ASSIGNMENT

B. LIKHITHA

Example 1

Test User Login Validation

Problem Statement:

Check whether login is successful when username and password are correct.

Method Logic:

Returns true if username is "admin" and password is "admin123".

Test Focus:

• Boolean result

• assertTrue, assertFalse

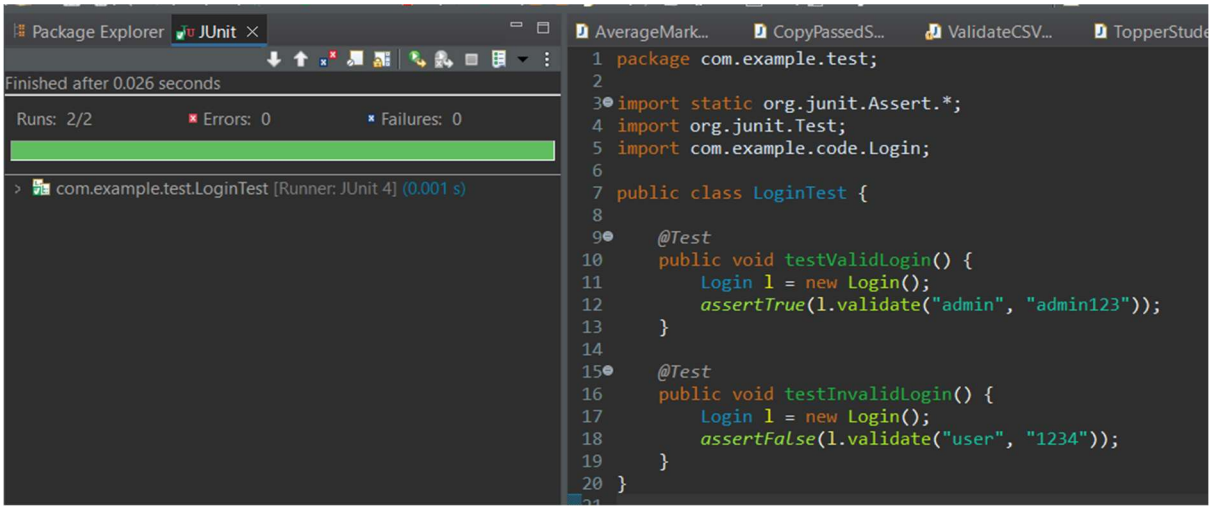
Expected Outcome:

Valid credentials → pass

Invalid credentials → fail

```java
package com.example.code;

public class Login {
    public boolean validate(String username, String password) {
        return username.equals("admin") && password.equals("admin123");
    }
}
```



Example 2

Test Age Eligibility

Problem Statement:

Verify whether a user is eligible to vote.

Method Logic:

Returns true if age ≥ 18.

Test Focus:

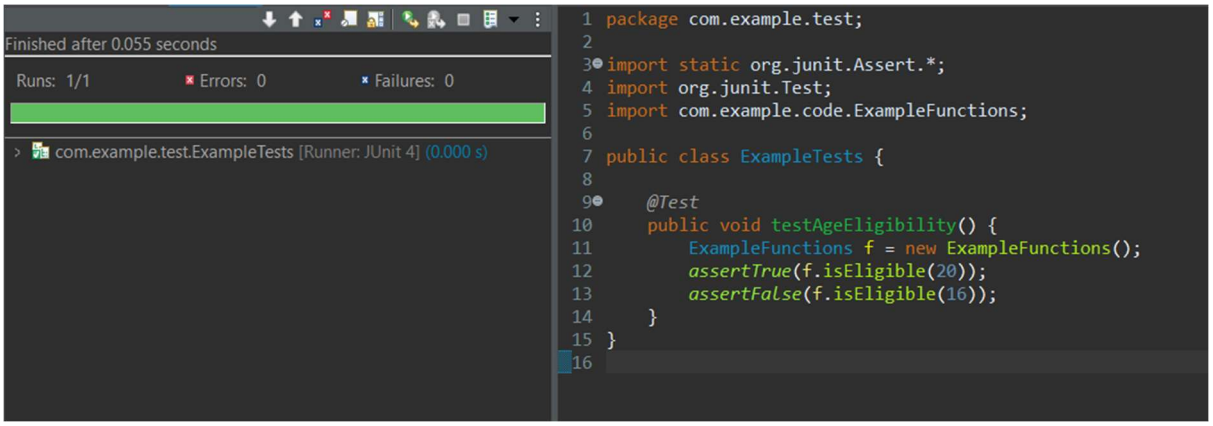
• Conditional logic

• assertTrue, assertFalse

Expected Outcome:

Age ≥ 18 → eligible

Age < 18 → not eligible



Example 3

Test String Uppercase Conversion

Problem Statement:

Convert a string to uppercase and test the output.**Method Logic:**

Returns input string in uppercase.

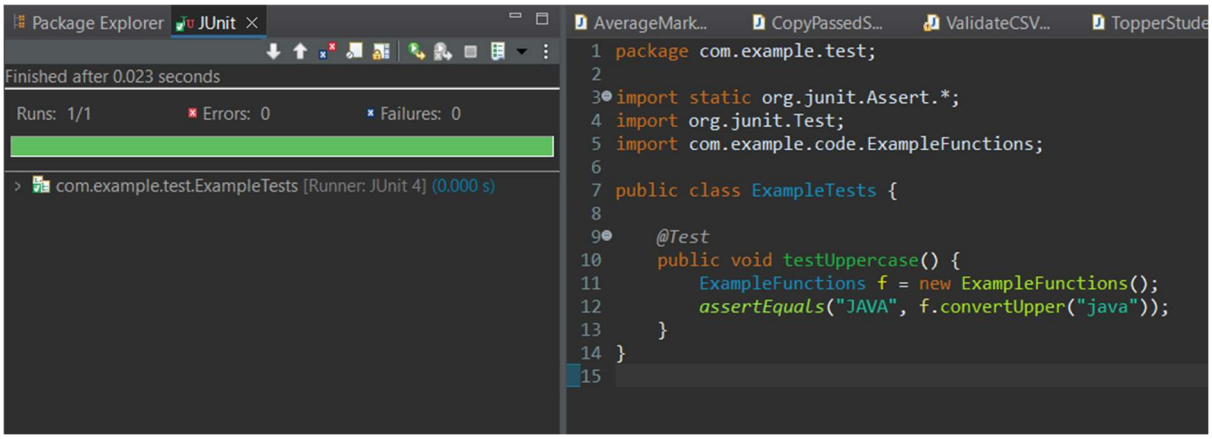
Test Focus:

• String comparison

• assertEquals

Expected Outcome:

Input "java" → Output "JAVA"



Example 4

Test Email Validation

Problem Statement:

Check whether an email contains @ symbol.

Method Logic:

Returns true if email contains "@".

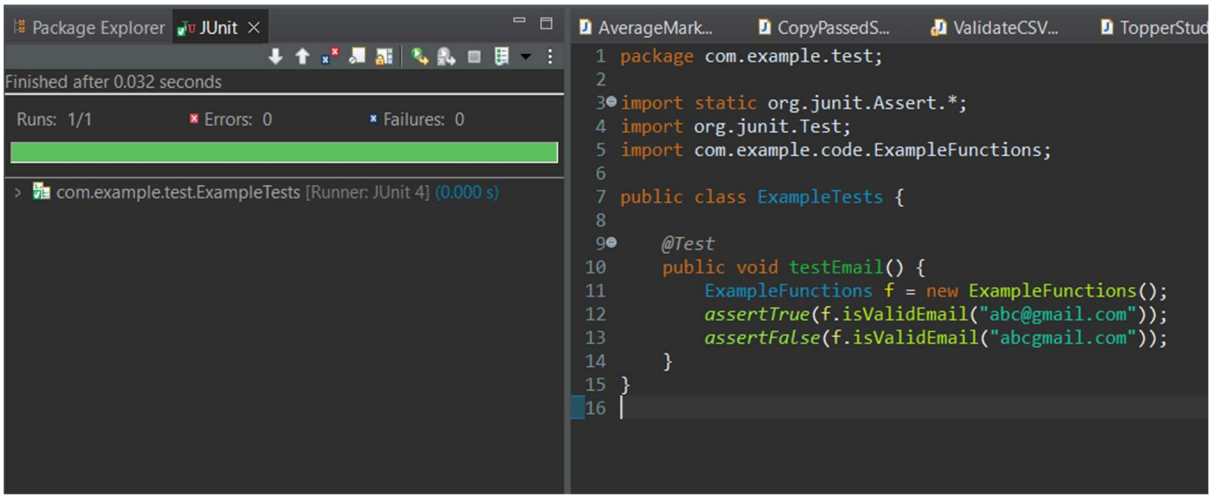
Test Focus:

• Basic string check

• assertTrue

Expected Outcome:

Valid email passes test.



Example 5

Test Password Length Rule

Problem Statement:

Check whether password length is at least 8 characters.

Method Logic:

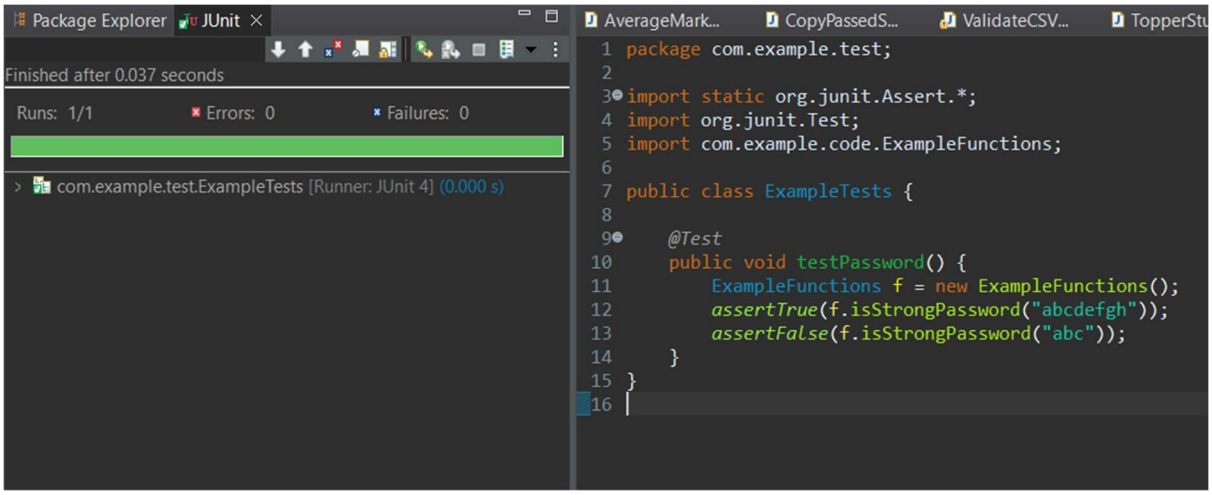
Returns true if password length ≥ 8.

Test Focus:

• Validation logic

• assertTrue, assertFalse**Expected Outcome:**

Short password fails.



Example 6

Test File Name Extension

Problem Statement:

Check whether file name ends with .csv.

Method Logic:

Returns true if file name ends with .csv.

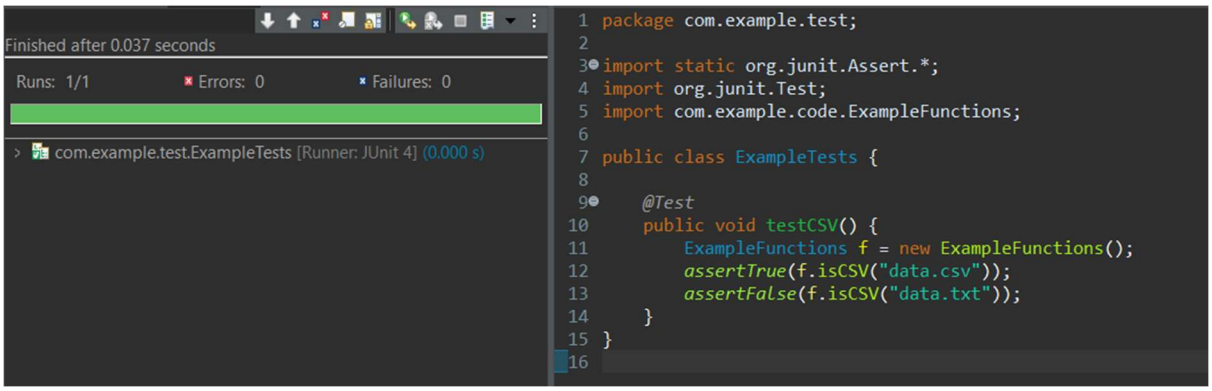
Test Focus:

• String method testing

• assertTrue

Expected Outcome:

CSV file passes test.



Example 7

Test Null Check

Problem Statement:

Return a username and ensure it is not null.

Method Logic:

Returns hardcoded username.

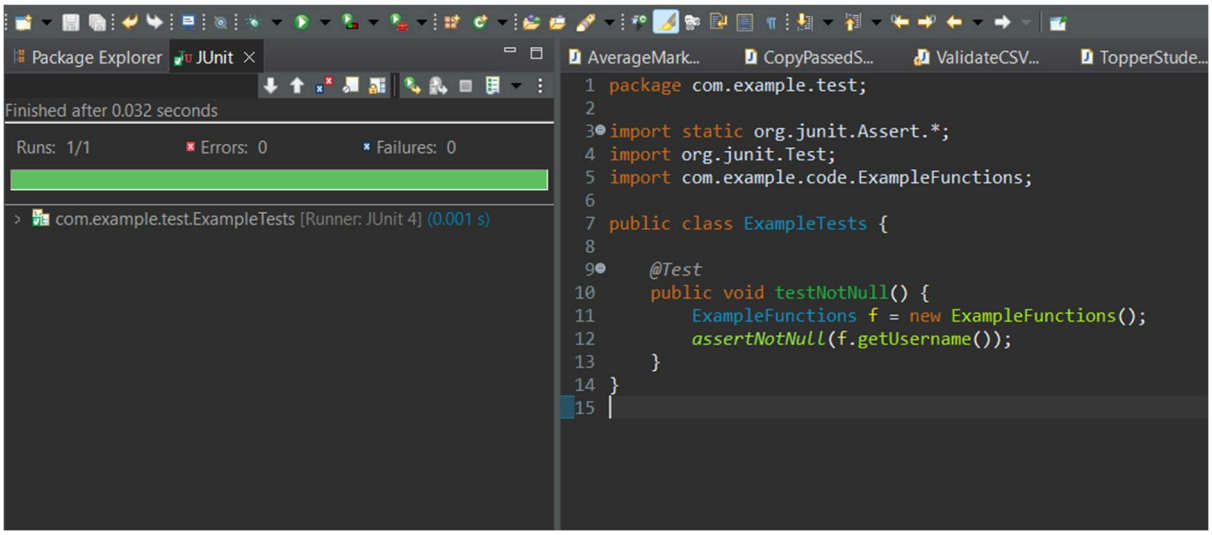
Test Focus:

• Null validation

• assertNotNull

Expected Outcome:

Username should not be null.



Example 8

Test List SizeProblem Statement:

Add 3 items to a list and verify its size.

Method Logic:

Returns list size.

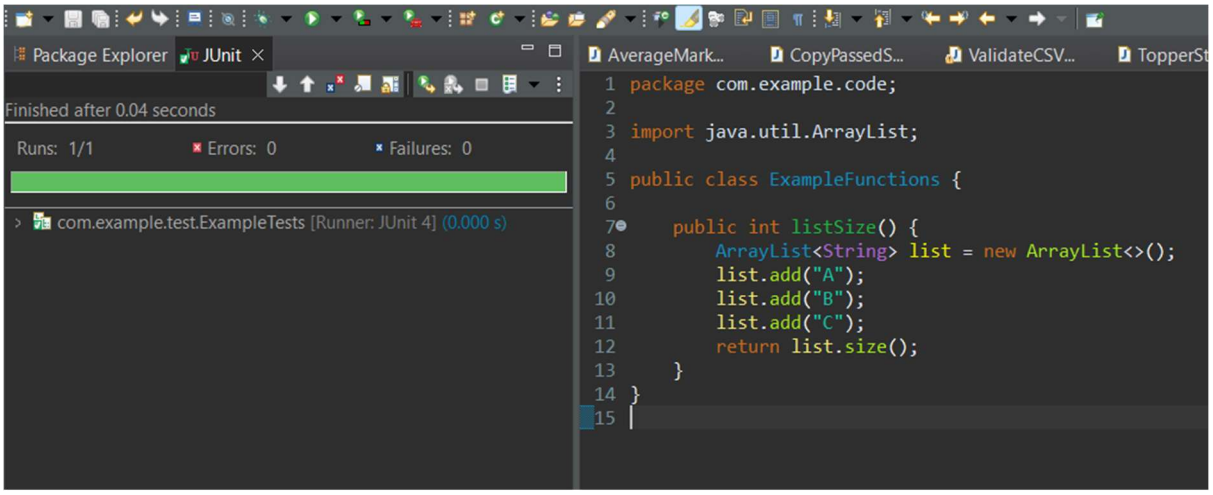
Test Focus:

• Collection size

• assertEquals

Expected Outcome:

List size should be 3.



Example 9

Test Array Contains Value

Problem Statement:

Check whether an array contains a specific value.

Method Logic:

Returns true if value exists.

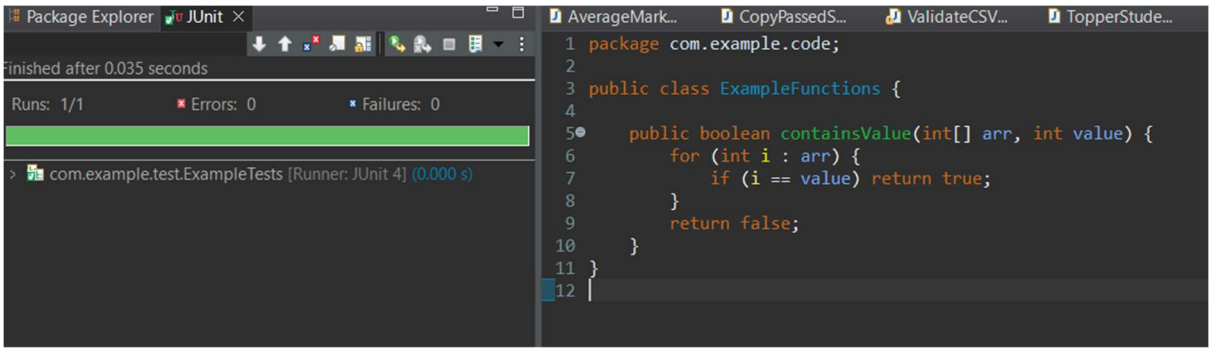
Test Focus:

• Loop-based logic

• assertTrue

Expected Outcome:

Value exists in array.



Example 10

Test Exception for Invalid Age

Problem Statement:

Throw exception if age is negative.

Method Logic:

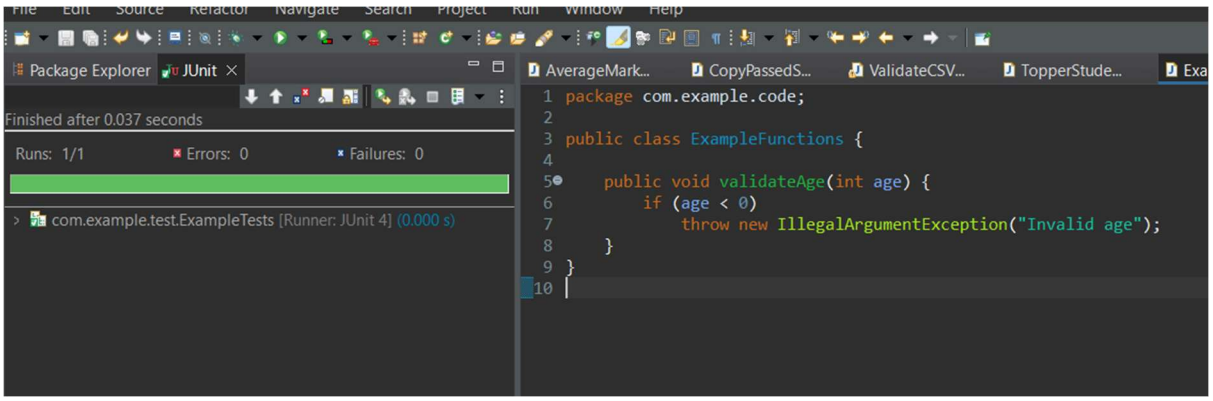
Throws IllegalArgumentException.

Test Focus:

• Exception testing• @Test(expected = IllegalArgumentException.class)

Expected Outcome:

Exception should be thrown.



Example 11

Test Greeting Message

Problem Statement:

Return greeting message based on username.

Method Logic:

Returns "Welcome, User".

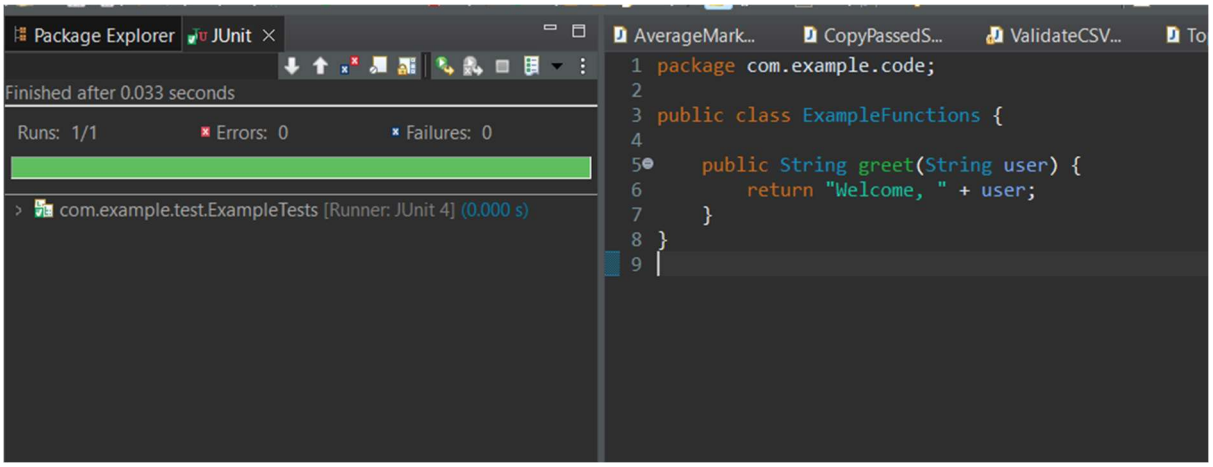
Test Focus:

• String comparison

• assertEquals

Expected Outcome:

Message should match exactly.



Example 12

Test Boolean Flag

Problem Statement:

Return true if user is active.

Method Logic:

Returns boolean status.

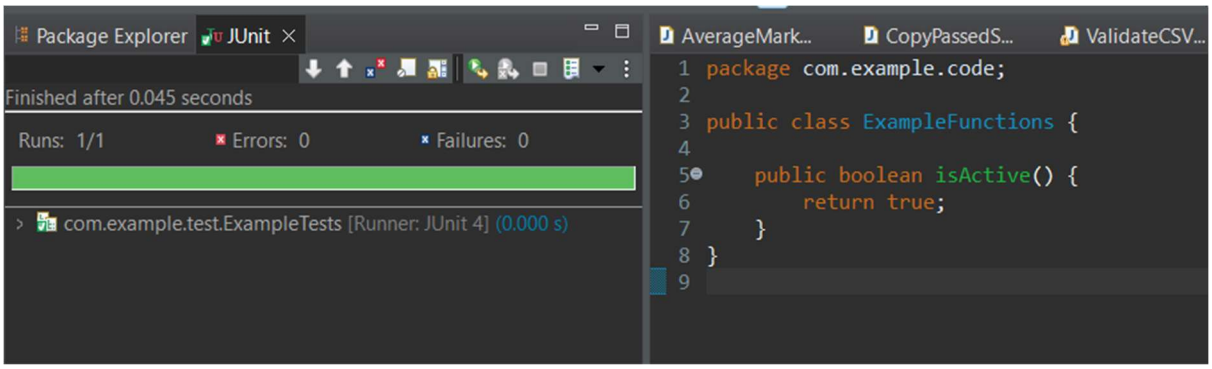
Test Focus:

• Boolean assertion

• assertTrue

Expected Outcome:

Active user returns true.



Example 13

Test Character CountProblem Statement:

Count characters in a string.

Method Logic:

Returns string length.

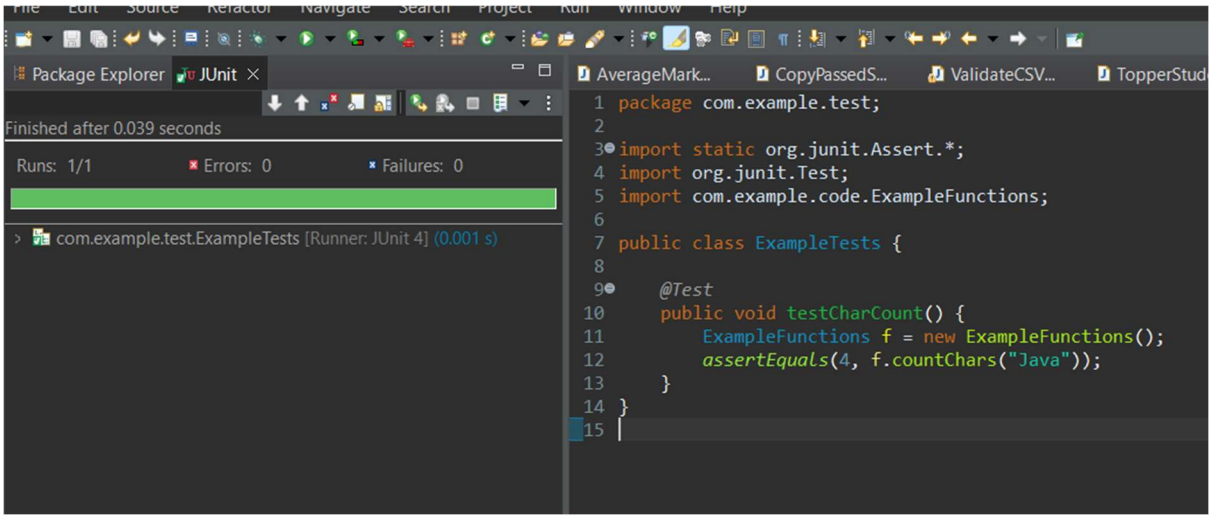
Test Focus:

• Value comparison

• assertEquals

Expected Outcome:

Correct character count returned.



Example 14

Test Default Value

Problem Statement:

Return default country code.

Method Logic:

Returns "IN".

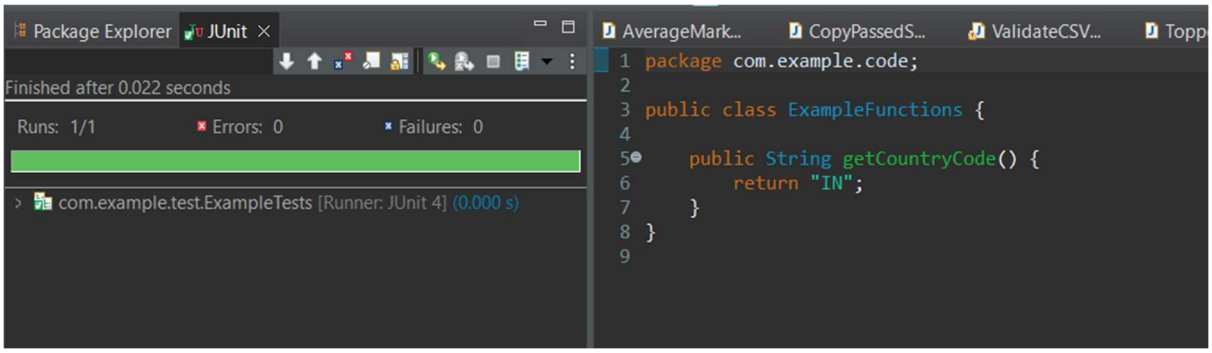
Test Focus:

• Default value testing

• assertEquals

Expected Outcome:

Country code matches.



Example 15

Test Data Present Flag

Problem Statement:

Check whether data exists.

Method Logic:

Returns true if data is present.

Test Focus:

• Simple flag testing• assertTrue

Expected Outcome:

Data presence validated.