**Test Cases**

1. **Borrows available book with no restrictions – success**
2. **Borrows available book with partial fine restrictions – success**
3. **Borrows available book with partial loan restrictions - success**
4. **Borrows available book with fine restrictions - failure**
5. **Borrows available book with loan restrictions – failure**
6. **Borrows loaned book with no restrictions - failure**
7. **Borrows loaned book with partial restrictions (loans) – failure**
8. **Borrows loaned book with partial restrictions (fines) – failure**
9. **Borrows loaned book with restrictions (fines) - failure**
10. **Borrows loaned book with restrictions (loans) – failure**
11. **Unrestricted borrower cancels loan before committing – failure**
12. **Unrestricted borrower cancels loan after scanning membership card - failure**

**1 – Borrows available book with no restrictions - success**

Description: Completely unrestricted borrower borrows an available book

Pre-conditions:

* Test data created
* At ‘Swipe Card’ screen

Post-conditions:

* When borrower swipes their card:
  + No loans are shown in current loans.
  + No fines are shown in Borrowing Restrictions
* When borrower next swipes their card, the loan is displayed in current loans.

Data required:

* Borrower with no outstanding fines and no other loans
* Book that is not part of a Loan

**2 – Borrows available book with partial fine restrictions - success**

Description: Partially restricted borrowed (fines) borrows an available book

Pre-conditions:

* Test data created
* At ‘Swipe Card’ screen

Post-conditions:

* When borrower swipes their card:
  + No loans are shown in current loans.
  + Some fines (less than max fine) are shown in Borrowing Restrictions
* When borrower next swipes their card, the loan is displayed in current loans.

Data required:

* Borrower with some outstanding fines (less than max fine) and no other loans
* Book that is not part of a Loan

**3 – Borrows available book with partial loan restrictions - success**

Description: Partially restricted borrower (loans) borrows an available book

Pre-conditions:

* Test data created
* At ‘Swipe Card’ screen

Post-conditions:

* When borrower swipes their card:
  + Some loans are shown in current loans (less than max loans).
  + No fines are shown in Borrowing Restrictions
  + Scan Book panel is enabled
  + Swipe card panel is disabled
* When borrower next swipes their card, the loan is displayed in current loans.

Data required:

* Borrower with some overdue loans (total loans less than max loans) and no fines
* Book that is not part of a Loan

**4 – Borrows available book with fine restrictions - failure**

Description: Restricted borrower (fines) attempts to borrow book (any)

Pre-conditions:

* Test data created
* At ‘Swipe Card’ screen

Post-conditions:

* When borrower swipes their card:
  + No loans are shown in current loans.
  + Fines (maximum) are shown in Borrowing Restrictions
  + Error message displays saying this borrower cannot borrow
  + Swipe card panel is disabled
  + Scan Book panel is disabled
* When borrower next swipes their card, the loan is not shown.

Data required:

* Borrower with maximum fines and no loans
* Book not required – book scanner not available with restricted borrower

**5 – Borrows available book with loan restrictions - failure**

Description: Restricted borrower (loans) attempts to borrow book (any)

Pre-conditions:

* Test data created
* At ‘Swipe Card’ screen

Post-conditions:

* When borrower swipes their card:
  + Loans are shown in current loans (maximum number).
  + No fines are shown in Borrowing Restrictions
  + Error message displays saying this borrower cannot borrow
  + Swipe card panel is disabled
  + Scan Book panel is disabled
* When borrower next swipes their card, the loan is not shown.

Data required:

* Borrower with maximum loans and no fines
* Book not required – book scanner not available with restricted borrower

**6 – Borrows loaned book with no restrictions - failure**

Description: Unrestricted borrower attempts to borrow loaned book

Pre-conditions:

* Program freshly opened
* At ‘Created’ main display
* No members previously swiped

Post-conditions:

* Borrower does not get any more loans

Data required:

* Borrower with no loans and no fines
* Book that is part of a Loan

**7 – Borrows loaned book with partial restrictions (loans) - failure**

Description: Borrower with less than the maximum number of loans attempts to borrow loaned book

Pre-conditions:

* Program freshly opened
* At ‘Created’ main display
* No members previously swiped

Post-conditions:

* No loan added to borrower

Data required:

* Borrower with some loans and no fines
* Book that is part of a Loan

**8 – Borrows loaned book with partial restrictions (fines) - failure**

Description: Unrestricted borrower with less than the maximum fines attempts to borrow loaned book

Pre-conditions:

* Program freshly opened
* At ‘Created’ main display
* No members previously swiped

Post-conditions:

* No loan added to borrower

Data required:

* Borrower with no loans and some fines
* Book that is part of a Loan

**9 – Borrows loaned book with restrictions (fines) - failure**

Not applicable: as from test case #4, the book scanner is not available if borrower is restricted, so it wouldn’t be possible to test a loaned book vs. available book.

**10 – Borrows loaned book with restrictions (loans) - failure**

Not applicable: as from test case #5, the book scanner is not available if borrower is restricted, so it wouldn’t be possible to test a loaned book vs. available book.

**11 – Cancels loan before committing**

Description: Unrestricted borrower attempts to borrow an available book but cancels after completing

Pre-conditions:

* Program freshly opened
* No members previously scanned
* At ‘created’ main display

Post-conditions:

* No loan added to borrower

Data required:

* Borrower with no loans and no fines
* Book that is not part of a Loan