

[Description](#) [Code Editor](#) [Grading view](#)

Verify Call - JUnit using Mockito

[Click here to download the code skeleton](#)

Mockito - Verify Method Call

Important Instructions:

- Please read the document thoroughly before you code.
- Import the given skeleton code into your Eclipse.
- Do not change the Skeleton code or the package structure, method names, variable names, return types, exception clauses, access specifiers etc.
- You can create any number of private methods inside the given class.
- Use **Mockito** annotations to mock & injects instances.
- You are provided with a **Main class** with the main method to check the correctness of the test methods written.
- Having completed writing the test methods, execute the main method and identify the result.

Assessment Coverage:

- Mockito **annotations & verify** methods
- JUnit annotations & **exception handling** rules

Given you an application, which assign the **valid ISBNs to books**. If the ISBN is **invalid**, it has to throw **RuntimeException** with message "**Invalid Code**".

You are required to write Junit test case using **Mockito** and check the correctness of the application developed.

Skeleton can be obtained by downloading the link provided in platform

Functional Requirements:

The application has the below classes and methods implemented.

You are provided with a model class Book

Component Specification : Book (Model Class)

Class	Attribute(s)	Template Method(s)
Book	String name String isbn	Necessary getters, setters and constructors provided as part of skeleton

By default the book objects created with name using single argument constructor. **setIsbn()** method need to be used to assign ISBN.

Class	Attribute(s)	Template Method(s)
GenerateISBN	Book book	Constructor provided to inject book object in class

Business Rule:

The below is the requirement implemented in the Utility class for which JUnit test cases are to be written and tested.

Class	Method(s)	Responsibilities	Exception
GenerateISBN	Book assignISBN(String isbn)	If the isbn parameter matches ISBN[4digits] (e.g., ISBN0000) then invoke book object's setIsbn(isbn) only once and return book object.	if isbn parameter doesn't match business rule, throw RuntimeException with message "Invalid Code"

Testing Scenarios:

You are provided with a class "**GenerateISBNTTest**" to do this testing. You are required to **mock** model & utility classes, and verify method call times & mock exception.

Note :

- To inject and perform testing, the GenerateISBN should contain objects of Book.

The below are the **test methods** to be implemented in **GenerateISBNTTest** class.

Test Cases / Methods	Scenarios / Responsibilities
testSuccess	This method should verify the setIsbn() method call, whether it has invoked only once for valid ISBN and no exceptions thrown
testFailed	This method should verify that the setIsbn() method never called (times 0) if Invalid ISBN passed as parameter. Note: Handle exception to avoid test abortion.
testException	This method should verify that the assignISBN() method throws RuntimeException with message " Invalid Code " if isbn code is not compliance with business rule.

Implement the test methods and provide the needed annotation to all the methods in GenerateISBNTTest class.