**Normal Flow**

**Test Case 1 – Initialize:**

**Description:** The user is able to initialize the system by clicking on ‘Borrow Books’.

**Pre-conditions:** All GUI components displayed. The user is on the ‘Main Menu’ screen. All other items are currently disabled.

**Post-conditions:** ‘Scan Card’ screen displayed and the card reader enabled.

**Data required:** None.

**Test Case 2 – Swipe Card:**

**Description:** The user is able to swipe the card of a member that exists. The member ID is ‘1’.

**Pre-conditions:** Test Case 1 was completed successfully.

**Post-conditions:** The ‘Member/Loan Details’ screen is displayed and shows the records for member 1. The scanner is enabled, card reader is disabled.

**Data required:** Member ID ‘1’.

**Test Case 3- Scan Book:**

**Description:** The user is able to scan the barcode of a book that exists. The book ID is ‘10’.

**Pre-conditions:** Test Cases 1 and 2 were completed successfully.

**Post-conditions:** The book is added to the pending loan list and the book’s details are displayed in the pending loan section.

**Data required:** Book barcode ‘10’.

**Test Case 4 – Scans Completed**

**Description:** The user is able to specify they are done scanning books by clicking the ‘Completed’ button.

**Pre-conditions:** Test Cases 1-3 were completed successfully.

**Post-conditions:** The ‘Pending Loan List’ screen is displayed and shows the relevant info. The scanner is now disabled.

**Data required:** None.

**Test Case 5 – Loans Confirmed**

**Description:** The user is able to confirm the loan by clicking the ‘Confirm’ button.

**Pre-conditions:** Test Cases 1-4 were completed successfully.

**Post-conditions:** The loan has been recorded against the borrower and the printer displays the necessary info. The ‘Main Menu’ screen is displayed again.

**Data required:** None.

**Alternate Flow - Borrowing Restricted**

**Test Case 6 – Borrower Restricted, Cancels**

**Description:** The user is unable to move on to scanning books as borrowing is restricted for the current member. The user must ‘Cancel’.

**Pre-conditions:** Test cases 1 and 2 were completed successfully. Member ID ‘2’.

**Post-conditions:** The system has displayed the ‘Borrowing Restricted’ error message and a description as to why this member is unable to borrow. The user has to click ‘Cancel’ and the ‘Main Menu’ screen is displayed again.

**Data required:** None.

**Alternate Flow – Scanning More Books**

**Test Case 7 – User Scans More Books**

**Description:** The user wishes to scan and borrow more books. The user is able to continue scanning. Book IDs ‘11’ and ‘12’.

**Pre-conditions:** Test cases 1-3 were successfully completed. Member ID ‘1’.

**Post-conditions:** The books are added to the pending loan list and the book’s details are displayed in the pending loan section.

**Data required:** Book barcodes‘11’ and ’12’.

**Test Case 8 – User Reaches Loan Limit**

**Description:** The user loans out the maximum amount (5). Book IDs ‘13’ and ‘14’.

**Pre-conditions:** Test cases 1-3 and 7 were completed successfully. Member ID ‘1’.

**Post-conditions:** The ‘Pending Loan List’ screen is displayed and shows the relevant info. The scanner is now disabled.

**Data required:** Book barcodes ‘13’ and ‘14’.

**Alternate Flow - Loan Rejected**

**Test Case 9 – User Rejects Pending Loans**

**Description:** The user decides against confirming the loan by clicking the ‘Reject’ button.

**Pre-conditions:** Test cases 1-3, 7, 8 were completed successfully.

**Post-conditions:** The current pending loan list is deleted and the user is taken back to ‘Member/Loan Details’ screen.

**Data required:** None.