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| --- | --- | --- | --- | --- | --- | --- |
| **Test Name** | | | Swipe card | | | |
| **Use Case Tested:** | | | borrow book | | | |
| **Test Description:** | | | run the program.  start a loan process.  swipe a member card (enter a member number | | | |
| **Pre-conditions** | | | card reader active  Rule 1 (member exists not restricted):  member must be in the system  member must not be borrow restricted.  Rule 2 (member exists restricted):  member must be in the system.  member is borrow restricted  Rule 3 (member does not exist)  member is not in the system | | | |
| **Post-conditions** | | | scanner active.  card reader disabled  borrower details displayed  existing loans displayed | | | |
| **Notes:** | |  | | | | |
| **Result (Pass/Fail/Warning/Incomplete)** | | Pass | | | | |
|  | **TEST STEP** | | | **EXPECTED TEST RESULTS** | **P** | **F** |
|  | click borrow book | | | card reader active | x |  |
|  | **Rule 1: Member exists not restricted** | | |  |  |  |
|  | swipe card (id 1) | | | member info displayed.  existing loans displayed.  scanner enabled.  card reader disabled  complete and cancel button enabled | x |  |
|  | **Rule 2: Member exists restricted** | | |  |  |  |
|  | Swipe card (id 3) | | | Member info Displayed.  Existing loans displayed  Restricted panel displayed  Cancel button enabled  Card reader disabled  Scanner disabled  Overdue or exceeding fines message displayed if relevant.  Borrowing restricted message displayed | x |  |
|  | **Rule 3: Member does not exist (id 7)** | | | Member not found message displayed  Card reader enabled  Scanner disabled  Cancel button enabled. | X |  |

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| **Test Data Table** | | | |
| **Conditions** | **Rule 1** | **Rule 2** | **Rule 3** |
| Member exists | Y | Y | N |
| Not Restricted | Y | N | N |
| **Actions:** |  |  |  |
| Scanner Enabled | Y | N | N |
| Card Reader Enabled | N | N | Y |
| Member info displayed | Y | Y | N |
| Existing loans displayed | Y | Y | N |
| Cancel button Enabled | Y | Y | Y |
| Complete button enabled | Y | N | N |

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| --- | --- | --- | --- | --- | --- | --- |
| **Test Name** | | | Scan book | | | |
| **Use Case Tested:** | | | borrow book | | | |
| **Test Description:** | | | member card has been scanned.  scan book. | | | |
| **Pre-conditions** | | | Scanner active  Card has been scanned  Rule 1 (not found):  book not in system  Rule 2 (not available):  book state not available  Rule 3 (already scanned)  book has already been scanned  Rule 4 (Scan count < loan limit)  book state available  number of books scanned must be less than the loan limit.  Rule 5 (Scan count == loan limit)  book state available  number of books for member equals their allowed loan limit. | | | |
| **Post-conditions** | | | scanner enable.  card reader disabled  cancel button enabled  book details displayed  pending loan list displayed  borrower details displayed  existing loans displayed | | | |
| **Notes:** | |  | | | | |
| **Result (Pass/Fail/Warning/Incomplete)** | | Pass | | | | |
|  | **TEST STEP** | | | **EXPECTED TEST RESULTS** | **P** | **F** |
|  | **Rule 1 Book not Found** | | |  |  |  |
|  | Scan Book (callNo 20) | | | * BorrowBookUI is displayed * scanning panel of borrowBookUI displayed * cancel button enabled * cardReader is disabled * scanner is enabled * book not found error message displayed. | x |  |
|  | **Rule 2 Book not Available** | | |  |  |  |
|  | Scan Book (callNo 1) | | | * BorrowBookUI is displayed * scanning panel of borrowBookUI displayed * cancel button enabled * cardReader is disabled * scanner is enabled * book not available error message displayed. | X |  |
|  | **Rule 3 Book already Scanned** | | |  |  |  |
|  | Scan book (callNo 10) | | | * BorrowBookUI is displayed * scanning panel of borrowBookUI displayed * cancel button enabled * cardReader is disabled * current book details displayed * pending loan list displayed * scanner is enabled * scanCount incremented by 1 * new pending loan created * pending loan added to pending loan list | x |  |
|  | Scan Book (callNo 10) | | | * BorrowBookUI is displayed * scanning panel of borrowBookUI displayed * cancel button enabled * cardReader is disabled * current book details displayed * pending loan list displayed * scanner is enabled * book already scanned error message displayed. | X |  |
|  | **Rule 4 Scan count < loan limit** | | |  |  |  |
|  | Scan book (callNo 11) | | | * BorrowBookUI is displayed * scanning panel of borrowBookUI displayed * cancel button enabled * cardReader is disabled * current book details displayed * pending loan list displayed * scanner is enabled * scanCount incremented by 1 * new pending loan created * pending loan added to pending loan list | x |  |
|  | **Rule 5 Scan count == Loan limt** | | |  |  |  |
|  | Scan book (callNo 12) | | | * BorrowBookUI is displayed * confirmingloans panel of borrowBookUI is displayed * cancel button enabled * reject button enabled * cardReader is disabled * current book details displayed * final pending loan list displayed * scanner is disabled * scanCount incremented by 1 | x |  |

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|  | **Test Data Table** | | | | | |
| **Conditions** | | **Rule 1** | **Rule 2** | **Rule 3** | **Rule 4** | **Rule 5** |
| Book Available | | N | N | Y | Y | Y |
| Book Scanned | | N | N | Y | N | N |
| Scan count < loan limit | | N | N | Y | Y | N |
| Scan count = loan limit | | N | N | N | N | Y |
| Book exists | | N | Y | Y | Y | Y |
| **Actions:** | |  |  |  |  |  |
| Scanner Enabled | | Y | Y | Y | Y | N |
| Card Reader Enabled | | N | N | N | N | N |
| Member info displayed | | Y | Y | Y | Y | N |
| Existing loans displayed | | Y | Y | Y | Y | N |
| Cancel button Enabled | | Y | Y | Y | Y | Y |
| Complete button enabled | | Y | Y | Y | Y | N |
| Pending loan list displayed | | Y | Y | Y | Y | Y |
| Current book Details shown | | N | N | N | Y | N |
| Reject button shown | | N | N | N | N | Y |
| Confirm button shown | | N | N | N | N | Y |

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| --- | --- | --- | --- | --- | --- | --- |
| **Test Name** | | | Complete Scan | | | |
| **Use Case Tested:** | | | borrow book | | | |
| **Test Description:** | | | Tests the completion of the scanning process. | | | |
| **Pre-conditions** | | | * Book scanner must be present. * member must be in system * Card must have been scanned. * cardReader present. * PendingLoanList exists * BorrowBookCTl class exists | | | |
| **Post-conditions** | | | * BorrowBookUI is displayed * confirmingloans panel of borrowBookUI is displayed * list of pending loand displayed * cancel button enabled * confirm button enabled * reject button enabled * cardReader is disabled * scanner is disabled | | | |
| **Notes:** | |  | | | | |
| **Result (Pass/Fail/Warning/Incomplete)** | | Pass | | | | |
|  | **TEST STEP** | | | **EXPECTED TEST RESULTS** | **P** | **F** |
|  | Complete scan | | | * BorrowBookUI is displayed * confirmingloans panel of borrowBookUI is displayed * list of pending loand displayed * cancel button enabled * confirm button enabled * reject button enabled * cardReader is disabled * scanner is disabled | x |  |

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| --- | --- |
|  | **Test Data Table** |
| **Conditions** | **Rule 1** |
| Book in loan | Y |
| Pending loan list exists | Y |
| **Actions:** |  |
| Confirm loan panel displayed | Y |
| List of pending loans displayed | Y |
| Cancel button enabled | Y |
| Confirm button enabled | Y |
| Reject button enabled | Y |

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| --- | --- | --- | --- | --- | --- | --- |
| **Test Name** | | | Confirm loans | | | |
| **Use Case Tested:** | | | borrow book | | | |
| **Test Description:** | | | Tests the confirmation of the loan. | | | |
| **Pre-conditions** | | | * Book scanner must be present. * member must be in system * Card must have been scanned. * cardReader present. * PendingLoanList exists * BorrowBookCTl class exists | | | |
| **Post-conditions** | | | * Main Menu is displayed * all pending loans are committed and recorded * Loan slip of committed loans is printed * cardReader is disabled * scanner is disabled | | | |
| **Notes:** | |  | | | | |
| **Result (Pass/Fail/Warning/Incomplete)** | | Pass | | | | |
|  | **TEST STEP** | | | **EXPECTED TEST RESULTS** | **P** | **F** |
|  | Confirm loans | | | * Main Menu is displayed * all pending loans are committed and recorded * Loan slip of committed loans is printed * cardReader is disabled * scanner is disabled | x |  |

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| --- | --- |
|  | **Test Data Table** |
| **Conditions** | **Rule 1** |
| Confirm loans screen displayed | Y |
| Pending loan list exists | Y |
| **Actions:** |  |
| Main menu shown | Y |
| Loan slip printed | Y |

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| --- | --- | --- | --- | --- | --- | --- |
| **Test Name** | | | Reject loans | | | |
| **Use Case Tested:** | | | borrow book | | | |
| **Test Description:** | | | Tests the system if a loan is rejected. | | | |
| **Pre-conditions** | | | * Book scanner must be present. * member must be in system * Card must have been scanned. * cardReader present. * PendingLoanList exists * BorrowBookCTl class exists | | | |
| **Post-conditions** | | | * Main Menu is displayed * BorrowBookUI is displayed * Scanning panel of BorrowBookUI is displayed * borrower details displayed * existing loan details displayed * pending loan list is empty * scan count equals number of existing loans * cancel button enabled * cardReader is disabled * scanner is enabled | | | |
| **Notes:** | |  | | | | |
| **Result (Pass/Fail/Warning/Incomplete)** | | Pass | | | | |
|  | **TEST STEP** | | | **EXPECTED TEST RESULTS** | **P** | **F** |
|  | Reject loans | | | * Main Menu is displayed * BorrowBookUI is displayed * Scanning panel of BorrowBookUI is displayed * borrower details displayed * existing loan details displayed * pending loan list is empty * scan count equals number of existing loans * cancel button enabled * cardReader is disabled * scanner is enabled | x |  |

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| --- | --- |
|  | **Test Data Table** |
| **Conditions** | **Rule 1** |
| Confirm loans screen displayed | Y |
| Pending loan list exists | Y |
| **Actions:** |  |
| Main menu shown | Y |
| Borrower details displayed | Y |
| Existing loan details displayed | Y |
| Pending loan list displayed | Y |
| Cancel button enabled | Y |
| cardReader enabled | N |
| Scanner enabled | Y |