

Java Coding Question: Library Management System

Description:

You are tasked with implementing a simple Library Management System in Java. The system should allow users to manage books and members. Your task is to create the following classes and their respective methods:

1. Book

- Fields:
 - `String title`
 - `String author`
 - `String isbn`
- Methods:
 - `void borrowBook()`: Marks the book as borrowed.
 - `void returnBook()`: Marks the book as returned.
 - `boolean isAvailable()`: Checks if the book is available for borrowing.

2. Member

- Fields:
 - `String name`
 - `String memberId`
- Methods:
 - `void borrowBook(Book book)`: Allows the member to borrow a book.
 - `void returnBook(Book book)`: Allows the member to return a borrowed book.
 - `List<Book> getBorrowedBooks()`: Returns a list of books currently borrowed by the member.

Requirements:

1. Implement the `Book` and `Member` classes with the specified fields and methods.
2. Write JUnit tests to test the functionality of each method.

JUnit Tests:

1. Test for `Book` Class:

- Test Method: `testBorrowBook`
 - Description: Test that a book can be borrowed.
 - Expected Result: The book should be marked as borrowed, and `isAvailable()` should return `false`.
- Test Method: `testReturnBook`
 - Description: Test that a book can be returned.
 - Expected Result: The book should be marked as available, and `isAvailable()` should return `true`.

2. Test for `Member` Class:

- Test Method: `testBorrowBook`
 - Description: Test that a member can borrow a book.
 - Expected Result: The book should be added to the member's borrowed books list, and the book should be marked as borrowed.
- Test Method: `testReturnBook`
 - Description: Test that a member can return a book.
 - Expected Result: The book should be removed from the member's borrowed books list, and the book should be marked as available.
- Test Method: `testGetBorrowedBooks`
 - Description: Test that the list of borrowed books is returned correctly.
 - Expected Result: The list should contain all the books borrowed by the member.