| **Test Name** | | Test program and Borrow Book display functions | | | |
| --- | --- | --- | --- | --- | --- |
| **Use Case Tested:** | | Initialize Borrow Book Use Case | | | |
| **Test Description:** | | This set of tests are designed to check if the program loads the main menu and user can initialize the borrowing of a book or cancel borrowing book. | | | |
| **Pre-conditions** | | BorrowBookCTL class exists  memberDAO, loanDAO  bookDAO, display, cardReader,  scanner, printer all exist  BorrowBookCTL added as listener to  cardReader and scanner  BorrowBookCTL state == ***CREATED*** | | | |
| **Post-conditions** | | BorrowBookUI is displayed  SwipeCard panel of BorrowBookUI displayed  Cancel button enabled  cardReader is enabled  scanner is disabled  BorrowBookCTL state == ***INITIALIZED*** | | | |
| **Notes:** | | **Each test should be a continuation of the last test without closing the application unless requested to do so.** | | | |
| **Result**  **(Pass/Fail/Warning/Incomplete)** | | **Pass** | | | |
|  | **TEST STEP** | | **EXPECTED TEST RESULTS** | P | F |
| Test 1 – Execute program | | | | | |
|  | Double click on program executable | | * Main Menu is displayed | x |  |
| Test 2 – Borrow Book button | | | | | |
|  | Click ‘Borrow Book’ button | | * Display ‘Swipe Card Please’ on main display | x |  |
|  |  | | * Set Borrow Book state to Initialized (top left corner of main display) | x |  |
|  |  | | * Cancel button enabled | x |  |
|  |  | | * Card Reader is enabled | x |  |
|  |  | | * Scanner is disabled | x |  |
| Test 3 – Cancel Borrow Book | | | | | |
|  | Click the ‘Cancel’ button on the main display | | * Card Reader is disabled | x |  |
|  |  | | * Main Menu is displayed | x |  |

| **Test Name** | | Test Member Details | | | |
| --- | --- | --- | --- | --- | --- |
| **Use Case Tested:** | | Swipe Borrower Card | | | |
| **Test Description:** | | This set of tests are designed to identify the borrower and their existing details within the loan system. | | | |
| **Pre-conditions** | | cardReader visible and enabled  BorrowBookCTL added as listener to  cardReader  memberDAO exists  BorrowBookCTL state == ***INITIALIZED*** | | | |
| **Post-conditions** | | **(member exists and not restricted)**  Scanning panel of BorrowBookUI displayed  Complete, Cancel buttons enabled  cardReader is disabled  scanner is enabled  borrower details displayed  existing loans displayed  scan count initialized as number of  existing loans  existing fine message displayed if relevant  BorrowBookCTL state == ***SCANNING\_BOOKS***    **(member exists and is restricted)**  Restricted panel of BorrowBookUI displayed  Cancel button enabled  cardReader is disabled  scanner is disabled  borrower details displayed  existing loans displayed  existing fine message displayed if relevant  overdue message displayed if relevant  atLoanLimit message displayed if relevant  borrowing restricted error message displayed  BorrowBookCTL state ==  ***BORROWING\_RESTRICTED***  **(member does not exists)**  throw exception error  scanner is enabled | | | |
| **Notes:** | | * **It is assumed that the test subject has opened the program and selected the borrow book button before beginning this UAT.** * **Each test should be a continuation of the last test without closing the application unless requested to do so.** | | | |
| **Result**  **(Pass/Fail/Warning/Incomplete)** | | **Pass** | | | |
|  | **TEST STEP** | | **EXPECTED TEST RESULTS** | P | F |
| Test 1 – Lookup an illegal member | | | | | |
|  | Enter member ID: 0 | | * Text box allows user to enter digit | x |  |
|  | Click ‘Swipe Card’ button | | * Display error message in Card Reader panel:   “Member ID must be a positive integer” | x |  |
| Test 2 – Lookup a non restricted member | | | | | |
|  | Enter member ID: 1 | | * Text box allows user to enter digit | x |  |
|  | Click ‘Swipe Card’ button | | * Scanner panel is enabled | x |  |
|  |  | | * Scanning panel is enabled | x |  |
|  |  | | * Borrower details are displayed | x |  |
|  |  | | * Existing loans are displayed | x |  |
|  |  | | * Card Reader panel is disabled | x |  |
| Test 3 – Lookup a restricted member | | | | | |
|  | Enter member ID: 2 | | * Text box allows user to enter digit | x |  |
|  | Click ‘Swipe Card’ button | | * Scanner panel is disabled | x |  |
|  |  | | * Card Reader panel is disabled | x |  |
|  |  | | * Scanning panel is enabled | x |  |
|  |  | | * Borrower details are displayed | x |  |
|  |  | | * Client has borrowing restrictions | x |  |
|  |  | | * Existing loans displayed | x |  |
| Test 4 – Check completed button disabled | | | | | |
|  | Enter member ID: 3 | | * Text box allows user to enter digit | x |  |
|  | Click ‘Swipe Card’ button | | * Scanner panel is disabled | x |  |
|  |  | | * Card Reader panel is disabled | x |  |
|  |  | | * Scanning panel is enabled | x |  |
|  |  | | * Completed button disabled | x |  |
| Test 5 – Lookup member with outstanding fines – restricted member | | | | | |
|  | Enter member ID: 3 | | * Text box allows user to enter digit | x |  |
|  | Click ‘Swipe Card’ button | | * Scanner panel is disabled | x |  |
|  |  | | * Card Reader panel is disabled | x |  |
|  |  | | * Scanning panel is enabled | x |  |
|  |  | | * Borrower details are displayed | x |  |
|  |  | | * Existing fine message displayed | x |  |
|  |  | | * Borrowing restricted error message displayed:   “Member 3 cannot borrow at this time” | x |  |
|  |  | |  |  |  |
| Test 6 – Lookup member with outstanding fines – non restricted member | | | | | |
|  | Enter member ID: 5 | | * Text box allows user to enter digit | x |  |
|  | Click ‘Swipe Card’ button | | * Scanner panel is disabled | x |  |
|  |  | | * Card Reader panel is disabled | x |  |
|  |  | | * Scanner panel is enabled | x |  |
|  |  | | * Scanning panel is enabled | x |  |
|  |  | | * Borrower details are displayed | x |  |
|  |  | | * Existing fine message displayed | x |  |