

Test Driven Development | Library Management System

**Prepared for**

**Prof. Mukhtiar Zamin**

**Prepared by**

**Faizan (FA21-BSE-011)**

Department of Computer Science

COMSATS University Islamabad, Lahore Campus

04 June 2024

Table of Contents

[BookServiceTest Test Cases – findBooksByAuthor 3](#_Toc168411520)

[BookServiceTest Test Cases – findBooksByTitle 3](#_Toc168411521)

[BookServiceTest Test Cases – findBooksByAuthorAndTitle 4](#_Toc168411522)

# BookServiceTest Test Cases – findBooksByAuthor

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Test Case ID | Name | Description | Precondition | Test Data | Expected Result | Actual Result | Status |
| TC-001 | Find Books by Valid Author | Retrieves a list of books with the matching author. | Book data exists in the repository. | Author: "Kent Beck" | List of books by "Kent Beck" |  | Pass |
| TC-002 | Find Books by Non-Existent Author | Returns an empty list. | Book data exists in the repository. | Author: "Unknown Author" | Empty list |  | Pass |
| TC-003 | Find Books by Empty Author | Returns an empty list. | Book data exists in the repository. | Author: "" (empty string) | Empty list |  | Pass |
| TC-004 | Find Books by Null Author | Returns an empty list. | Book data exists in the repository. | Author: null | Empty list |  | Pass |

# BookServiceTest Test Cases – findBooksByTitle

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Test Case ID | Name | Description | Precondition | Test Data | Expected Result | Actual Result | Status |
| TC-005 | Find Books by Valid Title | Retrieves a list of books with the matching title. | Book data exists in the repository. | Title: "Clean Code" | List of books titled "Clean Code" |  | Pass |
| TC-006 | Find Books by Non-Existent Title | Returns an empty list. | Book data exists in the repository. | Title: "Unknown Title" | Empty list |  | Pass |
| TC-007 | Find Books by Empty Title | Returns an empty list. | Book data exists in the repository. | Title: "" (empty string) | Empty list |  | Pass |
| TC-008 | Find Books by Null Title | Returns an empty list. | Book data exists in the repository. | Title: null | Empty list |  | Pass |

# BookServiceTest Test Cases – findBooksByAuthorAndTitle

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Test Case ID | Name | Description | Precondition | Test Data | Expected Result | Actual Result | Status |
| TC-009 | Find Books by Valid Author and Title | Retrieves a list of books with the matching author and title. | Book data exists in the repository. | Author: "Robert C. Martin", Title: "Clean Code" | List of books by "Robert C. Martin" titled "Clean Code" |  | Pass |
| TC-010 | Find Books by Non-Existent Author and Title | Returns an empty list. | Book data exists in the repository. | Author: "Unknown Author", Title: "Unknown Title" | Empty list |  | Pass |
| TC-011 | Find Books by Valid Author, Non-Existent Title | Returns an empty list. | Book data exists in the repository. | Author: "Robert C. Martin", Title: "Unknown Title" | Empty list |  | Pass |
| TC-012 | Find Books by Non-Existent Author, Valid Title | Returns an empty list. | Book data exists in the repository. | Author: "Unknown Author", Title: "Clean Code" | Empty list |  | Pass |
| TC-013 | Find Books by Null Author and Title | Returns an empty list. | Book data exists in the repository. | Author: null, Title: null | Empty list |  | Pass |
| TC-014 | Find Books by Valid Author, Null Title | Returns an empty list. | Book data exists in the repository. | Author: "Robert C. Martin", Title: null | Empty list |  | Pass |
| TC-015 | Find Books by Null Author, Valid Title | Throws an IllegalArgumentException (or adjust based on implementation). | Book data exists in the repository. | Author: null, Title: "Clean Code" | IllegalArgumentException |  | Pass (if exception is thrown) |