IT PAT

Phase 4: Testing Documentation

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# 4.2.1 Evaluation

## Improvements

Areas of work that have met the minimum requirements but can be improved upon for better functionality. Improvingly already sufficient work.

### Validation

The current validation measures are adequate and provide necessary error messages when required. However, I intend to enhance validation for specific fields to ensure logical consistency in the database. Additionally, a presence check, which was not implemented in previous versions of the PAT, will be incorporated. Additionally, the range check should be adjusted for improved functionality.

### Consistency

To maintain uniformity, all repetitive messages, particularly validation error messages, should follow a consistent format. For example, all error messages should start with “Invalid Data Entry” followed by the specific reason. Currently, there are inconsistencies that need to be addressed.

### Code Formatting

Certain methods contain disorganized and scattered code, making it difficult to understand upon review. Improved formatting will enhance clarity and comprehension.

### Comments

Presently, comments are minimal, especially in more complex methods. These methods should be thoroughly documented with comments to facilitate easier review for both myself and the evaluator.

### Implementation of a User Table Screen and related functions in the application

The Users Table is currently predefined by the organization and cannot be changed in any way through the application itself. Although it is not required currently, it may be wise to implement this in the future to improve data control and add functionality.

# 4.2.2 Functional Testing

## Test 1: 2024/02/05 – 20:57 – Whyet Badri

### SplashScreen Functions

|  |  |  |
| --- | --- | --- |
| * Play loading GIF | **No** | **Yes** |
| * Loading bar progresses until completion |  |  |
| * Percentage in label increases with loading bar until completion |  |  |
| * + Automatically navigates to LoginFrame upon completion |  |  |

### LoginFrame functions:

|  |  |  |
| --- | --- | --- |
| * Enter username | **No** | **Yes** |
| * Enter password |  |  |
| * + Show and hide password |  |  |
| * Verify username and password |  |  |
| * + Display error messages if incorrect details methods |  |  |
| * + Navigate to WelcomeFrame to welcome user if correct |  |  |
| * Navigate to HelpFrame |  |  |
| * + View relevant help text file |  |  |
| * + Print relevant help text file |  |  |
| * + Play help video |  |  |
| * Navigate to Logout Frame |  |  |

### WelcomeFrame

|  |  |  |
| --- | --- | --- |
| * Display welcome message | **No** | **Yes** |
| * Display the user’s name and surname |  |  |
| * Close |  |  |
| * + Navigate to MainMenuFrame |  |  |

### MainMenuFrame functions:

|  |  |  |
| --- | --- | --- |
| * Navigate to EventsTable | **No** | **Yes** |
| * Navigate to PatronsTable |  |  |
| * Navigate to VisitsTable |  |  |
| * Navigate to Reports Frame |  |  |
| * Navigate to Help Screen |  |  |
| * + View the relevant text file |  |  |
| * + Print the relevant text file |  |  |
| * + Play help video |  |  |
| * Navigate back to LoginFrame |  |  |

### EventTable functions:

|  |  |  |
| --- | --- | --- |
| * View records | **No** | **Yes** |
| * Navigate through table records using first, previous, next, last buttons |  |  |
| * Search records using radio buttons and search text field |  |  |
| * Add Events |  |  |
| * + Auto set next primary key (EventID) |  |  |
| * Edit Events |  |  |
| * Delete Events |  |  |
| * Navigate to Help Screen |  |  |
| * + View relevant text file |  |  |
| * + Print relevant text file |  |  |
| * + Play help video |  |  |
| * Navigate back to Main Menu |  |  |

### PatronsTable functions:

|  |  |  |
| --- | --- | --- |
| * View records | **No** | **Yes** |
| * Navigate through table records using first, previous, next, last buttons |  |  |
| * Search records using radio buttons and search text field |  |  |
| * Add Patrons |  |  |
| * + Auto set next primary key (PatronID) |  |  |
| * Edit Patrons |  |  |
| * Delete Patrons |  |  |
| * Navigate to Help Screen |  |  |
| * + View relevant text file |  |  |
| * + Print relevant text file |  |  |
| * + Play help video |  |  |
| * Navigate back to Main Menu |  |  |

### VisitsTable functions:

|  |  |  |
| --- | --- | --- |
| * View records | **No** | **Yes** |
| * Navigate through table records using first, previous, next, last buttons |  |  |
| * Search records using radio buttons and search text field |  |  |
| * Add Visits |  |  |
| * + Auto set next primary key (VisitNo) |  |  |
| * Edit Visits |  |  |
| * Delete Visits |  |  |
| * Navigate to Help Screen |  |  |
| * + View relevant text file |  |  |
| * + Print relevant text file |  |  |
| * + Play help video |  |  |
| * Navigate back to Main Menu |  |  |

### ReportsFrame functions:

|  |  |  |
| --- | --- | --- |
| * **Highest Spender**: Returns the patron that has spend the most overall across all time at the casino. | **No** | **Yes** |
| * + Display on text area |  |  |
| * **Most Visits**: The patron that had made the most visits to the casino across all time. |  |  |
| * + Display on text area |  |  |
| * **Patron card types**: Lists the number of patrons per each card type. |  |  |
| * + Display on text area |  |  |
| * + Display pie chart |  |  |
| * **Gender**: Lists the number of male and female patrons |  |  |
| * + Display on text area |  |  |
| * + Display pie chart |  |  |
| * **Event Locations**: Returns the number of events at each location. Also lists each event and its location. |  |  |
| * + Display on text area |  |  |
| * + Display pie chart |  |  |
| * **High-Capacity Events**: returns the number of events that more than 1000 patrons capacity and those that have less than 1000 patrons capacity. Also lists each event as a high capacity or low-capacity event. |  |  |
| * + Display on text area |  |  |
| * + Display pie chart |  |  |
| * Clear text area of all text |  |  |
| * Navigate to HelpFrame |  |  |
| * + View relevant text file |  |  |
| * + Print relevant text file |  |  |
| * + Play help video |  |  |
| * Navigate back to MainMenuFrame |  |  |

### LogoutFrame:

|  |  |  |
| --- | --- | --- |
| * Display logout confirmation message | **No** | **Yes** |
| * Exit application |  |  |
| * Navigate back to LoginFrame |  |  |

### HelpFrame:

|  |  |  |
| --- | --- | --- |
| * Display relevant help text file depending on the frame the called the HelpFrame | **No** | **Yes** |
| * + Display in the text area |  |  |
| * Print relevant help text file |  |  |
| * Play the relevant help video |  |  |

#### Comment from checker – Whyet Badri

Program functions as intended, the only features not fully done are the auto-setting of the primary key and edit fucntion in the PatronsTable. Additionally, the SQL for High Capacity Events wasn’t completed.

#### Result

Program functions as intended, minor quality of life fixed and minor sql needs to be added

## Test 2: 2024/07/11 – 01:57 – Sahil Mungroo

### SplashScreen Functions

|  |  |  |
| --- | --- | --- |
| * Play loading GIF | **No** | **Yes** |
| * Loading bar progresses until completion |  |  |
| * Percentage in label increases with loading bar until completion |  |  |
| * + Automatically navigates to LoginFrame upon completion |  |  |

### LoginFrame functions:

|  |  |  |
| --- | --- | --- |
| * Enter username | **No** | **Yes** |
| * Enter password |  |  |
| * + Show and hide password |  |  |
| * Verify username and password |  |  |
| * + Display error messages if incorrect details methods |  |  |
| * + Navigate to WelcomeFrame to welcome user if correct |  |  |
| * Navigate to HelpFrame |  |  |
| * + View relevant help text file |  |  |
| * + Print relevant help text file |  |  |
| * + Play help video |  |  |
| * Navigate to Logout Frame |  |  |

### WelcomeFrame

|  |  |  |
| --- | --- | --- |
| * Display welcome message | **No** | **Yes** |
| * Display the user’s name and surname |  |  |
| * Close |  |  |
| * + Navigate to MainMenuFrame |  |  |

### MainMenuFrame functions:

|  |  |  |
| --- | --- | --- |
| * Navigate to EventsTable | **No** | **Yes** |
| * Navigate to PatronsTable |  |  |
| * Navigate to VisitsTable |  |  |
| * Navigate to Reports Frame |  |  |
| * Navigate to Help Screen |  |  |
| * + View the relevant text file |  |  |
| * + Print the relevant text file |  |  |
| * + Play help video |  |  |
| * Navigate back to LoginFrame |  |  |

### EventTable functions:

|  |  |  |
| --- | --- | --- |
| * View records | **No** | **Yes** |
| * Navigate through table records using first, previous, next, last buttons |  |  |
| * Search records using radio buttons and search text field |  |  |
| * Add Events |  |  |
| * + Auto set next primary key (EventID) |  |  |
| * Edit Events |  |  |
| * Delete Events |  |  |
| * Navigate to Help Screen |  |  |
| * + View relevant text file |  |  |
| * + Print relevant text file |  |  |
| * + Play help video |  |  |
| * Navigate back to Main Menu |  |  |

### PatronsTable functions:

|  |  |  |
| --- | --- | --- |
| * View records | **No** | **Yes** |
| * Navigate through table records using first, previous, next, last buttons |  |  |
| * Search records using radio buttons and search text field |  |  |
| * Add Patrons |  |  |
| * + Auto set next primary key (PatronID) |  |  |
| * Edit Patrons |  |  |
| * Delete Patrons |  |  |
| * Navigate to Help Screen |  |  |
| * + View relevant text file |  |  |
| * + Print relevant text file |  |  |
| * + Play help video |  |  |
| * Navigate back to Main Menu |  |  |

### VisitsTable functions:

|  |  |  |
| --- | --- | --- |
| * View records | **No** | **Yes** |
| * Navigate through table records using first, previous, next, last buttons |  |  |
| * Search records using radio buttons and search text field |  |  |
| * Add Visits |  |  |
| * + Auto set next primary key (VisitNo) |  |  |
| * Edit Visits |  |  |
| * Delete Visits |  |  |
| * Navigate to Help Screen |  |  |
| * + View relevant text file |  |  |
| * + Print relevant text file |  |  |
| * + Play help video |  |  |
| * Navigate back to Main Menu |  |  |

### ReportsFrame functions:

|  |  |  |
| --- | --- | --- |
| * **Highest Spender**: Returns the patron that has spend the most overall across all time at the casino. | **No** | **Yes** |
| * + Display on text area |  |  |
| * **Most Visits**: The patron that had made the most visits to the casino across all time. |  |  |
| * + Display on text area |  |  |
| * **Patron card types**: Lists the number of patrons per each card type. |  |  |
| * + Display on text area |  |  |
| * + Display pie chart |  |  |
| * **Gender**: Lists the number of male and female patrons |  |  |
| * + Display on text area |  |  |
| * + Display pie chart |  |  |
| * **Event Locations**: Returns the number of events at each location. Also lists each event and its location. |  |  |
| * + Display on text area |  |  |
| * + Display pie chart |  |  |
| * **High-Capacity Events**: returns the number of events that more than 1000 patrons capacity and those that have less than 1000 patrons capacity. Also lists each event as a high capacity or low-capacity event. |  |  |
| * + Display on text area |  |  |
| * + Display pie chart |  |  |
| * Clear text area of all text |  |  |
| * Navigate to HelpFrame |  |  |
| * + View relevant text file |  |  |
| * + Print relevant text file |  |  |
| * + Play help video |  |  |
| * Navigate back to MainMenuFrame |  |  |

### LogoutFrame:

|  |  |  |
| --- | --- | --- |
| * Display logout confirmation message | **No** | **Yes** |
| * Exit application |  |  |
| * Navigate back to LoginFrame |  |  |

### HelpFrame:

|  |  |  |
| --- | --- | --- |
| * Display relevant help text file depending on the frame the called the HelpFrame | **No** | **Yes** |
| * + Display in the text area |  |  |
| * Print relevant help text file |  |  |
| * Play the relevant help video |  |  |

#### Comment from checker – Sahil Mungroo

Program functions as intended, I was not able to find any errors.

#### Result

Program functions as intended, no errors

# 4.2.3 Test Plan and Results for TWO input variables

## VisitsTable variable – AmountSpent

Testing the AmountSpent variable which is entered when logging a visit. It indicates how much a patron has spent during the visit.

**Expected input format**: positive double value, max 1 000 000 and minimum 00.01

**Expected input example**: 250.00

### ****Standard Data Test Cases: Accepted as valid****

**Input:** 25

A screenshot of a computer

Description automatically generatedA screenshot of a computer error

Description automatically generated**Results:** System accepts 25 and proceeds without error.

**Input:** 1000.00

A screenshot of a computer

Description automatically generatedA screenshot of a computer error

Description automatically generated**Results:** System accepts 1000.00 and proceeds without error.

### ****Extreme Data Test Cases: Accepted as valid****

**Input:** 2000000

A screen shot of a computer screen

Description automatically generatedA screenshot of a computer

Description automatically generated**Results:** System displays an error message indicating that the AmountSpent must be between 00.01 and 1000000

**Input:** 0

A screen shot of a computer screen

Description automatically generatedA screenshot of a computer

Description automatically generated**Results:** System displays an error message indicating that the AmountSpent must be between 00.01 and 1000000

### ****Abnormal Data Test Cases:**** Rejected with error message

**Input:** “twenty”

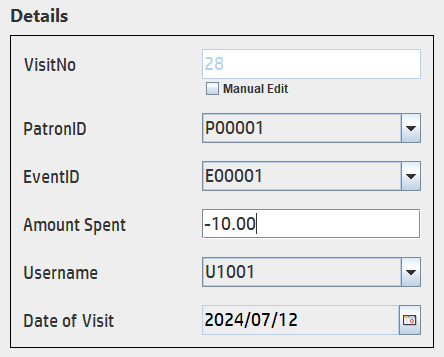
A screenshot of a computer error

Description automatically generatedA screenshot of a computer

Description automatically generated**Results:** System displays an error message indicating that the AmountSpent must be a positive double value

**Input:** -10.00

A screenshot of a computer error

Description automatically generated**Results:** System displays an error message indicating the AmountSpent must be a positive double value

### ****Summary****

Entry must be a positive double value

All validation functions as expected. Only correct data is validated. Appropriate error messages are displayed where necessary.

## PatronsTable variable – PatronID

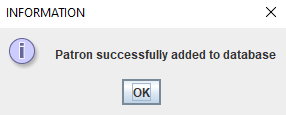
Testing the PatronID variable which is entered when adding a new patron to the database. It is the primary key of the PatronsTable and needs to be entered in a specific format.

**Expected input format**: The character “P” followed by 5 number

**Expected input example**: P00001

### ****Standard Data Test Cases: Accepted as valid****

**Input:** P00002 (Previous value is P00001)

A screenshot of a computer

Description automatically generated**Results:** System accepts 25.00 and proceeds without error.

### ****Extreme Data Test Cases: Accepted as valid****

**Input:** P123456 - 7 characters in length

A screenshot of a computer

Description automatically generatedA screenshot of a computer

Description automatically generated**Results:** System displays an error saying that PatronID should be 6 characters in length

**Input:** P1234 - 5 characters in length

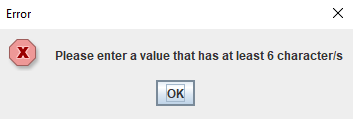
A screenshot of a computer

Description automatically generatedA screenshot of a computer

Description automatically generated**Results:** System displays an error saying that PatronID should be 6 characters in length

### ****Abnormal Data Test Cases:**** Rejected with error message

**Input:** P0001

A screenshot of a computer

Description automatically generated**Results:** System displays an error message indicating that the entry should be 6 characters in length

**Input:** 000001

A screenshot of a computer error

Description automatically generatedA screenshot of a computer

Description automatically generated**Results:** System displays an error message indicating that the entry must begin with the letter “P”

### ****Summary****

Entry must be 6 characters in length and begin with the letter “P”

All validation functions as expected. Only correct data is validated. Appropriate error messages are displayed where necessary.