Test Driven Development | Library Management System

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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,	Returns an empty list.	Book data exists in the repository.	Author: "Unknown Author", Title:	Empty list		Pass

				"Clean Code"			
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)