*[The Test Case ID should be unique. In addition, the name of each Test Case should reflect the intent of the test case, ideally expressed as a Boolean condition.]*

**BBUC\_Op1 – Begin use case**

Description: for all items to be initializes and ready

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***

Data required: member id e.g. 1

Book barcode e.g.12 Initialize()

**BBUC\_Op2 – Swipe borrower card:**

Description: Swiping card of member which in turn should result in different conditions the member has such as restricted or not restricted.

Pre-conditions: cardReader visible and enabled

BorrowBookCTL added as listener to

cardReader

memberDAO exists

BorrowBookCTL state == ***INITIALIZED***

Post-conditions: **PostConditions:**

**(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***

Data required: cardSwiped(borrowerId)

**[repeat as needed]**

**BBUC\_Op3 – Scan Book:**

Description: scanning a book with different conditions such as the book doesn’t exist or it is ON\_LOAN at the moment.

Pre-conditions: BorrowBookCTL class exists

scanner exists

BorrowBookCTL added as listener to

scanner

BorrowBookCTL state == ***SCANNING\_BOOKS***

Post-conditions: **PostConditions:**

**(book not found)**

BorrowBookUI is displayed

Scanning panel of BorrowBookUI displayed

Cancel button enabled

cardReader is disabled

scanner is enabled

book not found error message displayed

BorrowBookCTL state == ***SCANNING\_BOOKS***

**(book not available)**

BorrowBookUI is displayed

Scanning panel of BorrowBookUI displayed

Cancel button enabled

cardReader is disabled

scanner is enabled

book not available error message displayed

BorrowBookCTL state == ***SCANNING\_BOOKS***

**(book already scanned)**

BorrowBookUI is displayed

Scanning panel of BorrowBookUI displayed

Cancel button enabled

cardReader is disabled

scanner is enabled

book already scanned error message

displayed

BorrowBookCTL state == ***SCANNING\_BOOKS***

**(scan count < 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 displayed

BorrowBookCTL state == ***SCANNING\_BOOKS***

**(scan count == loan limit)**

BorrowBookUI is displayed

ConfirmingLoans panel of BorrowBookUI

displayed

final pending loan list displayed

Cancel button enabled

Reject button enabled

cardReader is disabled

scanner is disabled

scanCount incremented by 1

BorrowBookCTL state == ***CONFIRMING\_LOANS***

Data required: bookScanned(Barcode)

**[repeat as needed]**

**BBUC\_Op4 – Complete Scans:**

Description: Complete scanning books

Pre-conditions: BorrowBookCTL class exists

Pending loan list exists

BorrowBookCTL state == ***SCANNING\_BOOKS***

Post-conditions: **PostConditions:**

BorrowBookUI is displayed

Confirming Loan panel of BorrowBookUI

Is displayed

List of pending loans displayed

Cancel button enabled

cardReader is disabled

scanner is disabled

BorrowBookCTL state == ***CONFIRMING\_LOANS***

Data required: scansComplete()

**[repeat as needed]**

**BBUC\_Op5 – confirm loans:**

Description: Confirming loans which means going through the process of borrowing a book without any issues such as member restrictions and confirming the loans which will be send to the printer.

Pre-conditions: BorrowBookCTL class exists

Pending loan list exists

BorrowBookCTL state == ***CONFIRMING\_LOANS***

Post-conditions: **PostConditions:**

Main Menu is displayed

All pending loans are committed and recorded

Loan slip of committed loans printed

cardReader is disabled

scanner is disabled

BorrowBookCTL state == ***COMPLETED***

Data required: loansConfirmed()

**[repeat as needed]**

**BBUC\_Op6 – Reject Loans:**

Description: going through the borrow a book use case but at the end rejecting the borrowing information displayed.

Pre-conditions: BorrowBookCTL class exists

Pending loan list exists

BorrowBookCTL state == ***CONFIRMING\_LOANS***

Post-conditions: **PostConditions:**

BorrowBookUI is displayed

Scanning panel of BorrowBookUI displayed

Borrower details displayed

Existing loan details displayed

pending loan list is empty

scan count == number of existing loans

Cancel button enabled

cardReader is disabled

scanner is enabled

BorrowBookCTL state == ***SCANNING\_BOOKS***

Data required: loansRejected()