**Test Cases**

**User**

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| **ID** | |  | 1 | | | | |
| **Title** | |  | Main Menu | | | | |
| **Description** | |  | To test the main menu works correctly | | | | |
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| **Step** | **Description** | | | | **Type** | **Expected Result** | **Actual Result** |
| 1 | Run system | | | | QN | System opens and main menu displays | System runs and main menu appears |
| 2 | Test all menu items load when input | | | | QN | System displays correct submenu or page when valid menu input is entered |
| 3 | Enter a valid input | | | | QN | System loads the correct area of the system. | User is directed to the area they selected |
| 4 | Enter invalid data Test Data: ‘54’, ‘Three’ | | | | QN | Enter message appears, re-runs the main menu loop. | User is told the number is invalid and to enter a valid one. |

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| **ID** | |  | 2 | | | | |
| **Title** | |  | Create Account | | | | |
| **Description** | |  | The user can create an account that saves to the xml | | | | |
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| **Step** | **Description** | | | | **Type** | **Expected Result** | **Actual Result** |
| 1 | Load Main Menu | | | | QN | System opens and main menu when run | Registration menu appears and lets user enter details |
| 2 | Select create account from the main menu, by typing ‘2’ | | | | QN | Create account function runs, prompting the user to enter their details |
| 3 | Enters valid data | | | | QN | System continues to the next detail without any error messages, then prompted with confirmation. | System continues to the next detail without any error messages, then prompted with confirmation. |
| 4 | Enter invalid data | | | | QN | User cannot continue to next detail - Error message asking the user to enter valid data such a phone number must be a length of 11 digits. | Validation checks for incorrect length phone numbers, existing emails and different passwords. |
| 5 | Data is added to xml file on confirmation | | | | QN | When the customer xml file is loaded, the users details will be inside each field e.g <USER> <NAME> Andrew </NAME> <EMAIL> jj@gmail.com</ EMAIL> | Data is added to the XML |
| 6 | User account creation is cancelled midway | | | | QN | If created account is cancelled or not confirmed, system does not write to xml file | XML file is not written |

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| **ID** | |  | 3 | | | | |
| **Title** | |  | Log in | | | | |
| **Description** | |  | To log in to the system | | | | |
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| **Step** | **Description** | | | | **Type** | **Expected Result** | **Actual Result** |
| 1 | Select Log In from the main menu, by typing ‘1’ | | | | QN | Log in menu appears | Log in menu appears |
| 2 | Input valid email, invalid password | | | | QN | Error message occurs, user must re-enter their email and password | Error message occurs, user must re-enter their email and password |
| 3 | Input invalid email, valid password | | | | QN | Error message occurs, user must re-enter their email and password | Error message occurs, user must re-enter their email and password |
| 4 | Input valid email and password | | | | QN | User directed to menu, account created | User directed to their menu (user/admin), account created |
| 5 | Input invalid email and password | | | | QN | Error message occurs, user must re-enter their email and password | Error message occurs, user must re-enter their email and password |

**Booking**

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| **ID** | |  | 4 | | | | |
| **Title** | |  | Book a flight | | | | |
| **Description** | |  | To book a flight as a customer | | | | |
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| **Step** | **Description** | | | | **Type** | **Expected Result** | **Actual Result** |
| 1 | Select book flight from the main menu, by typing ‘3’ then ‘1’ on the booking menu. | | | | QN | Flight booking menu opens | Flight booking menu opens |
| 2 | Choose an existing flight | | | | QN | User will be able to progress | User will be able to progress |
| 3 | Choose a non-existing flight | | | | QN | Error message asking the user to pick another seat | Error message asking the user to pick another seat |
| 3 | Choose a valid seat “1, 1” | | | | QN | Users flight gets booked | Users flight gets booked |
| 4 | Choose an invalid seat ‘AY-SEVEN’/ ‘A99999’ | | | | QN | Error message prompting the user to pick a valid seat | User gets stuck in loop |
| 5 | Choose an already booked seat | | | | QN | Error message, asking user to book another seat | Error message, asking user to book another seat |
| 7 | Booking is saved to booking xml file upon confirmation | | | | QN | Booking is saved to booking xml file upon confirmation | Booking is saved to booking xml file upon confirmation |
| 8 | If system is closed before confirmation, no data is entered into the xml file | | | | QN | If system is closed before confirmation, no data is entered into the xml file | If system is closed before confirmation, no data is entered into the xml file |

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| **ID** | 5 |
| **Title** | View timetable |
| **Description** | Test that the timetable viewing works correctly |

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| **Step** | **Description** | **Type** | **Expected Result** | **Actual Result** |
| 1 | Check that flight times are sorted | QN | All flight times display correctly, in order of time after begin passed through the sorting algorithm | All flight times display correctly, in order of time after begin passed through the sorting algorithm |
| 2 | Ensure the queue works correctly | QN | Flights times enqueue and dequeue on button press | Flights times enqueue and dequeue on button press |

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| **ID** | | 6 | | |
| **Title** | | Create flight | | |
| **Description** | | Test that the create flight admin function works correctly | | |
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| **Step** | **Description** | | **Expected Result** | **Actual Result** |
| 1 | Enter an invalid flight number | | User will be asked for a valid flight number | User will be asked for a valid flight number |
| 2 | Enter an invalid destination | | User will be asked for a valid destination | User will be asked for a valid destination |
| 3 | Enter an invalid time (minutes or hours) | | User will be asked for a valid time | User will be asked for a valid time |