**BBUC\_Op1:** Begin Use Case

**Intent:** Initialize Borrow Book Use Case

**Signature:** initialize()

**PreConditions:**

BorrowBookCTL class exists

memberDAO, loanDAO

bookDAO, display, cardReader,

scanner, printer all exist

BorrowBookCTL added as listener to

cardReader and scanner

BorrowBookCTL state == ***CREATED***

**PostConditions:**

BorrowBookUI is displayed

SwipeCard panel of BorrowBookUI displayed

Cancel button enabled

cardReader is enabled

scanner is disabled

BorrowBookCTL state == ***INITIALIZED***

**BBUC\_Op2:** Swipe Borrower Card

**Intent:** Identify borrower to system

**Signature:** cardSwiped(borrowerId)

**PreConditions:**

cardReader visible and enabled

BorrowBookCTL added as listener to

cardReader

memberDAO exists

BorrowBookCTL state == ***INITIALIZED***

**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***

**BBUC\_Op3:** Scan Book

**Intent:** Add book to list of intended/pending loans

**Signature:** bookScanned(barcode)

**PreConditions:**

BorrowBookCTL class exists

scanner exists

BorrowBookCTL added as listener to

scanner

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

**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***

**BBUC\_Op4:** Complete Scans

**Intent:** Finish scanning books

**Signature:** scansCompleted()

**PreConditions:**

BorrowBookCTL class exists

Pending loan list exists

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

**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***

**BBUC\_Op5:** Confirm Loans

**Intent:** complete the borrowing book process

**Signature:** loansConfirmed()

**PreConditions:**

BorrowBookCTL class exists

Pending loan list exists

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

**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***

**BBUC\_Op6:** Reject Loans

**Intent:** reject the current list of pending loans and

start the scanning process again

**Signature:** loansRejected()

**PreConditions:**

BorrowBookCTL class exists

Pending loan list exists

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

**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***