Pseudo Code

# 1. Class AddCopyController

* **Method checkBookNumber():**

Loop: for all book in database:

If(book.bookNumber == bookNumber)

return true;

End If;

End loop;

return false;

* **Method addCopy(int numberOfCopies, String typeOfCopy, double price, String bookNumber):**

CopyInfo.addCopy(new CopyInfo(numberOfCopies, typeOfCopy, price, bookNumber));

(create a new copy and store to database)

# 2. Class AddCopyForm

* **Method displaySuccessfulOperation():**

this.AddCopyForm.displayDialog(“Successfully added”);

* **Method displayError(String errorMessage):**

this.AddCopyForm.displayDialog(“Error: “ + errorMessage);

* **Method addCopy(int numberOfCopies, String typeOfCopy, double price, String bookNumber):**

addCopyController.addCopy(numberOfCopies, typeOfCopy, price, bookNumber);

(call corresponding method of addCopyController)

# 3. Class CopyInfo

* **Method generateCopyNumber():**

int max = 0;

List copyList = select all copy where copy.bookNumber == bookNumber;

Loop: for all copy in copyList:

If(copy.copyNumber >= max)

max = copy.copyNumber;

End If;

End loop;

copyNumber = max + 1;

(set copyNumber of the new copy a value of max + 1)

* **Method getCopyInfo(String bookNumber, int copyNumber):**

Loop: for all copyInfo in database:

If(copyInfo.bookNumber == bookNumber && copyInfo.copyNumber == copyNumber)

return copyInfo;

End If;

End loop;

return null;

* **Method addCopy(CopyInfo copyInfo):**

Store a new copyInfo to database.

# 4. Class BookInfo

* **Method getBookInfo(String bookNumber):**

Loop: for all bookInfo in database:

If(bookInfo.bookNumber == bookNumber)

return bookInfo;

End If;

End loop;

return null;

# 5. Class BorrowController

* **Method registerToBorrow(String cardNumber, String bookNumber):**

BookBorrowingInfo.addNewBorrowingInfo(new BookBorrowingInfo(cardNumber, bookNumber));

* **Method checkCard(String cardNumber):**

boolean cardExist = false;

boolean cardNotExpire = false;

CardInfo card;

Loop: for all cardInfo in database:

If(cardInfo.cardNumber == cardNumber)

cardExist = true;

card = cardInfo;

End If;

End loop;

If(card != null && card.dueDate > today)

cardNotExpire = true;

End If;

return cardExist && cardNotExpire;

* **Method checkCopyStatus(String bookNumber):**

Loop: for all copyInfo in database:

If(copyInfo.bookNumber == bookNumber)

return true;

End If;

End loop;

return false;

# 6. Class BorrowForm

* **Method displaySuccessfulOperation():**

this.AddCopyForm.displayDialog(“Successfully added”);

* **Method displayError(String errorMessage):**

this.AddCopyForm.displayDialog(“Error: “ + errorMessage);

* **Method registerToBorrow(String cardNumber, String bookNumber)** borrowController.registerToBorrow(cardNumber, bookNumber);

(call corresponding method of borrowController)

# 7. Class BookBorrowingInfo

* **Method addNewBorrowingInfo(BookBorrowingInfo bookBorrowingInfo):**

Store a new bookBorrowingInfo to database.

* **Method getBorrowingInfo(cardNumber, bookNumber):**

Loop: for all borrowingInfo in database:

If(borrowingInfo.bookNumber == bookNumber && borrowingInfo.cardNumber == cardNumber)

return borrowingInfo;

End If;

End loop;

return null;

# 8. Class CardInfo

* **Method getCardInfo(String cardNumber):**

Loop: for all cardInfo in database:

If(cardInfo.cardNumber == cardNumber)

return cardInfo;

End If;

End loop;

return null;