**Title:** Testing Report 1

**Date:** 18/03/2024

**By:** Adam Hussain

Introduction

In this report I will be reviewing the Lancaster Restaurant software created by the development team. The aim of software is to streamline the interactions between the three teams: front-of-house (FOH), kitchen and management. The focus of the testing is to evaluate the Graphical User Interface (GUI) for the software. The GUI is a critical component of the system as it is the primary interface through which the user interacts with the software and there is a key emphasis on usability and functionality. I will not be testing functions within the GUI such as the ability to update menus. The evaluation criteria have been decided through a mixture of specific needs from Lancaster’s Restaurant as well as general software and GUI principles. I will approach the testing from the perspective of someone in management using the software.

Evaluation Criteria

Navigation and Layout

1. Is the layout of the screens consistent?

Visual Design and Branding

1. Does the aesthetic fit with the theme specified by the customer? (e.g. text fonts, colouring, branding etc.)

Responsiveness and Performance

1. Do interactive elements perform as expected?
2. Can user inputs impede performance?
3. Does the GUI exhibit any graphical errors?
4. Does the program use a reasonable amount of system resources?

Input Validation and Error Handling

1. How does the system respond to erroneous data being submitted?

User Interaction

1. Is the user successfully able to change settings? (e.g. date and time)

Testing Approach

Since I am testing GUI from the perspective of a member of staff, I will be manually testing the software. I will also be testing in black box conditions and will perform both functional tests and stress testing. By using this approach, we can ensure that all the user requirements are met within the framework of the evaluation criteria while also testing the software’s ability to handle errors and stress.

Visual items such as logos and designs will be manually checked to make sure they adhere with the design philosophy put forward by Lancaster's Restaurant. To test user inputs, I will use a variety of different inputs from letters to special characters and other potentially unexpected inputs. Lastly to test the performance of the code I will monitor statistics such as CPU and RAM usage while the code is running. The CPU and RAM being used are not from a high-end system, they would be much more in line with a low end consumer system.

Test Cases

Navigation and Layout

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| Evaluation Criteria: Navigation and Layout | Criteria Number: 1 |
| Test Number: 1.1 | |
| Setup:  The software must be running and the user should be at the login screen. The VPN must be connected. | |
| Expected Result:  All buttons in the menu are of a uniform size and shape with appropriate layout. | |
| Test:   1. Log into the software 2. Observe the software | |
| Result: PASS All buttons in the menu are of a uniform size and shape with appropriate layout. | |
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Visual Design and Branding

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| Evaluation Criteria: Visual Design and Branding | Criteria Number: 1 |
| Test Number: 2.1 | |
| Setup:  The software must be running and the user should be logged in at the home screen. The VPN must be connected. | |
| Expected Result:  All colour schemes, fonts and logos used are ones approved by Lancaster’s Restaurant. | |
| Test:   1. Log into the software 2. Observe the software | |
| Result: PASS All colour schemes, fonts and logos used are ones approved by Lancaster’s Restaurant. | |
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Responsiveness and Performance

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| Evaluation Criteria: Responsiveness and Performance | Criteria Number: 1 |
| Test Number: 3.1a | |
| Setup:  The software must be running and the user should be logged in at the home screen. The VPN must be connected. | |
| Expected Result:  Whenever a button is pressed to access a new screen, the expected screen is brought up. | |
| Test:   1. Log into the software 2. Press on the button that leads to the desired screen 3. Observe results 4. Repeat for all screens | |
| Result: PASS All buttons lead to expected screens. | |
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| Evaluation Criteria: Responsiveness and Performance | Criteria Number: 1 |
| Test Number: 3.1b | |
| Setup:  The software must be running and the user should be logged in at the home screen. The VPN must be connected. | |
| Expected Result:  Whenever the back button is pressed, the user is returned to the home menu. | |
| Test:   1. Log into the software 2. Press on a button that leads to a screen 3. Press the back button 4. Observe results 5. Repeat for all screens | |
| Result: PASS All buttons lead back to the main menu. | |
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| Evaluation Criteria: Responsiveness and Performance | Criteria Number: 2 |
| Test Number: 3.2 | |
| Setup:  The software must be running and the user should be logged in at the home screen. | |
| Expected Result:  Opening another screen should not cause any delay in the opening of the software. The VPN must be connected. | |
| Test:   1. Log into the software 2. Press on a button that leads to a screen 3. Press the back button 4. Observe results 5. Repeat for all screens | |
| Result: PASS No screens cause any extra delay when opening. | |
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| Evaluation Criteria: Responsiveness and Performance | Criteria Number: 3 |
| Test Number: 3.3 | |
| Setup:  The software must be running and the user should be logged in at the home screen. The VPN must be connected. | |
| Expected Result:  There should be no graphical errors running the software | |
| Test:   1. Log into the software 2. Press on a button that leads to a screen 3. Press the back button 4. Observe results 5. Repeat for all screens | |
| Result: PASS No graphical errors when running the software. | |
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| Evaluation Criteria: Responsiveness and Performance | Criteria Number: 4 |
| Test Number: 3.4 | |
| Setup:  The software must be running and the user should be logged in. Task manager should be opened to observe system resources. The VPN must be connected. | |
| Expected Result:  The software should use a small amount of system resources to run. | |
| Test:   1. Log into the software 2. Press on a button that leads to a screen 3. Press the back button 4. Observe task manager to see how much system resources are used 5. Repeat for all screens | |
| Result: PASS The software used at most 200MB of RAM and under 3% of CPU. This only peaked when changing screens, it was using less idling. | |
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Input Validation and Error Handling

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| Evaluation Criteria: Input Validation and Error Handling | Criteria Number: 1 |
| Test Number: 4.1a | |
| Setup:  The software must be running and the user should be at the home screen. The VPN must be connected. | |
| Expected Result:  Logging in with the wrong username and password should give an error. | |
| Test:   1. Try logging into the software with a random username and a given password | |
| Result: PASS The system did not allow a log-in and gave an error suggesting a wrong username or password. | |
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| Evaluation Criteria: Input Validation and Error Handling | Criteria Number: 1 |
| Test Number: 4.1b | |
| Setup:  The software must be running and the user should be at the home screen. The VPN must be connected. | |
| Expected Result:  Logging in with the wrong username and password should give an error. | |
| Test:   1. Try logging into the software with a random password and a given username | |
| Result: PASS The system did not allow a log-in and gave an error suggesting a wrong username or password. | |
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User Interaction

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| Evaluation Criteria: User Interaction | Criteria Number: 1 |
| Test Number: 5.1 | |
| Setup:  The software must be running and the user should be at the home screen. | |
| Expected Result:  Clicking on an icon should result in the settings menu being brought up. | |
| Test:   1. Log into the software 2. Click on settings icon | |
| Result: FAIL There is not settings icon. | |
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Evaluation

All the tests passed successfully given the expected results (acceptance criteria), except one. The test that failed was the ability to modify user settings such as the date and time as this feature has not been added anywhere on the software.

Conclusion

Overall, the GUI has clearly met the functional requirements set out with all but one test meeting the expected result. The development team need to add a settings button that allows the user to modify software settings. Also, when testing I found myself trying to press “enter” to login which did not work. Instead, I had to manually click on the login button every time. Adding the feature to login on pressing “enter” would improve usability.