University of Bahrain
College of Information Technology
Department of Computer Science
ITSE305 – Software Engineering Project

Phase VI Review

Code Review Plan – SE305 Project

1. Team Members

- Mariam Ali Saeed – [202202008]

- Hussain Ali Anan – [202208624]

- Reem Saleh Qasem – [202200281]

- Rayan Mahmood – [202204223]

2. Review Pairing

Each member reviews one person and gets reviewed by that same person.

- **Reem** reviews **Rayan**

- **Rayan** reviews **Reem**

- **Mariam** reviews **Hussain**

- **Hussain** reviews **Mariam**

3. Steps to Complete the Task (GitHub Flow):

Step 1 – Work on Our Existing Branches

Since all branches are already created, we will continue working on our assigned branches.

Step 2 – Open a Pull Request (PR)

Each of us will:

- Open a PR from our branch into main.
- Add a clear title and description (Optimal) .
- Assign the correct reviewer (based on the pairing above).

Step 3 – Perform Code Reviews

We will review the assigned teammate's Pull Request by:

- Checking their changes line-by-line.
- Writing comments and suggestions.
- Requesting changes when needed.

Step 4 – Apply Requested Changes

When we receive comments from our reviewers, we will:

- Update our code based on the feedback.
- Commit and push the changes to the same branch.

Step 5 – Reviewer Approval

Once the changes are made, the reviewer will:

- Re-check the Pull Request.
- Approve it when everything is correct.

Step 6 – Merge to Main

After approval, we will merge the Pull Request into main.

4. Reviewed Code Summary Table

1. **Reem** reviews **Rayan:**

File Path	Feature / Line Reviewed
src/main/java/library/ModelLayer/Book.java	Line 15 — Constructor validation (Book(...))
src/main/java/library/ModelLayer/Member.java	Line 25 — toString() method
src/main/java/library/ModelLayer/ReturnReceipt.java	Line 16 — ReturnReceipt(...) constructor
src/main/java/library/ModelLayer/Loan.java	Line 19 — Loan(...) constructor
src/main/java/library/business/ReturnService.java	Line 13 — final InMemoryDataStore store field
src/main/java/library/testproject/ConsoleUITest.java	Line 31 — Simulated input & System.setIn handling

2. **Mariam** reviews **Hussain:**

File Path	Feature / Line Reviewed
AddABook/src/Book.java	Line 15 — Missing additional getters
AddABook/src/BookTest.java	Line 9 — assert statements not effective
AddABook/src/Library.java	Line 12 — Duplicate ID check optimization
AddABook/src/LibraryTest.java	Lines 1–6 — Duplicate imports
AddABook/src/Main.java	Line 15 — Unsafe nextInt() usage Line 18 — Repeated nextLine() calls
AddABook/src/MainTest.java	Line 5 — String.join() not necessary Line 35 — Weak output assertion

3. **Hussain** reviews **Mariam:**

File Path	Feature / Line Reviewed
Book1.java	Constructor didn't validate the title; No way to return a book
BookRepository.java	findByTitle() didn't check null input; O(n) search inefficient for large data
LibraryService.java	Borrowing logic unclear for missing books; Allowed borrowing already borrowed book
LibraryApp.java	Scanner inside method → hard to unit-test
LibraryServiceTest.java	Missing key test cases (e.g., borrowing a non-existing book)
LibraryAppTest.java	No way to test input because Scanner was inside method
CalculatorTest.java	Missing tests for negative numbers and division by zero

4. **Rayan** reviews **Reem:**

Src/SimpleCalculatorTest.java	Line 8