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Quality aspects of software product supply and support using the Internet

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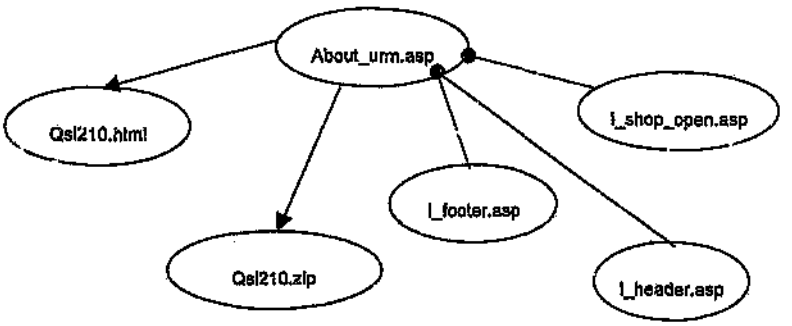
7 About_urm.asp

7.1 Purpose

This module presents the user with a User Reference Manual for the IS4.

7.2 Module diagram



7.3 Module interface

Table 7.1: A description of all inputs to and outputs from the module

About_urm.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Module being called	E	User selection	D	Web browser	The URM in HTML format
The download link being selected	E	The customer's selection	E	The customer's PC	The Word version of the URM being downloaded

7.4 Comments

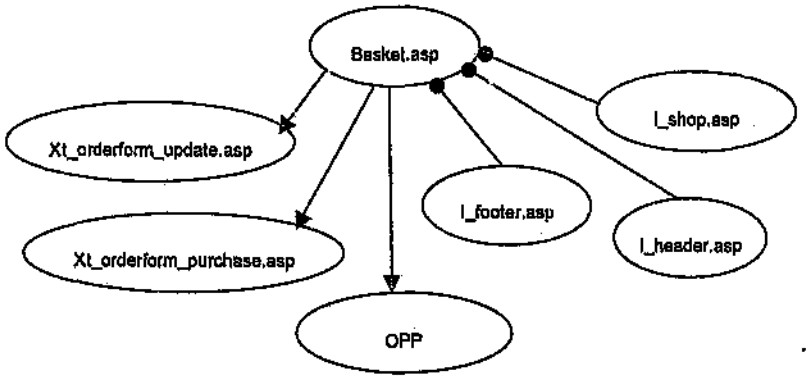
None

8 Basket.asp

8.1 Purpose

This module is used to display the customer's order form (shopping basket).

8.2 Module diagram



8.3 Module interface

Table 8.1: A description of all inputs to and outputs from the module

Basket.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Module being called	E	User selection	D	Web browser	The order form being displayed
Shopper's order information	D	Database	D	Order form	Customised order form
Error messages	D	OPP	D	OPP	The shopper's order form
Update c	E	User	E	The xt_orderform_u	Calling of

Basket.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
clear button		selection		pdate module	the module
Purchase button	E	The user selection	E	The xt_orderform_purchase.asp module.	Calling of the module

8.4 Comments

None

9 Closed.asp

9.1 Purpose

This is the default page displayed to a user if the store is closed.

9.2 Module diagram



9.3 Module interface

Table 9.1: A description of all inputs to and outputs from the module

Closed.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Page being called	E	User selection	D	Web browser	The 'store is closed' information

9.4 Comments

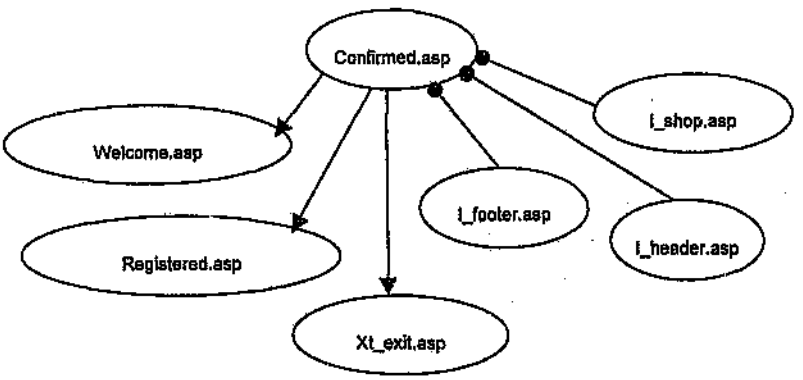
None

10 Confirmed.asp

10.1 Purpose

This module presents a purchase confirmation page and gives the user an order number after the product has been purchased. If the user has purchased a zero price value product the user is given a confirmation of the purchase but no order number is given.

10.2 Module diagram



10.3 Module interface

Table 10.1: A description of all inputs to and outputs from the module

Confirmed.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Module being called	E	User selection	D	Web browser	The confirmed information with a links to other modules
Order number	D	The calling module	D	Customer's web browser display	Order number

Confirmed.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Sku	D	The calling module	D	Customer's web browser display	The details of the purchased product
Welcome.asp	E	User selection	E	Web browser	Calling of the module
Registered.asp	E	User selection	E	Web browser	Calling of the module
Xt_exit.asp	E	User Selection	E	Web browser	Calling of the module

10.4 Comments

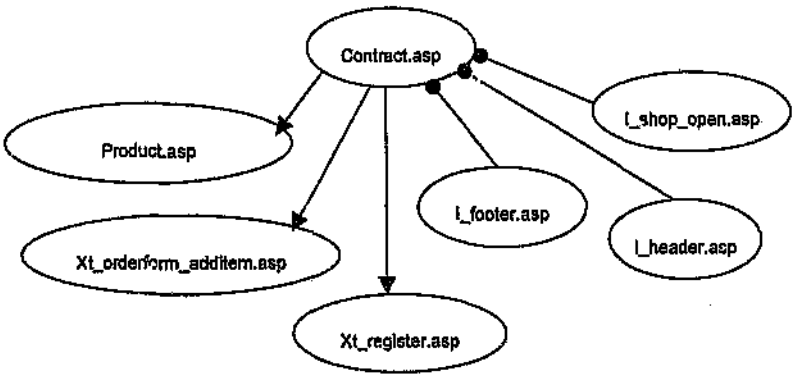
None

11 Contract.asp

11.1 Purpose

This page is used to display a contract for a particular product. If the user selects to purchase the product the contract gives the user the option to agree or disagree with the contract.

11.2 Module diagram



11.3 Module interface

Table 11.1: A description of all inputs to and outputs from the module

Contract.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Module being called	E	The user selection	D	Customer's web browser	The contract
Status – whether the customer is simply viewing or approving the contract	D	The selection made on the calling page ("View" or "Purchase")	D	The contract	The buttons at the end of the contract ("Accept" and "Reject" or "Return")

Contract.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
The selected product	D	The calling module	D	The contract	The contract for the specific product
The "Return" button to the calling page	E	The user selection	E	The web browser	The product module being recalled
			D	Product.asp	The product for which the contract is being viewed.
The "Reject" button	E	The user selection	E	Calling of the module	Product.asp
			D	Product.asp	The product for which the contract is being viewed.
The "Accept" button	E	The user selection	E	Calling of the module	Xt_orderform_additem
			D	Xt_orderform_additem	The selected product
			E	Calling of the module	Xt_register
			D	Xt_register	The selected product

11.4 Comments

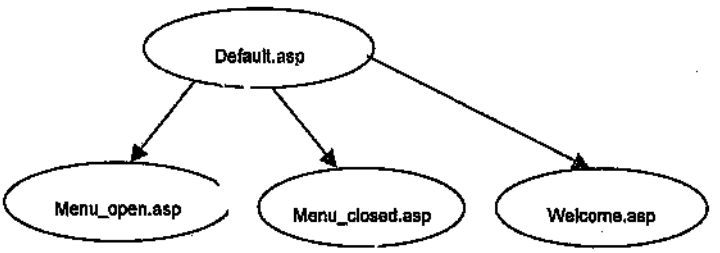
None

12 Default.asp

12.1 Purpose

This is the default page loaded when someone accesses the store. The page defines the frame structure for the entire user interface.

12.2 Module diagram



12.3 Module interface

Table 12.1: A description of all inputs to and outputs from the module

Default.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
The destination module.	D	The module calling default.asp	E	Main frame window	The calling of the destination module or welcome.asp module
			E	Side frame window	The calling of the menu.asp module
The task that has been carried out prior to calling of default.asp	D	The calling module	D	The called destination.asp module	The task, error and label variable values.
Any error messages to be passed to the	D	The calling			

Default.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
destination module		page			
The label for any error message being passed to the destination module	D	The calling page			

12.4 Comments

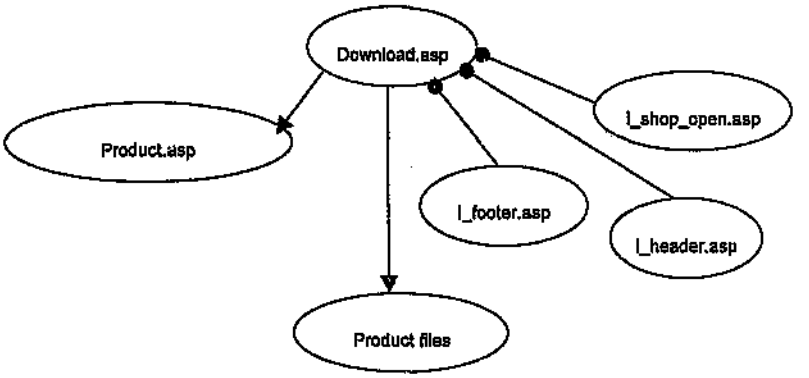
None

13 Download.asp

13.1 Purpose

This module allows the user (customer or potential customer) to download the respective software product.

13.2 Module diagram



13.3 Module interface

Table 13.1: A description of all inputs to and outputs from the module

Download.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Module being called	E	The user selection	D	Customer's web browser	The download page
The product	D	The calling module			
Downloadable file details	D	Database	D	The download page	The list of files for the particular product

Download.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Download Link	E	The user selection	D	The customer's machine.	The file being downloaded
The "Return" button to the calling page	E	The user selection	E	The web browser	The product module being recalled
			D	Product.asp	The product for which the contract is being viewed.

13.4 Comments

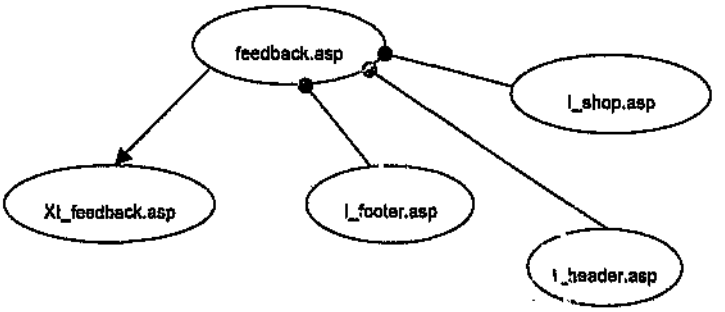
None

14 Feedback.asp

14.1 Purpose

This page is to present a form to a customer to provide feedback to the supplier.

14.2 Module diagram



14.3 Module interface

Table 14.1: A description of all inputs to and outputs from the module

Feedback.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Module being called	E	The user selection	D	Customer's web browser	The feedback page
The selected product	D	Feedback_menu.asp			
The selected type of feedback	D	Feedback_menu.asp	D	The web browser	The customised form based on the type of feedback
			E	Feedback_menu.as	The calling of the page

Feedback.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
				p	
			D	Feedback_menu.asp	Error messages is elther the type of feedback or the selected product is not supplied.
Form data	D	The user	D	The web browser	The form data
The submit button	E	User selection	E	Xt_Feedback.asp	The calling of the module
			D	Xt_Feedback.asp	All of the form data

14.4 Comments

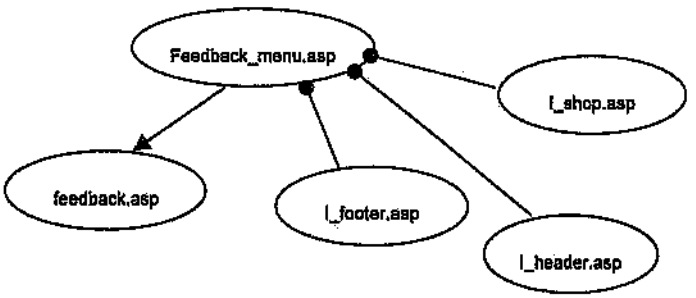
None

15 Feedback_menu.asp

15.1 Purpose

This page presents a menu to the user allowing him to select the type of feedback that he wishes to provide and the product for which the feedback is being given. This allows the feedback page to be customised for the type of feedback.

15.2 Module diagram



15.3 Module interface

Table 15.1: A description of all inputs to and outputs from the module

Feedback_menu.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Module being called	E	The user selection	D	Customer's web browser	The feedback menu page
The list of products	D	The database	D	The form	The user being able to select a product
Form data	D	The user	D	The web browser	The form data
The submit button	E	User selection	E	Feedback.asp	The calling of the

Feedback_menu.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
					module
			D	Feedback.asp	The selected type of feedback
			D	Feedback.asp	The selected product
Error messages	D	Xt_feedback.asp	D	Web browser	The received error messages

15.4 Comments

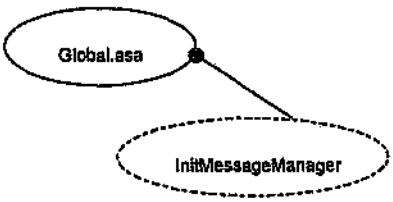
None

16 Global.asa

16.1 Purpose

This module defines the global variables and creates the global objects for the application. Every ASP-based application has one Global.asa file. (The file name extension .asa stands for "Active Server Application.") This file is stored in the root directory of the application. The file is used to specify event scripts and to declare objects that have either session or application scope.

16.2 Module diagram



16.3 Module interface

Table 16.1: A description of all inputs to and outputs from the module

Global.asa					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
			D	Memory	The components are created in memory

16.4 Comments

None

16.5 Submodules

16.5.1 InitMessageManager

16.5.1.1 Purpose

This function defines and initialises the Message Manager component by defining it and then adding messages to the component.

16.5.1.2 Module diagram



16.5.1.3 Submodule interface

Table 16.2: A description of all inputs to and outputs from the submodule

InitMessageManager					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
			D	Global.asa	The initialised Message Manager Component

16.5.1.4 Comments

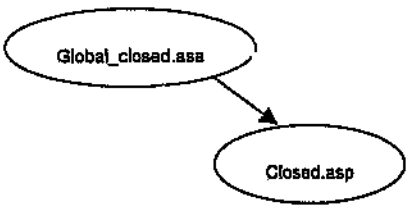
None

17 Global_closed.asa

17.1 Purpose

This module is called in place of global.asa when the store is closed. The module redirects the web browser to the closed.asp page.

17.2 Module diagram



17.3 Module interface

Table 17.1: A description of all inputs to and outputs from the module

Global_closed.asa					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
			E	Closed.asp	The calling of the module

17.4 Comments

None

18 l_country.asp

18.1 Purpose

This module presents a list containing countries allowing the shopper to select his/her country of location.

18.2 Module diagram



18.3 Module interface

Table 18.1: A description of all inputs to and outputs from the module

l_country.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Module being called	E	Inclusion in another module	D	Web browser	A selection list of the world's countries.

18.4 Comments

None

19 l_footer.asp

19.1 Purpose

This module displays a standard page footer.

19.2 Module diagram



19.3 Module interface

Table 18.1: A description of all inputs to and outputs from the module

l_footer.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Module being called	E	Inclusion in another module	D	Web browser	The standard footer

19.4 Comments

None

20 l_header.asp

20.1 Purpose

This module displays a standard page header.

20.2 Module diagram



20.3 Module interface

Table 20.1: A description of all inputs to and outputs from the module

l_header.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Module being called	E	Inclusion in another module	D	Web browser	The standard header

20.4 Comments

None

21 l_shop.asp

21.1 Purpose

This module declares the global variable as local ones and verifies that the shopper is identified, otherwise it directs the shopper to enter his identity. The module also logs a traffic event.

21.2 Module diagram



21.3 Module interface

Table 21.1: A description of all inputs to and outputs from the module

l_shop.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Module being called	E	Inclusion in another module			
Shopper ID	D	Application			
Shopper Information	D	Database			
			E	Shopper_lookup.asp	Calling of the page is the shopper ID and shopper information are not valid.

21.4 Comments

None

22 l_shop_open.asp

22.1 Purpose

This module declares the global variables as local ones. This serves the same function as i_shop except that it does not require that the shopper's ID be known.

22.2 Module diagram



22.3 Module interface

Table 22.1: A description of all inputs to and outputs from the module

l_shop_open.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Li
Module being called	E	Inclusion in another module			
Shopper ID	D	Application			

22.4 Comments

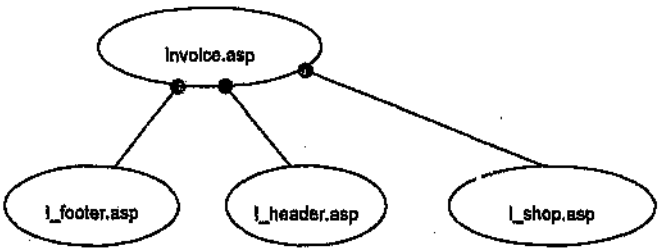
None

23 Invoice.asp

23.1 Purpose

This module outputs an invoice for the shopper. The invoice contains the items that the shopper selected to purchase in his shopping basket. The purpose of the invoice is for the shopper to be able to print out the invoice and send it to the store Manager with a cheque. This is a temporary measure until a fully automated credit card payment mechanism is implemented.

23.2 Modu diagram



23.3 Module interface

Table 0.1: A description of all Inputs to and outputs from the module

Invoice.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Module being called	E	The calling module	D	Customer's web browser	The invoice
Order_Id	D	The calling module			
Orderform details	D	Database	D	The invoice	The orderform details

23.4 Comments

None

24 Menu_closed.asp

24.1 Purpose

This module outputs the menu page for a user who is logged in to the system.

24.2 Module diagram



24.3 Module interface

Table 23.1: A description of all inputs to and outputs from the module

Menu_closed.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
User selection of the menu option	E	User Selection	E	The calling respective module	The calling of the module

24.4 Comments

None

25 Menu_open.asp

25.1 Purpose

This module outputs the menu page for a user who is not logged in to the system.

25.2 Module diagram



25.3 Module interface

Table 25.1: A description of all inputs to and outputs from the module

Menu_open.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
User selection of the menu option	E	User Selection	E	The calling respective module	The calling of the module

25.4 Comments

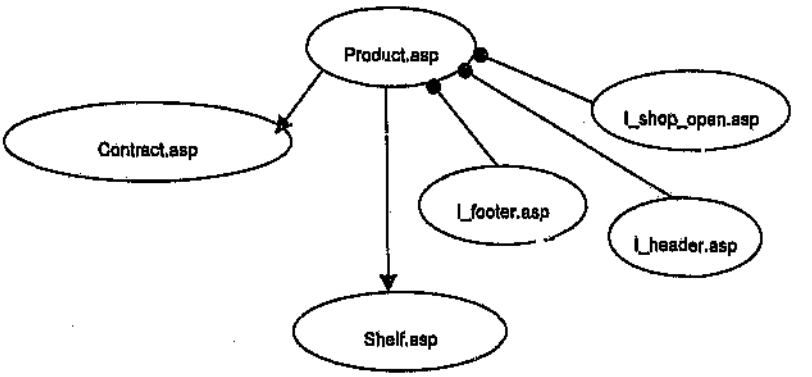
None

26 Product.asp

26.1 Purpose

This module displays details about the selected product. From the product page the user can select to view the contract for the product. Depending on whether or not the user is logged in to the system, it allows the user to add the product to his/ her shopping basket. If however the product has a zero price value, the user is given the option to purchase the product directly by bypassing the shopping basket and the transaction processing system.

26.2 Module diagram



26.3 Module interface

Table 26.1: A description of all inputs to and outputs from the module

Product.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Module being called	E	The user selection	D	Customer's web browser	The Product page
The product Id	D	The calling page			
Product	D	Database			

Product.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Information					
Product dependencies	D	database			
Additional product information	D	Database			
Shopper ID	D	l_shop_open.asp			
The availability of the product	D	Product information	D	The product page	The information being displayed on condition that the product is available.
View contract	E	User selection	E	Contract.asp	Calling of the module
Add to basket	E	User selection	E	Contract.asp	Calling of the module
Purchase	E	User Selection	E	Contract.asp	Calling of the module
			D	Contract.asp	Product id
Login to system	E	User selection	E	Shopper_lookup.asp	Calling of the module

26.4 Comments

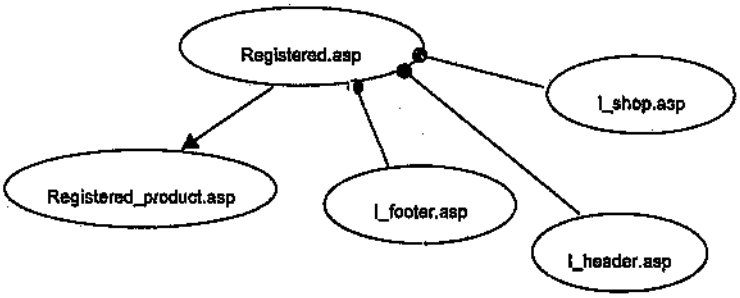
None

27 Registered.asp

27.1 Purpose

This module outputs a list of products for which the user is registered.

27.2 Module diagram



27.3 Module interface

Table 0.1: A description of all inputs to and outputs from the module

Registered.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Module being called	E	The user selection	D	Customer's web browser	The registered page
Shopper_Id	D	l_shop.asp			
List of purchased products	D	Database	D	Registered page	List of purchased products as links
Product Link	E	User selection	E	Registered_product.asp	Calling of the module
			D	Registered_product.asp	Selected purchased product

27.4 Comments

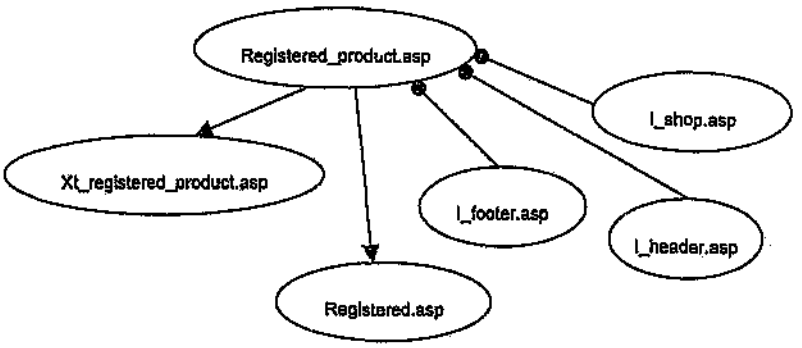
None

28 Registered_product.asp

28.1 Purpose

This module displays the details and documentation for a selected registered product.

28.2 Module diagram



28.3 Module interface

Table 28.1: A description of all inputs to and outputs from the module

Registered_product.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Module being called	E	The user selection	D	Customer's web browser	The registered_product page
Selected purchased product	D	The calling module			
Shopper ID	D	l_shop.asp	D		
Error messages	D	Xt_registered_product.asp	D	Registered_product.asp	Display of the error messages

Registered_product.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Purchased product details for the particular shopper	D	Database	D	Registered_product.asp	The display of product details, links to documentation and whether the user is on the product's mailing list.
Modification of the mailing list status	E	User selection	D	Registered_product.asp	The display of the modified status
Selection of the update button	E	User selection	E	Xt_registered_product.asp	The calling of the module
			D	Xt_registered_product.asp	Mailing list status
Document link selection	E	User selection	E	Users machine	Document being downloaded
Return to registered products list	E	User selection	E	Registered.asp	Calling of the module

28.4 Comments

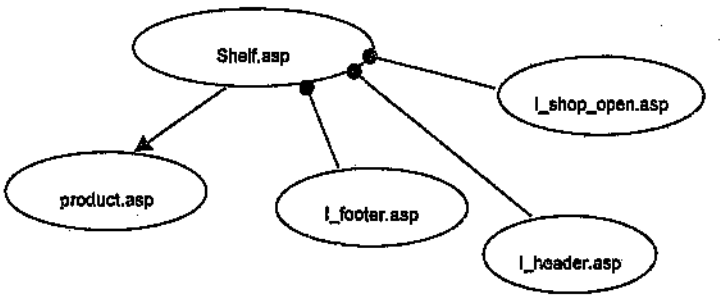
None

29 Shelf.asp

29.1 Purpose

This page displays a list of products available.

29.2 Module diagram



29.3 Module interface

Table 29.1: A description of all inputs to and outputs from the module

Shelf.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Module being called	E	The user selection	D	Customer's web browser	The shelf page
List of available products	D	database	D	Shelf page	Display of the list of products
Link to a product	E	User selection	E	Product.asp	Calling of page
			D	Product.asp	Product ID

29.4 Comments

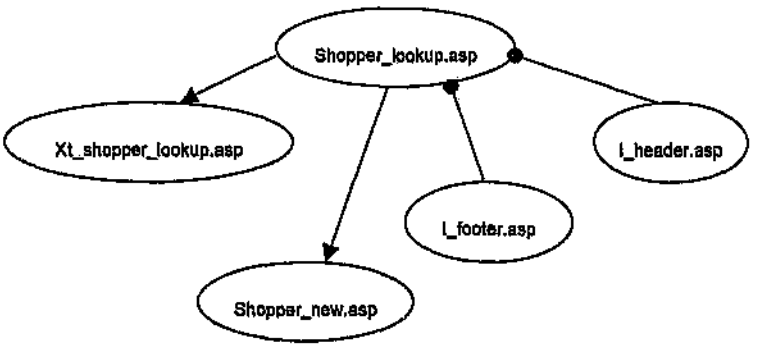
None

30 Shopper_lookup.asp

30.1 Purpose

This page is used to allow a user to input his username and password in order to identify the shopper and allow access to restricted areas.

30.2 Module diagram



30.3 Module interface

Table 30.1: A description of all inputs to and outputs from the module

Shopper_lookup.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Module being called	E	The user selection	D	Customer's web browser	The shopper lookup page
Customer's username	D	User input	D	Web browser	Customer's username
Customer's password	D	User input	D	Web browser	Customer's password
Lookup button	E	User selection	E	xt_shopper_lookup.asp	Calling of the module

Shopper_lookup.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
			D	Xt_shopper_lookup.asp	Username
			D	Xt_shopper_lookup.asp	Password
Link to shopper_new.asp	E	User selection	E	Shopper_new.asp	Calling of the module
Error messages	D	Xt_shopper_lookup.asp	D	Web browser	The received error messages

30.4 Comments

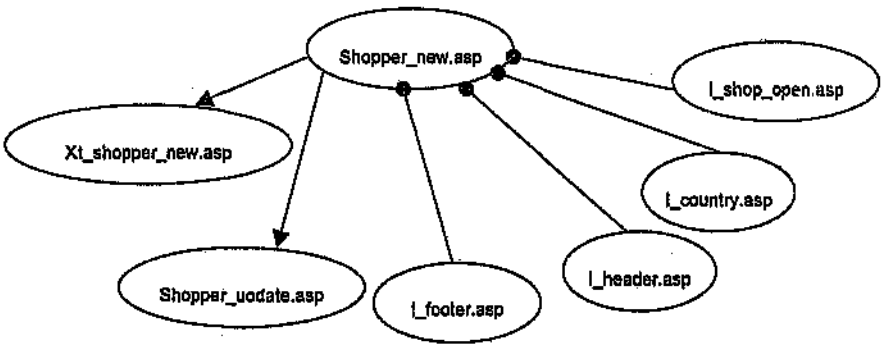
None

31 Shopper_new.asp

31.1 Purpose

This page is used for a new customer to enter details in order to register as a shopper on the system.

31.2 Module diagram



31.3 Module interface

Table 31.1: A description of all inputs to and outputs from the module

Shopper_new.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Module being called	E	The user selection	D	Customer's web browser	The shopper new page
Presence of Shopper ID	D	l_shop_open.asp	E	Shopper_update.asp	Calling of the module
			D	Shopper_update.asp	Error message
Registration information	D	User input	D	Web browser	Registration information
Register button	E	User selection	E	Xt_shopper_new.asp	Calling of the page

Shopper_new.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
			D	Xt_shopper_new.asp	Registration Information
Error messages	D	Xt_shopper_new.asp	D	Web browser	The received error messages

31.4 Comments

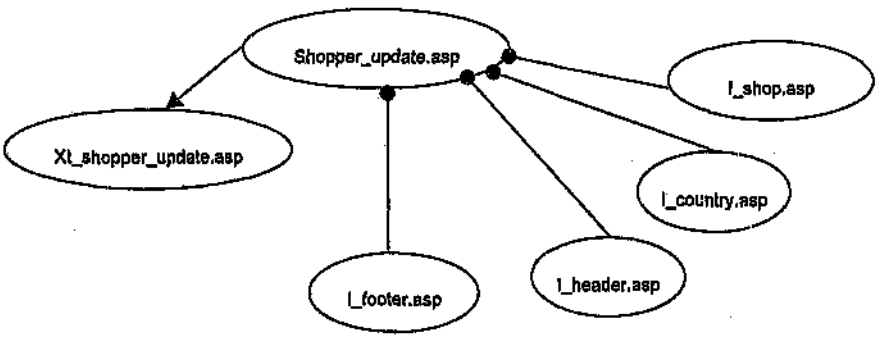
None

32 Shopper_update.asp

32.1 Purpose

This page is used for a shopper to update his/her registration information.

32.2 Module diagram



32.3 Module interface

Table 32.1: A description of all inputs to and outputs from the module

Shopper_update.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Module being called	E	The user selection	D	Customer's web browser	The shopper update page
Shopper information	D	The database	D	The web browser	The shopper information
Updated shopper information	D	User input	D	The web browser	Updated shopper information

Shopper_update.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Update button	E	User selection	E	Xt_shopper_update.asp	Calling of the module
			D	Xt_shopper_update.asp	Shopper information
Error messages	D	Xt_shopper_update.asp or shopper_new.asp	D	Web browser	The received error messages

32.4 Comments

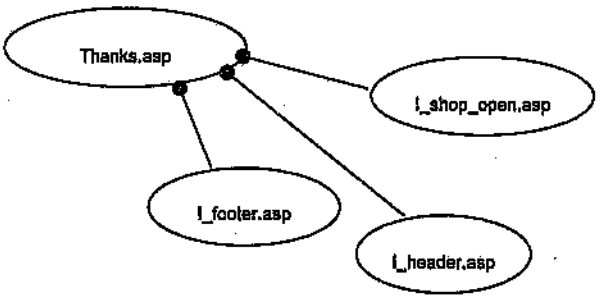
None

33 Thanks.asp

33.1 Purpose

This page presents a thank-you message to the customer after he has performed certain tasks.

33.2 Module diagram



33.3 Module interface

Table 33.1: A description of all inputs to and outputs from the module

Thanks.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Module being called	E	The user selection	D	Customer's web browser	The thanks page
Type of thank you	D	Calling page	D	The web browser	Correct thank you message
Link being called	E	User selection	E	The selected page	Calling of the module

33.4 Comments

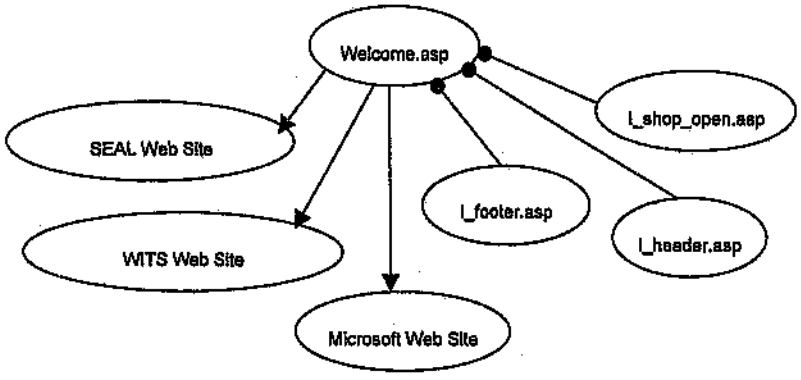
None

34 Welcome.asp

34.1 Purpose

This is the welcome and default page loaded when someone accesses the store. This is the starting page from where all other sections can be accessed. The page is an open page and gives a brief description of the system. From this page the customer can branch down into other pages.

34.2 Module diagram



34.3 Module Interface

Table 34.1: A description of all inputs to and outputs from the module

Welcome.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Module being called	E	The user selection	D	Customer's web browser	The welcome page
A Link	E	User selection	E	The selected link	The module or web site being called

34 4 Comments

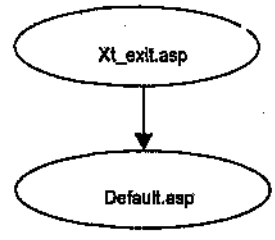
None

35 Xt_exit.asp

35.1 Purpose

This page removes the shopper ID from memory when the shopper exits the store

35.2 Module diagram



35.3 Module Interface

Table 35.1: A description of all inputs to and outputs from the module

Xt_exit.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Module being called	E	The user selection to log out of the system	D	Shopper ID in memory	Null value
			E	Default.asp	Calling of the module

35.4 Comments

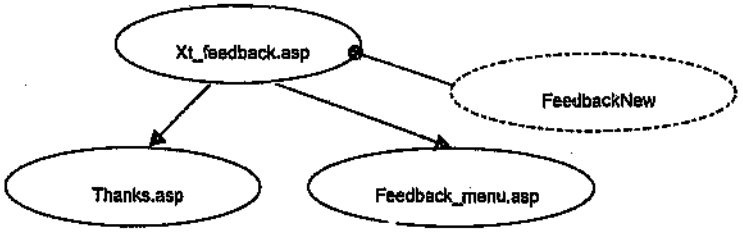
None

36 Xt_feedback.asp

36.1 Purpose

The page carries out the process of adding the customer's input feedback item into the database. The page retrieves the feedback information, checks it and then inserts it into the database. The page then redirects the user to the thanks.asp page.

36.2 Module diagram



36.3 Module interface

Table 36.1: A description of all inputs to and outputs from the module

Xt_feedback.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Module being called	E	Feedback asp			
Shopper ID	D	Application			
Date	D	Application			
Feedback data	D	Feedback.asp	D	Database	The Insertion the data.
			E	Feedback_menu.asp or thanks.asp depending on the presence of error	Calling of the module

Xt_feedback.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
				messages or not	
			D	Feedback_menu.asp	Error messages
			D	Thanks.asp	The task

36.4 Comments

None

36.5 Submodules

36.5.1 FeedbackNew

36.5.1.1 Purpose

This function checks that all the required input information is present and within the required string lengths

36.5.1.2 Module diagram



36.5.1.3 Submodule interface

Table 36.2: A description of all inputs to and outputs from the submodule

FeedbackNew					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
The page	D	Xt_feedba			

FeedbackNew					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
com ınent		ck.asp			
Feedback data	D	Xt_feedback.asp			
Error string object	D	Xt_feedback.asp			
Error string label object	D	Xt_feedback.asp	D	Xt_feedback.asp	The data written to the correct object
			D	Xt_feedback.asp	The relevant error messages

36.5.1.4 Comments

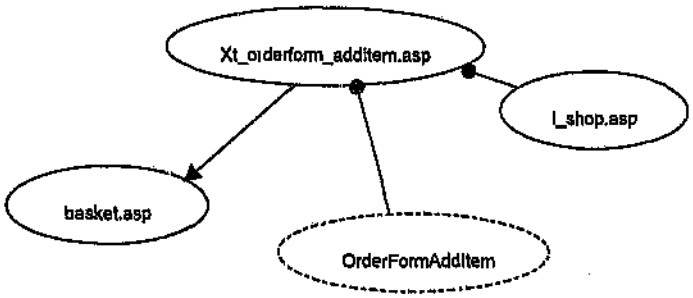
None

37 Xt_orderform_additem.asp

37.1 Purpose

This module carries out the process of adding an item to the shopper's order form.

37.2 Module diagram



37.3 Module interface

Table 37.1: A description of all inputs to and outputs from the module

Xt_orderform_additem.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Calling of the module	E	Contract.asp			
Shopper ID	D	l_shop.asp			
Product ID	D	The calling module			
Product quantity	D	The calling module	D	Database	Addition of the item to the shopper's order form

Xt_orderform_additem.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
			E	Basket.asp	Calling of the module

37.4 Comments

None

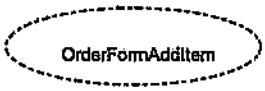
37.5 Submodules

37.5.1 OrderFormAddItem

37.5.1.1 Purpose

The function retrieved the parameters for adding the item to the order form (product and quantity). The function then retrieves the product details from the database and adds all the relevant details to the shopper's order form. If the shopper does not already have an order form, on is created for him/her.

37.5.1.2 Module diagram



37.5.1.3 Submodule interface

Table 37.2: A description of all inputs to and outputs from the submodule

OrderFormAddItem					
Input			Output		
Label	Natur	Source	Nature	Destination	Label
The order form storage	D	Xt_orderform _additem.asp			

OrderFormAddItem					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
component, the page component and the shopper's ID					
Product ID	D	Calling module			
Product quantity	D	Calling module			
Shopper's order form	D	Database			
Product details	D	Database	D	Xt_orderform_additem.asp	The item added to the order form and the value of TRUE

37.5.1.4 Comments

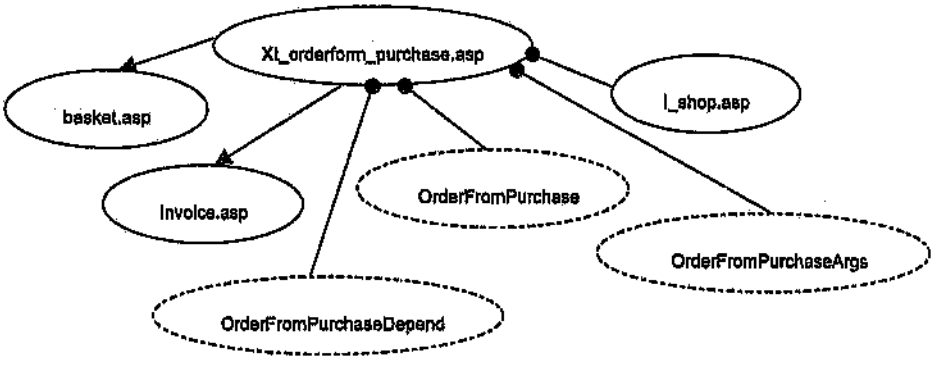
None

38 Xt_orderform_purchase.asp

38.1 Purpose

This module processes the contents of the shopper's basket. The module checks that all the dependency requirements are met and if so, converts the basket contents to a receipt.

38.2 Module diagram



38.3 Module interface

Table 37.1: A description of all inputs to and outputs from the module

Xt_orderform_purchase.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Calling of the module	E	Basket.asp			
Shopper ID	D	I_shop.asp			
Orderform	D	Database			
Shopper details	D	I_shop.asp			
			D	Database	Orderform
			E	Calling of the	Basket.asp

Xt_orderform_purchase.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
				module	
			D	Basket.asp	Error message
			E	Calling of the module	Invoice.asp
			D	Invoice.asp	Order ID

38.4 Comments

None

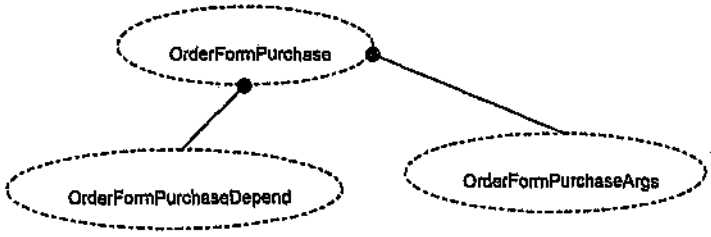
38.5 Submodules

38.5.1 OrderFormPurchase

38.5.1.1 Purpose

The function retrieves the shopper's basket from the database. The function then calls the OrderFormPurchaseDepend function to check that all the dependency requirements are met. Thereafter the OrderFormPurchaseArgs function is called to write relevant shopper information to the order form. The function then writes the contents of the shopper's basket to an order form/ invoice and then deletes the contents of the basket.

38.5.1.2 Module diagram



38.5.1.3 Submodule interface

Table 37.2: A description of all inputs to and outputs from the submodule

OrderFormPurchase					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
The order form storage component, the page component, the shopper's ID, an error string and the shopper storage component.	D	Xt_orderform_purchase.asp			
Shopper's order form	D	Database			
			D	Xt_orderform_purchase.asp	The order ID.

38.5.1.4 Comments

None

38.5.2 OrderFormPurchaseDepend

38.5.2.1 Purpose

The function checks that the shopper has met the dependency requirements for each item in the shopper's basket.

38.5.2.2 Module diagram



38.5.2.3 Submodule interface

Table 37.2: A description of all inputs to and outputs from the submodule

OrderFormPurchaseDepend					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
The Shopper's order form, the page component, the shopper's ID and an error string.	D	OrderFormPurchase			
			D	OrderFormPurchase	A true or false value

38.5.2.4 Comments

None

38.5.3 OrderFormPurchaseArgs

38.5.3.1 Purpose

The function writes the relevant shopper information to the order form.

38.5.3.2 Module diagram



38.5.3.3 Submodule interface

Table 37.2: A description of all inputs to and outputs from the submodule

OrderFormPurchaseArgs					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
The shopper's order form, the page component, the shopper's information and an error string	D	OrderFormPurchase			
			D	Shopper's order form	The shopper's details.
			D	OrderFormPurchase	A true value

38.5.3.4 Comments

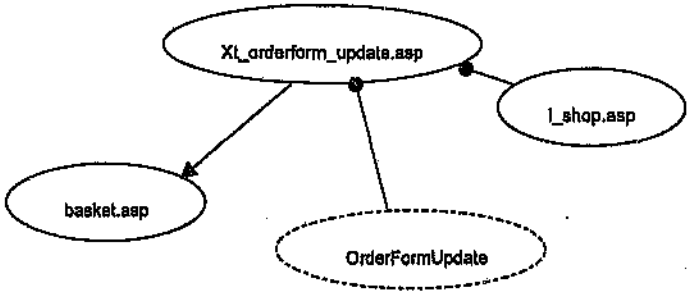
None

39 Xt_orderform_update.asp

39.1 Purpose

This module carries out the process of updating the order form after a user changes the quantity of an item, delete an item or clear the order form.

39.2 Module diagram



39.3 Module Interface

Table 38.3.1: A description of all inputs to and outputs from the module

Xt_orderform_update.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Calling of the module	E	Basket.asp			
Shopper's order form	D	Database			
The type of update	D	Calling module			
The quantity of the item being updated	D	The calling module			

Xt_orderform_update.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
The item being updated	D	Calling module	D	Database	The updated order form
			E	Calling of the module	Basket.asp

39.4 Comments

None

39.5 Submodules

39.5.1 OrderFormUpdate

39.5.1.1 Purpose

The function carries out the task of updating the order form based on the type of update.

39.5.1.2 Module diagram



39.5.1.3 Submodule interface

Table 38.3.2: A description of all inputs to and outputs from the submodule

OrderFormUpdate					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Calling of	E	Xt_orderform_			

OrderFormUpdate					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
the function		update.asp			
The order form storage component, the page component and the shopper's ID	D	Xt_orderform_update.asp			
Type of update	D	The calling module			
The item to be updated	D	The calling module			
The quantity of the item to be updated	D	The calling module			
The shopper's order form	D	Database	D	Database	ıe updated order form
			D	Xt_orderform_update.asp	A true value

39.5.1.4 Comments

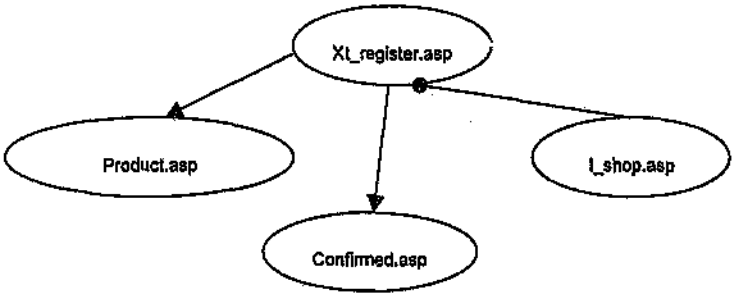
None

40 Xt_register.asp

40.1 Purpose

This module registers a free product that the user has purchased as a registered product in the database. The registration details for the product are input into the database along with the purchased product's encryption number that the module calculates.

40.2 Module diagram



40.3 Module interface

Table 40.1: A description of all inputs to and outputs from the module

Xt_register.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Shopper ID	D	I_shop.asp			
SKU	D	The calling module			
Product details	D	Database			
Dependency details	D	Database			
Shopper	D	Database			

Xt_register.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
purchases					
Shopper details	D	Database			
			D	database	The registration of a new purchase for the shopper
			E	The calling of the module	Product.asp
			D	Product.asp	SKU and error message
			E	The calling of the module	Confirmed.asp
			D	Confirmed.asp	SKU

40.4 Comments

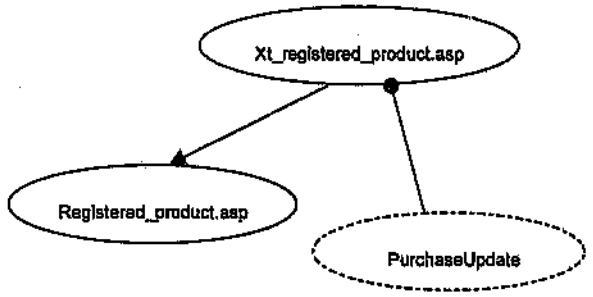
None

41 Xt_registered_product.asp

41.1 Purpose

This module is used to update the information on the registered_product.asp page.

41.2 Module diagram



41.3 Module interface

Table 40.1: A description of all inputs to and outputs from the module

Xt_registered_product.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Shopper ID	D	The application			
Selected product	D	The calling module			
Mailing list status	D	Calling module	D	database	Modification of the mailing list status for the product for the specific customer

Xt_registered_product.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
			E	Registered_product.asp	The calling of the module
			D	Registered_product.asp	Shopper ID
			D	Registered_product.asp	Selected product
			D	Registered_product.asp	Error messages

41.4 Comments

None

41.5 Submodules

41.5.1 PurchaseUpdate

41.5.1.1 Purpose

The function carries out the task of updating the purchase details with the information passed to the xt_registered_product.asp module. The function checks if the received values are within the required ranges and if so, updates the information.

41.5.1.2 Module diagram



41.5.1.3 Submodule interface

Table 40.2: A description of all inputs to and outputs from the submodule

PurchaseUpdate					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Calling of the function	E	Xt_registered_ product.asp			
The purchase storage component, the page component and the variables for the error message and label	D	Xt_registered_ product.asp			
The updated purchase information	D	The calling module	D	Xt_registered_ product.asp	The updated purchase information in the purchase storage component
			D	Xt_registered_ product.asp	A true value

41.5.1.4 Comments

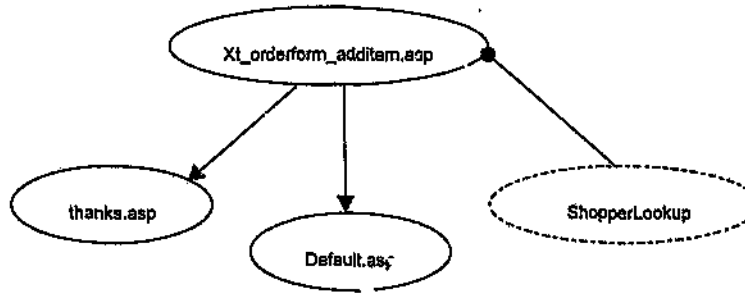
None

42 Xt_shopper_lookup.asp

42.1 Purpose

This module checks if the shopper exists in the database and if so, retrieves the shopper id.

42.2 Module diagram



42.3 Module interface

Table 42.1: A description of all inputs to and outputs from the module

Xt_shopper_lookup.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Calling of the module	E	Shopper_looku p.asp			
Username	D	Shopper_looku p.asp			
Password	D	Shopper_looku p.asp	D	The application	Shopper ID
			E	Calling of the module	Default.asp
			D	Default.asp	Destination and error

Xt_shopper_lookup.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
					messages

42.4 Comments

None

42.5 Submodules

42.5.1 ShopperLookup

42.5.1.1 Purpose

The function obtains the customer's username and password, checks if the strings have been correctly entered and checks if the customer exists in the database.

42.5.1.2 Module diagram



42.5.1.3 Submodule interface

Table 42.2: A description of all inputs to and outputs from the submodule

ShopperLookup					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
The page object, shopper object, error message object and the error label object	D	Xt_shopper_lookup			

ShopperLookup					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Username	D	Shopper_lookup.asp			
Password	D	Shopper_lookup.asp	D	Xt_shopper_lookup	Shopper object with shopper's information
			D	Xt_shopper_lookup	Error messages

42.5.1.4 Comments

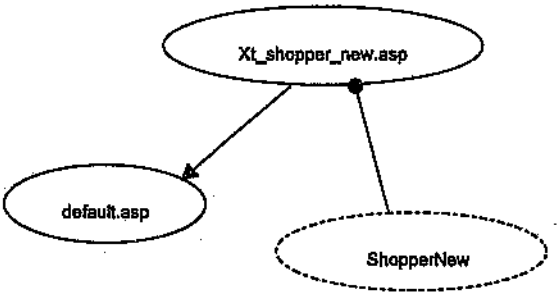
None

43 Xt_shopper_new.asp

43.1 Purpose

This module processes the information entered in the shopper_new page and if no errors are present assigns the shopper with a shopper ID and then commits the data to the database.

43.2 Module diagram



43.3 Module interface

Table 43.1: A description of all inputs to and outputs from the module

Xt_shopper_new.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Calling of the module	E	Shopper_new.asp			
Entered Shopper Information	D	Shopper_new.asp	D	Database	Shopper Information
			D	Application	Shopper ID
			E	Default.asp	Calling of the module
			D	Default.asp	Destination and error messages if

Xt_shopper_new.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
					present

43.4 Comments

None

43.5 Submodules

43.5.1 ShopperNew

43.5.1.1 Purpose

The function validates the information input into the ShopperNew.asp form. The function checks that the two instances of the password match and that all information is present and falls within the required ranges. If so, the functions writes the information to the required object.

43.5.1.2 Module diagram



43.5.1.3 Submodule interface

Table 43.2: A description of all inputs to and outputs from the submodule

ShopperNew					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
The page object, the shopper object, the	D	Xt_shopper_new.asp			

ShopperNew					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
error message object and the error label object					
Shopper information	D	The calling module	D	Xt_shopper_new.asp	The shopper component with the input information
			D	Xt_shopper_new.asp	Error messages

43.5.1.4 Comments

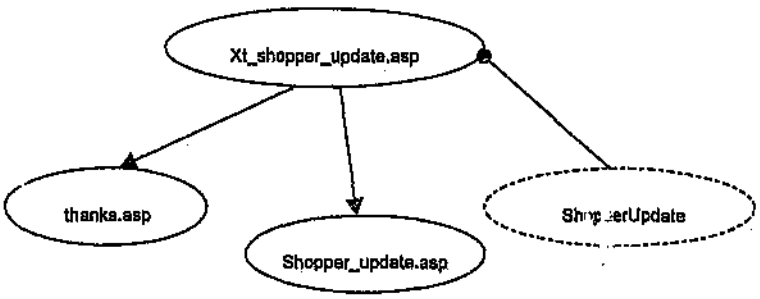
None

44 Xt_shopper_update.asp

44.1 Purpose

This module processes the information entered in the shopper_update page and commits the data to the database.

44.2 Module diagram



44.3 Module Interface

Table 44.1: A description of all inputs to and outputs from the module

Xt_shopper_update.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Calling of the module	E	Shopper_update.asp			
Shopper ID	D	Application			
Shopper Information	D	Database			
Modified shopper Information	D	Shopper_update.asp	D	Database	Updated shopper Information
			E	Shopper_update.asp	Calling of the module
			D	Shopper_up	Error

Xt_shopper_update.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
				date.asp	messages
			E	Calling of the module	Thanks.asp
			D	Thanks.asp	Type of thanks

44.4 Comments

None

44.5 Submodules

44.5.1 ShopperUpdate

44.5.1.1 Purpose

The function validates the updated information input by the customer and then writes the information to the required object.

44.5.1.2 Module diagram



44.5.1.3 Submodule interface

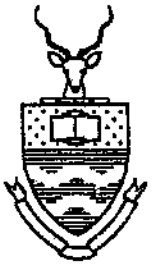
Table 44.2: A description of all inputs to and outputs from the submodule

ShopperUpdate					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
The page, shopper,	D	Xt_shopper_u			

ShopperUpdate					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
error and error string objects		pdate.asp			
Modified shopper information	D	Shopper_update.asp	D	Xt_shopper_update.asp	The updated shopper component
			D	Xt_shopper_update.asp	Error messages

44.5.1.4 Comments

None



QSI

Is4 High Level Design 3 - Manager Interface

Technical Product

Revision 1.00

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Change History

Configuration Control

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Revision History

Version	Date	Changes
0.01	97\08\28	New document created using qst324-40.100
1.00	98\04\08	Document approved

Management Authorisation

Version	Date	Status	Management Board Minute Reference
1.00	98\04\08	Approved	QSI 2049 section 2.3

Change Forecast

This document will be updated each time new design requirements are identified.

1 Scope

1.1 Introduction

The IS4 High Level Design details the modular structure of the IS4 Manager interface and associated functionality. The document describes each module. Each Active Server Page comprising the application is treated as a separate module (Refer to QSI 232). The document defines the purpose, functionality and the inputs and outputs of each module.

1.2 Applicability

This document is applicable as the Manager Interface High Level Design for the IS4 and is a technical product in the QSI project. This document forms part of the following series of documents:

a. IS4 High Level Design 1 - System and Database (QSI 232)

b. IS4 High Level Design 2 – Shopper Interface (QSI 230)

c. IS4 High Level Design 3 – Manager Interface (QSI 231)

d. IS4 Low Level Design 1 – System and Database (QSI 242)

e. IS4 Low Level Design 2 – Shopper Interface (QSI 240)

f. IS4 Low Level Design 3 – Manager Interface (QSI 241)

1.3 Definitions

D - Data

E - Event

IS^4 – Internet System for the Supply and Support of Software

SEAL - Software Engineering Applications Laboratory

WWW - World Wide Web

FTP - File Transfer Protocol

ASP – Active Server Pages

IIS – (Microsoft) Internet Information Server

HTTP – Hypertext Transfer Protocol

HTML – Hypertext Markup Language

1.4 Diagram Conventions

Diagram	Meaning
	Module
	Submodule
	Calls
	Includes

1.5 Audience

- The Product Manager
- The Customer or Client
- The Product Developers
- Individuals who perform 2nd and 3rd party surveillance on SEAL QMS.
- Fulltime members of SEAL Management Board.

1.6 Applicable Documents

1.6.1 Standards

a. SEAL QMS Document Layout, Presentation and Typesetting Guide, QS 003, Revision 1.00, 3 October 1994

1.6.2 Procedures

1.6.3 Guidelines

1.6.4 Exemplar Documents

An example of this use of this template can be found in:

a) TMP 126 Task Management Package High Level Design, Revision 1.02, 12 December 1995 (See project 1995_34).

1.7 Assumptions

It is assumed that the reader has access to the entire High and Low level design series (Refer to section 1.2 above) and has read and is familiar with the High and Low Level Designs for the System and Database (QSI 232 and QSI 242).

1.8 Requirements Traceability

2 List of modules

Table 2.1: List of all modules in the application

Module No.	Module Name	Description
1.	_add.asp	Used to add various entities to the respective database tables.
2.	_delete.asp	Used to delete various entities from the respective database tables.
3.	_update.asp	Used to modify various entities in the respective database tables with updated information.
4.	Default.asp	The default module that is displayed when the manager enters the IS4 manager interface.
5.	Event.asp	This module lists all the events logged for the store according to various criteria.
6.	Feedback.asp	This module lists all the feedback received by the store manager according to various criteria
7.	Feedback_delete	This module prompts the store manager as to whether he wants to delete the selected feedback item.
8.	Feedback_view	This module displays the details of a single feedback item.
9.	Global.asa	This module defines the global variables and creates the global objects for the application
10.	Mail.asp	This module is used by the store manager to input a mail message to be sent to a selected group of customers.

Module No.	Module Name	Description
11.	Mail_delete.asp	This module prompts the store manager as to whether he wants to delete the selected mail item.
12.	Mail_list.asp	This module lists all the sent mail items according to various criteria.
13.	Mail_view.asp	This module displays the details of a selected mail item.
14.	Order_day.asp	This module lists statistics for the orders that have been received in a selected month according to day.
15.	Order_month.asp	This module lists statistics for the orders that have been received in a selected year according to month.
16.	Order_product.asp	This module lists statistics for orders that have been received according to products.
17.	Order_shopper.asp	This module lists statistics for orders that have been received according to shoppers.
18.	Order_view.asp	This module displays all the details of a selected order.
19.	Orders.asp	This module displays a list of all orders received according to various criteria.
20.	Proddepend_delete.asp	This module prompts the store manager as to whether he wants to delete the selected product dependency.
21.	Proddepend_edit.asp	This module allows the store manager to edit the details relating to the specific product dependency.

Module No.	Module Name	Description
22.	Proddepend_new.asp	This module presents a drop down list to the store manager containing all the products in the store. The manager can select from the list a dependency for the current product being viewed
23.	Proddoc_delete.asp	This module prompts the store manager as to whether he wants to delete the selected product document.
24.	Proddoc_edit.asp	This module allows the store manager to edit the details relating to the specific product document.
25.	Proddoc_new.asp	This module presents a form to the store manager allowing him to input information for a new product document.
26.	Proddown_delete.asp	This module prompts the store manager as to whether he wants to delete the selected product download.
27.	Proddown_edit.asp	This module allows the store manager to edit the details relating to the specific product download.
28.	Proddown_new.asp	This module presents a form to the store manager allowing him to input information for a new product download item.
29.	Prodinfo_delete.asp	This module prompts the store manager as to whether he wants to delete the selected product information item.
30.	Prodinfo_edit.asp	This module allows the store manager to edit the details relating to the specific product information item.

Module No.	Module Name	Description
31.	Prodinfo_new.asp	This module presents a form to the store manager allowing him to input information for a new product information item.
32.	Product_delete.asp	This module presents a confirmation prompt checking whether the manager wants to delete a product from the system.
33.	Product_edit.asp	This module allows the store manager to edit the details relating to a specific product.
34.	Product_list.asp	This module lists all of the products in the system.
35.	Product_new.asp	This module presents a form allowing the manager to input a new product into the system
36.	Product_view.asp	This module displays the details of a selected product.
37.	Purchase.asp	This module lists all the purchased products according to various criteria.
38.	Purchase_delete.asp	This module is used to output a confirmation prompt as to whether the user wishes to delete the selected purchase.
39.	Purchase_new.asp	This module allows the manager to register the shopper for a purchase.
40.	Purchase_view.asp	This module is used to display all the details of a selected purchase and to allow the manager to edit selected purchase details.
41.	Reload_store.asp	This page is used to reload the Store

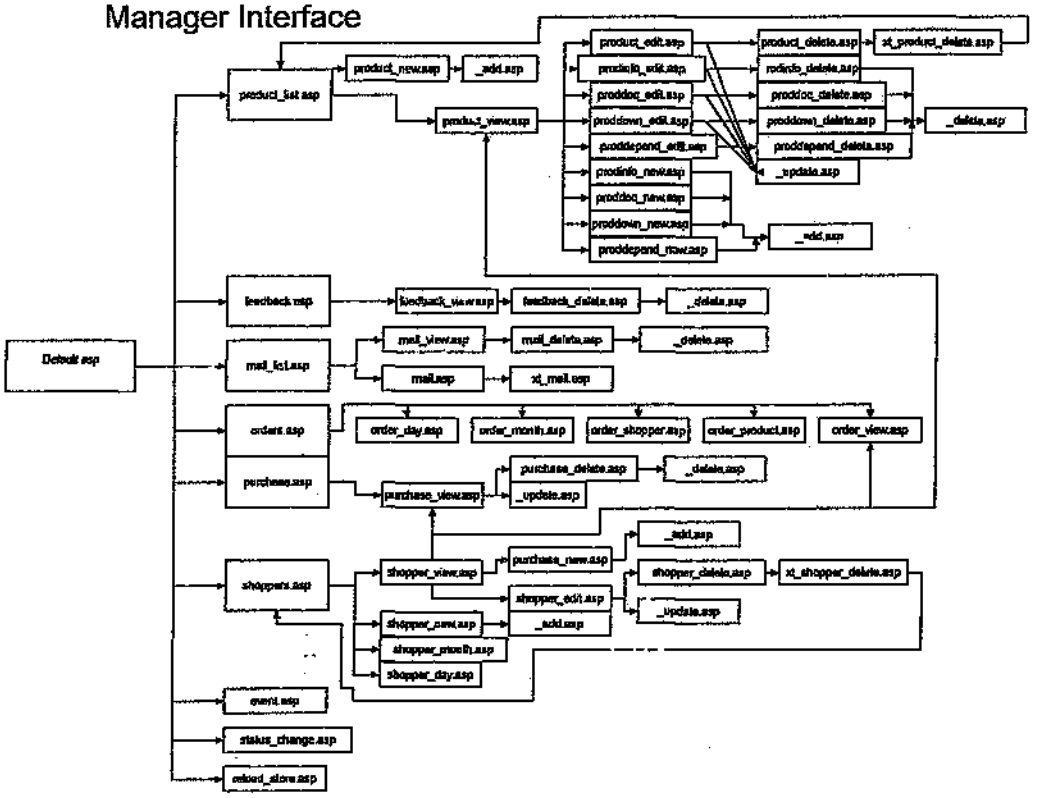
Module No.	Module Name	Description
		Manager.
42.	Shopper_day.asp	This module lists the number of new shoppers that have registered in the system per day for a selected month.
43.	Shopper_delete.asp	This module presents a confirmation prompt checking if the manager wishes to delete the selected shopper from the system.
44.	Shopper_edit	This module presents the selected shopper information to the user and allows the user to modify and submit the information.
45.	Shopper_month.asp	This module lists the number of new shoppers that have registered in the system per month for a selected year.
46.	Shopper_new	This module presents a form allowing the store manager to register a new shopper in the system.
47.	Shopper_view.asp	This module displays the details of a selected shopper.
48.	Shoppers.asp	This module lists all shoppers registered in the system according to various criteria.
49.	Status_change.asp	This module is used to change the status of the store from Open to Closed or vice versa.
50.	Sys_error.asp	This module displays a default error message.
51.	Xt_mail.asp	This module generates an e-mail message using the information entered in the mail.asp form.

Module No.	Module Name	Description
52.	Xt_product_delete.asp	This module deletes the selected product and all its associated entities from the database.
53.	Xt_receipt_pay.asp	This module changes the status of an order from unpaid to paid and then creates a purchased product record for each item purchased through the order.
54.	Xt_shopper_delete.asp	This module deletes the selected shopper and all its associated entities from the database.
55.	auth_Include.asp	This module checks the whether the user is allowed to access the module, and if not, outputs an error message.
56.	date_args2var.asp	This module retrieves the month and year from the calling module or otherwise sets the values to the current month and year.
57.	date_args2var2.asp	This module retrieves the month, year and other variables from the calling module. If some variables are not passed when required, the variables are set to default values.
58.	DSN_Include.asp	This module contains VB Script used for the database connection.
59.	Error.asp	This module is used to present an error message to the store manager
60.	list.asp	This module lists the contents of a query with navigation arrows between pages of the list.
61.	list_column.asp	This module lists the column headers for the items listed in List.asp

Module No.	Module Name	Description
62.	list_no_rows.asp	This module displays a message in the case of there not being any items to list in a selected list.
63.	list_row.asp	This module lists the row items for the selected list.
64.	manager.asp	This module defines all the variables necessary to connect to the database and creates instances of objects necessary for most modules.
65.	mgmt_define.asp	This module sets values to variables necessary for the HTML links in the store manager interface
66.	mgmt_footer.asp	This module outputs the standard page footer for the Store Manager HTML pages.
67.	mgmt_header.asp	This module outputs a standard page header for the Store Manager HTML pages
68.	mgmt_style.asp	This module defines an HTML style for all the Store Manager HTML pages.
69.	picker_group.asp	This module outputs a drop down HTML form list allowing the user to select a group to which to send a mail message.
70.	picker_month.asp	This module outputs a drop down HTML form list containing the months of the year.
71.	picker_month2.asp	This module outputs a drop down HTML form list containing the months of the year including the option to select all the months of the year.

Module No.	Module Name	Description
72.	picker_page.asp	This module outputs a drop down HTML form list allowing the user to select an HTML page for which to view events.
73.	picker_product.asp	This module outputs a drop down HTML form list allowing the user to select a system product for which to view feedback items or purchases.
74.	picker_year.asp	This module outputs a drop down HTML form list containing the years from 1997 to 2003.
75.	picker_year2.asp	This module outputs a drop down HTML form list containing the years from 1997 to 2003 as well as the option to select all the years in the list.

3 User Interface Application Diagram

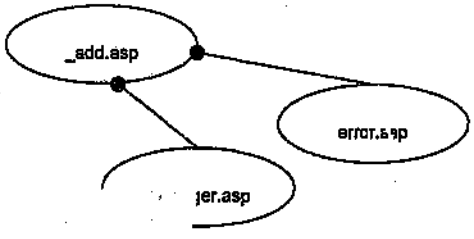


4 _add.asp

4.1 Purpose

This module is a generic module used to add database items to the database table. The module first checks that the values received from a web form are within the required ranges and then creates a new record in the respective database table.

4.2 Module diagram



4.3 Module Interface

Table 3.1: A description of all inputs to and outputs from the module

_add.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
The type of data being inserted	D	The calling module			
Input values	D	The calling module	D		
Relevant database table	D	Database	D	Database	The verified data.
Destination module	D	Calling form	E	Destination module	Calling of the module

_add.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
SKU	D	Calling form	D	Destination module	SKU
Shopper_id		Calling form	D	Destination module	Shopper_id

4.4 Comments

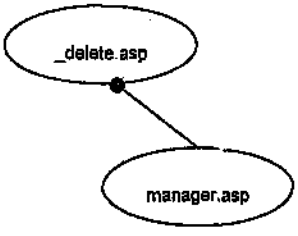
None

5 _delete.asp

5.1 Purpose

This module is a generic module used to delete records from a database table.

5.2 Module diagram



5.3 Module interface

Table 3.1: A description of all inputs to and outputs from the module

_delete.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
The type of record being deleted	D	The calling module			
The unique key identifying the record to be deleted	D	The calling module			
The record to be deleted	D	database	E	Database	The deletion of the record in the database.
Destination module	D	Calling module	E	Calling of the module	Destination module

_delete.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
SKU	D	Calling module	D	Destination module	SKU
Shopper_id	D	Calling module	D	Destination module	Shopper_id

5.4 Comments

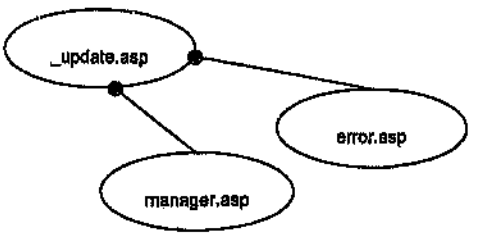
None

6 _update.asp

6.1 Purpose

This module is a generic module used to update a record in a database with the values passed to the module.

6.2 Module diagram



6.3 Module interface

Table 3.1: A description of all inputs to and outputs from the module

_update.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
The type of data being updated	D	The calling module			
Input values	D	The calling module			
The unique key identifying the record to be updated	D	The calling module			
Relevant database record	D	Database	D	Database	The updated data.

_update.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Destination module	D	Calling form	E	Calling of the module	Destination module
SKU	D	Calling form	D	Destination module	SKU
Shopper_id	D	Calling form	D	Destination module	Shopper_id
Purchase_id	D	Calling form	D	Destination module	Purchase_id

6.4 Comments

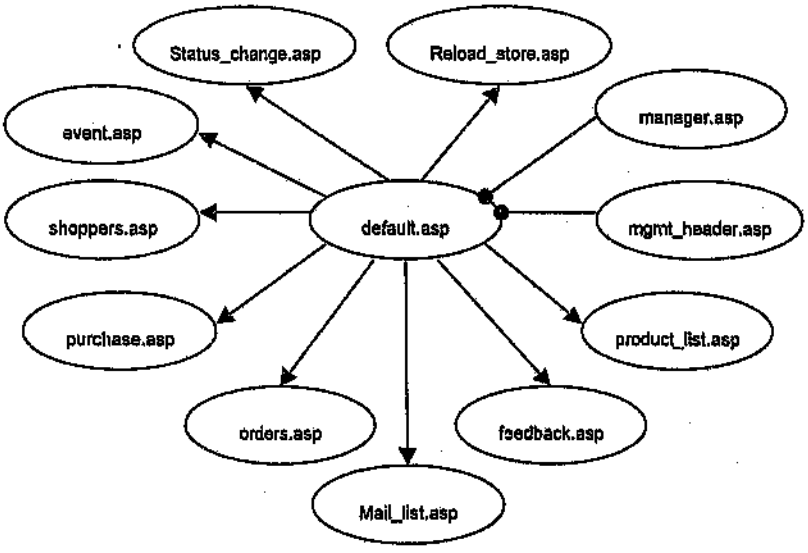
None

7 Default.asp

7.1 Purpose

This is the default module called when the store manager access the IS4 manager interface. The module sets default values for the store and presents a main menu to the store manager.

7.2 Module diagram



7.3 Module interface

Table 3.1: A description of all inputs to and outputs from the module

Default.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Module being called	E	Manager loading the Interface	D	Web browser	The main menu
Selection of	E	User	E	The calling	The

Default.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
a menu Item		selection		of the module	selected module

7.4 Comments

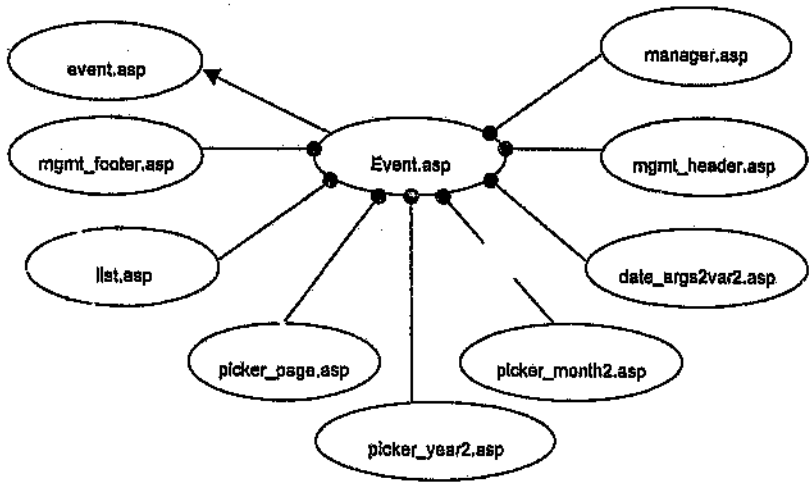
None

8 Event.asp

8.1 Purpose

This module lists all the events logged for the store according to various criteria. The manager can select criteria such as which events to list, the time period for which to list events and the order in which to sort the events.

8.2 Module diagram



8.3 Module Interface

Table 3.1: A description of all inputs to and outputs from the module

Event.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Module being called	E	The calling module	D	Web browser	The events list
Year	D	Manager			

Event.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
		selection			
Month	D	Manager selection			
Pages	D	Manager selection			
Sort order	D	Manager selection			
Whether or not the user must be logged in	D	Manager selection			
List of events	D	Database			
Update	E	User selection	E	Calling of the module	Event.asp
			D	Event.asp	The list of events based on the required criteria.
The required shopper	E	Manager selection	E	Calling of the module	Shopper_view.asp
			D	Shopper_view.asp	The shopper_id

8.4 Comments

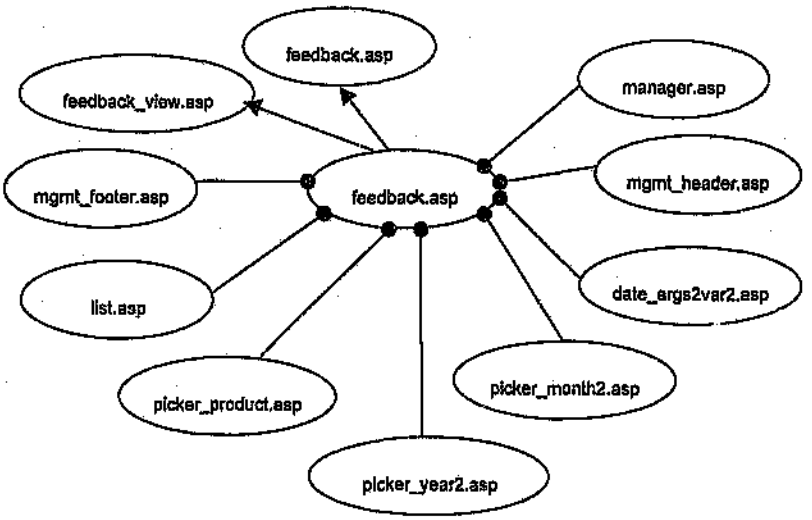
None

9 Feedback.asp

9.1 Purpose

This module lists all the feedback received by the store manager according to various criteria. The user can select for which time period to view feedback as well as for which product. The sort order can also be specified.

9.2 Module diagram



9.3 Module interface

Table 3.1: A description of all inputs to and outputs from the module

Feedback.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Module being called	E	The calling module	D	Web browser	The list of feedback items.

Feedback.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Year	D	Manager selection			
Month	D	Manager selection			
Product	D	Manager selection			
Sort order	D	Manager selection			
Feedback Items	D	Database			
Update	E	User selection	E	Calling of the module	Feedback.asp
			D	feedback.asp	The updated list of feedback items based on the selected criteria
The required feedback item	E	Manager selection	E	Calling of the module	Feedback_view.asp
			D	feedback_view.asp	The feedback_id

9.4 Comments

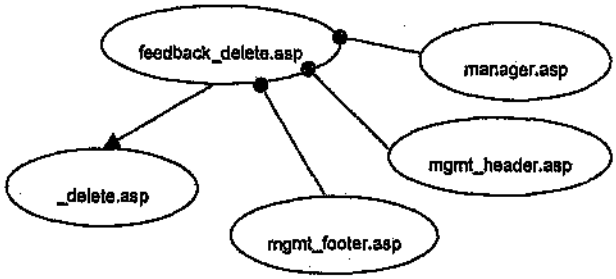
None

10 Feedback_delete.asp

10.1 Purpose

This module is used to output a confirmation prompt as to whether the user wishes to delete the selected feedback item.

10.2 Module diagram



10.3 Module interface

Table 3.1: A description of all inputs to and outputs from the module

Feedback_delete.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Module being called	E	The calling module	D	Web browser	The deletion prompt.
The feedback ID	D	The calling module			
User selecting to delete	E	User selection	E	_delete.asp	Calling of the module
			D	_delete.asp	The feedback ID
			D	_delete.asp	The deletion type (feedback)

Feedback_delete.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
			D	_delete.asp	The destination module after deletion.

10.4 Comments

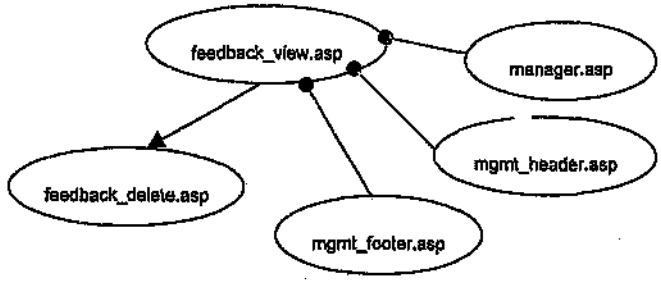
None

11 Feedback_view.asp

11.1 Purpose

This module is used to display all the details of a selected feedback item.

11.2 Module diagram



11.3 Module interface

Table 3.1: A description of all inputs to and outputs from the module

Feedback_view.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Module being called	E	The calling module	D	Web browser	The feedback details page
Feedback ID	D	The calling module			
Feedback details	D	Database	D	The feedback details page.	The feedback details
Delete button	E	User selection	E	Feedback_delete.asp	Calling of the module

Feedback_view.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
			D	Feedback_delete.asp	The feedback ID

11.4 Comments

None

12 Global.asa

12.1 Purpose

This module defines the global variables and creates the global objects for the application. Every ASP-based application has one Global.asa file. (The file name extension .asa stands for "Active Server Application.") This file is stored in the root directory of the application. The file is used to specify event scripts and to declare objects that have either session or application scope.

12.2 Module diagram



12.3 Module interface

Table 12.1: A description of all inputs to and outputs from the module

Global.asa					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
			D	Memory	The components are created in memory

12.4 Comments

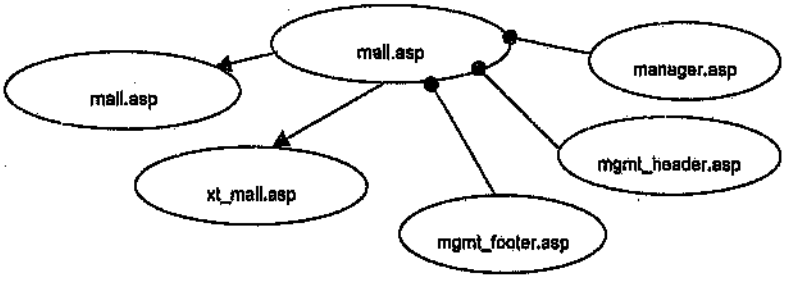
None

13 Mail.asp

13.1 Purpose

This module presents a form to the store manager allowing him to input an e-mail message to be sent to a selected group of shoppers.

13.2 Module diagram



13.3 Module interface

Table 3.1: A description of all inputs to and outputs from the module

Mail.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Calling of the module	E	The calling module	D	Web browser	The mail form
Error messages	D	Xt_mail.asp	D	Mail form	The error message
The list of system products	D	Database	D	Mail form	A list of available products
Group to mail to	D	User selection			
Message subject	D	User input			

Mail.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Message text	D	User Input			
Submission of the message	E	User selection	E	Xt_mail.asp	Calling of the module
			D	Xt_mail.asp	Mail contents and options.

13.4 Comments

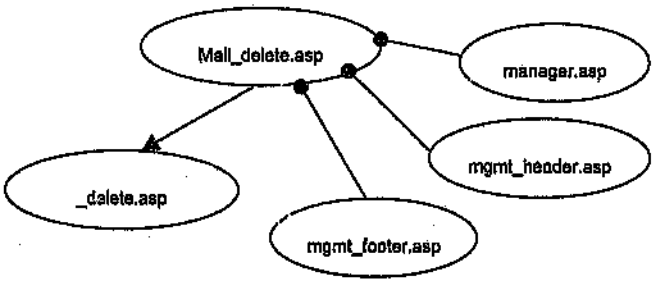
None

14 Mail_delete.asp

14.1 Purpose

This module is used to output a confirmation prompt as to whether the user wishes to delete the selected mail item.

14.2 Module diagram



14.3 Module interface

Table 3.1: A description of all inputs to and outputs from the module

Mail_delete.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Module being called	E	The calling module	D	Web browser	The deletion prompt.
The message ID	D	The calling module			
User selecting to delete	E	User selection	E	_delete.asp	Calling of the module
			D	_delete.asp	The message ID
			D	_delete.asp	The deletion type (mail)

Mail_delete.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
			D	_delete.asp	The destination module after deletion.

14.4 Comments

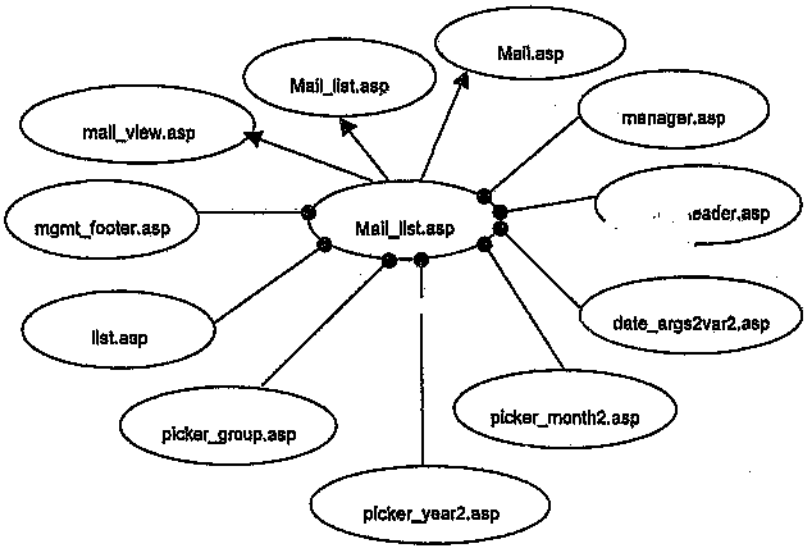
None

15 Mail_list.asp

15.1 Purpose

This module lists all the mail sent by the store manager according to various criteria. The user can select for which time period to view mail as well as for which mail list group. The sort order can also be specified.

15.2 Module diagram



15.3 Module interface

Table 3.1: A description of all inputs to and outputs from the module

Mail_list.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Module being called	E	The calling module	O	Web browser	The list of mail items.

Mail_list.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Year	D	Manager selection			
Month	D	Manager selection			
Group	D	Manager selection			
Sort order	D	Manager selection			
Mail items	D	Database			
Update	E	User selection	E	Calling of the module	Mail_list.asp
			D	Mail_list.asp	The updated list of mail items based on the selected criteria
The required mail item	E	Manager selection	E	Calling of the module	mail_view.asp
			D	mail_view.asp	The mail_id
Composition of a new message	E	Manager selection	E	Calling of the module	Mail.asp

15.4 Comments

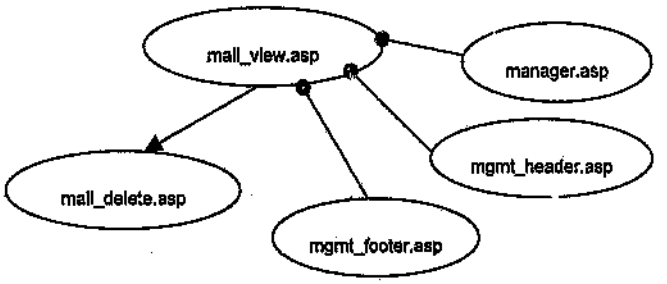
None

16 Mail_view.asp

16.1 Purpose

This module is used to display all the details of a selected mail item.

16.2 Module diagram



16.3 Module interface

Table 3.1: A description of all inputs to and outputs from the module

Mail_view.asp					
Input			Output		
Level	Nature	Source	Nature	Destination	Label
Module being called	E	The calling module	D	Web browser	The mail details page
Mail ID	D	The calling module			
Mail details	D	Database	D	The mail details page.	The mail details
Delete button	E	User selection	E	Mail_delete.asp	Calling of the module
			D	mail_delete.asp	The mail ID

16.4 Comments

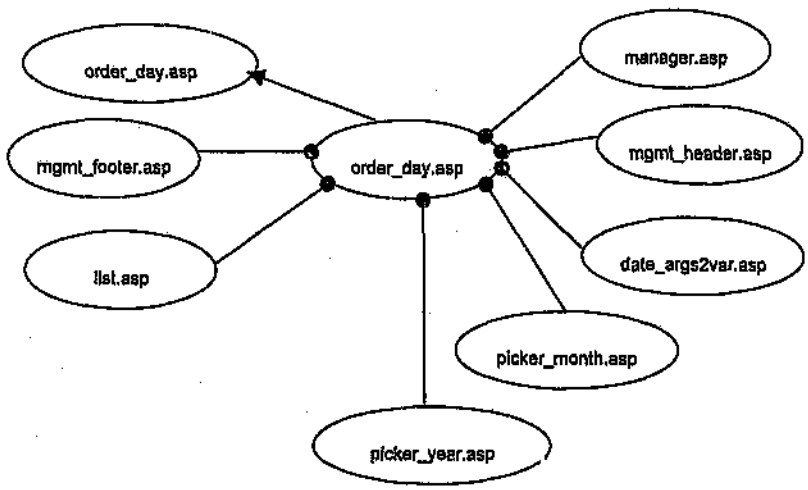
None

17 Order_day.asp

17.1 Purpose

This module lists daily statistics for orders received during a particular month.

17.2 Module diagram



17.3 Module Interface

Table 3.1: A description of all inputs to and outputs from the module

Order_day.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Module being called	E	The calling module			
Orders	D	Database	D	Web browser	The daily breakdown of orders for

Order_day.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
					the month.
Year	D	Manager selection			
Month	D	Manager selection			
Orders	D	Database			
Update	E	User selection	E	Calling of the module	Order_day.asp
			D	Order_day.asp	The daily breakdown of orders for the selected month.

17.4 Comments

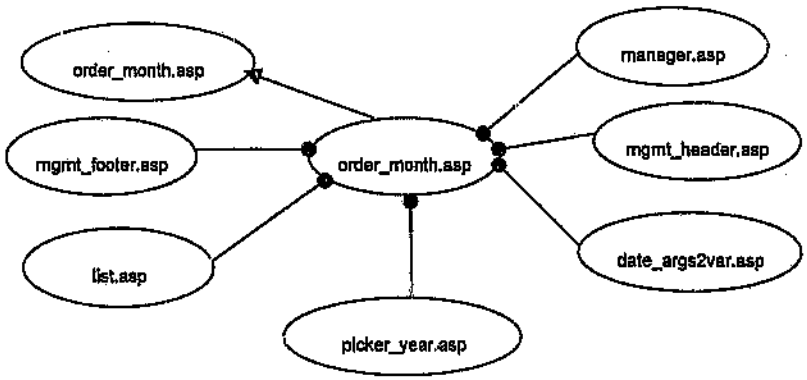
None

18 Order_month.asp

18.1 Purpose

This module lists monthly statistics for orders received during a particular year.

18.2 Module diagram



18.3 Module interface

Table 3.1: A description of all inputs to and outputs from the module

Order_month.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Module being called	E	The calling module			
Orders	D	Database	D	Web browser	The monthly breakdown of orders for the year.
Year	D	Manager selection			
Orders	D	Database			

Order_month.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Update	E	User selection	E	Calling of the module	Order_month.asp
			D	Order_month.asp	The monthly breakdown of orders for the selected year.

18.4 Comments

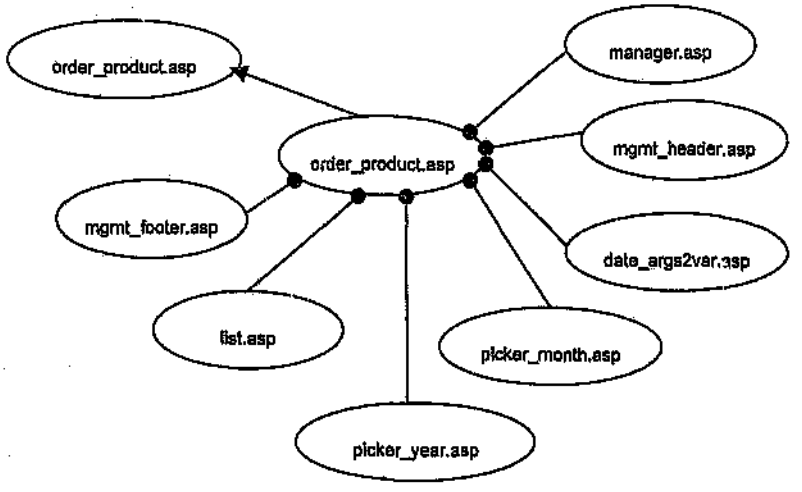
None

19 Order_product.asp

19.1 Purpose

This module lists statistics for orders received according to the different products. The user can select for which time period to view orders.

19.2 Module diagram



19.3 Module interface

Table 3.1: A description of all inputs to and outputs from the module

Order_product.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Module being called	E	The calling module	D	Web browser	The breakdown of orders for the different products.

Order_product.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Month	D	Manager selection			
Year	D	Manager selection			
Orders	D	Database			
Update	E	User selection	E	Calling of the module	Order_product.asp
			D	Order_product.asp	The breakdown of orders for the different products.

19.4 Comments

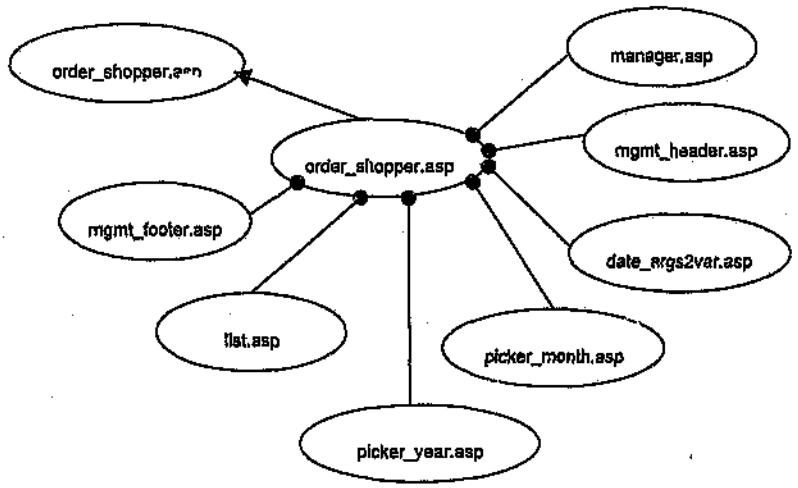
None

20 Order_shopper.asp

20.1 Purpose

This module lists statistics for orders received according to the different shoppers. The user can select for which time period to view orders.

20.2 Module diagram



20.3 Module interface

Table 3.1: A description of all inputs to and outputs from the module

Order_shopper.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Module being called	E	The calling module	D	Web browser	The breakdown of orders for the different shoppers.
Month	D	Manager selection			

Order_shopper.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Year	D	Manager selection			
Orders	D	Database			
Update	E	User selection	E	Calling of the module	Order_shopper.asp
			D	Order_shopper .asp	The breakdown of orders for the different shoppers.

20.4 Comments

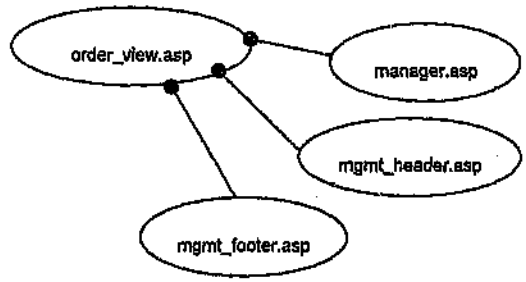
None

21 Order_view.asp

21.1 Purpose

This module is used to display all the details of a selected order.

21.2 Module diagram



21.3 Module interface

Table 3.1: A description of all inputs to and outputs from the module

Order_view.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Module being called	E	The calling module	D	Web browser	The order details page
Order ID	D	The calling module			
Order details	D	Database	D	The order details page.	The order details

21.4 Comments

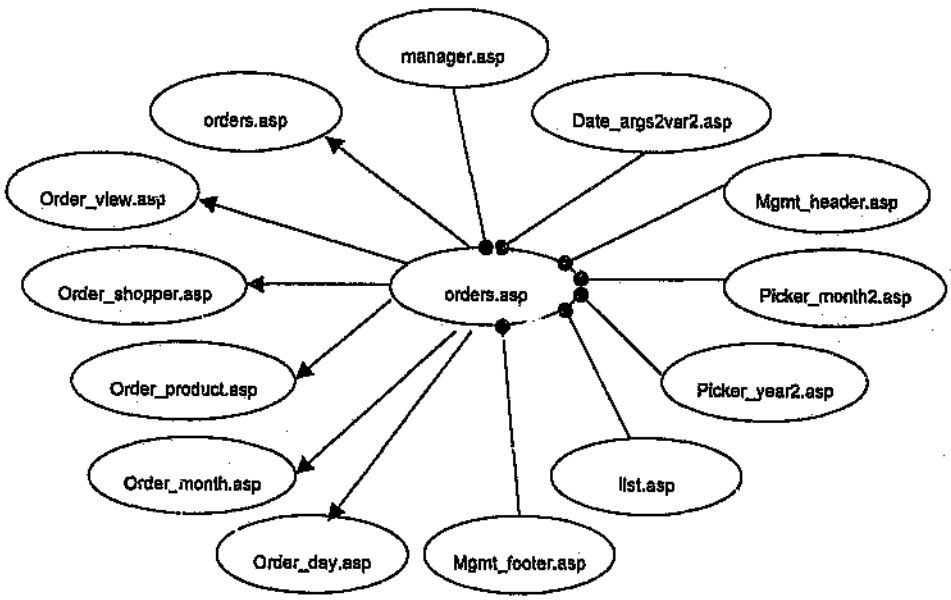
None

22 Orders.asp

22.1 Purpose

This module lists all the orders received by the store manager according to various criteria. The user can select for which time period to view orders and can specify the sort order.

22.2 Module diagram



22.3 Module interface

Table 3.1: A description of all inputs to and outputs from the module

Orders.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Module being called	E	The calling module	D	Web browser	The list of orders.
Year	D	Manager			

Orders.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
		selection			
Month	D	Manager selection			
Sort order	D	Manager selection			
Orders	D	Database			
Update	E	User selection	E	Calling of the module	Orders.asp
			D	Orders.asp	The updated list of orders based on the selected criteria
The required order	E	Manager selection	E	Calling of the module	Order_view.asp
			D	order_view.asp	The order ID
Orders by day/month/shopper/product	E	Manager Selection	E	Calling of the module	Order_day/month/product/shopper.asp

22.4 Comments

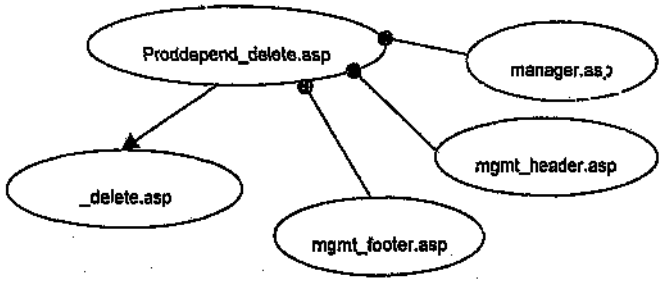
None

23 Proddepend_delete.asp

23.1 Purpose

This module is used to output a confirmation prompt as to whether the user wishes to delete the selected dependency item.

23.2 Module diagram



23.3 Module interface

Table 3.1: A description of all inputs to and outputs from the module

Proddepend_delete.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Module being called	E	The calling module	D	Web browser	The deletion prompt.
The dependency ID	D	The calling module			
User selecting to delete	E	User selection	E	Calling of the module	_delete.asp
			D	_delete.asp	The dependecy ID
			D	_delete.asp	The deletion type (dependency)

Proddepend_delete.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
			D	_delete.asp	The destination module after deletion.

23.4 Comments

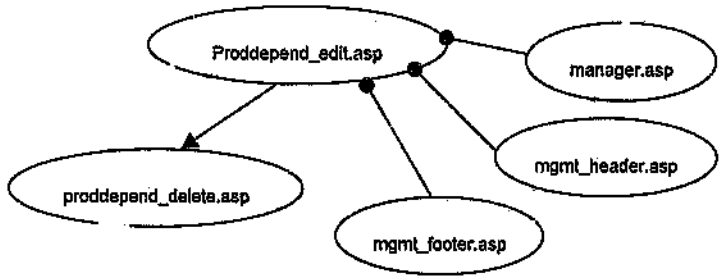
None

24 Proddepend_edit.asp

24.1 Purpose

This module is used to display all the details of a selected dependency item and to allow the manager to edit the dependency details.

24.2 Module diagram



24.3 Module interface

Table 3.1: A description of all inputs to and outputs from the module

Proddepend_edit.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Module being called	E	The calling module	D	Web browser	The product dependency form
Dependency ID	D	The calling module			
Dependency details	D	Database			
Dependency Product details	D	Database	D	The dependency details page.	The dependency details
Delete button	E	User selection	E	proddepend_delete.asp	Calling of the module

Proddepend_edit.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
			D	proddepend_delete.asp	The dependency ID

24.4 Comments

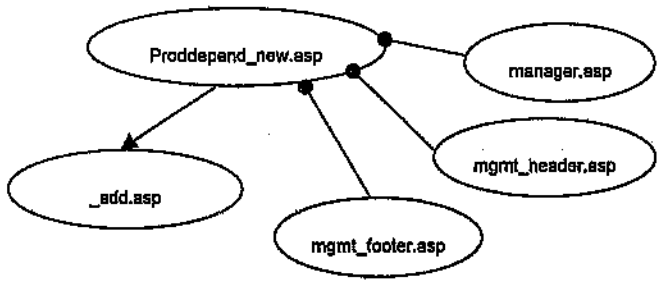
None

25 Proddepend_new.asp

25.1 Purpose

This module presents a drop down list to the store manager containing all the products in the store. The manager can select from the list a dependency for the current product being viewed.

25.2 Module diagram



25.3 Module interface

Table 3.1: A description of all inputs to and outputs from the module

Proddepend_new.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Calling of the module	E	The calling module	D	Web browser	The dependency form
The product for which a dependency is being added	D	The calling module			
The list of system products	D	Database	D	Dependency form	The list of products
Dependency	D	User selection			

Proddepend_new.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Add Dependency	E	User selection	E	Calling of the module	_add.asp
			D	_add.asp	Dependency details
			D	_add.asp	The add type (dependency)
			D	_add.asp	The destination module after addition.

25.4 Comments

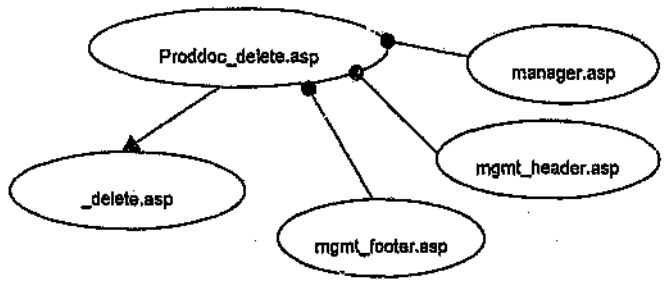
None

26 Proddoc_delete.asp

26.1 Purpose

This module is used to output a confirmation prompt as to whether the user wishes to delete the selected document item.

26.2 Module diagram



26.3 Module interface

Table 3.1: A description of all inputs to and outputs from the module

Proddoc_delete.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Module being called	E	The calling module	D	Web browser	The deletion prompt.
The document ID	D	The calling module			
User selecting to delete	E	User selection	E	Calling of the module	_delete.asp
			D	_delete.asp	The document ID
			D	_delete.asp	The deletion type (document)

Proddoc_delete.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
			D	_delete.asp	The destination module after deletion.

26.4 Comments

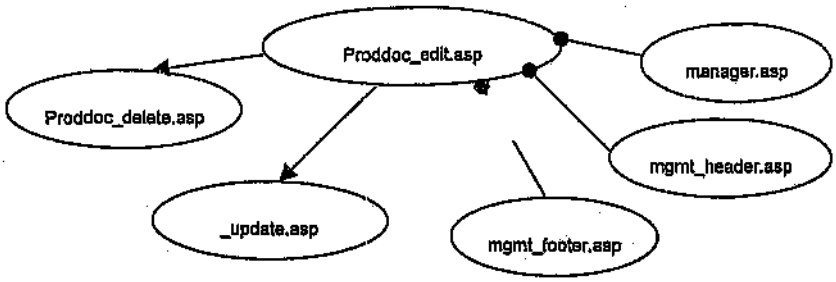
None

27 Proddoc_edit.asp

27.1 Purpose

This module is used to display all the details of a selected document item and to allow the manager to edit the document details.

27.2 Module diagram



27.3 Module interface

Table 3.1: A description of all inputs to and outputs from the module

Prodddoc_edit.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Module being called	E	The calling module	D	Web browser	The product document form
Document ID	D	The calling module			
Document details	D	Database	D	The document details form.	The document details
Modifications to the information	D	User input	D	The document details form	The modified information
Update button	E	User selection	E	Calling of the module	_update.asp

Prodddoc_edit.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
			D	_update.asp	Updated document information
			D	_update.asp	The document ID
			D	_update.asp	The update type (document)
			D	_update.asp	The destination module after updating.
Delete button	E	User selection	E	Calling of the module	Proddoc_delete.asp
			D	proddoc_delete.asp	The document ID

27.4 Comments

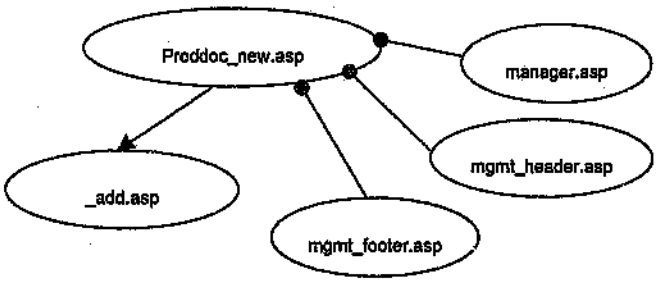
None

28 Proddoc_new.asp

28.1 Purpose

This module presents a form to the store manager allowing him to input information for a new product document.

28.2 Module diagram



28.3 Module interface

Table 3.1: A description of all inputs to and outputs from the module

Proddoc_new.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Calling of the module	E	The calling module	D	Web browser	The document form
The product for which a document is being added	D	The calling module			
Document information	D	User input	D	The document details form	The new information
Add	E	User	E	Calling of the	_add.asp

Proddoc_new.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Document		selection		module	
			D	_add.asp	Document details
			D	_add.asp	The add type (document)
			D	_add.asp	The destination module after addition.

28.4 Comments

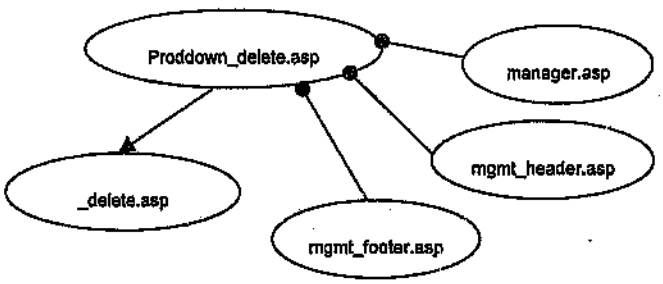
None

29 Proddown_delete.asp

29.1 Purpose

This module is used to output a confirmation prompt as to whether the user wishes to delete the selected download item.

29.2 Module diagram



29.3 Module interface

Table 3.1: A description of all inputs to and outputs from the module

Proddown_delete.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Module being called	E	The calling module	D	Web browser	The deletion prompt.
The download ID	D	The calling module			
User selecting to delete	E	User selection	E	Calling of the module	_delete.asp
			D	_delete.asp	The download ID
			D	_delete.asp	The deletion type

Proddown_delete.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
					(download)
			D	_delete.asp	The destination module after deletion.

29.4 Comments

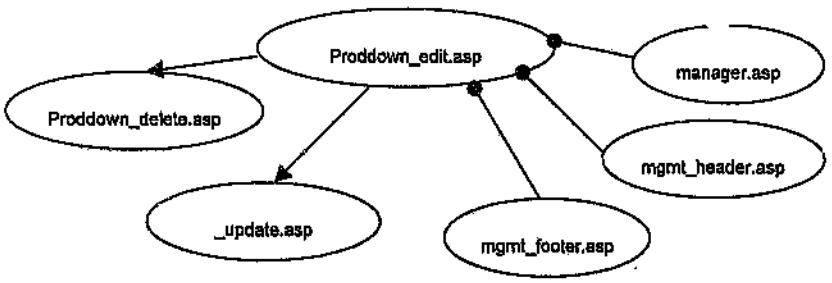
None

30 Proddown_edit.asp

30.1 Purpose

This module is used to display all the details of a selected download item and to allow the manager to edit the download item details.

30.2 Module diagram



30.3 Module interface

Table 3.1: A description of all inputs to and outputs from the module

Proddown_edit.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Module being called	E	The calling module	D	Web browser	The product download item form
Download ID	D	The calling module			
Download details	D	Database	D	The download details form.	The download details
Modifications to the information	D	User Input	D	The download details form	The modified information
Update button	E	User selection	E	Calling of the module	_update.asp

Proddown_edit.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
			D	_update.asp	Updated download information
			D	_update.asp	The download ID
			D	_update.asp	The update type (download)
			D	_update.asp	The destination module after updating.
Delete button	E	User selection	E	Calling of the module	Proddown_delete.asp
			D	Proddown_delete.asp	The download ID

30.4 Comments

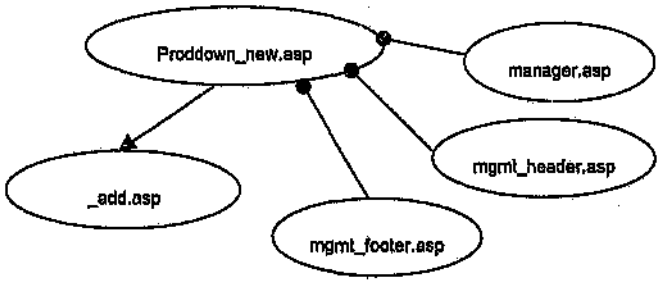
None

31 Proddown_new.asp

31.1 Purpose

This module presents a form to the store manager allowing him to input information for a new product download item.

31.2 Module diagram



31.3 Module interface

Table 3.1: A description of all inputs to and outputs from the module

Proddown_new.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Calling of the module	E	The calling module	D	Web browser	The download form
The product for which a download is being added	D	The calling module			
Download Information	D	User input	D	The download details form	The new information
Add Download	E	User selection	E	Calling of the module	_add.asp

Proddown_new.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
			D	_add.asp	Download details
			D	_add.asp	The add type (download)
			D	_add.asp	The destination module after addition.

31.4 Comments

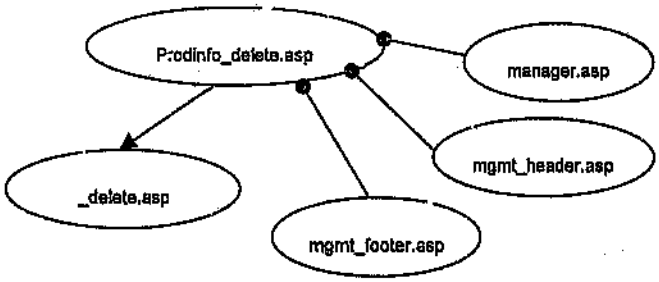
None

32 Prodinfo_delete.asp

32.1 Purpose

This module is used to output a confirmation prompt as to whether the user wishes to delete the selected information item.

32.2 Module diagram



32.3 Module interface

Table 3.1: A description of all inputs to and outputs from the module

Prodinfo_delete.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Module being called	E	The calling module	D	Web browser	The deletion prompt.
The Information ID	D	The calling module			
User selecting to delete	E	User selection	E	Calling of the module	_delete.asp
			D	_delete.asp	The Information ID
			D	_delete.asp	The deletion

ProdInfo_delete.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
					type (information)
			D	_delete.asp	The destination module after deletion.

32.4 Comments

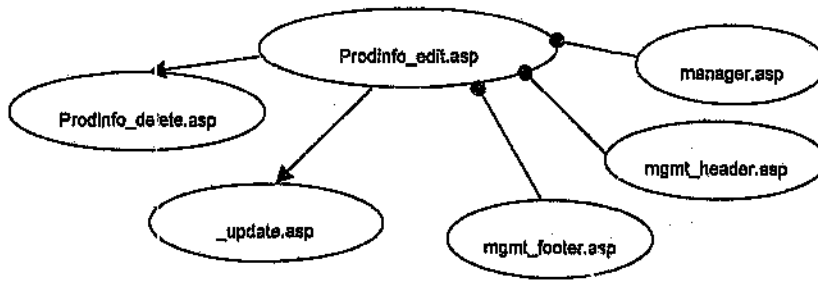
None

33 Prodinfo_edit.asp

33.1 Purpose

This module is used to display all the details of a selected information item and to allow the manager to edit the information item details.

33.2 Module diagram



33.3 Module interface

Table 3.1: A description of all inputs to and outputs from the module

Prodinfo_edit.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Module being called	E	The calling module	D	Web browser	The product information item form
Information ID	D	The calling module			
Information item details	D	Database	D	The information details form.	The information details
Modifications to the information	D	User input	D	The information details form	The modified information
Update	E	User	E	Calling of the	_update.asp

Prodinfo_edit.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
button		selection		module	
			D	_update.asp	Updated Information
			D	_update.asp	The information ID
			D	_update.asp	The update type (information)
			D	_update.asp	The destination module after updating.
Delete button	E	User selection	E	Calling of the module	Prodinfo_delete.asp
			D	Prodinfo_delete.asp	The information ID

33.4 Comments

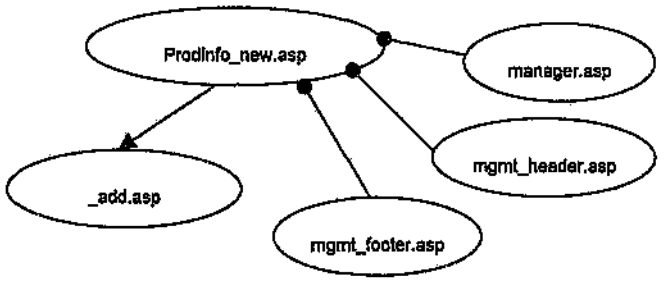
None

34 ProdInfo_new.asp

34.1 Purpose

This module presents a form to the store manager allowing him to input information for a new product information item.

34.2 Module diagram



34.3 Module interface

Table 3.1: A description of all inputs to and outputs from the module

ProdInfo_new.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Calling of the module	E	The calling module	D	Web browser	The information item form
The product for which an information item is being added	D	The calling module			
Product information	D	User input	D	The information details form	The new information
Add	E	User	E	Calling of the	_add.asp

ProdInfo_new.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Information		selection		module	
			D	_add.asp	Information item details
			D	_add.asp	The add type (information)
			D	_add.asp	The destination module after addition.

34.4 Comments

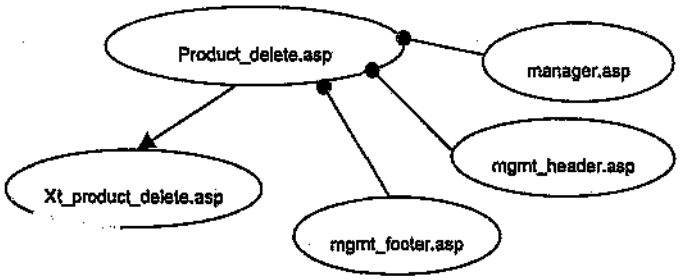
None

35 Product_delete.asp

35.1 Purpose

This module is used to output a confirmation prompt as to whether the user wishes to delete the selected product.

35.2 Module diagram



35.3 Module interface

Table 3.1: A description of all inputs to and outputs from the module

Product_delete.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Module being called	E	The calling module	D	Web browser	The deletion prompt.
The product ID	D	The calling module			
User selecting to delete	E	User selection	E	Calling of the module	Xt_product_delete.asp
			D	Xt_product_delete.asp	The product ID

35.4 Comments

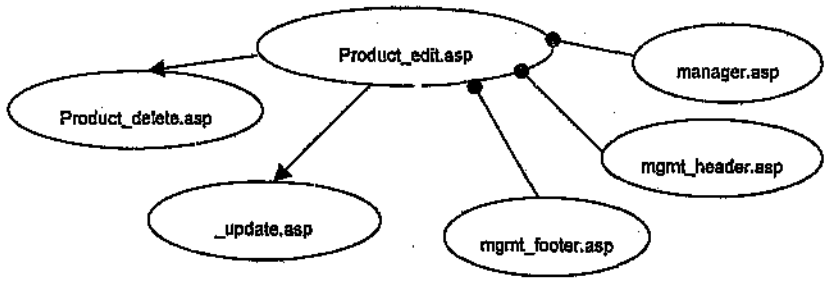
None

36 Product_edit.asp

36.1 Purpose

This module is used to display all the details of a selected product and to allow the manager to edit the product details. The manager is also presented with a button allowing him to delete the product.

36.2 Module diagram



36.3 Module interface

Table 3.1: A description of all inputs to and outputs from the module

Product_edit.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Module being called	E	The calling module	D	Web browser	The product details form
Product ID	D	The calling module			
Product details	D	Database	D	The product details form.	The product details
Modifications to the product details	D	User input	D	The product details form	The modified information
Update button	E	User selection	E	Calling of the module	_update.asp

Product_edit.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
			D	_update.asp	Updated product details
			D	_update.asp	The product ID
			D	_update.asp	The update type (product)
			D	_update.asp	The destination module after updating.
Delete button	E	User selection	E	Calling of the module	Product_delete.asp
			D	Product_delete.asp	The product ID

36.4 Comments

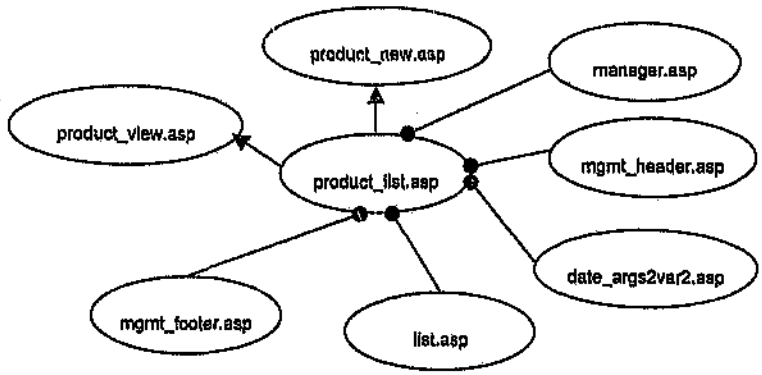
None

37 Product_list.asp

37.1 Purpose

This module lists all the products in the system according to various criteria.

37.2 Module diagram



37.3 Module interface

Table 3.1: A description of all inputs to and outputs from the module

Product_list.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Module being called	E	The calling module	D	Web browser	The list of products.
Sort order	D	Manager selection			
Product details	D	Database			
Update	E	User selection	E	Calling of the module	Product_list.asp
			D	Product_list.asp	The updated list of products

Product_list.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
					based on the selected criteria
The required product	E	Manager selection	E	Calling of the module	Product_view.asp
			D	Product_view.asp	The product ID
Add a new product	E	Manager selection	E	Calling of the module	Product_new.asp

37.4 Comments

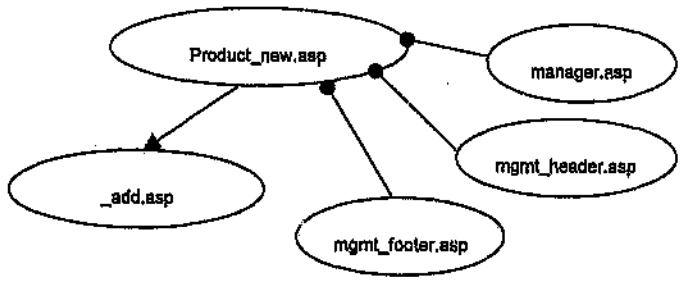
None

38 Product_new.asp

38.1 Purpose

This module presents a form to the store manager allowing him to input information for a new product.

38.2 Module diagram



38.3 Module interface

Table 3.1: A description of all inputs to and outputs from the module

Product_new.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Calling of the module	E	The calling module	D	Web browser	The new product form
Product Information	D	User input	D	The product details form	The new product information
Add Product	E	User selection	E	Calling of the module	_add.asp
			D	_add.asp	New product details
			D	_add.asp	The add type (product)

Product_new.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
			D	_add.asp	The destination module after addition.

38.4 Comments

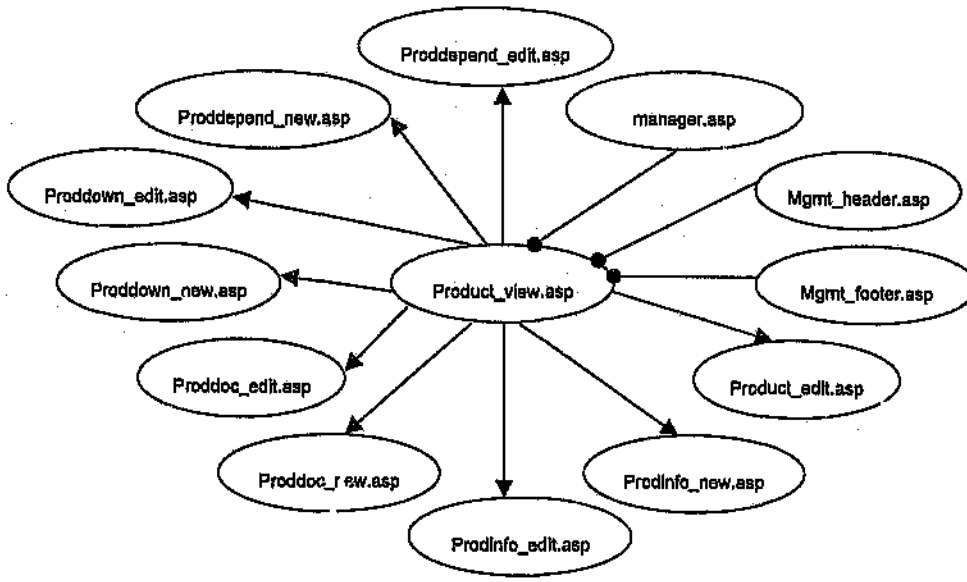
None

39 Product_view.asp

39.1 Purpose

This module is used to display all the details of a selected product. The module also lists the product's information items, docume ation items, downloads and dependencies.

39.2 Module diagram



39.3 Module interface

Table 3.1: A description of all inputs to and outputs from the module

Product_view.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Module	E	The calling	D	Web browser	The product

Product_view.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
being called		module			details page
Product ID	D	The calling module			
Product details	D	Database	D	The product details page.	The product details
List of information items	D	Database	D	The product details page	The list of product information items
Add new information item	E	User selection	E	Calling of the module	ProdInfo_new.asp
			D	Prodinfo_new.asp	Product ID.
View information item	E	User selection	E	Calling of the module	ProdInfo_edit.asp
			D	Prodinfo_edit.asp	Information Item ID
List of document items	D	Database	D	The product details page	The list of product documents
Add new document	E	User selection	E	Calling of the module	Proddoc_new.asp
			D	Proddoc_new.asp	Product ID.
View document item details	E	User selection	E	Calling of the module	Proddoc_edit.asp
			D	Proddoc_edit.asp	Document Item ID
List of download items	D	Database	D	The product details page	The list of product downloads
Add new download	E	User selection	E	Calling of the module	Proddown_new.asp
			D	Proddown_ne	Product ID.

Product_view.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
				w.asp	
View download item details	E	User selection	E	Calling of the module	Proddown_edit.asp
			D	Proddown_edit.asp	Download item ID
List of dependencies	D	Database	D	The product details page	The list of product dependecies
Add new dependency	E	User selection	E	Calling of the module	Proddepend_new.asp
			D	Proddepend_new.asp	Product ID.
View dependency item details	E	User selection	E	Calling of the module	Proddepend_edit.asp
			D	Proddepend_edit.asp	Dependency item ID

39.4 Comments

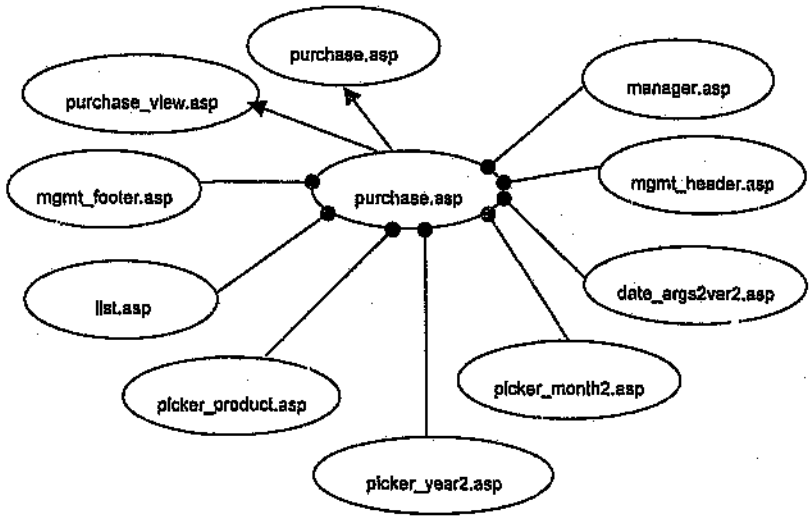
None

40 Purchase.asp

40.1 Purpose

This module lists all the purchased products according to various criteria. The user can select for which time period to view purchases, purchases of which products to list and can specify the sort order.

40.2 Module diagram



40.3 Module interface

Table 3.1: A description of all inputs to and outputs from the module

Purchase.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Module being called	E	The calling module	D	Web browser	The list of purchases.
Year	D	Manager selection			

Purchase.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Month	D	Manager selection			
Sort order	D	Manager selection			
Purchases	D	Database			
Update	E	User selection	E	Calling of the module	Purchase.asp
			D	Purchase.asp	The updated list of purchases based on the selected criteria
The required purchase	E	Manager selection	E	Calling of the module	Purchase_view.asp
			D	Purchase_view.asp	The purchase ID

40.4 Comments

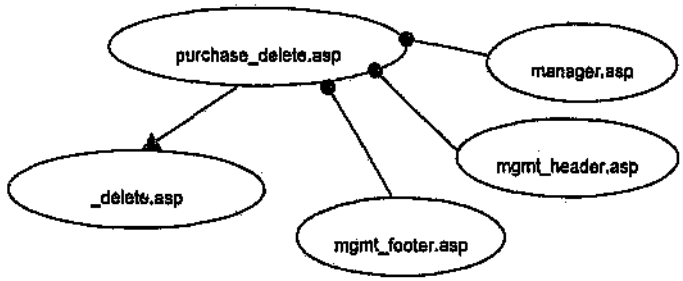
None

41 Purchase_delete.asp

41.1 Purpose

This module is used to output a confirmation prompt as to whether the user wishes to delete the selected purchase.

41.2 Module diagram



41.3 Module interface

Table 3.1: A description of all inputs to and outputs from the module

Purchase_delete.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Module being called	E	The calling module	D	Web browser	The deletion prompt.
The purchase ID	D	The calling module			
User selecting to delete	E	User selection	E	Calling of the module	_delete.asp
			D	_delete.asp	The purchase ID
			D	_delete.asp	The deletion type

Purchase_delete.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
					(purchase)
			D	_delete.asp	The destination module after deletion.

41.4 Comments

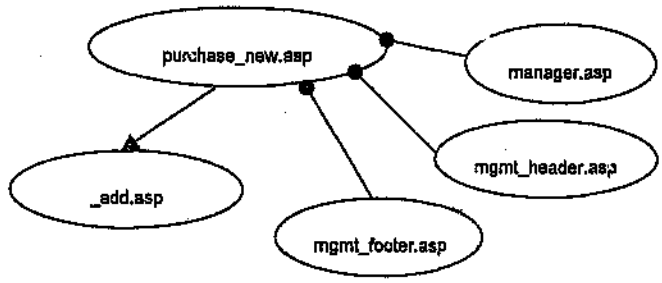
None

42 Purchase_new.asp

42.1 Purpose

This module presents a drop down list to the store manager containing all the products in the store. The manager can select from the list a product purchase for the current shopper being viewed.

42.2 Module diagram



42.3 Module interface

Table 3.1: A description of all inputs to and outputs from the module

Purchase_new.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Calling of the module	E	The calling module	D	Web browser	The new purchase form
The shopper for which a purchase being added	D	The calling module			
The list of system products	D	Database	D	Purchase form	The list of products

Purchase_new.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Purchase	D	User selection			
Add Purchase	E	User selection	E	Calling of the module	_add.asp
			D	_add.asp	Purchase details
			D	_add.asp	The add type (purchase)
			D	_add.asp	The destination module after addition.

42.4 Comments

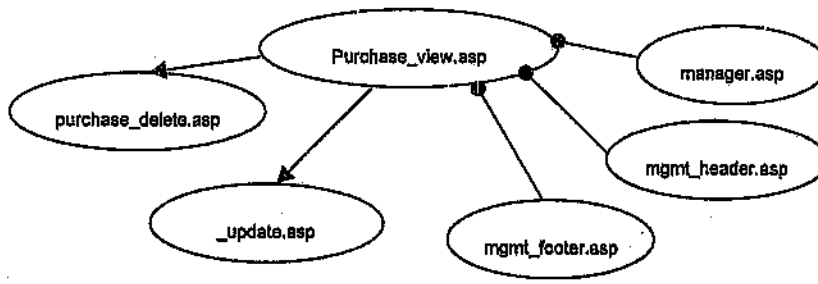
None

43 Purchase_view.asp

43.1 Purpose

This module is used to display all the details of a selected purchase and to allow the manager to edit selected purchase details.

43.2 Module diagram



43.3 Module interface

Table 3.1: A description of all inputs to and outputs from the module

Purchase_view.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Module being called	E	The calling module	D	Web browser	The purchase details form
Purchase ID	D	The calling module			
Purchase details	D	Database	D	The purchase details form.	The purchase details
Modifications to the purchase information	D	User Input	D	The purchase details form	The modified information

Purchase_view.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Update button	E	User selection	E	Calling of the module	_update.asp
			D	_update.asp	Updated information
			D	_update.asp	The purchase ID
			D	_update.asp	The update type (purchase)
			D	_update.asp	The destination module after updating.
Delete button	E	User selection	E	Calling of the module	Purchase_delete.asp
			D	Purchase_delete.asp	The purchase ID

43.4 Comments

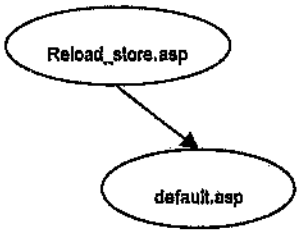
None

44 Reload_store.asp

44.1 Purpose

This module is used to reload the store manager for the current store in the user's web browser.

44.2 Module diagram



44.3 Module interface

Table 3.1: A description of all inputs to and outputs from the module

Reload_store.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Module being called	E	The calling module			
Store name	D	The calling module			
			E	Calling of the module	Default.asp

44.4 Comments

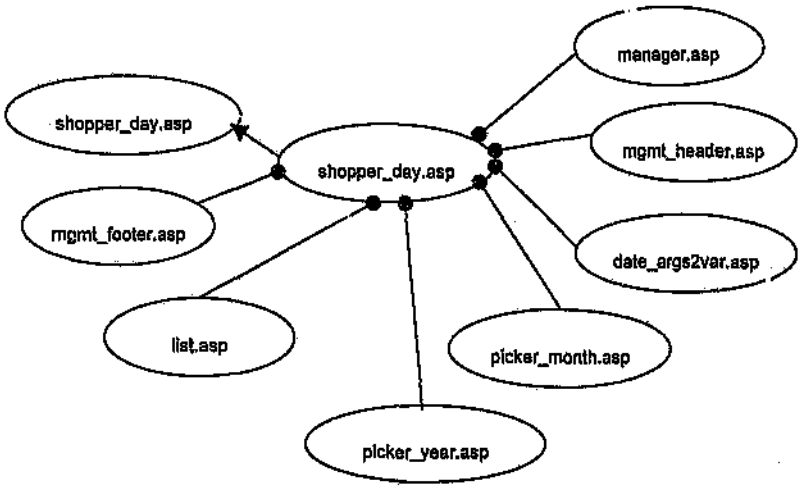
None

45 Shopper_day.asp

45.1 Purpose

This module lists the number of new shoppers that have registered in the system per day for a selected month.

45.2 Module diagram



45.3 Module interface

Table 3.1: A description of all inputs to and outputs from the module

Shopper_day.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Module being called	E	The calling module			
Shopper information	D	Database	D	Web browser	The daily breakdown of new shoppers for

Shopper_day.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
					the month.
Year	D	Manager selection			
Month	D	Manager selection			
Update	E	User selection	E	Calling of the module	Shopper_day.asp
			D	Shopper_day.asp	The daily breakdown of new shoppers for the selected month.

45.4 Comments

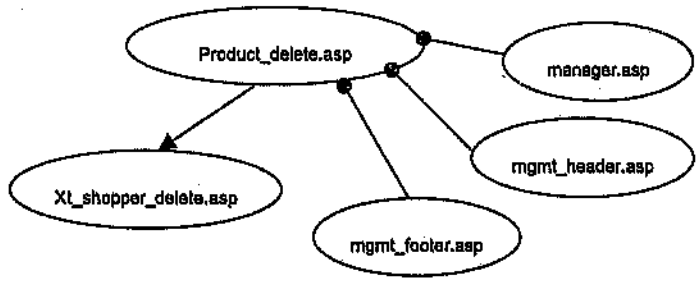
None

46 Shopper_delete.asp

46.1 Purpose

This module is used to output a confirmation prompt as to whether the user wishes to delete the selected shopper.

46.2 Module diagram



46.3 Module interface

Table 3.1: A description of all inputs to and outputs from the module

Shopper_delete.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Module being called	E	The calling module	D	Web browser	The deletion prompt.
The shopper ID	D	The calling module			
User selecting to delete	E	User selection	E	Calling of the module	Xt_shopper _delete.asp
			D	Xt_shopper_d elete.asp	The shopper ID

46.4 Comments

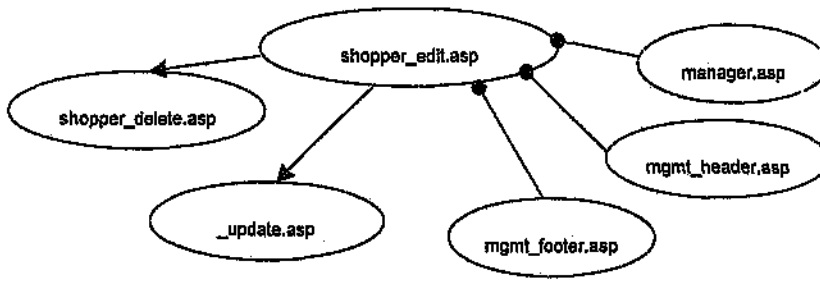
None

47 Shopper_edit.asp

47.1 Purpose

This module is used to display all the details of a selected shopper and to allow the manager to edit the shopper's details. The manager is also presented with a button allowing him to delete the shopper from the system.

47.2 Module diagram



47.3 Module Interface

Table 3.1: A description of all inputs to and outputs from the module

Shopper_edit.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Module being called	E	The calling module	D	Web browser	The shopper details form
Shopper ID	D	The calling module			
Shopper details	D	Database	D	The shopper details form.	The shopper details
Modifications to the shopper details	D	User Input	D	The shopper details form	The modified information

Shopper_edit.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Update button	E	User selection	E	Calling of the module	_update.asp
			D	_update.asp	Updated shopper details
			D	_update.asp	The shopper ID
			D	_update.asp	The update type (shopper)
			D	_update.asp	The destination module after updating.
Delete button	E	User selection	E	Calling of the module	Shopper_delete.asp
			D	Shopper_delete.asp	The shopper ID

47.4 Comments

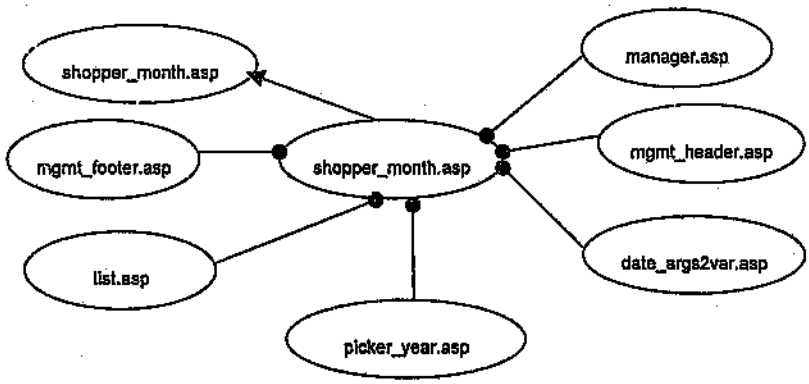
None

48 Shopper_month.asp

48.1 Purpose

This module lists monthly statistics for new shoppers joined during a particular year.

48.2 Module diagram



48.3 Module interface

Table 3.1: A description of all inputs to and outputs from the module

Shopper_month.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Module being called	E	The calling module			
Shopper Information	D	Database	D	Web browser	The monthly breakdown of new shoppers for the year.
Year	D	Manager selection			
Update	E	User selection	E	Calling of the	Shopper_m

Shopper_month.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
				module	onth.asp
			D	Shopper_month.asp	The monthly breakdown of new shoppers for the selected year.

48.4 Comments

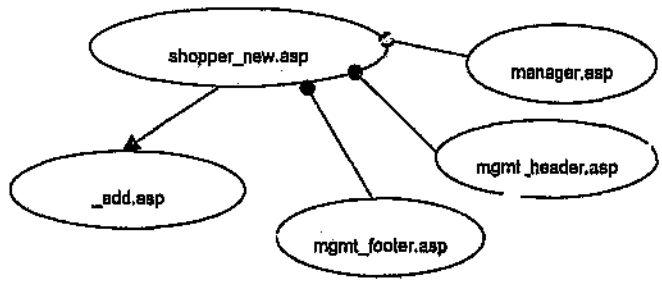
None

49 Shopper_new.asp

49.1 Purpose

This module presents a form to the store manager allowing him to input information for a new shopper.

49.2 Module diagram



49.3 Module interface

Table 3.1: A description of all inputs to and outputs from the module

Shopper_new.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Calling of the module	E	The calling module	D	Web browser	The new shopper form
Errors	D	Calling module	D	The new shopper form	Relevant error message
Shopper information	D	User input	D	The shopper details form	The new shopper information
Add Shopper	E	User selection	E	Calling of the module	_add.asp
			D	_add.asp	New product details

Shopper_new.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
			D	_add.asp	The add type (shopper)
			D	_add.asp	The destination module after addition.

49.4 Comments

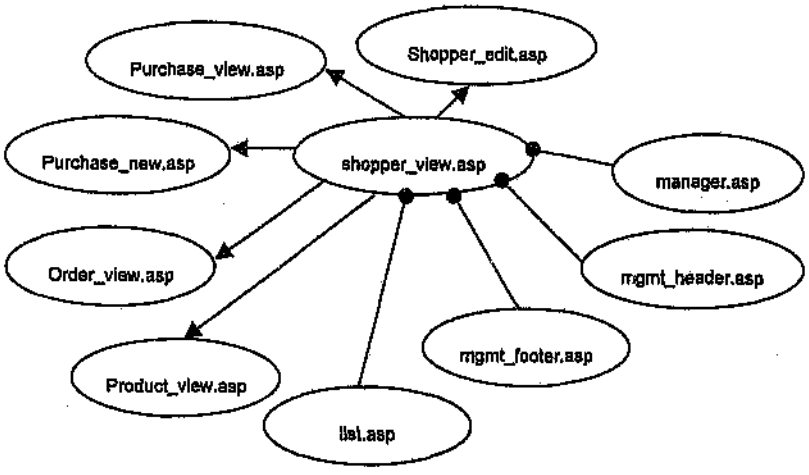
None

50 Shopper_view.asp

50.1 Purpose

This module is used to display all the details of a selected shopper as well as information regarding the shopper's basket, receipts and purchased products.

50.2 Module diagram



50.3 Module interface

Table 3.1: A description of all inputs to and outputs from the module

Shopper_view.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Module being called	E	The calling module	D	Web browser	The shopper details page
Shopper ID	D	The calling module			
Shopper details	D	Database	D	The shopper details page	The shopper details
List of shopping	D	Database	D	The shopper	The list of shopping

Shopper_view.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
basket items				details page	basket items
View shopping basket item	E	User selection	E	Calling of the module	Product_view.asp
			D	Product_view.asp	Product ID
List of receipts	D	Database	D	The shopper details page	The list of receipts
View receipt	E	User selection	E	Calling of the module	Order_view.asp
			D	Order_view.asp	Order ID
List of purchases	D	Database	D	The shopper details page	The list of purchases
Add new purchase	E	User selection	E	Calling of the module	purchase_new.asp
			D	purchase_new.asp	Shopper ID,
View purchase details	E	User selection	E	Calling of the module	Purchase_view.asp
			D	Purchase_view.asp	Purchase ID
Edit Shopper	E	User Selection	E	Calling of the module	Shopper_edit.asp
			D	Shopper_edit.asp	Shopper ID

50.4 Comments

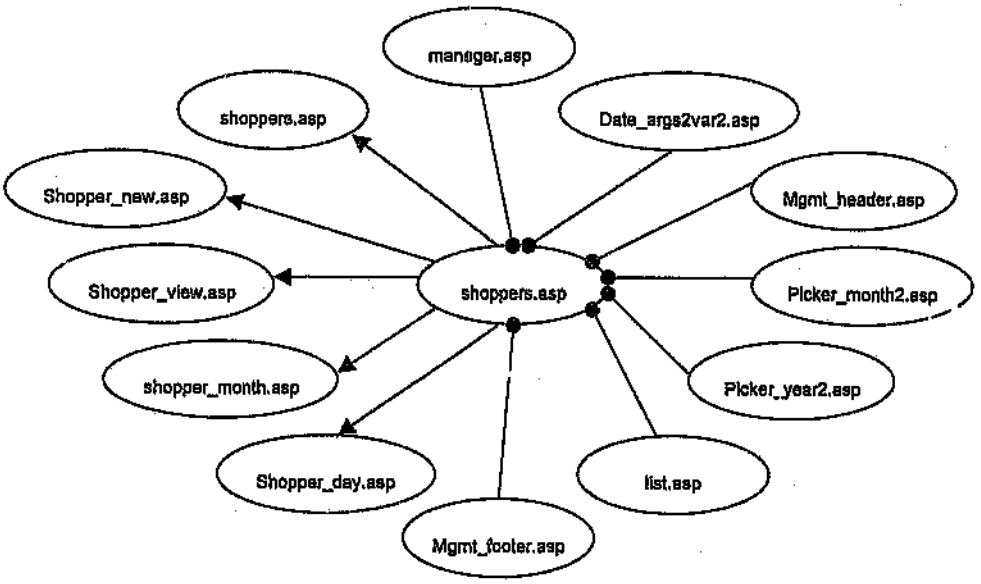
None

51 Shoppers.asp

51.1 Purpose

This module lists all the shoppers registered with the store manager according to various criteria. The user can select for which time period to view shoppers and can specify the sort order.

51.2 Module diagram



51.3 Module interface

Table 3.1: A description of all inputs to and outputs from the module

Shoppers.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Module being called	E	The calling module	D	Web browser	The list of shoppers.

Shoppers.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Year	D	Manager selection			
Month	D	Manager selection			
Sort order	D	Manager selection			
Shoppers	D	Database			
Update	E	User selection	E	Calling of the module	Shoppers.asp
			D	Shoppers.asp	The updated list of shoppers based on the selected criteria
The required shopper	E	Manager selection	E	Calling of the module	shopper_view.asp
			D	shopper_view.asp	The shopper ID
Shoppers by day/month	E	Manager Selection	E	Calling of the module	shopper_day/month.asp
Add new shopper	E	Manager selection	E	Calling of the module	Shopper_new.asp

51.4 Comments

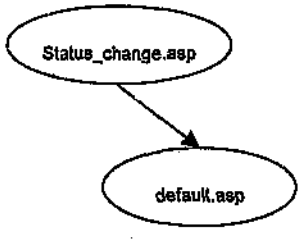
None

52 Status_change.asp

52.1 Purpose

This module is used to change the status of the store from Open to Closed or vice versa.

52.2 Module diagram



52.3 Module interface

Table 3.1: A description of all inputs to and outputs from the module

Status_change.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Module being called	E	The calling module			
Store name	D	The calling module			
			E	Calling of the module	Default.asp

52.4 Comments

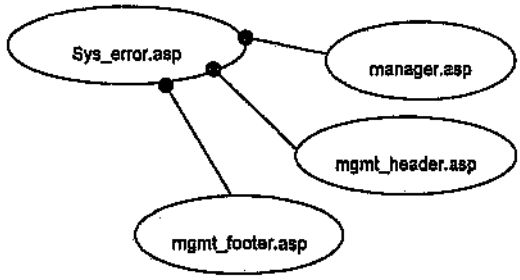
None

53 Sys_error.asp

53.1 Purpose

This module is used to display an error message to the store manager.

53.2 Module diagram



53.3 Module interface

Table 3.1: A description of all Inputs to and outputs from the module

Sys_error.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Module being called	E	The calling module			
Error	D	The calling module	D	Web browser	A page containing the error message

53.4 Comments

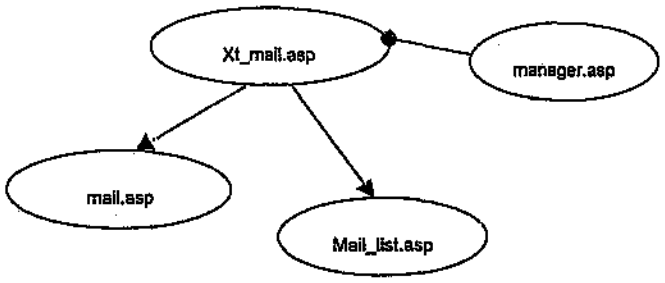
None

54 Xt_mail.asp

54.1 Purpose

This module generates an e-mail message using the information entered in the mail.asp form. If the message is sent successfully, the message is recorded in the system database.

54.2 Module diagram



54.3 Module interface

Table 3.1: A description of all inputs to and outputs from the module

Xt_mail.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Module being called	E	The calling module			
To whom the message should be sent	D	The calling module			
The message subject	D	The calling module			
The message content	D	The calling module	E	Calling of the module	Mail.asp

Xt_mail.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
			D	Mail.asp	Error message
			E	Internet	Mail message
			D	Mail message	The message subject and content
			D	Database	Message
			E	Calling of the module	Mail_list.asp

54.4 Comments

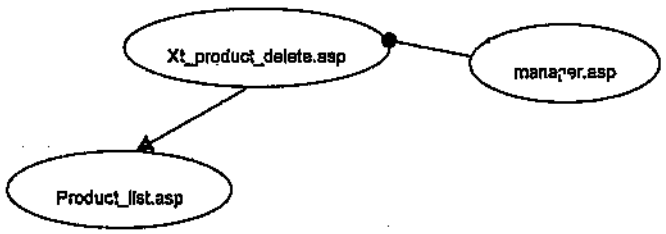
None

55 Xt_product_delete.asp

55.1 Purpose

This module deletes the selected product and all its associated entities from the database.

55.2 Module diagram



55.3 Module Interface

Table 3.1: A description of all inputs to and outputs from the module

Xt_product_delete.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Product ID	D	The calling module			
The product to be deleted	D	database	E	Database	The deletion of the product from the database.
The relevant product information items	D	database	E	Database	The deletion of the relevant product information items
The product documents	D	database	E	Database	The deletion of the product

Xt_product_delete.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
					documents
The product downloads	D	database	E	Database	The deletion of the product downloads
The product dependencies	D	database	E	Database	The deletion of the product dependencies
The dependencies on this product	D	database	E	Database	The deletion of the dependencies on this product
Purchases of the product	D	database	E	Database	The deletion of all purchases of this product
			E	Product_list.asp	Calling of the module

55.4 Comments

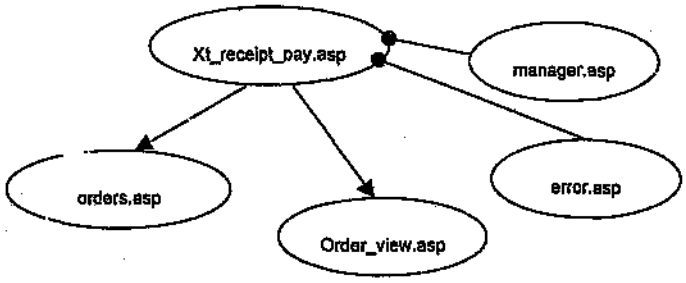
None

56 Xt_receipt_pay.asp

56.1 Purpose

This module changes the status of an order from unpaid to paid and then creates a purchased product record for each item purchased through the order.

56.2 Module diagram



56.3 Module interface

Table 3.1: A description of all inputs to and outputs from the module

Xt_receipt_pay.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Order ID	D	The calling module			
Order details	D	database			
			E	Calling of the module (if there are no items in the order)	Orders.asp
			D	Database	The updated order with

Xt_receipt_pay.asp					
Input			Output		
Label	ature	Source	Nature	Destination	Label
					the status changed to paid
Each product's details	D	Database			
Product purchases	D	Database			
Shopper details	D	Database			
Shopper's purchases	D	Database			
			D	database	The registration of purchases for the shopper
			E	Calling of the module	Order_view.asp
			D	Order_view.asp	Order ID
			D	Web browser	Error messages if necessary

56.4 Comments

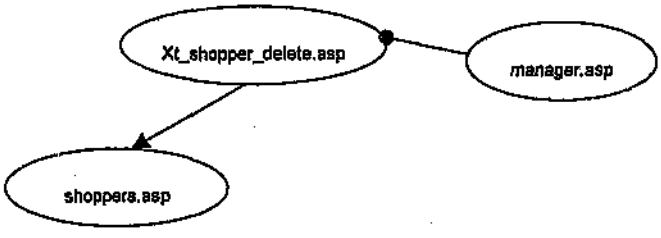
None

57 Xt_shopper_delete.asp

57.1 Purpose

This module deletes the selected shopper and all its associated entities from the database.

57.2 Module diagram



57.3 Module interface

Table 3.1: A description of all inputs to and outputs from the module

Xt_shopper_delete.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Shopper ID	D	The calling module			
The shopper to be deleted	D	database	E	Database	The deletion of the shopper from the database.
The shopper's basket	D	database	E	Database	The deletion of the shopper's basket
The shopper's purchases	D	database	E	Database	The deletion of all the shopper's

Xt_shopper_delete.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
					purchases
			E	shoppers.asp	Calling of the module

57.4 Comments

None

58 Auth_include.asp

58.1 Purpose

This module checks the whether the user is allowed to access the module, and if not, outputs an error message.

58.2 Module diagram



58.3 Module interface

Table 3.1: A description of all inputs to and outputs from the module

Auth_include.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Username	D	Server	D	Web browser	Error message is that username is not correct

58.4 Comments

This module is part of the Commerce Server set of files and has not been developed or altered in development.

59 Date_args2var.asp

59.1 Purpose

This module retrieves the month and year from the calling module. If no month and / or year are passed, the values that are not passed are set to the current month and / or year respectively.

59.2 Module diagram



59.3 Module interface

Table 3.1: A description of all inputs to and outputs from the module

Date_args2var.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Module being included	E	The including module			
Month	D	The including module's calling module	D	The including module	The passed month or the current month
Year	D	The including module's calling module	D	The including module	The passed year or the current year.

59.4 Comments

None

60 Date_args2var2.asp

60.1 Purpose

This module retrieves the month, year and other variables from the calling module. If some variables are not passed when required, the variables are set to default values.

60.2 Module diagram



60.3 Module interface

Table 3.1: A description of all inputs to and outputs from the module

Date_args2var2.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Module being included	E	The including module			
Month	D	The including module's calling module	D	The including module	The passed month or the current month
Year	D	The including module's calling module	D	The including module	The passed year or the current year.
Ordering variable depending on the type of list	D	The including module's calling module	D	The including module	The passed variable or the default variable.

60.4 Comments

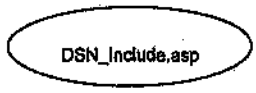
None

61 DSN_Include.asp

61.1 Purpose

This module contains VB Script used for the Database connection.

61.2 Module diagram



61.3 Module interface

61.4 Comments

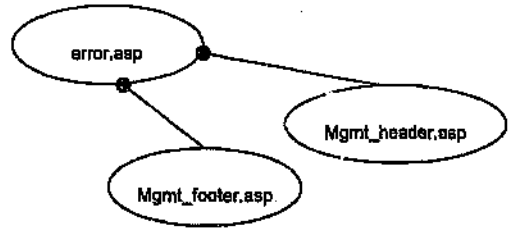
This module is part of the Commerce Server set of files and has not been developed or altered in development.

62 Error.asp

62.1 Purpose

This module displays an error message to the store manager based on a message passed to the module.

62.2 Module diagram



62.3 Module interface

Table 3.1: A description of all inputs to and outputs from the module

Error.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Module being included	E	The including module			
Error strings	D	The including module	D	Web browser	An error page
			D	Error page	The list of errors.

62.4 Comments

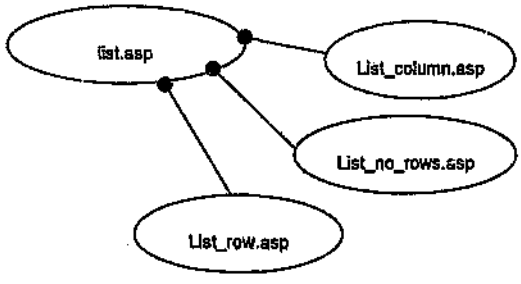
None

63 List.asp

63.1 Purpose

This module lists the contents of a query with navigation arrows between pages of the list.

63.2 Module diagram



63.3 Module interface

Table 3.1: A description of all inputs to and outputs from the module

List.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Module being included	E	The including module			
Query string	D	The including module	D	Including module	A list of the data required by the query string.
Navigation selection	E	User selection	D	Including module	The navigation string
Navigation selection	D	Including module	D	Including module	The navigated list.

63.4 Comments

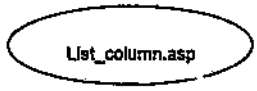
None

64 List_column.asp

64.1 Purpose

This module lists the column headers for the items listed in List.asp.

64.2 Module diagram



64.3 Module interface

Table 3.1: A description of *all* inputs to and outputs from the module

List_column.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Module being included	E	The including module			
Type of list	D	The including module	D	Including module	The column headings for the items to be listed.

64.4 Comments

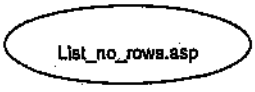
None

65 List_no_rows.asp

65.1 Purpose

This module displays a message in the case of there not being any items to list in a selected list.

65.2 Module diagram



65.3 Module interface

Table 3.1: A description of all inputs to and outputs from the module

List_no_rows.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Module being included	E	The including module			
Type of list	D	The including module			
Month selected for list	D	The including module			
Year selected for list	D	The including module	D	Including module	The message indicating that there are no items to list based on the user's selection.

65.4 Comments

None

66 List_row.asp

66.1 Purpose

This module lists the row items for the selected list.

66.2 Module diagram



66.3 Module interface

Table 3.1: A description of all inputs to and outputs from the module

List_row.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Module being included	E	The including module			
Type of list	D	The including module			
The list item details	D	The including module			
ID numbers of the type of item being listed	D	The including module			
Additional list information	D	Database	D	Including module	The row item containing all the information required in the list.

66.4 Comments

None

67 Manager.asp

67.1 Purpose

This module defines all the variables necessary to connect to the database and creates instances of objects necessary for most modules.

67.2 Module diagram



67.3 Module interface

Table 3.1: A description of all inputs to and outputs from the module

Manager.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Module being included	E	The including module	D	The including module	The list of variables

67.4 Comments

None

68 Mgmt_define.asp

68.1 Purpose

This module sets values to variables necessary for the HTML links in the store manager interface.

68.2 Module diagram



68.3 Module Interface

Table 3.1: A description of all inputs to and outputs from the module

Mgmt_define.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Module being included	E	The including module	D	The including module	The list of variables with associated values.

68.4 Comments

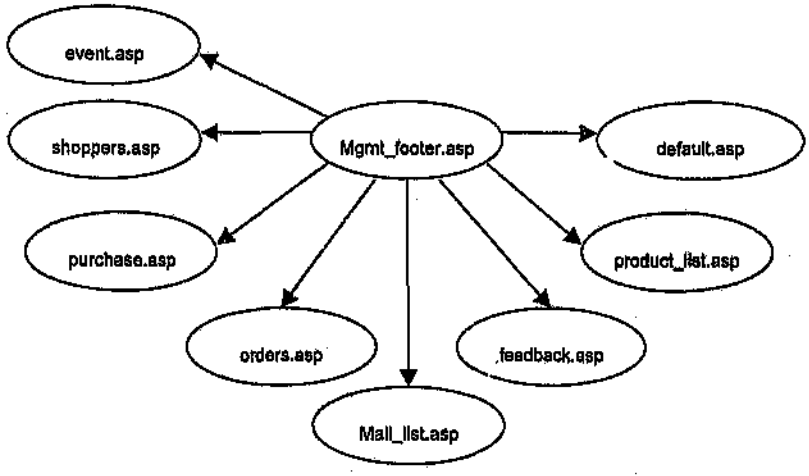
None

69 Mgmt_footer.asp

69.1 Purpose

This module outputs the standard page footer for the Store Manager HTML pages.

69.2 Module diagram



69.3 Module interface

Table 3.1: A description of all inputs to and outputs from the module

Mgmt_footer.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Module being included	E	The including module	D	The including module	The standard footer.

69.4 Comments

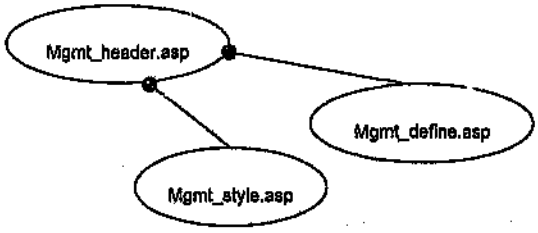
None

70 Mgmt_header.asp

70.1 Purpose

This module outputs the standard page header for the Store Manager HTML pages.

70.2 Module diagram



70.3 Module interface

Table 3.1: A description of all inputs to and outputs from the module

Mgmt_header.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Module being included	E	The including module			
The page title	D	The including module	D	The including module	The standard footer.

70.4 Comments

None

71 Mgmt_style.asp

71.1 Purpose

This module defines an HTML style for all the Store Manager HTML pages.

71.2 Module diagram



71.3 Module interface

Table 3.1: A description of all inputs to and outputs from the module

Mgmt_style.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Module being included	E	The including module	D	The including module	The HTML style tags.

71.4 Comments

None

72 Picker_group.asp

72.1 Purpose

This module outputs a drop down list allowing the user to select a group to which to send a mail message.

72.2 Module diagram



72.3 Module interface

Table 3.1: A description of all inputs to and outputs from the module

Picker_group.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Module being included	E	The including module			
Products in the system	D	database	D	The including module	A list of groups available to which to send a mail message.

72.4 Comments

None

73 Picker_month.asp

73.1 Purpose

This module outputs a drop down selection list containing the months of the year.

73.2 Module diagram



73.3 Module interface

Table 3.1: A description of all inputs to and outputs from the module

Picker_month.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Module being included	E	The including module	D	The including module	A list containing the months of the year.

73.4 Comments

None

74 Picker_month2.asp

74.1 Purpose

This module outputs a drop down HTML form list containing the months of the year including the option to select all the months of the year.

74.2 Module diagram



74.3 Module interface

Table 3.1: A description of all inputs to and outputs from the module

Picker_month2.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Module being included	E	The including module	D	The including module	A list containing the months of the year and the option to select all the months.

74.4 Comments

None

75 Picker_page.asp

75.1 Purpose

This module outputs a drop down HTML form list allowing the user to select an HTML page for which to view events.

75.2 Module diagram



75.3 Module interface

Table 3.1: A description of all inputs to and outputs from the module

Picker_page.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Module being included	E	The including module	D	The including module	A list containing the HTML pages for which the Store Manager can view events.

75.4 Comments

None

76 Picker_product.asp

76.1 Purpose

This module outputs a drop down HTML form list allowing the user to select a system product for which to view feedback items or purchases.

76.2 Module diagram



76.3 Module Interface

Table 3.1: A description of all inputs to and outputs from the module

Picker_product.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Module being included	E	The including module	D	The including module	A list containing the HTML pages for which the Store Manager can view events.
The products in the system	D	Database	D	The including module	A list containing the system products as well as the IS4 option and the option to select all products.

76.4 Comments

None

77 Picker_year.asp

77.1 Purpose

This module outputs a drop down HTML form list containing the years from 1997 to 2003.

77.2 Module diagram



77.3 Module interface

Table 3.1: A description of all inputs to and outputs from the module

Picker_year.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Module being included	E	The including module	D	The including module	A list containing the years from 1997 to 2003.

77.4 Comments

None

78 Picker_year2.asp

78.1 Purpose

This module outputs a drop down HTML form list containing the years from 1997 to 2003 as well as the option to select all the years in the list.

78.2 Module diagram



78.3 Module interface

Table 3.1: A description of all inputs to and outputs from the module

Picker_year2.asp					
Input			Output		
Label	Nature	Source	Nature	Destination	Label
Module being included	E	The including module	D	The including module	A list containing the years from 1997 to 2003 as well as the option to select all the years in the list.

78.4 Comments

None



QSI

IS4 Low Level Design 1 - System And Database

Technical Product

Revision 1.01

Document Status: Approved

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Change History

Configuration Control

Project:	QSI
Title:	IS4 Low Level Design 1 - System and Database
Doc. Reference:	C:\QSI\TP\SOFTWARE\QSI242.001.DOC
Created by:	B.Braude
Creation Date:	17 November 1997

Document History

Version	Date	Status	Who	Saved as:
0.01	97\11\17	Draft	BB	Qsl242.001.doc
1.00	98\04\08	Approved	BB	QSI242.100.doc
1.01	98\04\28	Approved	BB	QSI242.101.doc

Revision History

Version	Date	Changes
0.01	97\11\17	New document created using qst324-50 revision 1.00
1.00	98\04\08	Document approved
1.01	98\04\28	SEAL Component added

Management Authorisation

Version	Date	Status	Management Board Minute Reference
1.00	98\04\08	Approved	QSI 2049 section 2.3
1.01	98\06\02	Approved	QSI 2053 section 2.10

Change Forecast

1 Scope

1.1 Introduction

The IS4 System and Database Low Level Design details the detailed configuration of the IS4 system, the detailed tabular structure of the IS4 database and the low level design of the SEAL encryption component. The purpose and general operation of the IS4 system components are detailed in the System and Database High Level Design (QSI 232). This document details the configuration options used in setting up the components discussed in QSI 232. This document describes details of the database tables used in the SQL Server discussed in QSI 232. Lastly the document describes the low-level design of the SEAL encryption component detailed in QSI 232.

1.2 Purpose

This document attempts to define all the configuration options for setting up the system software in order to enable future developers and maintainers to configure the system should the need arise. The document also describes the detailed designs of the IS4 database and the SEAL encryption component for development and maintenance purposes.

1.3 Applicability

This document is applicable as the system and database low level design for the IS4 and is a technical product in the QSI project. This document forms part of the following series of documents:

a. IS4 High Level Design 1 - System and Database (QSI 232)

b. IS4 High Level Design 2 - Shopper Interface (QSI 230)

c. IS4 High Level Design 3 – Manager Interface (QSI 231)

d. IS4 Low Level Design 1 – System and Database (QSI 242)

e. IS4 Low Level Design 2 – Shopper Interface (QSI 240)

f. IS4 Low Level Design 3 – Manager Interface (QSI 241)

1.4 Definitions

IS⁴ – Internet System for the Supply and Support of Software

SEAL - Software Engineering Applications Laboratory

WWW - World Wide Web

FTP - File Transfer Protocol

ASP – Active Server Pages

IIS – (Microsoft) Internet Information Server

HTTP – Hypertext Transfer Protocol

HTML – Hypertext Markup Language

DLL – Dynamic Link Library

1.5 Audience

- The Product Manager
- The Product Developers
- Individuals who perform 2nd and 3rd party surveillance on SEAL QMS.
- Fulltime members of SEAL Management Board.

1.6 Applicable Documents

1.6.1 Specifications

1.6.2 Standards

a. SEAL QMS Document Layout, Presentation and Typesetting Guide, QS 003, Revision 1.00, 3 October 1994

1.6.3 Procedures

Boillot M. H., Gleason G. M, Horn L. W., Essentials of Flowcharting, 3rd Edition, Wm. C. Brown Company Publishers, 1982

1.6.4 Guidelines

1.6.5 Exemplar Document

A helpful example where this template is used can be found in:

a) TMP 127 Task Management Package Low Level Design, Revision 1.00, 27 December 1995. (See project 1995_34)

1.7 Assumptions

It is assumed that the reader uses this document in conjunction with the entire series of IS4 High and Low Level Design documents (Refer to section 1.3) and that the reader has read and is familiar with the System and Database High Level Design (QSI 232).

1.8 Requirements Traceability

2 Hardware and Operating System

2.1 NT 4 Server General Setup

Windows NT is installed as a stand alone machine and not as a Primary Domain Controller or Secondary Domain Controller. The system can however be installed as a Primary Domain Controller.

The harddrive is set up as a single NTFS partition.

2.2 Network Setup

The following is set up in the NT 4 Server Network Setup:

2.2.1 Identification options

a. Computer name: IS4

b. Workgroup: Seal Group

2.2.2 Services

The following network services are installed:

a. Computer Browser

b. Gateway Service for Netware

c. Microsoft Internet Information Server 3.0

d. NetBIOS Interface

e. RPC Configuration

f. Server

g. Workstation

2.2.3 Protocols

The following network protocols are installed:

a. NetBEUI Protocol

b. NWLink IPX/SPX Compatible Protocol

c. NWLink NetBIOS

d. TCP / IP ProtocolIP

The following are the options for configuring the TCP/IP protocol:

i. Address: Obtain IP Address from DHCP Server

ii. DNS: Hostname - IS4, Domain - seal.ac.za

iii. WINS Address: Nothing selected

iv. DHCP Relay: Seconds threshold – 4, Maximum hops – 4

v. Routing: Enable IP Forwarding - No

2.2.4 Adapters

The Realtek RTL8029 PCI Adapter is installed

2.2.5 Bindings

The bindings setting are left as default.

3 Microsoft Internet Information Server with Active Server Pages

The Internet Information Server (IIS) is installed with default options. The following are the settings in the WWW service properties. Most of the settings are however set by default as listed below:

3.1 Service

a. TCP Port: 80

b. Connection Timeout: 900 Seconds

c. Maximum Connections: 100 000

d. Username: IUSR_IS4

e. Password Authentication:

i. Allow Anonymous: Yes

ii. Basic (Clear Text): No

iii. Windows NT Challenge/ Response: Yes

3.2 Directories

The following are the directory aliases necessary for the running of the IS4. Other aliases do however exist and are created by the installations of IIS and Commerce Server.

Directory	Alias	Access
C:\InetPub\wwwroot	<Home>	Read and Execute
C:\MicrosoftCommerce Server\Server\Administration\Host Administrator	/MSCS_HostAdmin	Execute
C:\MicrosoftCommerce Server\Server\Administration\PipelineConfiguration	/MSCS_PipeEdit	Execute
C:\MicrosoftCommerceServer\Server\Images	/MSCS_Images	Read

Directory	Alias	Access
C:\MicrosoftCommerceServer\Stores\SSOFT\Assets	/SSOFT_assets	Read
C:\MicrosoftCommerceServer\Stores\SSOFT\Manager	/SSOFT_mgr	Execute
C:\MicrosoftCommerceServer\Stores\SSOFT\Shop	/SSOFT	Read and Execute

"Enable Default Document" must be selected and set to "default.asp"

"Directory browsing" must NOT be selected.

3.3 Logging

a. Enable logging: Yes

b. Log to file: Yes

c. Log to SQL/ODBC Database: No

d. Log format: Standard Format

e. Automatically open new log: Yes – Daily

f. Log file directory: C:\WINNT\System32\LogFiles

3.4 Advanced

By default all computers will be granted access

4 Microsoft Commerce Server

The Microsoft Commerce Server is set up with all the default options. The IS4 store is created using the Commerce Server Store Foundation Wizard with the following information:

a. Short name: SSOFT

b. Description: Seal Software

c. Database: SQL server

d. ODBC Datasource: Commerceserv

e. Database name: Commercedb.

f. Database username: sa

g. Password: None

h. Store administration account on the NT Server: administrator

The store infrastructure as detailed in the High and Low level Designs for the Manager and Shopper Interfaces, is developed and run on this infrastructure.

The store infrastructure is contained in the following directories:

Description	Directory
Root directory for store files	c:\Microsoft Commerce Server\Stores\Ssoft
User Interface subdirectory	\Shop
Administrator Interface subdirectory	\Manager
Pipeline configuration files	\Config
Documents, Images and Downloads	\Assets

Description	Directory
SQL Configuration files (system use)	\Sql

5 Microsoft SQL Server

5.1 ODBC Connection

An system ODBC connection is created with the following information:

a. Datasource Name: Commerceserv

b. Driver: SQL Server

c. Server: IS4

d. Network Address: Default

e. Network Library: Default

f. Use trusted connection: No

g. Database name: Commercedb

h. Language name: Default

i. Generate Stored Procedures for prepared statement: No

j. Use ANSI quote identifiers: Yes

k. Use ANSI nulls, padding and warnings: Yes

l. Convert OEM to ANSI characters: No

5.2 Database Devices

In the SQL server two database devices are created for storing the IS4 information.

a. The one is named Commercedata and is created to be 10MB in size.

b. The second is name Commercelog and is created to be 5 MB in size.

5.3 Databases

A database is created and named Commercedb. Its data device is set to Comemrcedata and its log device is set to Commercelog.

5.4 Tables

The following tables are created as objects within the Commercedb database with the following characteristics:

5.4.1 Ssoft_basket

5.4.1.1 Purpose

This table stores the baskets for the shoppers. All the items that a particular shopper has in his basket are stored for future visits to the store. A shopper can leave the store and on return his items will still be in his basket.

5.4.1.2 Table fields

Table 5.4.1.1: A description of all fields in the Table

Ssoft_basket					
Column name	Data type	Size	Nulls	Default	Description
Shopper_Id	Char	32			The shopper's ID
Date_changed	Datetime	8			The date the basket was last changed
Marshalled_basket	Image	16			All the basket information in binary form

5.4.1.3 Comments

5.4.2 Ssoft_product

5.4.2.1 Purpose

This table stores the products available in the store. This table stores the basic information for the products. Additional information for the products is stored in the ssoft_product_info table.

5.4.2.2 Table fields

Table 5.4.2.1: A description of all fields in the Table

Ssoft_product					
Column name	Data type	Size	Nulls	Default	Description
Sku (primary id)	varchar	30			The product's ID number

Ssoft_product					
Column name	Data type	Size	Nulls	Default	Description
Name	Varchar	50	Y		The product name
Subtitle	Varchar	255	Y		A brief description of its function
Qmsproduct_id	Varchar	20	Y		The seal product abbreviation
Version	Varchar	20	Y		The product version
Product_type	varchar	50	Y		Whether the product is a full version or upgrade
Available	varchar	20	Y		Whether or not the product is available for sale
Languages	Varchar	255	Y		Languages of the interface
Purpose	Text		Y		The purpose, functions and limits of the product
Hardware1	varchar	100	Y		The requirements
Hardware2	varchar	100	Y		The requirements
Hardware3	varchar	100	Y		The requirements
Hardware4	varchar	100	Y		The requirements
Hardware5	varchar	100	Y		The hardware requirements
Hardware6	varchar	1	Y		The hardware requirements
Image_file	Varchar	255	Y		The file containing an image for the product
Image_height	Int	4	Y		The image height
Image_width	Int	4	Y		The image width
List_price	Int	4	Y		The product's price
Contract	Text		Y		The product's contract in HTML form

5.4.2.3 Comments

5.4.3 Ssoft_product_info

5.4.3.1 Purpose

This table stores the items of information applicable to the respective products. The ssoft_product table stores the product information whos fields are common to all applications. Additional product information is stored in this table.

5.4.3.2 Table fields

Table 5.4.3.1: A description of all fields in the Table

Ssoft_product_info					
Column name	Data type	Size	Nulls	Default	Description
Info_id (primary key and indexed)	Int				A uniqu dentifier for each item
Sku	Varchar	30			roduct's identifying number.
Label	Varchar	100	Y		A Lel for the piece of information
Information	Varchar	255	Y		The information itself

5.4.3.3 Comments

5.4.4 Ssoft_receipt

5.4.4 1 Purpose

This table stores the receipts issued.

5.4.4.2 Table fields

Table 5.4.4.1: A description of all fields in the Table

Ssoft_receipt					
Column name	Data type	Size	Nulls	Default	Description
Order_id	Char	27			
Shopper_id	Char	32			
Total	Int	4	Y		
Status	Int	4	Y		
Date_entered	Datetime	8	Y		
Date_changed	Datetime	8	Y		
Marshalled_receipt	Image	16			

5.4.4.3 Comments

5.4.5 Ssoft_receipt_item

5.4.5.1 Purpose

This table stores the items that make up the receipts.

5.4.5.2 Table fields

Table 5.4.5.1: A description of all fields in the Table

Ssoft_receipt_item					
Column name	Data type	Size	Nulls	Default	Description
Sku	Varchar	30	Y		
Order_Id	Char	27			
Row_Id	Int	4			
Quantity	Int	4			
Adjusted_price	Int	4			

5.4.5.3 Comments

5.4.6 Ssoft_shopper

5.4.6.1 Purpose

This table stores the personal and contact information for the shoppers.

5.4.6.2 Table fields

Table 5.4.6.1: A description of all fields in the Table

Ssoft_shopper					
Column name	Data type	Size	Nulls	Default	Description
Shopper_Id	char	32			The customer's shopper_Id
Date_created	datetime	8			The date the customer signed up with the system
Surname	varchar	50	Y		The customer's surname
Firstname	varchar	50	Y		The customer's firstname
Title	varchar	20	Y		The customer's title

Ssoft_shopper					
Column name	Data type	Size	Nulls	Default	Description
Company	varchar	50	Y		The customer's company
Username	varchar	50			The username under which the customer's products must be licensed
Address1	varchar	50	Y		The customer's address
Address2	varchar	50	Y		The customer's address
Address3	varchar	50	Y		The customer's address
Address4	varchar	50	Y		The customer's address
Country	varchar	20	Y		The customer's country
Phone	varchar	50	Y		The customer's phone number
Fax	varchar	50	Y		The customer's fax number
Cell	varchar	50	Y		The customer's cellular telephone number
e-mail	varchar	50	Y		The customer's e-mail address
Password	varchar	50	Y		The customer's password to access the IS4
Mllst	varchar	20	Y		Whether or not the customer wants to be on the SEAL's general products mailing list

5.4.6.3 Comments

5.4.7 Ssoft_traffic

5.4.7.1 Purpose

This table stores a log of user requests for specific modules. The events are written to the table by ASP scripting implemented in the required modules (the modules that are to be logged).

5.4.7.2 Table fields

Table 5.4.7.1: A description of all fields in the Table

Ssoft_traffic

Column name	Data type	Size	Nulls	Default	Description
Event	Int	4			
Event_time	Datetime	8	Y		
Item_requested	Varchar	255	Y		
Shopper_id	Char	32	Y		
Args_sku	Varchar	255	Y		

5.4.7.3 Comments

5.4.8 Ssoft_downloads

5.4.8.1 Purpose

This table stores links to software products for downloading. The table contains the URLs for downloading the files comprising the complete product.

5.4.8.2 Table fields

Table 5.4.8.1: A description of all fields in the Table

Ssoft_downloads					
Column name	Data type	Size	Nulls	Default	Description
Download_id (primary key and indexed)	Int				A unique identifier for each download.
Sku	varchar	30			An identifying number for each product
List_order	int	4	Y		A number used for ordering the items in the list.
Label	varchar	100	Y		A label for each download item
Qmsnumber	varchar	50	Y		The artefact number in the SEAL QMS
Filename	varchar	50	Y		The filename of the item to be downloaded
Filesize	varchar	50	Y		The size of the file to be downloaded

5.4.8.3 Comments

5.4.9 Ssoft_documents

5.4.9.1 Purpose

This table stores information and links for all documentation that is available for downloading for purchased software products.

5.4.9.2 Table fields

Table 5.4.8.1: A description of all fields in the Table

Ssoft_documents					
Column name	Data type	Size	Nulls	Default	Description
Document_Id (primary key and indexed)	int				A uniques identifier for each document.
Sku	varchar	30			A unique identifying number for each product
List_order	int	4	Y		A number used for ordering of the items in a list
Label	varchar	100	Y		A label for the artefact
Qmsnumber	varchar	50	Y		The artefact number in the SEAL QMS
Filename	varchar	50	Y		
Filesize	varchar	50	Y		

5.4.9.3 Comments

5.4.10 Ssoft_purchase

5.4.10.1 Purpose

This table stores the products that the customers have purchased along with the information for each purchased product (unlock key, product number)

5.4.10.2 Table fields

Table 5.4.10.1: A description of all fields in the Table

Ssoft_purchase

Column name	Data type	Size	Nulls	Default	Description
Purchase_Id (primary key and indexed)	Int	4			A counter for the every product purchased irrespective of product or customer.
Date_purchased	datetime		Y		The date of the purchase
Sku	varchar	30	Y		The unique identifying number for each product
Qmsproduct_Id	Varchar	20	y		The seal product abbreviation
Version	Varchar	20	Y		The product version
Copy_number	int		Y		The incremental number for each copy of the specific product purchased.
Shopper_Id	char	32	Y		The unique identifier for each shopper
Username	varchar	50	Y		The name in which the product is registered (draw from ssoft_shopper table)
Encrypt_num	Varchar	255	Y		The encryption number calculated based on the username, copy number and encryption number
Mlist	varchar	20	Y		Whether or not the customer wants to be on the SEAL's specific product's mailing list

5.4.10.3 Comments

5.4.11 Ssoft_feedback

5.4.11.1 Purpose

This table stores the feedback items received from customers.

5.4.11.2 Table fields

Table 5.4.11.1: A description of all fields in the Table

Ssoft_feedback					
Column name	Data type	Size	Nulls	Default	Description
Feedback_Id (primary key and index)	Int	4			The unique identifying number for each feedback item
Date_input	Datetime	8			The date that the item was input
Shopper_Id	char	32			The unique identifier for each shopper

Ssoft_feedback					
Column name	Data type	Size	Nulls	Default	Description
Type	Varchar	50	Y		The type of feedback
Product	Varchar	30	Y		The sku or name of the product for which feedback is being given
Comments	Text		Y		The actual feedback comments
Date	Datetime	8	Y		The date that the problem in the product occurred
Description	Text		Y		The description of the problem
Messages	Text		Y		Error messages that the problem presented.
Repeat	Text		Y		How to repeat the problem
Os	varchar	100	Y		The operating system used
Processor	varchar	100	Y		The processor used
Memory	varchar	100	Y		The memory used

5.4.11.3 Comments

5.4.12 Ssoft_mail

5.4.12.1 Purpose

This table stores the mail items sent by the IS4 administrator.

5.4.12.2 Table fields

Table 5.4.12.1: A description of all fields in the Table

Ssoft_mail					
Column name	Data type	Size	Nulls	Default	Description
mail_id (primary key and index)	int	4			The unique identifying number for each mail item
Date_input	Datetime	8			The date that the item was input
Mail_to	varchar	100	Y		The group to which the mail was sent
subject	Varchar	255	Y		The subject of the message
body	text		Y		The body of the message

5.4.12.3 Comments

5.4.13 Ssoft_depend

5.4.13.1 Purpose

This table stores the dependencies for the system's products.

5.4.13.2 Table fields

Table 5.4.13.1: A description of all fields in the Table

Ssoft_depend					
Column name	Data type	Size	Nulls	Default	Description
depend_id (primary key and index)	Int	4			The unique identifying number for each dependency
sku	Varchar	30	Y		The product for which a dependency is being identified
Depend_item	varchar	30	Y		The product on which the 'product' field depends

5.4.13.3 Comments

6 Microsoft Personalisation Server

Microsoft Personalisation Server is installed with default settings with the SMTP server being set to "seal.ac.za".

7 Seal Encryption Component

The following functions form part of the SEAL encryption component as described in a high level in the IS4 High Level Design 1 – System and Database, QSI 232:

7.1 Encrypt

7.1.1 Objects and Variables

Username (string): The shopper's username

prod_id (string): The product ID

prod_ver (string): The product version

prod_num (string): The product serial number

li_keyword_length (integer): The length of the registration number

li_count (integer): A counter variable

ls_hex_no (string): A variable used to store the Hex value of the ASCII value of each character in the encryption string.

ls_keyword (string): The encryption string returned by the function

temp (string): A temporary string variable

ls_registered_name (string): The username

ls_registration_no (string): *prod_id*, *prod_ver* and *prod_num* combined together.

compact_customername (string): The username with all the spaces removed and expanded or shortened to be the same length as *ls_registration_no*.

ls_encrypt_string (string): The encryption string in character format.

7.1.2 Functionality

The function reads in the username, product ID, version and number passed to the function.

The product ID, version and number are combined into one string to form the registration number. The username is then made equal in length to the registration number by removing any spaces in the string and adding in spaces to the end of the string if the username is shorter than the registration number. If the username is longer than the registration number, the extra characters are removed from the username. Also, all the username characters are converted to uppercase.

The *wf_stringcipher_encrypt* function is passed the compacted username and the registration number. The function returns the encryption string in character format.

For each character in the encryption string, the character is converted to its ACSII value and the *wf_convertinttohex* function is called to convert the ASCII integer value to a Hex value. If the returned Hex value is only one character is length, a "0" is added to the front of the string. Each Hex value for each character is appended to the Hex value of the previous character thereby building up an encryption string in Hex format. This Hex string is returned by the function.

7.1.3 Algorithms

None

7.2 wf_stringcipher_encrypt

7.2.1 Objects and Variables

as_key (string): The registration number passed to the function

as_text (string): The username passed to the function

li_text_length (integer): The length of the username

li_currentpos (integer): A counter variable

li_key_length (integer): The length of the registration number

li_keypos (integer): A counter variable

ls_encrypted_text (string): The encryption string returned by the function

ls_current_char (string): A variable used to hold the current username character for operations

ls_current_key_char (string): A variable used to hold the current registration number character for operations

ls_xor_binaries (string): The binary value of the XOR of the two current characters.

7.2.2 Functionality

If the registration number and the username are non-zero length strings then the function processes the strings, otherwise the function ends.

If the 2 strings are non-zero in length, then the function cycles through each of the characters in the 2 respective strings. For each character in the 2 strings, the function calls *wf_convert_chartobin* to convert the characters to binary values. The function then calls *wf_xor_binaries* to XOR the binary values of the 2 respective characters from the 2 functions. Once the XOR value has been obtained, the function calls *wf_convert_bintochar* to convert the resultant binary value to a character.

The resultant characters from each operation on the 2 respective characters from the 2 original strings are appended to each other to form an encryption string. This encryption string is then returned.

7.2.3 Algorithms

None

7.3 Wf_convert_chartobin

7.3.1 Objects and Variables

as_char (string): The character passed to the function

li_ascii_value (integer): The ASCII value of the character in *as_char*.

li_count (integer): A variable used as a counter

li_binary_add (integer): A binary value holder used for conversion.

ls_binary (string): The binary value returned by the function

7.3.2 Functionality

The character is first converted to its ASCII integer value. The function then executes an algorithm to convert the integer value to its binary equivalent. The binary value is returned.

7.3.3 Algorithms

The following algorithm is used to convert the integer value to a binary value:

```
For li_count = 7 To 0 Step -1          //Cycles through the 8 bits of the binary word

  li_binary_add = 2 ^ li_count         //Starting from the largest value bit, the integer
                                       //equivalent is calculated.

 If li_ascii_value >= li_binary_add Then     //If the binary value is less than the integer
                                             //value, then a binary 1 is included in the
                                             //binary word and the binary value is
                                             //subtracted.

   ls_binary = ls_binary + "1"

   li_ascii_value = li_ascii_value - li_binary_add

 Else

   ls_binary = ls_binary + "0"               //If the binary value is greater than the integer
                                             //value then a binary 0 is included in the
                                             //binary word.

 End If

Next
```

7.4 Wf_xor_binaries

7.4.1 Objects and Variables

as_binary_x (string): The x binary string passed to the function.

as_binary_y (string): The y binary string passed to the function.

ls_xor_result (string): The XOR result

li_x_len (integer): The length of the x binary string

li_y_len (integer): The length of the y binary string

li_count (integer): A variable used as a counter

li_x_chamo (Integer): The value of each bit in the x binary word

li_y_chamo (integer): The value of each bit in the y binary word

7.4.2 Functionality

The lengths of the 2 binary strings passed to the function are calculated. If one of the strings is shorted than the other, '0's are added to the shorted string to make it equal in length to the other string.

The function cycles through each bit in the binary strings. For each successive bit in the string, the 2 bits from the 2 respective strings are XOR'd together. The result is appended to the resultant string.

The resultant string is returned by the function.

7.4.3 Algorithms

None

7.5 Wf_convert_bintochar

7.5.1 Objects and Variables

as_binary (string): The binary word passed to the function

li_count (integer): A counter variable

li_binary_no (integer): The integer representation of the binary number.

as_binary_reverse (string): The as_binary string in reverse.

7.5.2 Modular Functionality

The length of the binary string passed to the function is checked. If the length is less than 8 bits, the word is lengthened to 8 bits in length by the addition of 0's in front of the other bits. If the string is greater than 8 bits in length, the string is shortened to the 8 least significant bits.

The binary word is converted to its integer representation using the algorithm described below.

Once the integer value has been obtained, the ASCII character represented by the integer is returned by the function.

7.5.3 Algorithms

The following algorithm is used to convert the binary word to an integer value:

```
For li_count = Len(as_binary) To 1 Step –1        //Reverse the order of the bits in the
                                                  //binary word.

  as_binary_reverse = as_binary_reverse & Mid(as_binary, li_count, 1)

Next


For li_count = 1 To 8                             //Calculate the integer value by
                                                  //cycling through each bit and
                                                  //multiplying it by 2^(li_count - 1)

li_binary_no = li_binary_no + CInt(Mid(as_binary_reverse, li_count, 1)) * (2 ^ (li_count -
1))

Next
```

7.6 Wf_convertinttohex

7.6.1 Objects and Variables

ai_number (integer): The integer passed to the function

ls_hex_string (string): The Hex string returned by the function

ls_hex_char (string): The string used to stored each successive hex character to be added to the string

li_count (integer): A counter variable

li_hex_int (integer): The integer representation for each hex character (1-16)

li_hex_quotient (integer): Used in the calculation of the number of characters in the hex string

li_factor (integer): The highest power in the hex string.

7.6.2 Functionality

The integer value is passed to the function. The function calculates the hex equivalent as detailed below.

The hex string is then returned by the function.

7.6.3 Algorithms

The following algorithm is used to convert the integer a hex equivalent:

```
li_factor = 0

Do                                  //Calculate the highest factor needed in the hex string

  li_hex_quotient = ai_number \ (16 ^ li_factor)     //Divide the integer by a 16 to a
                                                     //power

  If (li_hex_quotient >= 16) Then                    //If the result is greater than 16
                                                     //Increase the power used by 1

    li_factor = li_factor + 1

  End If

Loop Until (li_hex_quotient < 16)                    //Continue until the result is less than
                                                     //16 (0-F)


For li_count = li_factor To 0 Step --1               //Calculate the hex value by looping through
                                                     //each power from the highest to 0

  li_hex_int = ai_number \ 16 ^ li_count             //Each hex character is the number / 16 to
                                                     //the power

  ai_number = ai_number - (li_hex_int * (16 ^ li_count))     //Subtract the integer value
                                                             //of the hex character.

  Select Case li_hex_int                             //Convert the first hex character to
                                                     //hex notation

    Case 0 To 9

      ls_hex_char = Format(li_hex_int)

    Case 10

      ls_hex_char = "A"

    Case 11
```

```
            ls_hex_char = "B"

        Case 12

            ls_hex_char = "C"

        Case 13

            ls_hex_char = "D"

        Case 14

            ls_hex_char = "E"

        Case 15

            ls_hex_char = "F"

    End Select

    ls_hex_string = ls_hex_string + ls_hex_char      //Append each hex character to the
                                                     //hex string
```



QSI

Is4 Low Level Design 2 - Shopper Interface

Technical Product

Revision 1.00

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Change History

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1.00	98\04\08	Approved	QSI 2049 section 2.3

Change Forecast

1 Scope

1.1 Introduction

The Shopper Interface Low Level Design for the IS4 details the detailed design of each module comprising the Shopper Interface. The high level descriptions and module interactions have been specified in the High Level Design for the Shopper Interface (QSI 230). The Low Level Design implements each module of the Shopper Interface as a separate Active Server Page (Refer to QSI 232 section 3 for an overview of Active Server pages). Unless otherwise specified, all the Active Server Page scripting is implemented using Microsoft Visual Basic Scripting.

1.2 Purpose

This document aims to describe the internal functionality of each module comprising the Shopper Interface. The document defines the flow of each module and the algorithms used therein. All relevant variables used in each module are also described.

1.3 Applicability

This document is applicable as the Low Level Design for the Shopper Interface of the IS4 and is a technical product in the QSI project. This document forms part of the following series of documents:

a. IS4 High Level Design 1 - System and Database (QSI 232)

b. IS4 High Level Design 2 - Shopper Interface (QSI 230)

c. IS4 High Level Design 3 – Manager Interface (QSI 231)

d. IS4 Low Level Design 1 – System and Database (QSI 242)

e. IS4 Low Level Design 2 – Shopper Interface (QSI 240)

f. IS4 Low Level Design 3 – Manager Interface (QSI 241)

1.4 Definitions

IS^4 – Internet System for the Supply and Support of Software

SEAL - Software Engineering Applications Laboratory

WWW - World Wide Web

FTP - File Transfer Protocol

ASP – Active Server Pages

IIS – (Microsoft) Internet Information Server

HTTP – Hypertext Transfer Protocol

HTML – Hypertext Markup Language

OPP – Order Processing Pipeline

1.5 Audience

- The Product Manager
- The Product Developers
- Individuals who perform 2nd and 3rd party surveillance on SEAL QMS.
- Fulltime members of SEAL Management Board.

1.6 Applicable Documents

1.6.1 Specifications

1.6.2 Standards

a. SEAL QMS Document Layout, Presentation and Typesetting Guide, QS 003, Revision 1.00, 3 October 1994

1.6.3 Procedures

Boillot M. H., Gleason G. M, Horn L. W., Essentials of Flowcharting, 3rd Edition, Wm. C. Brown Company Publishers, 1982

1.6.4 Guidelines

1.6.5 Exemplar Document

A helpful example where this template is used can be found in:

a) TMP 127 Task Management Package Low Level Design, Revision 1.00, 27 December 1995. (See project 1995_34)

1.7 Assumptions

It is assumed that the reader has access to the entire High and Low level design series (Refer to section 1.3) and has read and is familiar with the High and Low Level Designs for the System and Database (QSI 232 and QSI 242) and the High Level Design for the Shopper Interface (QSI 230).

1.8 Requirements Traceability

2 List of modules

Table 2.1: List of all modules in the application

Module No.	Module Name	Description
1.	About.asp	This module presents a brief abstract about the store and provides links to the other 'about' Modules.
2.	About_contact	This module presents contact information for the store.
3.	About_security	This module presents security information for the store.
4.	About_urm	This module presents an on-line User Reference Manual for using the IS4.
5.	Basket.asp	This module displays the customers order form
6.	Closed.asp	This is the default module used to display information to a user if the store is closed.
7.	Confirmed.asp	This module presents a purchase confirmation and gives the user an order number after the product has been purchased.
8.	Contract.asp	This module is used to display a contract for a particular product. If the user selects to purchase the product, the contract gives the user the option to agree or disagree with the contract.
9.	Default.asp	This module defines the frame structure for the user interface.

Module No.	Module Name	Description
10.	Download.asp	This module lists all the files comprising the product and allows the customer or potential customer to download the product.
11.	Feedback.asp	This module presents a form to a customer allowing him/her to provide feedback to the supplier.
12.	Feedback_menu.asp	This module presents a feedback menu to the customer allowing the selection of the type of feedback to be given
13.	Global.asa	This module defines the global variables and creates the global objects for the application
14.	Global_closed.asa	This module defines the global variables and creates the global objects for the application when the store is closed.
15.	I_country.asp	This module presents a list containing countries allowing the shopper to select his/her country of location.
16.	I_footer.asp	This module presents a standard page footer.
17.	I_header.asp	This module presents a standard page header
18.	I_shop.asp	This module defines the global variable as local ones and verifies that the shopper is identified, otherwise it directs the shopper to enter his identity.

Module No.	Module Name	Description
19.	I_shop_open.asp	This shop defines the global variables as local ones. This serves the same function as i_shop except that it does not require that the shopper's ID be known.
20.	Invoice.asp	This module outputs an invoice for the shopper.
21.	Menu_closed.asp	The module presents a menu page to a user who is logged in to the system
22.	Menu_open.asp	The module presents a menu page to a user who is not logged in to the system.
23.	Product.asp	This module displays details about the selected product
24.	Registered.asp	This module is used to display a list of products for which the user is registered.
25.	Registered_product.asp	This module is used to display the details and documentation for a selected registered product.
26.	Shelf.asp	This module displays a list of products available for purchasing
27.	Shopper_lookup.asp	This module is used to allow a user to input his username and password in order to identify the shopper and allow access to restricted areas.
28.	Shopper_new.asp	This module is used by a new customer in order to enter his/her details in order to register as a

Module No.	Module Name	Description
		shopper on the system.
29.	Shopper_update.asp	This module is used to allow a shopper to update his registration information
30.	Thanks.asp	This module presents a thank-you message to the customer after he has performed certain tasks
31.	Welcome.asp	This is the default module loaded when someone accesses the store. This is the starting page from where all other sections can be accessed.
32.	Xt_exit.asp	This module defines the shopper's ID as "" thereby logging him out of the store.
33.	Xt_feedback.asp	The module carries out the process of adding the customer's feedback item into the database
34.	Xt_orderform_additem.asp	This module carries out the process of adding an item to the shopper's order form
35.	Xt_orderform_purchase.asp	This module processes the contents of the shopper's basket. The module checks that all the dependency requirements are met and if so, converts the basket contents to a receipt.
36.	Xt_orderform_update.asp	This module updates the order form after a user makes any changes to it (quantity, deleting etc)

Module No.	Module Name	Description
37.	Xt_register.asp	This module checks dependencies and then registers a free product that the user has purchased as a registered product in the database.
38.	Xt_registered_product.asp	This module is used to update the information on the registered_product.asp page.
39.	Xt_shopper_lookup.asp	This module looks up if the shopper exists in the database and if so, retrieves the shopper id.
40.	Xt_shopper_new.asp	This module processes the information entered in the shopper_new module and if no errors are present, commits the data to the database.
41.	Xt_shopper_update.asp	This module processes the information entered in the shopper_update module and commits the data to the database.

3 About.asp

3.1 Objects and Variables

MscsPage: This is an instance of the Page object (declared in *i_shop_open.asp*)

3.2 Modular Functionality

I_shop.asp is included.

The HTML page headers are defined.

I_header.asp is included.

HTML is output to the web browser consisting of the links to the various 'about' pages.

I_footer.asp is included.

3.3 Algorithms

None

4 About_contact.asp

4.1 Objects and Variables

None

4.2 Modular Functionality

I_shop_open.asp is included.

The HTML page headers are defined.

I_header.asp is included.

The contact information is output to the web browser.

I_footer.asp is included.

4.3 Algorithms

None

5 About_security.asp

5.1 Objects and Variables

None

5.2 Modular Functionality

l_shop_open.asp is included.

The HTML page headers are defined.

l_header.asp is included

HTML consisting of the security information is output to the web browser.

l_footer.asp is included.

5.3 Algorithms

None

6 About_urm.asp

6.1 Objects and Variables

None

6.2 Modular Functionality

I_shop_open.asp is included.

The HTML page headers are defined.

I_header.asp is included.

HTML consisting of the User Reference Manual is output to the web browser.

A link to download the URM is output to the web browser.

I_footer.asp is included.

6.3 Algorithms

None

7 Basket.asp

7.1 Objects and Variables

MscsOrderForm: The *OrderForm* object containing the user's order form information

MSCSOrderFormStorage: The application's *OrderFormStorage* object.

MSCSDataFunctions: The application's *MSCSDataFunctions* object (declared in *i_shop.asp*).

MscsPage: An instance of the Page object (declared in *i_shop.asp*)

OrderFormItems: The items in the order form

NOrderFormItems: The number of items in the order form

MscsBasketErrors: The errors in the basket items

NBasketErrors: The number of basket errors

7.2 Modular Functionality

I_shop.asp is included

The module retrieves the shoppers order form from the database and stores it in *MscsOrderForm*. The module then passes the order form through the OPP in order to verify the data in the *orderform*. The verification errors are written to *MscsBasketErrors* and *NbasketErrors* is set to the number of errors.

The HTML headers are then defined

I_header.asp is included

If the number of Order Form Items (*NorderFormItems*) is 0 the module then outputs that the basket is empty. However if there are items in the *orderform*, the basket is presented to the user's web browser. If there are errors from the order form verification (*NbasketErrors*), the errors (*MscsBasketErrors*) are then output to the user.

The basket items are output to the screen in a table format. The code cycles through each item and outputs each item characteristic to the

browser. For each item a button is also presented allowing the user to delete the individual item. The button calls *xt_orderform_update.asp* and passes it the "delete item" instruction and the item's number (position) in the order form. The order total is calculated using the money function of the *MSCSDataFunctions* object. This total is presented.

Three buttons are then presented allowing the user to update the basket information, clear the basket contents or purchase the basket contents.

Update: This button calls the *xt_orderform_update.asp* module and passes it the 'edit quantity' instruction.

Clear: This button calls the *xt_orderform_update.asp* module and passes it the 'clear items' instruction.

Purchase: This button calls the *xt_orderform_purchase.asp* module.

l_footer.asp is included.

7.3 Algorithms

None

8 Closed.asp

8.1 Objects and Variables

None

8.2 Modular Functionality

The HTML headers and text indicating that the store is closed are output to the user's web browser.

8.3 Algorithms

None

9 Confirmed.asp

9.1 Objects and Variables

MscsPage: An instance of the Page object (declared in *l_shop_open.asp*)

Order_id: The order identification number (passed from the calling module)

Sku: the product ID for the product purchased (passed from the calling module)

MSCSProductStorage: The application's *MSCSProductStorage* object.

Product: The product's details as retrieved from the database

MscsPage: An instance of the Page object (declared in *l_shop.asp*)

9.2 Modular Functionality

l_shop.asp is included.

The HTML page headers are defined.

l_header.asp is included

If an order number has been passed to the module, the order number is then output to the user's web browser along with a purchase confirmation message. If no order number is present (that is, a product ID (*sku*) has been passed instead), the product ID is retrieved from the calling module and based on the ID the product's details (*product*) are retrieved from the database. The product details are then output to the web browser as a purchase confirmation.

The user is provided with links to view his/her registered products, to return to the Welcome page or to log out of the application.

l_footer.asp is included.

9.3 Algorithms

None

10 Contract.asp

10.1 Objects and Variables

MSCSProductStorage: The application's MSCSProductStorage object.

Sku: The identification number for the particular product (passed by calling module)

Product: The product details in the database

Reason: The reason the contract is being viewed – for the purpose of viewing or for the purpose of obtaining approval from the user prior to purchase.

product_exists: Whether or not the product requested (by the passed sku) is available in the database or not.

10.2 Modular Functionality

I_shop_open.asp is included.

The product information is retrieved from the database based on the *sku* that is passed from the calling module.

The HTML page headers are defined.

I_header.asp is included.

If the requested product (based on the *sku*) is not available in the database, a message is displayed to the web browser informing the user of this fact, otherwise the contract is displayed.

If the reason the user is viewing the contract (*reason*) is to purchase the product, the user is then presented with two buttons, one allowing him/her to accept the contract and the other allowing him/her to reject the contract. If the user is purchasing a free product and selects to accept the contract, the *xt_register.asp* module is called and the product sku (*product.sku*) is passed to the module. If the user is purchasing a product that has a price other than zero and selects to accept the contract, the *xt_orderform_additem.asp* module is called and the product sku (*product.sku*) is passed to the module. If the user rejects the contract, he/she is returned to the product page and the item is not added to his/her shopping basket.

If the user is viewing the contract simply for the purpose of viewing it, he/she is presented with a link to return to the *product.asp* module from where he/she initially selected to view the contract.

l_footer.asp is included.

10.3 Algorithms

None

11 Default.asp

11.1 Objects and Variables

MscsPage: An instance of the Page object.

MSCSShopperStorage: The application's MSCSShopperStorage object.

MscsShopperID: The shopper's ID

Status: Whether or not the shopper is logged in to the system

Destination: The module to place in main frame window

Task: A variable passed to the destination module

Error: A variable passed to the destination module

Label: A variable passed to the destination module

11.2 Modular Functionality

The HTML page headers are defined.

The module retrieves the current shopper ID from the application. If the ID is present and is verified to be an actual ID in the database, the *status* variable is set to "in". Otherwise the variable is set to "out".

The *destination*, *task*, *error* and *label* variables are retrieved from the calling module.

The frame layout for the application is defined. If the user is logged in to the system (*status* = "in") a specific 'logged in' menu is displayed otherwise a 'logged out' menu with less features is displayed.

If the *destination* variable is defined the relevant module is loaded into the main frame window and the *tas ., error* and *label* variables are passed to this module. If the *destination* variable does not contain a destination, the *welcome.asp* module is loaded into the main frame.

11.3 Algorithms

None

12 Download.asp

12.1 Objects and Variables

MSCSProductStorage: The application's MSCSProductStorage object.

Sku: The identification number for the particular product (passed by calling module)

Product: The product details in the database

product_exists: Whether or not the product requested (by the passed sku) is available in the database.

MscsPage: An instance of the Page object (declared in *i_shop_open.asp*)

Proddowns: A list of each file and related information available for downloading of the particular product

Proddown: The details for a single file and related information available for downloading of the particular product

12.2 Modular Functionality

The *i_shop_open.asp* file is included.

The product is retrieved from the database based on the *sku* and written the *product* variable. The module checks if the product was successfully retrieved from the database (based on the *sku*) and also if it is available for purchasing. If it is, *product_exists* is set to "true", otherwise it is set to "false".

The HTML headers are defined

The *i_header.asp* file is included.

If *product_exists* is set to "false", a message is displayed indicating that the product is not available.

If the product is available (*product_exists* = "true"), all the file information for files available for downloading for the particular product are retrieved from the database (*proddowns*). The module then cycles through a loop and outputs information for each downloadable file (*proddown*) to the web

browser. The file name (*proddown.filename*) is created as a link to download the actual file.

The user is presented with a link to return to the *product.asp* module from where he/she initially selected to view the contract

The *i_footer.asp* file is included

12.3 Algorithms

None

13 Feedback.asp

13.1 Objects and Variables

Feedback_type: The type of feedback that is being provided

Feedback_product: The product for which feedback is being provided

MscsPage: An instance of the Page object (declared in *i_shop.asp*)

13.2 Modular Functionality

i_shop.asp is included

The *feedback_type* and *feedback_product* variables are retrieved from the calling module. The variables are then checked and if they are null values (the value has not been passed from the calling module) the web browser is redirected to the calling module (*feedback_menu.asp*) and the relevant error messages are passed to the module.

The HTML headers are defined

The *i_header.asp* file is included

An HTML form is then output to the user's web browser. Depending on the type of feedback being provided (*feedback_type*), different elements of the form are displayed.

The user then has the option to either submit or reset the form. Resetting the form clears all the input data. Submitting the form submits all the input data to the application (*xt_feedback.asp* in particular).

i_footer.asp is included

13.3 Algorithms

None

14 Feedback_menu.asp

14.1 Objects and Variables

Products: Details of all the products in the database

MSCSDataSource: The application's MSCSContent object (declared in *i_shop.asp*)

MscsPage: An instance of the Page object (declared in *i_shop.asp*)

Error: A list of error messages passed to the module.

14.2 Modular Functionality

I_shop.asp is included.

The HTML page headers are defined.

I_header.asp is included.

The details of the products stored in the database are retrieved using the *MSCSDataSource* component and stored in the *products* variable.

A form is defined and output to the web browser. If any error messages (*error*) have been passed to the module, these are then listed. The different options for the type of feedback to provide are output as a drop down list. The different products available for which to provide feedback are also output as a separate drop down list.

Two buttons are output to the web browser. The user can either select to reset the form. This will reset all the initial values on the form. Alternatively the user can submit the form. This submits the selected information to the application, in particular to *feedback.asp*.

I_footer.asp is included.

14.3 Algorithms

None

15 Global.asa

15.1 Objects and Variables

None

15.2 Modular Functionality

The ADO command types and ADO cursor types are defined.

The connection string (*connectStr*) is defined for connecting to the DSN using the ADO.

A content component (*MSCSContent*) with associated Data source (*MSCSDataSource*) and queries are defined.

The following instances of objects are defined and initialised (Refer to QSI 232 for definitions of each of the objects):

a. Data Functions (*MSCSDataFunctions*)

b. Product DBStorage (*MSCSProductStorage*)

c. Shopper Manager (StandardSManager component) (*MSCSShopperManager*)

d. Shopper DBStorage (*MSCSShopperStorage*)

e. Order form DBStorage (*MSCSOrderFormStorage*)

f. Feedback DBStorage (*MSCSFeedbackStorage*)

g. Purchase DBStorage (*MSCSPurchaseStorage*)

h. Receipt DBStorage (*MSCSReceiptStorage*)

i. Order Pipeline (*MSCSOrderPipeline*)

j. Traffic Table (*MSCSTraffic*)

k. Message Manager (*MSCSMessageManager*)

The Message Manager is initialised by calling the InitMessageManager function.

The components that are defined and initialised as listed above are given Application scope.

15.3 Algorithms

None

15.4 Functions

15.4.1 InitMessageManager

15.4.1.1 Objects and Variables

msg_mgr: The Message Manager component when created.

15.4.1.2 Functionality

The Message Manager (*msg_mgr*) is defined. Messages are added to the Message Manager. The Message Manager object is then returned by the function.

15.4.1.3 Algorithms

None

16 Global_closed.asa

16.1 Objects and Variables

StartPage: The page to be displayed on the user's web browser

CurrentPage: The current page being displayed

16.2 Modular Functionality

The module retrieves the current page being displayed to the web browser and if it is not the same as the start page (*StartPage*), the user is redirected to the start page (indicating that the store is closed).

16.3 Algorithms

None

17 l_country.asp

17.1 Objects and Variables

current_country: The current country that the shopper is registered to be from (used for updating the country).

17.2 Modular Functionality

The module displays a selection list of all the countries that a shopper may be from. If the shopper is already registered to be from a particular country (*current_country*) then that country is initially selected.

17.3 Algorithms

None

18 I_footer.asp

18.1 Objects and Variables

None

18.2 Modular Functionality

The module displays the HTML contents of the standard footer. The footer closes off the HTML table data, row and table tags opened in *i_header.asp*.

18.3 Algorithms

None

19 l_header.asp

19.1 Objects and Variables

None

19.2 Modular Functionality

The module defines an HTML table. The header information is output in the first row of the table. The next row of the table is then output. The first column is output as an empty column (to serve as a margin) and the next column is defined in the header but the contents is output by the pages that include the header. This column, the table row and the table itself are closed by the *l_footer.asp* module.

19.3 Algorithms

None

20 i_shop.asp

20.1 Objects and Variables

MscsPage: An instance of the Commerce Server Page object.

MSCSDataSource: The application's MSCSContent object.

MSCSDataFunctions: The application's MSCSDataFunctions object.

MSCSShopperManager: The application's MSCSShopperManager object.

MSCSTraffic: The application's MSCSTraffic object.

MSCSShopperStorage: The application's MSCSShopperStorage object.

MSCSOrderFormStorage: The application's MSCSOrderFormStorage object.

MSCSOrderPipeline: The application's MSCSOrderPipeline object.

MscsShopperID: The user's shopper ID

MscsShopper: The shopper's details from the database

20.2 Modular Functionality

The module either creates instances of the relevant Commerce Server objects or defines the application's objects as local variables.

The Shopper ID is retrieved from the application.

A traffic event is logged.

If the shopper ID is not present in the application or if the shopper ID does not correlate with a valid shopper in the database, the user is redirected to the *shopper_lookup.asp* module.

If the Shopper ID is present and correlates with a valid user, the module ends and the module that calls the *I_shop.asp* module is processed.

20.3 Algorithms

None

21 l_shop_open.asp

21.1 Objects and Variables

MscsPage: An instance of the Commerce Server Page object.

MSCSDataSource: The application's MSCSContent object.

MSCSDataFunctions: The application's MSCSDataFunctions object.

MSCSShopperManager: The application's MSCSShopperManager object.

MSCSTraffic: The application's MSCSTraffic object.

MSCSShopperStorage: The application's MSCSShopperStorage object.

MSCSOrderFormStorage: The application's MSCSOrderFormStorage object.

MSCSOrderPipeline: The application's MSCSOrderPipeline object.

MscsShopperID: The user's shopper ID

MscsShopper: The shopper's details from the database

Status: Whether or not the user is logged in to the IS4.

21.2 Modular Functionality

The module either creates instances of the relevant Commerce Server objects or defines the application's objects as local variables.

The Shopper ID is retrieved from the application.

A traffic event is logged.

If the shopper ID is not present in the application or if the shopper ID does not correlate with a valid shopper in the database, the *status* variable is set to "out".

If the Shopper ID is present and correlates with a valid user, the *status* variable is set to "in".

21.3 Algorithms

None

22 Invoice.asp

22.1 Objects and Variables

MscsPage: An instance of the Page object (declared in *I_shop.asp*)

MSCSReceiptStorage: The application's *MSCSReceiptStorage* object.

Receipt: A component containing the details of the specific invoice

Items: The items in the invoice

Nitems: The number of items in the invoice.

row_items: An object containing the details of a particular row in the invoice.

MSCSDataFunctions: The application's *MSCSDataFunctions* object.

22.2 Modular Functionality

The *I_shop.asp* module is included.

The HTML page headers are defined.

I_header.asp is included.

Information for the shopper, on how to handle the invoice, is output to the shopper's web browser.

The shopper's invoice is retrieved from the database (*receipt*). The number of items in the invoice is determined (*nitems*). If there are no items an error message is then output.

The receipt details are output to the shopper's web browser.

I_footer.asp is included.

22.3 Algorithms

None

23 Menu_closed.asp

23.1 Objects and Variables

MscsPage: An instance of the Page object (declared in *l_shop.asp*)

23.2 Modular Functionality

The *l_shop.asp* module is included.

The HTML page headers are defined.

An HTML table is output to the web browser containing links to the menu items for a logged in user.

23.3 Algorithms

None

24 Menu_open.asp

24.1 Objects and Variables

MscsPage: An instance of the Page object (declared in *l_shop.asp*)

24.2 Modular Functionality

The *l_shop_open.asp* module is included.

The HTML page headers are defined.

An HTML table is output to the web browser, containing links to the menu items, for a user not logged in to the system.

24.3 Algorithms

None

25 Product.asp

25.1 Objects and Variables

MSCSProductStorage: The application's *MSCSProductStorage* object.

Sku: The product identifier.

Product: The product's details as retrieved from the database

product_exists: Whether or not the selected product is available for display

MscsPage: An instance of the Page object (declared in *I_shop_open.asp*)

MSCSDataFunctions: The application's *MSCSDataFunctions* object (declared in *I_shop_open.asp*)

Status: Whether or not the user is logged in to the system (defined and determined in *I_shop_open.asp*)

Prodreqs: Dependency items for the particular product.

Prodreq: Each dependency item for the particular product

Label: A counter used for the numbering of a list

Prodinfos: Information items for the particular product.

Prodinfo: Each information item for the particular product.

25.2 Modular Functionality

I_shop_open.asp is included.

The product storage object (*MSCSProductStorage*) object is declared and the product ID (*sku*) is retrieved from the calling module.

The product information is retrieved from the database based on the *sku*. If the product is present in the database and it is marked as available the *product_exists* variable is set to true, otherwise it is set to false.

The HTML page headers are defined.

l_header.asp is included.

If the product is not available (*product_exists* = false) then a message is displayed indicating this.

If the product is available then the product dependencies are retrieved from the database.

The product information is then displayed.

If product dependencies do exist, these are then listed.

If the shopper is logged in to the system and the product is not free, the shopper is given the option to add the product to his / her shopping basket. If the product is however free (*product.list_price = 0*), the shopper is given the option to purchase the product without first adding it to his/her shopping basket. If the shopper is not logged into the system, he/she is told that he/she has to first log into the system in order to purchase the product. The shopper is then given a button enabling him/her to log into the system.

The module outputs buttons (HTML links) for the shopper to be able to view the contract for the particular product as well as to view and download the files for the particular product.

Additional product information items are retrieved from the database for the particular product (based on the *sku*) and are displayed on the user's web browser.

l_footer.asp is included.

25.3 Algorithms

None

26 Registered.asp

26.1 Objects and Variables

Purchases: The database records of all the products that the user has purchased.

MscsShopperID: The user's ID (defined in *l_shop.asp*)

Product: The product details associated with each product in the *purchases* variable.

26.2 Modular Functionality

l_shop.asp is included

The products that the user has purchased are retrieved from the database and stored in the *purchases* variable.

The HTML page headers are defined.

l_header.asp is included.

If the customer has not made any purchases a message is output to the web browser indicating this. Otherwise a list of all the user's purchased products are output to the web browser as HTML links. These links link to the *registered_product.asp* module that displays the details of the individual selected product.

l_footer.asp is included

26.3 Algorithms

None

27 Registered_product.asp

27.1 Objects and Variables

purchase_id: The identifier for the particular purchased product being viewed.

Purchase: a variable containing the details of the purchased product that has been selected.

MSCSDataSource: The application's *MSCSContent* object (declared in *i_shop.asp*).

Error: The type of error message passed to the module

Label: The label of the error message

MscsPage: An instance of the Page object (declared in *i_shop_open.asp*)

Documents: A variable containing the documents available for downloading for the particular product.

documents_exists: Whether or not there are documents available for the specific product.

Document: a variable containing the details of each document respectively.

27.2 Modular Functionality

I_shop.asp is included

The details of the purchased product are retrieved from the database based on the *purchase_id* (which is retrieved from the calling module).

The module checks whether the purchase being viewed is registered to the user currently logged in to the application's session. If it is not registered to the current user, the user is redirected to the *shopper_lookup.asp* module, as this indicates that a user is fraudulently attempting to view another user's purchase.

If the registered user and the current user are the same person, the product information is output to the user's web browser.

The HTML headers are first defined.

l_header.asp is included.

If any error messages have been passed to the module, the relevant text is output to the user's web browser.

The purchase details are output to the web browser.

The user can alter purchase information (whether or not to be on the mailing list). An HTML form button is provided for the user to update this information. Pressing the button redirects the user to the *xt_registered_product.asp* module and passes the *purchase_id* and the selected mailing list status (*purchase_mlist*).

The documents available for downloading for the purchased product are retrieved from the database (*documents* variable).

If there are documents available *documents_exists* is set to true, otherwise to false. If there are no documents available a message is output to the web browser indicating that this is the case. If there are documents available, the documents' information is output to the web browser. The information is output as a link allowing the user to select the link to download the respective file.

The user is presented with a link to return to the *registered.asp* module from where he/she initially selected to view the details of the purchased product.

l_footer.asp is included.

27.3 Algorithms

None

28 Shelf.asp

28.1 Objects and Variables

MSCSDataSource: The application's *MSCSContent* object

Products: The details of all available products stored in the database

Product: The details of a single product from the *products* variable.

28.2 Modular Functionality

l_shop_open.asp is included

The products available in the database that are available for purchasing are retrieved (*Products* variable).

The HTML page headers are defined.

l_header.asp is included.

If there are no products available in the database, an appropriate error message is output to the web browser.

If there are products available, the module loops through each product and outputs the product name and version as a link to the *product.asp* module.

l_footer.asp is included.

28.3 Algorithms

None

29 Shopper_lookup.asp

29.1 Objects and Variables

MscsPage: An instance of the Page object.

MSCSTraffic: The application's MSCSTraffic component

Error: The type of error sent to the module

Error_string: The error message

Flag_error: A flag indicating whether or not an error has been received by the module.

Label: A label for a respective *error_string.*

29.2 Modular Functionality

The *MscsPage* component is defined and a traffic event is logged.

The module checks if any error messages have been received. If an error has been received, the error flag is set and the error message and label are retrieved from the calling module. Also the relevant error message is set.

The HTML page headers are defined.

I_header.asp is included.

A form is output to the user's web browser. If the error flag (*flag_error*) has been set, the relevant error string is output to the web browser.

Two form fields are output as part of the form, a field for the username and a field for the password. A button to submit the form details is also output to the web browser.

A link to *shopper_new.asp* is also output to the web browser for the case of a new user not having a username and password.

I_footer.asp is included.

29.3 Algorithms

None

30 Shopper_new.asp

30.1 Objects and Variables

MscsShopperID: The user's shopper ID (defined in *i_shop_open.asp*)

Status: Whether or not the user is logged in to the system

MSCSShopperStorage: The application's MSCSShopperStorage object (declared in *i_shop_open.asp*)

MscsPage: An instance of the Page object.

MSCSTraffic: The application's *MSCSTraffic* component.

Error: An error message received by the module

Label: A label for the received error messsage.

StrError: An error string passed to *shopper_update.asp*

StrLabel: An error label passed to *shopper_update.asp*

Current_country: The country for which the shopper is registered as being from.

30.2 Modular Functionality

I_shop_open.asp is included.

It is determined whether or not the user is logged in to the system (whether or not the shopper ID is known) and the *status* variable is set accordingly.

If the user is logged in (*status* = "in") he/she is redirected to the *shopper_update.asp* module to rather update his/her user information. The associated error message is also passed to the *shopper_update.asp* module.

If the user is not logged in (*status* = "out") the page contents is then output to the web browser as follows.

The page component is defined and a traffic event is logged.