| **Test Name** | | | Scan Book | | | |
| --- | --- | --- | --- | --- | --- | --- |
| **Use Case Tested:** | | | BBUC\_Op3 – Scan Book | | | |
| **Test Description:** | | | We test by testing conditions where the book object being scanned has varying conditions, such as having an invalid id, or that the book is available or not. Each test condition is successful if it can be demonstrated that it behaves as intended. | | | |
| **Pre-conditions** | | | * BorrowBookCTL class must exist * scanner class variable must exist * BorrowBookCTL must be added as listener to scanner * BorrowBookCTL’s state must be set to SCANNING\_BOOKS | | | |
| **Post-conditions** | | | (If book is not found due to incorrect id value)   * BorrowBookUI is displayed * Scanning panel of BorrowBookUI displayed * Cancel button is enabled * cardReader is disabled (we don’t want to re-read who is borrowing the books) * scanner is enabled (to allow scanning of more books) * book not found error message displayed * BorrowBookCTL’s state remains as SCANNING\_BOOKS   (If book is not available)   * BorrowBookUI is displayed * Scanning panel of BorrowBookUI displayed * Cancel button is enabled * cardReader is disabled * scanner is enabled * book not available error message displayed * BorrowBookCTL’s state remains as SCANNING\_BOOKS   (If book is already scanned into the pending list)   * BorrowBookUI is displayed * Scanning panel of BorrowBookUI displayed * Cancel button is enabled * cardReader is disabled * scanner is enabled * book already scanned error message dispalyed * BorrowBookCTL’s state remains as SCANNING\_BOOKS   (if scan count of member borrowing is less than loan limit)   * BorrowBookUI is displayed * Scanning panel of BorrowBookUI displayed * Cancel button enabled * cardReader is disabled * scanner is enabled * scanCount incremented by 1 * scanned books details displayed * new (pending) loan created * pending loan added to pending loan list * Current pending loan list refreshed and displayed * BorrowBookCTL’s state remains as SCANNING\_BOOKS   (If scan count is at loan limit)   * BorrowBookUI is displayed * ConfirmingLoans panel of BorrowBookUI is displayed * Final pending loan list displayed * Cancel button enabled * Reject button enabled * cardReader is disabled (loans are being finalized) * scanner is disabled (at loan limit for member) * scanCount incremented by 1 * BorrowBookCTL’s state changed to CONFIRMING\_LOANS | | | |
| **Notes:** | |  | | | | |
| **Result (Pass/Fail/Warning/Incomplete)** | | **Pass** | | | | |
|  | **TEST STEP** | | | **EXPECTED TEST RESULTS** | P | F |
|  | testScanBookIncorrectBarcode() – we test if a book scanned with an invalid barcode exists in the bookDAO database. | | | The book is invalid, and will state that the book does not exist. | X |  |
|  | testScanBookCorrectBarcode() – we test if a book scanned with a valid barcode exists in the bookDAO database | | | The book is valid, and will indicate that it exist in the database | X |  |
|  | testScanBookAlreadyOnPendingList() – we test if the book, when it already exists in the pending loan list, will be recognized as not valid to be repeatedly added into the loan list | | | The book is invalid, and will not be added to the loan list repeatedly | X |  |
|  | testScanBookNotAvailable() – we test if the book is NOT available | | | The book is recognized as NOT available, and is not added to the loan list | X |  |
|  | testScanBookMemberBelowBorrowLimit() – we test if the member is below loan limit | | | The member is below loan limit when the book is borrowed | X |  |
|  | testScanBookMemberAboveLimit() – we test if the member manages to somehow be above the loan limit and yet able to scan a book | | | The member is above loan limit when the book is borrowed | X |  |

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| **Test Data Table** | | | | | |
|  | **1** | **2** | **3** | **4** | **5** |
| [Data field 1] | [data set 1 input value for field 1] |  |  |  |  |
| [Data field 2] | [data set 1 input value for field 2] |  |  |  |  |
| [Data field 3] | [data set 1 input value for field 3] |  |  |  |  |