**Library Management System Test Cases**

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| **Test Case ID** | **Test Case Name** | **Description** | **Preconditions** | **Test Steps** | **Test Data** | **Expected Result** | **Actual Result** | **Status** |
| TC1 | Get Books by Valid Author | Verify method returns books for a valid author | Repository contains books by "Kent Beck" | 1. Call getBooksByAuthor("Kent Beck") | "Kent Beck" | List containing "Test Driven Development" |  |  |
| TC2 | Get Books by Unknown Author | Verify method returns an empty list for an unknown author | Repository does not contain books by "Unknown Author" | 1. Call getBooksByAuthor("Unknown Author") | "Unknown Author" | An empty list |  |  |
| TC3 | Get Books by Null Author | Verify method returns an empty list when the author is null | Repository contains some books | 1. Call getBooksByAuthor(null) | null | An empty list |  |  |
| TC4 | Get Books by Empty Author | Verify method returns an empty list when the author is an empty string | Repository contains some books | 1. Call getBooksByAuthor("") | "" | An empty list |  |  |
| TC5 | Get Books by Case-Sensitive Author | Verify method is case-sensitive when searching by author | Repository contains books by "Kent Beck" | 1. Call getBooksByAuthor("kent beck") | "kent beck" | An empty list |  |  |
| TC6 | Get Books by Valid Title | Verify method returns books for a valid title | Repository contains the book "Clean Code" | 1. Call getBooksByTitle("Clean Code") | "Clean Code" | List containing "Clean Code" |  |  |
| TC7 | Get Books by Unknown Title | Verify method returns an empty list for an unknown title | Repository does not contain books with the title "Unknown Title" | 1. Call getBooksByTitle("Unknown Title") | "Unknown Title" | An empty list |  |  |
| TC8 | Get Books by Null Title | Verify method returns an empty list when the title is null | Repository contains some books | 1. Call getBooksByTitle(null) | null | An empty list |  |  |
| TC9 | Get Books by Empty Title | Verify method returns an empty list when the title is an empty string | Repository contains some books | 1. Call getBooksByTitle("") | "" | An empty list |  |  |
| TC10 | Get Books by Case-Sensitive Title | Verify method is case-sensitive when searching by title | Repository contains the book "Clean Code" | 1. Call getBooksByTitle("clean code") | "clean code" | An empty list |  |  |
| TC11 | Get Books by Valid Author and Title | Verify method returns books for a valid author and title | Repository contains the book "Clean Code" by "Robert C. Martin" | 1. Call getBooksByAuthorAndTitle("Robert C. Martin", "Clean Code") | "Robert C. Martin", "Clean Code" | List containing "Clean Code" |  |  |
| TC12 | Get Books by Unknown Author and Title | Verify method returns an empty list for unknown author and title | Repository does not contain books by "Unknown Author" with the title "Unknown Title" | 1. Call getBooksByAuthorAndTitle("Unknown Author", "Unknown Title") | "Unknown Author", "Unknown Title" | An empty list |  |  |
| TC13 | Get Books by Valid Author and Invalid Title | Verify method returns an empty list for a valid author with an invalid title | Repository contains the book "Clean Code" by "Robert C. Martin" | 1. Call getBooksByAuthorAndTitle("Robert C. Martin", "Unknown Title") | "Robert C. Martin", "Unknown Title" | An empty list |  |  |
| TC14 | Get Books by Invalid Author and Valid Title | Verify method returns an empty list for an invalid author with a valid title | Repository contains the book "Clean Code" | 1. Call getBooksByAuthorAndTitle("Unknown Author", "Clean Code") | "Unknown Author", "Clean Code" | An empty list |  |  |
| TC15 | Get Books by Null Author and Title | Verify method returns an empty list when both author and title are null | Repository contains some books | 1. Call getBooksByAuthorAndTitle(null, null) | null, null | An empty list |  |  |
| TC16 | Get Books by Valid Author and Null Title | Verify method returns an empty list for a valid author with a null title | Repository contains the book "Clean Code" by "Robert C. Martin" | 1. Call getBooksByAuthorAndTitle("Robert C. Martin", null) | "Robert C. Martin", null | An empty list |  |  |
| TC17 | Get Books by Null Author and Valid Title | Verify method returns an empty list for a null author with a valid title | Repository contains the book "Clean Code" | 1. Call getBooksByAuthorAndTitle(null, "Clean Code") | null, "Clean Code" | An empty list |  |  |