| **Test Name** | | | UATs – Three Scenarios | | | |
| --- | --- | --- | --- | --- | --- | --- |
| **Use Case Tested:** | | | Borrow Book | | | |
| **Test Description:** | | | Scenario One:  A member with 2 existing loans and $3.00 of fines payable wants to borrow three more books.  The member scans the three valid books, and confirms the loan.  Scenario Two:  A member with no existing loans or fines scans three books, one of which is a duplicate (same ID as a previous book). The member clicks completed but does not confirm the loans – instead they reject the loans and cancel the borrowing.  Scenario Three:  A member with no existing loans or fines attempts to scan an invalid member ID. The member then scans a valid member ID. The member inputs an invalid book ID (book doesn’t exist). The member inputs the ID for a book that is DISPOSED and can’t be borrowed. Finally, the member inputs the ID for a valid book. The member clicks completed and confirms the loan. | | | |
| **Pre-conditions** | | | Scenario One:   * MemberDAO contains a member with the right details for this particular test ($3.00 of fines + 2 existing loans) * BookDAO contains at least 3 available books to scan * Main Menu panel of BorrowUI is displayed * BorrowUC\_CTL exists and state == CREATED * DAO objects and all variables for BorrowUC\_CTL have been initialized, including printer * Reader, scanner, printer and display are visible   Scenario Two:   * MemberDAO contains a member with the right details for this particular test (no loans, no fines) * BookDAO contains at least 2 available books to scan * Main Menu panel of BorrowUI is displayed * BorrowUC\_CTL exists and state == CREATED * DAO objects and all variables for BorrowUC\_CTL have been initialized, including printer * Reader, scanner, printer and display are visible   Scenario Three:   * MemberDAO contains a member with the right details for this particular test (no loans, no fines) * BookDAO contains at least 2 available books to scan. One of these books must be in the DISPOSED state. * Main Menu panel of BorrowUI is displayed * BorrowUC\_CTL exists and state == CREATED * DAO objects and all variables for BorrowUC\_CTL have been initialized, including printer * Reader, scanner, printer and display are visible | | | |
| **Post-conditions** | | | Scenario One:   * Correct loan details are displayed on the printer window * 3 new loans are associated with the member * Card reader is disabled * Scanner is disabled * Main Menu displayed   Scenario Two:   * Card reader is disabled * Scanner is disabled * No loans associated with member * “Book Already Scanned” error message is displayed when duplicate book is scanned * Main Menu displayed   Scenario Three:   * Card reader is disabled * Scanner is disabled * Correct loan details are displayed on the printer window * One new loan is associated with the member * Main Menu displayed * “Member Not Found” error message is displayed when invalid member ID is scanned * “Book Not Found” error message is displayed when invalid book ID is scanned * “Book Not Available” error message is displayed when DISPOSED book is scanned | | | |
| **Notes:** | | These tests should be carried out by running the TestUATJosh class which ensures the right test data is in place.  Restart the application before beginning each test scenario. | | | | |
| **Result (Pass/Fail/**  **Warning/Incomplete)** | | Scenario One: PASS  Scenario Two: PASS  Scenario Three: PASS | | | | |
|  | **TEST STEP** | | | **EXPECTED TEST RESULTS** | P | F |
| SCENARIO ONE | | | | | | |
|  | Click ‘Borrow Books’ button on the main display panel | | | Main display panel shows ‘Swipe Card Please’ message and displays ‘Cancel’ button.  Card reader enabled. | ✅ |  |
|  | Enter **1** into the card reader text box.  Click ‘Swipe Card’ button on the card reader panel | | | Main display panel changed to Borrow UI.  Main display panel shows the following borrower details: *Id: 1 Name: Josh Kent Contact: 62626262*  Borrowing restrictions section of main display panel shows: *Borrower has outstanding fines. Amount owing $3.00*  Existing loans section of main display panel shows:  *Loan ID: 1*  *Author: Dean Crawford*  *Title: Immortal*  *Borrower: Josh Kent*  *Borrowed: <Today’s date>*  *Due Date: <Date two weeks from today>*  *Loan ID: 2*  *Author: Stephen King*  *Title: It*  *Borrower: Josh Kent*  *Borrowed: <Today’s date>*  *Due Date: <Date two weeks from today>*  Card reader disabled.  Scanner enabled. | ✅ |  |
|  | Enter **2** into the scanner text box.  Click ‘Scan Book Barcode’ button on the scanner panel | | | Current book section of main display panel shows:  *ID: 2*  *Author: Harper Lee*  *Title: Go Set a Watchman*  *Call Number: LEE 445*  Pending loan list section of main display panel shows:  *Loan ID: 0*  *Author: Harper Lee*  *Title: Go Set a Watchman*  *Borrower: Josh Kent*  *Borrowed: <Today’s date>*  *Due Date: <Date two weeks from today>* | ✅ |  |
|  | Enter **3** into the scanner text box.  Click ‘Scan Book Barcode’ button on the scanner panel | | | Current book section of main display panel shows:  *ID: 3*  *Author: Dan Brown*  *Title: Digital Fortress*  *Call Number: BRO 410*  Pending loan list section of main display panel shows:  *Loan ID: 0*  *Author: Harper Lee*  *Title: Go Set a Watchman*  *Borrower: Josh Kent*  *Borrowed: <Today’s date>*  *Due Date: <Date two weeks from today>*  *Loan ID: 0*  *Author: Dan Brown*  *Title: Digital Fortress*  *Borrower: Josh Kent*  *Borrowed: <Today’s date>*  *Due Date: <Date two weeks from today>* | ✅ |  |
|  | Enter **4** into the scanner text box.  Click ‘Scan Book Barcode’ button on the scanner panel | | | Scanner is disabled.  Main display panel changed to Confirm Loans UI.  Current loan list section of main display panel shows:  *Loan ID: 0*  *Author: Harper Lee*  *Title: Go Set a Watchman*  *Borrower: Josh Kent*  *Borrowed: <Today’s date>*  *Due Date: <Date two weeks from today>*  *Loan ID: 0*  *Author: Dan Brown*  *Title: Digital Fortress*  *Borrower: Josh Kent*  *Borrowed: <Today’s date>*  *Due Date: <Date two weeks from today>*  *Loan ID: 0*  *Author: Tom Grace*  *Title: Quantum*  *Borrower: Josh Kent*  *Borrowed: <Today’s date>*  *Due Date: <Date two weeks from today>* | ✅ |  |
|  | Click ‘Confirm’ button on the main display panel | | | Main display panel shows Main Menu UI.  Printer displays loan slip:  *Loan ID: 3*  *Author: Harper Lee*  *Title: Go Set a Watchman*  *Borrower: Josh Kent*  *Borrowed: <Today’s date>*  *Due Date: <Date two weeks from today>*  *Loan ID: 4*  *Author: Dan Brown*  *Title: Digital Fortress*  *Borrower: Josh Kent*  *Borrowed: <Today’s date>*  *Due Date: <Date two weeks from today>*  *Loan ID: 5*  *Author: Tom Grace*  *Title: Quantum*  *Borrower: Josh Kent*  *Borrowed: <Today’s date>*  *Due Date: <Date two weeks from today>* | ✅ |  |
|  | Click ‘Borrow Books’ button on the main display panel | | | Main display panel shows ‘Swipe Card Please’ message and displays ‘Cancel’ button.  Card reader enabled. | ✅ |  |
|  | Enter **1** into the card reader text box.  Click ‘Swipe Card’ button on the card reader panel | | | Main display panel changed to Borrow Restricted UI.  Main display panel shows error message: *Borrowing Restricted*  Main display panel shows the following borrower details: *Id: 1 Name: Josh Kent Contact: 62626262*  Borrowing restrictions section of main display panel shows:  *Borrower has outstanding fines. Amount owing $3.00*  *Borrower has reached maximum number of borrowed items*  Existing loans section of main display panel shows:  *Loan ID: 1*  *Author: Dean Crawford*  *Title: Immortal*  *Borrower: Josh Kent*  *Borrowed: <Today’s date>*  *Due Date: <Date two weeks from today>*  *Loan ID: 2*  *Author: Stephen King*  *Title: It*  *Borrower: Josh Kent*  *Borrowed: <Today’s date>*  *Due Date: <Date two weeks from today>*  *Loan ID: 3*  *Author: Harper Lee*  *Title: Go Set a Watchman*  *Borrower: Josh Kent*  *Borrowed: <Today’s date>*  *Due Date: <Date two weeks from today>*  *Loan ID: 4*  *Author: Dan Brown*  *Title: Digital Fortress*  *Borrower: Josh Kent*  *Borrowed: <Today’s date>*  *Due Date: <Date two weeks from today>*  *Loan ID: 5*  *Author: Tom Grace*  *Title: Quantum*  *Borrower: Josh Kent*  *Borrowed: <Today’s date>*  *Due Date: <Date two weeks from today>*  Card reader disabled.  Scanner disabled. | ✅ |  |
| SCENARIO TWO | | | | | | |
|  | Click ‘Borrow Books’ button on the main display panel | | | Main display panel shows ‘Swipe Card Please’ message and displays ‘Cancel’ button.  Card reader enabled. | ✅ |  |
|  | Enter **2** into the card reader text box.  Click ‘Swipe Card’ button on the card reader panel | | | Main display panel changed to Borrow UI.  Main display panel shows the following borrower details: *Id: 2 Name: John Kent Contact: 63636363*  Borrowing restrictions section of main display panel is empty.  Existing loans section of main display panel is empty.  Card reader disabled.  Scanner enabled. | ✅ |  |
|  | Enter **2** into the scanner text box.  Click ‘Scan Book Barcode’ button on the scanner panel | | | Current book section of main display panel shows:  *ID: 2*  *Author: Harper Lee*  *Title: Go Set a Watchman*  *Call Number: LEE 445*  Pending loan list section of main display panel shows:  *Loan ID: 0*  *Author: Harper Lee*  *Title: Go Set a Watchman*  *Borrower: John Kent*  *Borrowed: <Today’s date>*  *Due Date: <Date two weeks from today>* | ✅ |  |
|  | Enter **2** into the scanner text box (again).  Click ‘Scan Book Barcode’ button on the scanner panel | | | Main display panel shows error message: *Book already scanned* | ✅ |  |
|  | Enter **3** into the scanner text box.  Click ‘Scan Book Barcode’ button on the scanner panel | | | Error message is cleared.  Current book section of main display panel shows:  *ID: 3*  *Author: Dan Brown*  *Title: Digital Fortress*  *Call Number: BRO 410*  Pending loan list section of main display panel shows:  *Loan ID: 0*  *Author: Harper Lee*  *Title: Go Set a Watchman*  *Borrower: John Kent*  *Borrowed: <Today’s date>*  *Due Date: <Date two weeks from today>*  *Loan ID: 0*  *Author: Dan Brown*  *Title: Digital Fortress*  *Borrower: John Kent*  *Borrowed: <Today’s date>*  *Due Date: <Date two weeks from today>* | ✅ |  |
|  | Click ‘Completed’ button on the main display panel | | | Scanner is disabled.  Main display panel changed to Confirm Loans UI.  Current loan list section of main display panel shows:  *Loan ID: 0*  *Author: Harper Lee*  *Title: Go Set a Watchman*  *Borrower: John Kent*  *Borrowed: <Today’s date>*  *Due Date: <Date two weeks from today>*  *Loan ID: 0*  *Author: Dan Brown*  *Title: Digital Fortress*  *Borrower: John Kent*  *Borrowed: <Today’s date>*  *Due Date: <Date two weeks from today>* | ✅ |  |
|  | Click ‘Reject’ button on the main display panel | | | Scanner is enabled.  Main display panel changed to Borrow UI.  Current book section of main display panel is empty.  Pending loan list section of main display panel is empty. | ✅ |  |
|  | Click ‘Cancel’ button on the main display panel | | | Scanner is disabled.  Main display panel changed to Main Menu UI. | ✅ |  |
|  | Click ‘Borrow Books’ button on the main display panel | | | Main display panel shows ‘Swipe Card Please’ message and displays ‘Cancel’ button.  Card reader enabled. | ✅ |  |
|  | Enter **2** into the card reader text box.  Click ‘Swipe Card’ button on the card reader panel | | | Main display panel changed to Borrow UI.  Main display panel shows the following borrower details: *Id: 2 Name: John Kent Contact: 63636363*  Borrowing restrictions section of main display panel is empty (unchanged).  Existing loans section of main display panel is empty (unchanged).  Card reader disabled.  Scanner enabled. | ✅ |  |
| SCENARIO THREE | | | | | | |
|  | Click ‘Borrow Books’ button on the main display panel | | | Main display panel shows ‘Swipe Card Please’ message and displays ‘Cancel’ button.  Card reader enabled. | ✅ |  |
|  | Enter **5** into the Enter **3** into the card reader text box.  Click ‘Swipe Card’ button on the card reader panel | | | Main display panel shows error message: *Member: 5 not found* | ✅ |  |
|  | Enter **3** into the card reader text box.  Click ‘Swipe Card’ button on the card reader panel | | | Main display panel changed to Borrow UI.  Main display panel shows the following borrower details: *Id: 3 Name: Jason Kent Contact: 64646464*  Borrowing restrictions section of main display panel is empty.  Existing loans section of main display panel is empty.  Card reader disabled.  Scanner enabled. | ✅ |  |
|  | Enter **89** into the scanner text box.  Click ‘Scan Book Barcode’ button on the scanner panel | | | Main display panels shows error message: *Book not found* | ✅ |  |
|  | Enter **1** into the scanner text box.  Click ‘Scan Book Barcode’ button on the scanner panel | | | Main display panels shows error message: *Book not available* | ✅ |  |
|  | Enter **2** into the scanner text box.  Click ‘Scan Book Barcode’ button on the scanner panel | | | Error message is cleared.  Current book section of main display panel shows:  *ID: 2*  *Author: Harper Lee*  *Title: Go Set a Watchman*  *Call Number: LEE 445*  Pending loan list section of main display panel shows:  *Loan ID: 0*  *Author: Harper Lee*  *Title: Go Set a Watchman*  *Borrower: Jason Kent*  *Borrowed: <Today’s date>*  *Due Date: <Date two weeks from today>* | ✅ |  |
|  | Click ‘Completed’ button on the main display panel | | | Scanner is disabled.  Main display panel changed to Confirm Loans UI.  Current loan list section of main display panel shows:  *Loan ID: 0*  *Author: Harper Lee*  *Title: Go Set a Watchman*  *Borrower: Jason Kent*  *Borrowed: <Today’s date>*  *Due Date: <Date two weeks from today>* | ✅ |  |
|  | Click ‘Confirm’ button on the main display panel | | | Main display panel shows Main Menu UI.  Printer displays loan slip:  *Loan ID: 3*  *Author: Harper Lee*  *Title: Go Set a Watchman*  *Borrower: Jason Kent*  *Borrowed: <Today’s date>*  *Due Date: <Date two weeks from today>* | ✅ |  |
|  | Click ‘Borrow Books’ button on the main display panel | | | Main display panel shows ‘Swipe Card Please’ message and displays ‘Cancel’ button.  Card reader enabled. | ✅ |  |
|  | Enter **3** into the card reader text box.  Click ‘Swipe Card’ button on the card reader panel | | | Main display panel changed to Borrow UI.  Main display panel shows the following borrower details: *Id: 3 Name: Jason Kent Contact: 64646464*  Borrowing restrictions section of main display panel is empty.  Existing loans section of main display panel shows:  *Loan ID: 3*  *Author: Harper Lee*  *Title: Go Set a Watchman*  *Borrower: Jason Kent*  *Borrowed: <Today’s date>*  *Due Date: <Date two weeks from today>*  Card reader disabled.  Scanner enabled. | ✅ |  |

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| **Test Data Table** | | | | | | |
|  | **Member ID** | **Member Loans** | **Member Fines** | **Book One** | **Book Two** | **Book Three** |
| Scenario 1 | 1 | 2 existing (not overdue) | $3.00 (under fine limit) | 2 | 3 | 4 |
| Scenario 2 | 2 | None | None | 2 | 2 | 3 |
| Scenario 3 | Attempted: 5, then used 3 | None | None | 89 | 1 | 2 |