GUI_ProjectClose – Close a Project

Revision History

2017-06-20	Robin Lamacraft	Initial creation
2018-05-29 – 06-03	Rod Thompson	Major revision Add Window graphics Add Window Interaction Map Add Process Flow Chart
2018-06-06	Rod Thompson	Add clarification for meaning of Project Close Replace BR_PanelConfig with BR_WindowConfig
2018-06-08	Rod Thompson	Add Messages (Server) Revise Process Flowchart
2018-06-09	Don Ferguson	Minor edits
2018-06-15	Rod Thompson	Add Project fileset detail Update REQUIRED SERVICES-Dependencies Replace PROCESS FLOW CHART Replace WINDOW INTERACTION MAP
2018-06-28	Rod Thompson	Replace PROCESS FLOW CHART Replace WINDOW INTERACTION MAP Add Project Fileset under SCOPE
2018-06-29	Rod Thompson	Replace window graphic
2018-10-23	Rod Thompson	Replace window graphic Replace WINDOW INTERACTIONS MAP Add Window location detail LOOK AND FEEL – Remove configuration icon EVENT ACTION – Add to mouse actions Add 'Project Close Time record' to ACTIONS Add LOGGING Update REQUIRED SERVICES-Dependencies
2018-12-13	Rod Thompson	Replace Process Flowchart (add Action-Progress) Add TESTING SECTION
2019-02-25	Rod Thompson	Replace window graphics (v12) LOOK AND FEEL – Add Data Validation & message popup re Server logoff ACTIONS – Add re Data Validation Replace Process Flowchart(v12) WARNING CONDITIONS – Revise Replace WINDOW INTERACTION MAP (v6) MESSAGES – Update REQUIRED SERVICES - Update

SCOPE

This GUI module is called from the Main Menu (GUI_UserInterface), or from GUI_ExitHRE, to close a currently open project.

In general, the term 'Project Close' is used to mean closure of the connection between the Client and Server for the selected currently open Project. Only when there is ONE User of an open Project, can that Project be 'closed'.

PROJECT FILESET

A set of files required for normal use of HRE projects consists of:

- an H2 database
- A 'User' Auxiliary file
- A 'Project' Auxiliary file

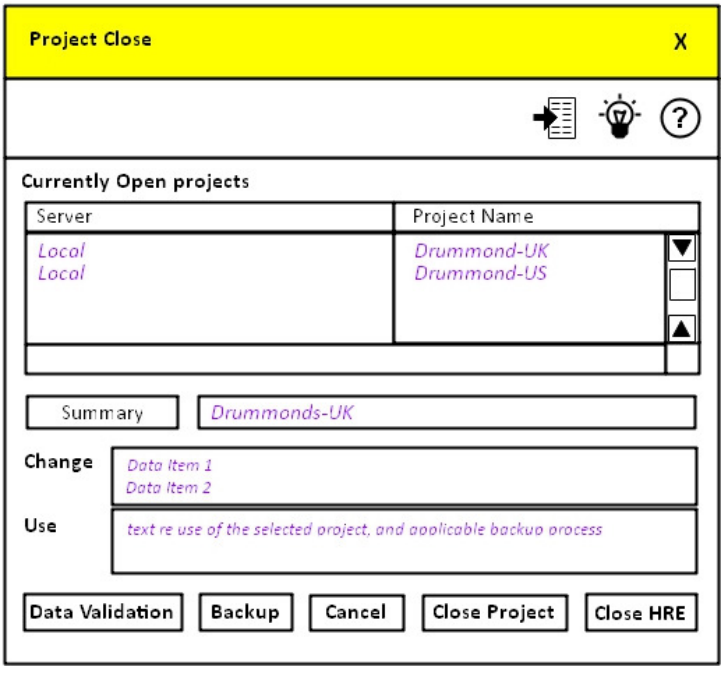
- folders of external files (images, etc). [optional].

Refer to *03.32 Overview – Auxiliary (Non Database) Files* for details.

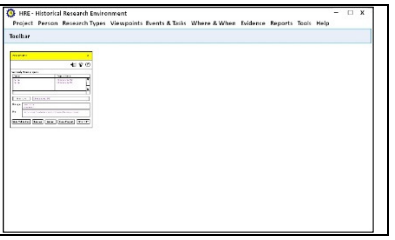
LOOK AND FEEL

The window has several parts:

- A top panel with the window name, and window size control icons
- The upper right icon buttons provide the following universal features:
  - The 'Output' icon enables Output of the new project properties list by sending the contents of the Currently Open projects tabular display to a file or to a printer
  - The 'Reminder' icon displays the Reminder content for this window
  - The 'Help' icon displays context Help about the use of this window
- A scrollable display area which shows all of the user's currently open projects, by server and project name which allows the selection of a Project from the displayed list (this may be empty if no projects are open)
- A display area for the selected Project name
- A "Summary" button which opens the GUI_ProjectSummary module to display details of the selected project
- A display of additional information to the user, relevant to the closing of the Project
- A "Data Validation" button to initiate that process
- The control buttons
  - "Backup" causes backup of the selected project, in a single user situation
  - "Close Project" performs the project close functions on the selected project
  - "Close HRE" will close HRE if there are no projects open
  - "Cancel" exits without action.
- Following use of the "Close Project" option, and on completion of the process, a pop-up message will be displayed about logging from the server (only displayed if the project is server resident)
- Warning messages are displayed where appropriate.



ProjectClose Window – Mockup

Shape, Size, Color, Layout etc. determined in design. On screen location Initially inherited from the HRE main display Window located immediately below the Project menu button On screen location and scale are the only User changeable settings	

ACTIONS

The fundamental operations are:

1. Open the window according to its saved Layout (BR_WindowConfig)
2. Allow selection of a project to be closed
3. When a project has been selected, the project name is displayed in the text box and the 'Summary' button activated. This allows the User to view a 'Summary' of the selected Project (refer to GUI_ProjectSummary)
4. Wait until all outstanding transactions from this client are completed
5. Allow a Data Validation process to be run; by calling BR_DataValidation
6. Ask whether to backup the project; if so, call GUI_ProjectBackup
7. On completion of all tasks above:
   - Write a 'Project Close' time to the Session table
   - Close the project file from this HRE client.
8. Message the User regarding Logging from the Server
9. Close the window and return to GUI_UserInterface
10. If selected, close the HRE application.

See the Flowchart section for more explanation of these Actions.

INFORMATION DISPLAY

This provides the user with information about the Project intended to be closed, to assist determining further action.

Two parts make up the information set:

1) Project changes

   This gathers two pieces of data, and formats these with words according to a template.

   a. Date Item 1 – the number of changes to the Project since the previous backup
      Example 317
   b. Data Item 2 – the date/time of the previous backup.
      Example 10-Jan-2018, 10:04AM

   Template: NUMBER changes since the last backup on DATE/TIME
   Example: 317 changes since the last update on 10-Jan-2018, 10:04AM

2) Use

   This gives information about current use of the selected project, relevant to backup of the Project.

   The following template 2-line text messages are involved

   a. Single User
      Backup allowed
   b. Multiple Users
      Backup request will be sent to the Server for later action

   Where there is only one User of the Project, backup can occur immediately.

   Where there are multiple active users, backup can occur only when one user remains, and activates either the Backup or Close processes.

Each of these parts is provided by separate text boxes.

USED BY

All HRE users.

DATA CONTROLLED BY THIS MODULE

1. Any open HRE Project.

REQUIRED DATA CONTROLLED BY OTHER MODULES

1. Server names and Project names
2. Data from Project Summary for each open Project.

REQUIRED SERVICES – Dependencies

First-Order Dependencies	Second-Order Dependencies (if not already listed)	Higher-Order Dependencies (if not already listed)
04.05 GUI_ProjectBackup	03.66 GUI - MessagePatterns	NIL
	07.17 BR_WindowConfig	07.06 BR_GuiElement
		07.02 BR_EntityLink
		07.29 BR_Translation
		07.16 BR_MessagePatterns
	07.21 BR_Project	07.06 BR_GuiElement
		07.02 BR_EntityLink
		07.29 BR_Translation
		07.03 BR_FieldDefinition
04.14 GUI_ProjectSummary	07.17 BR_WindowConfig	07.06 BR_GuiElement
		07.02 BR_EntityLink
		07.29 BR_Translation
		07.16 BR_MessagePatterns
	07.21 BR_Project	07.06 BR_GuiElement
		07.02 BR_EntityLink
		07.29 BR_Translation
		07.03 BR_FieldDefinition
	07.16 BR_MessagePatterns	NIL
04.13 GUI_ExitHRE	04.07 GUI_ProjectClose	This module
	07.21 BR_Project	07.06 BR_GuiElement
		07.02 BR_EntityLink
		07.29 BR_Translation
		07.03 BR_FieldDefinition
07.17 BR_WindowlConfig	07.06 BR_GuiElement	07.01 BR_EncodedString
		07.02 BR_EntityLink
		BR_FieldTranslation
		07.16 BR_MessagePatterns
	07.02 BR_EntityLink	NIL
	07.29 BR_Translation	07.02 BR_EntityLink
		BR_Field
		07.06 BR_GuiElement
		07.16 BR_MessagePatterns
	07.03 BR_FieldDefinition	NIL
	07.16 BR_MessagePatterns	07.02 BR_EntityLink
		07.01 BR_EncodedString
		07.11 BR_Logging
		Call Stack
		07.24 BR_Setting
		GUI Translation
07.21 BR_Project	07.06 BR_GuiElement	07.06 BR_GuiElement
		07.02 BR_EntityLink
		BR_FieldTranslation
		07.16 BR_MessagePatterns
	07.02 BR_EntityLink	NIL

First-Order Dependencies	Second-Order Dependencies (if not already listed)	Higher-Order Dependencies (if not already listed)
	07.29 BR_Translation	07.02 BR_EntityLink
		BR_Field
		07.06 BR_GuiElement
		07.16 BR_MessagePatterns
	07.03 BR_FieldDefinition	NIL
07.11 BR_Logging	07.01 BR_EncodedString	NIL
	07.02 BR_EntityLink	NIL
	BR_FieldTranslation	
	07.26 BR_Substitution	07.02 BR_EntityLink
		07.29 BR_Translation
07.48 BR_DataValidation		

APPLICATION PROGRAMMING INTERFACE (API)

1. Single call, no parameters

LOGGING

Use of this module will create log entries.

Commit Logging occurs for each of the following functions – in the listed tables:

Function	Database Table
Close Session	128
Move and/or resize window	305/306?

General Log
This includes:

- Data Validation
- Project Backup
- Message to Server (at Client)
- Message from Client (at Server)
- Message to Client (at Server)
- Message from Server (at Client)
- Message Acknowledgement.

EVENT ACTIONS

1) Keyboard actions
   NIL
2) Mouse actions
   Drag and drop mouse actions to move and resize the window
   Setting changes saved to database for User>Project>Window
   Left key
   a. Mouse key click on Server/Project name pulldown expands Server/Project list, and allows selection
   b. Mouse key click on a Project Name, causes the project name to be shown in the text box, and enables the Summary button
   c. Mouse key click on each button, operates the button
   d. Mouse key click on icons (detailed below)

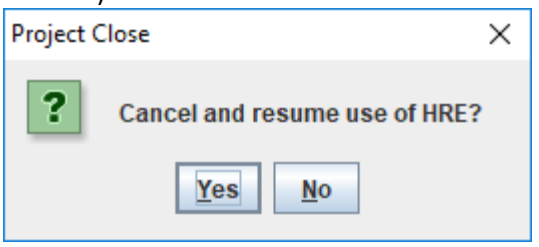
   Right key
   To be determined

3) Icon actions
    a. left mouse key click on icons in the Window Control group:
        a. 'X' icon
           (closes the window)
           NOTE: Same action as in use of the 'Cancel' button
        b. 'Box' icon
           Toggles the window size between full screen, and the saved Layout
        c. 'Dash' icon
           Minimizes the window, to an icon on the screen toolbar.
           A click on the toolbar icon restores the display to its previous setting
    b. Left mouse key click on the 'Output' icon:
       (opens the 'Output' window for output to File or Printer)
    c. left mouse key click on 'Reminder' icon:
       (opens 'Reminder' window for this 'ProjectClose' display)
    d. left mouse click on 'Help ' icon:
       (opens the Help System, searches for the section on 'ProjectClose')
4) Keyboard shortcuts
    To be determined

WARNING CONDITIONS

Display Location: centered on the GUI_ProjectClose window

1. When the 'Cancel' button is used, a reminder warning message is displayed.
   Warning Message (WM-PB1)



Implement using a JOptionPane.

Message Display bypass

A system is to employed in HRE enabling the bypass of Warning Messages.
Detail of this system is to be determined.

ERROR CONDITIONS

1. Need to record the condition that raised the error, example message and possible next steps.

POSSIBLE SERVER INTERACTIONS

1. In the Client-Server mode of operation, the project database resides on the Server
2. Backup commands from the Client act in the Server to backup the data
3. This may occur on receipt of the command, where there is only one user of a Project
4. Where multiple users concurrently access a Project, a backup of the Project is allowed only when there is one user
5. If the Server receives a backup command from a user of a Project with multiple concurrent users, that request is stored in a Queue until there is only one active User, and that User initiates either a Project Backup or Project Close. That backup process is completed before the last active User closes. If the last user does not initiate a Project Backup, the Server must

send that user a message indicating activation of the backup process and delay the user's Project close until completion.

MESSAGES

Created in and sent from Client to Server

Message M_C_S_1 Software based – no display	Contains: User Name Project name Folder and filename for saving of the Project Option-External Files Option-App Settings

Created in and sent from Server to Client(s)

Message M_S_C_1 Uses Server Broadcast Message Pattern GUI_Message (SB) Sent to all Users of the selected project	Subject: Project Close From: Server Text Message: Project connection closed. Requested by: User name Project name: Project name Backup folder: Folder name Backup filename: Filename

Message M_S_C_2 Uses Server Broadcast Message Pattern GUI_Message (SB) Sent to all Users of the selected project	Subject: Project Close From: Server Text Message: Project closed. Requested by: User name Project name: Project name Backup folder: Folder name Backup filename: Filename

Display Location: centred on the GUI_ProjectClose window

Message designator:

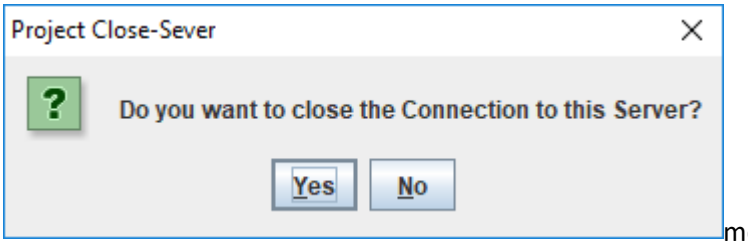
1) M_ signifies a message
2) X_ source
3) Y_ destination
4) Z distinguishing number for this window

Messages from the Server to the Client utilize the Server Broadcast Message Pattern.
Such messages result in a window opening on the client, to display information (detailed above)

MESSAGES

Created in the Client, triggered by Server action
Display Location: centered on the GUI_ProjectClose window

1. When the ‘Project Closel’ button is used, and after the Project is closed, a popup prompt message is displayed.



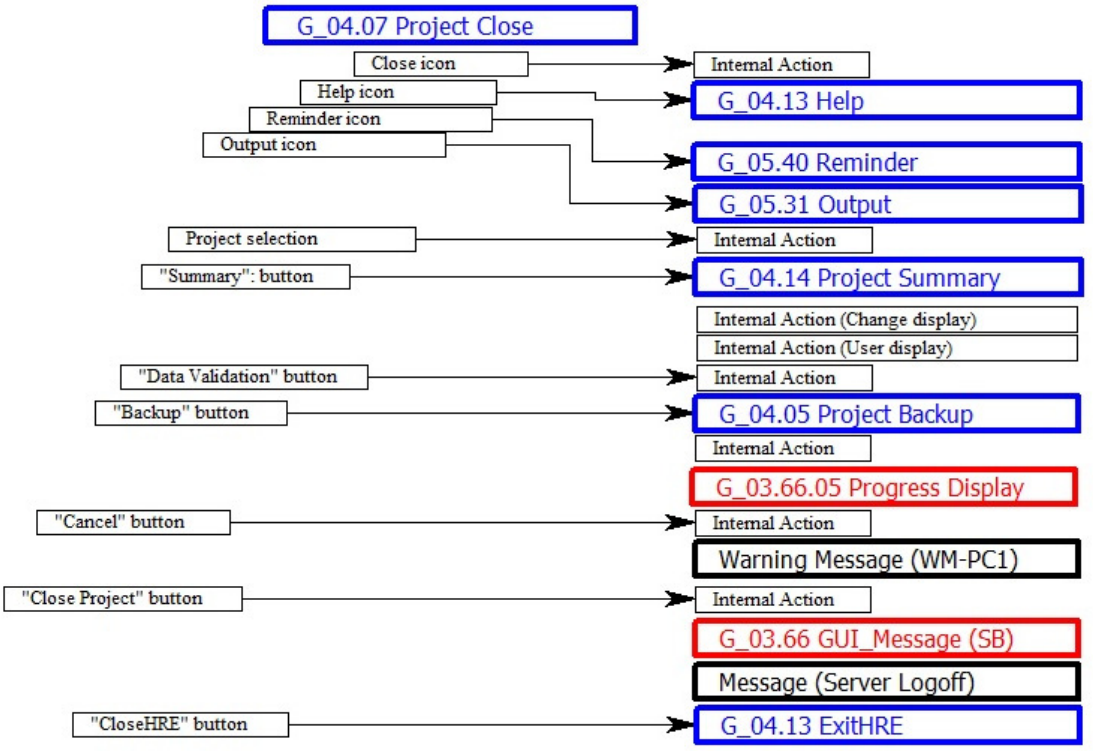
message is not to

Implement using a JOptionPane.

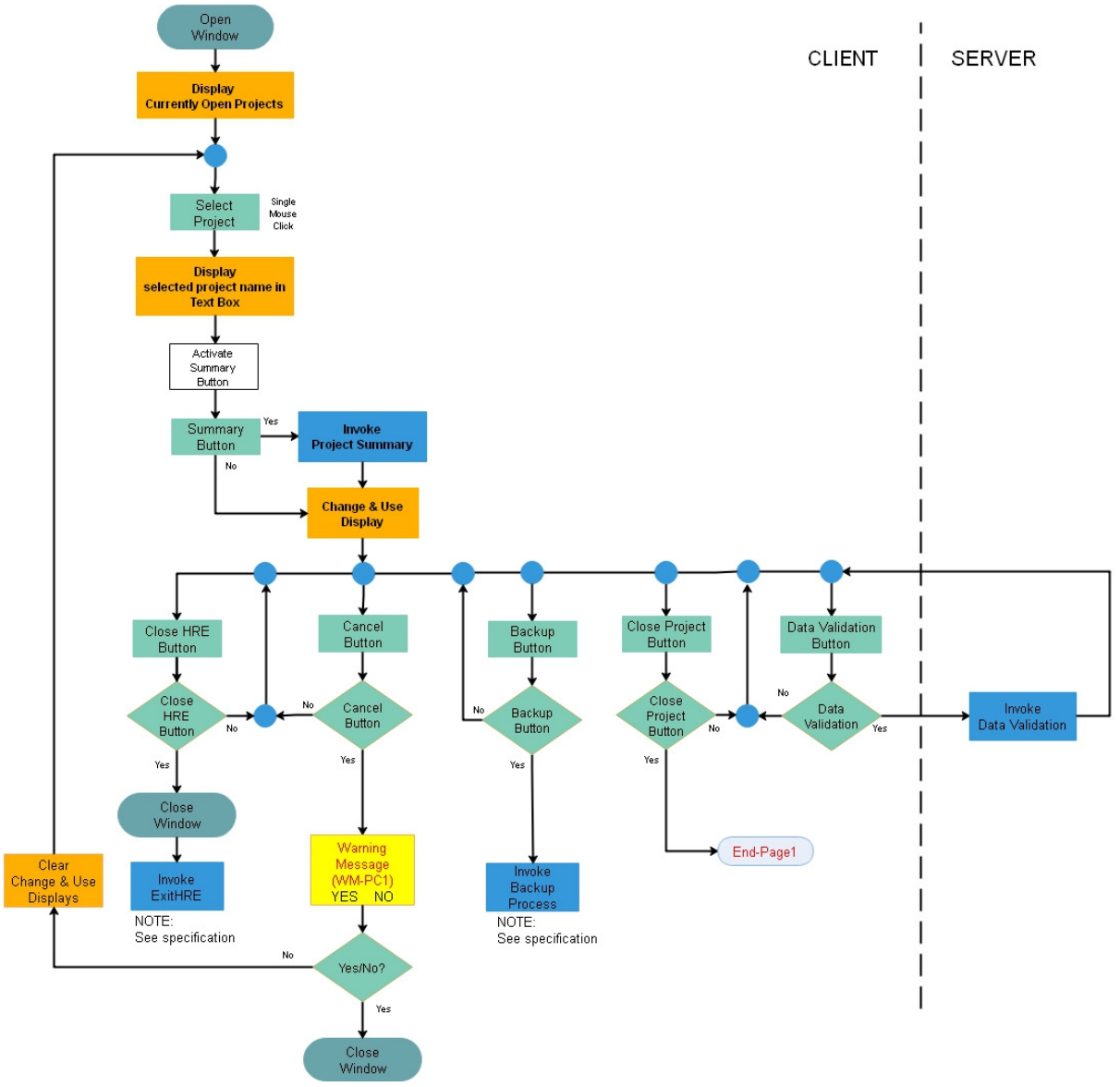
Message Display bypass
A system is to employed in HRE enabling the bypass of Warning Messages.
Detail of this system is to be determined.
This message is NOT to be Bypassed.

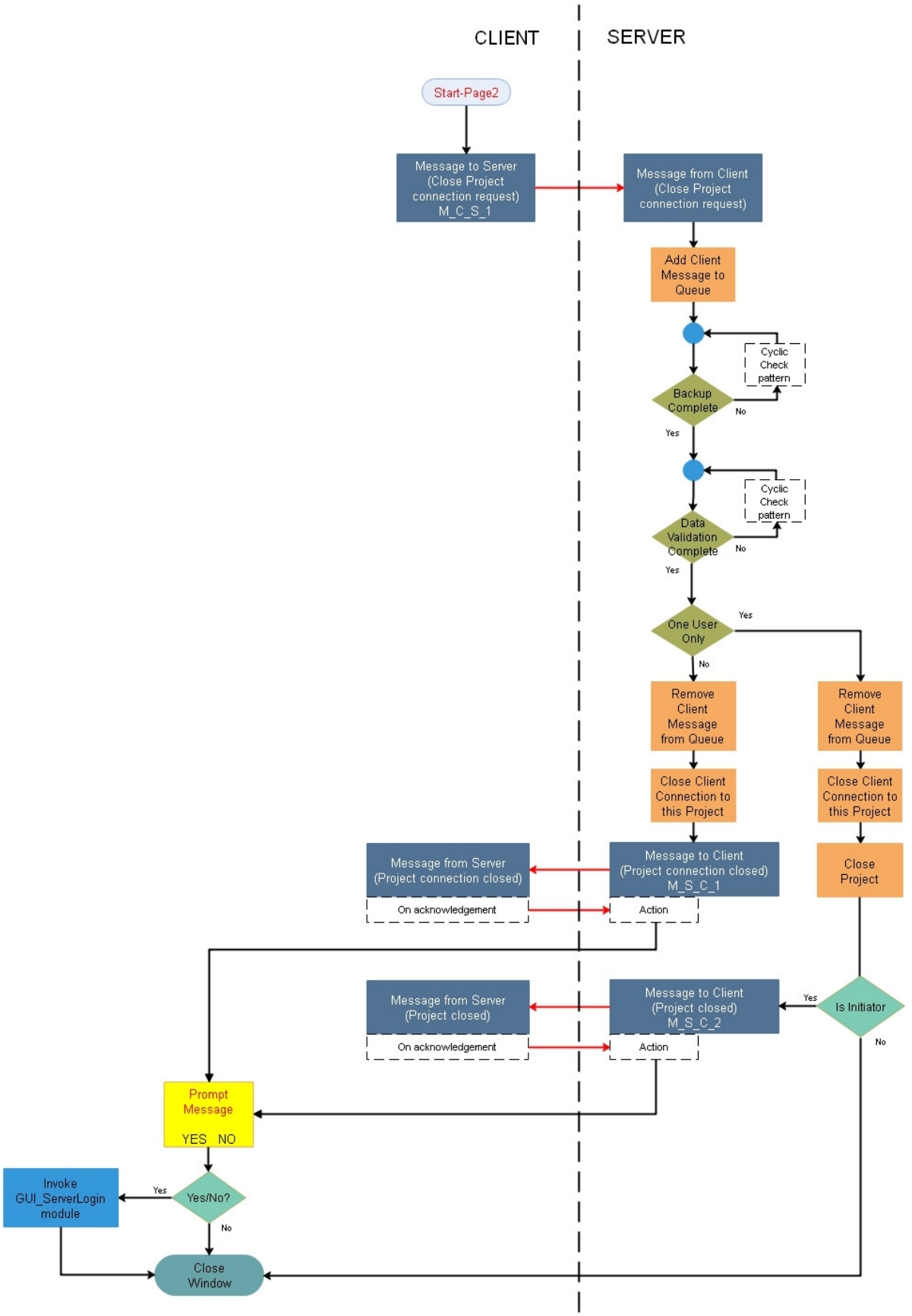
DATABASE INTEGRITY TESTS
Database integrity is checked prior to backup; and initiated by that process.
Should this be integral to the Backup process?

WINDOW INTERACTION MAP



PROCESS FLOW CHART




CLIENT
SERVER
Start-Page2
Message to Server (Close Project connection request) M_C_S_1
Message from Client (Close Project connection request)
Add Client Message to Queue
Cyclic Check pattern
Backup Complete
No
Yes
Cyclic Check pattern
Data Validation Complete
No
Yes
One User Only
Yes
No
Remove Client Message from Queue
Close Client Connection to this Project
Remove Client Message from Queue
Close Client Connection to this Project
Close Project
Message from Server (Project connection closed)
On acknowledgement
Message to Client (Project connection closed) M_S_C_1
Action
Message from Server (Project closed)
On acknowledgement
Message to Client (Project closed) M_S_C_2
Action
Yes
Is Initiator
No
Prompt Message
YES NO
Invoke GUI_ServerLogin module
Yes
Yes/No?
No
Close Window

USE CASES

TESTING

Testing to prove the functionality of this module in use with others of the HRE application.
Limited 'Project' functionality (see below).
Prior testing of the module in the code development process is assumed.

General requirements	Code element requirements
HRE installation 1) Single computer 2) Client-Server 3) Test Project database fileset	Main GUI Project Open Project Close ExitHRE

Process

1) HRE (Simple restore)
    a. Open HRE
    b. Open the Project
    c. Close the Project
2) Check result (how?)
    a. Appropriate Commit Log entries
    b. Appropriate General Log entries.

See Test Plan document