

Building Your First JUnit 5 Test

This lesson provides step by step hands-on approach to run JUnit 5 test case on Eclipse IDE.

Project Setup

Please install the following softwares on your machine.

Java 8

JUnit 5 tests will run with Java 8 or above. Please download and install the latest update of Java 8 or above from the official Oracle web site.

www.oracle.com/technetwork/java/javase/downloads/index.html .

After installing Java, you can check your Java version by running the following command -

```
Dineshs-MBP:~ dinesh$ java -version
java version "1.8.0_111"
Java(TM) SE Runtime Environment (build 1.8.0_111-b14)
Java HotSpot(TM) 64-Bit Server VM (build 25.111-b14, mixed mode)
```

Eclipse Oxygen or above

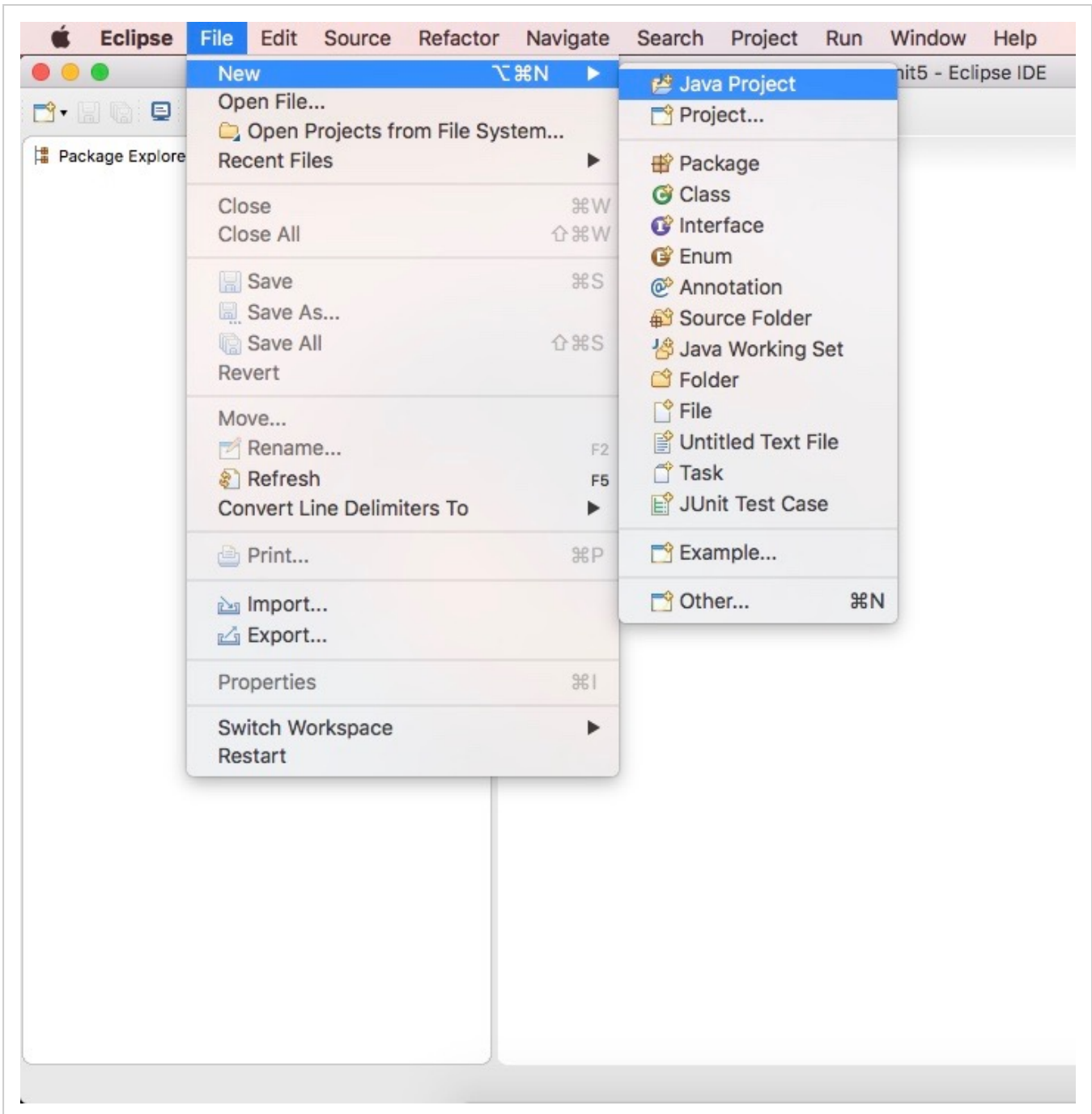
You can download the latest version from Eclipse web site -

<https://www.eclipse.org/downloads/packages/release/neon/3/eclipse-ide-java-ee-developers> .

Steps to write your first JUnit 5 test case in Eclipse

Step 1 - Launch Eclipse IDE.

Step 2 - Create a new Java Project. Right click on File --> New --> Java Project as demonstrated in the figure below.



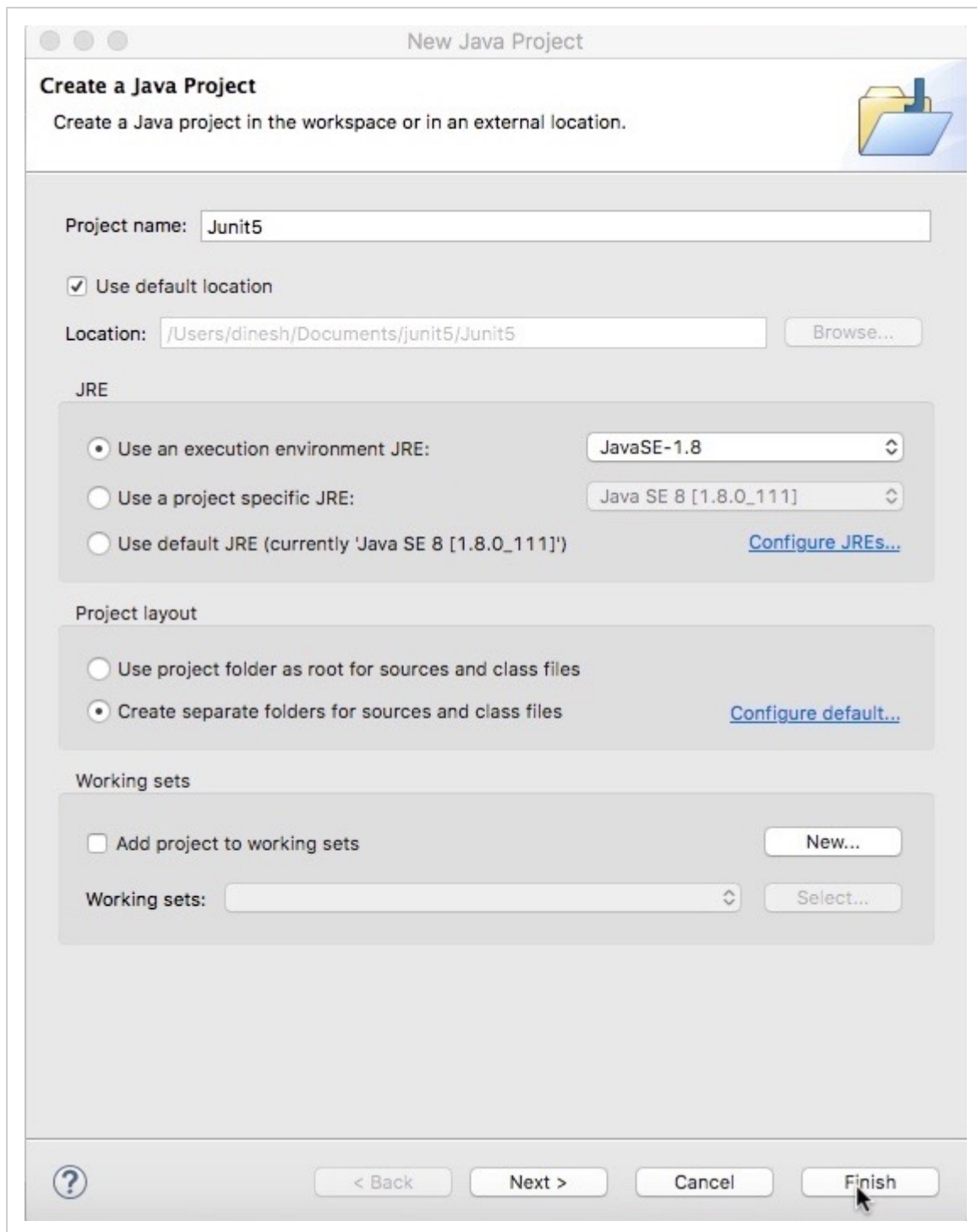
A new popup window by name “New Java Project” will be opened as shown in the figure below.

Step 3 - Provide a Project name: say, **Junit5**

Step 4 - Select JRE as 1.8 and above.

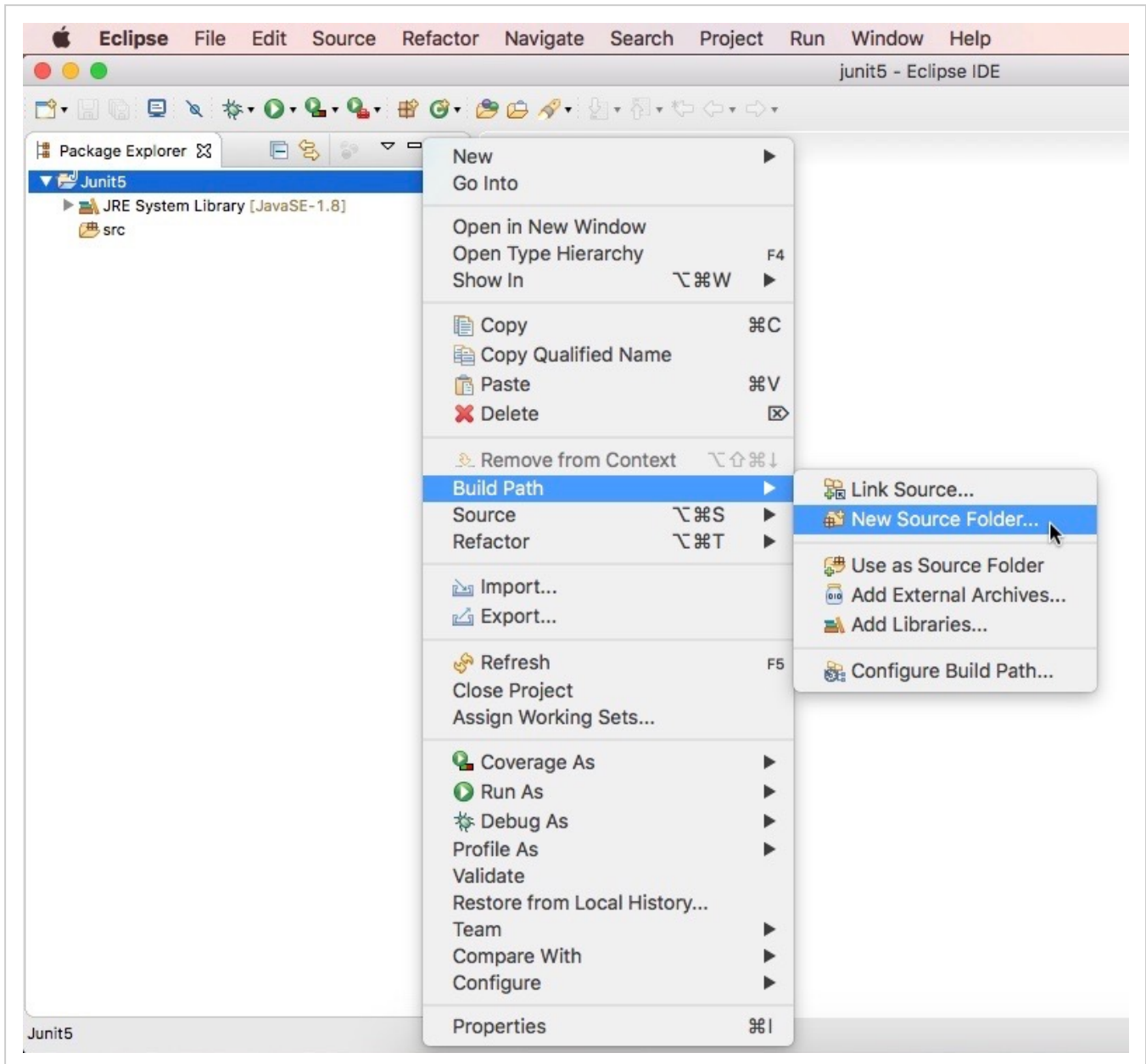
Step 5 - Click Finish.

A new Java Project will be created by name - **Junit5**



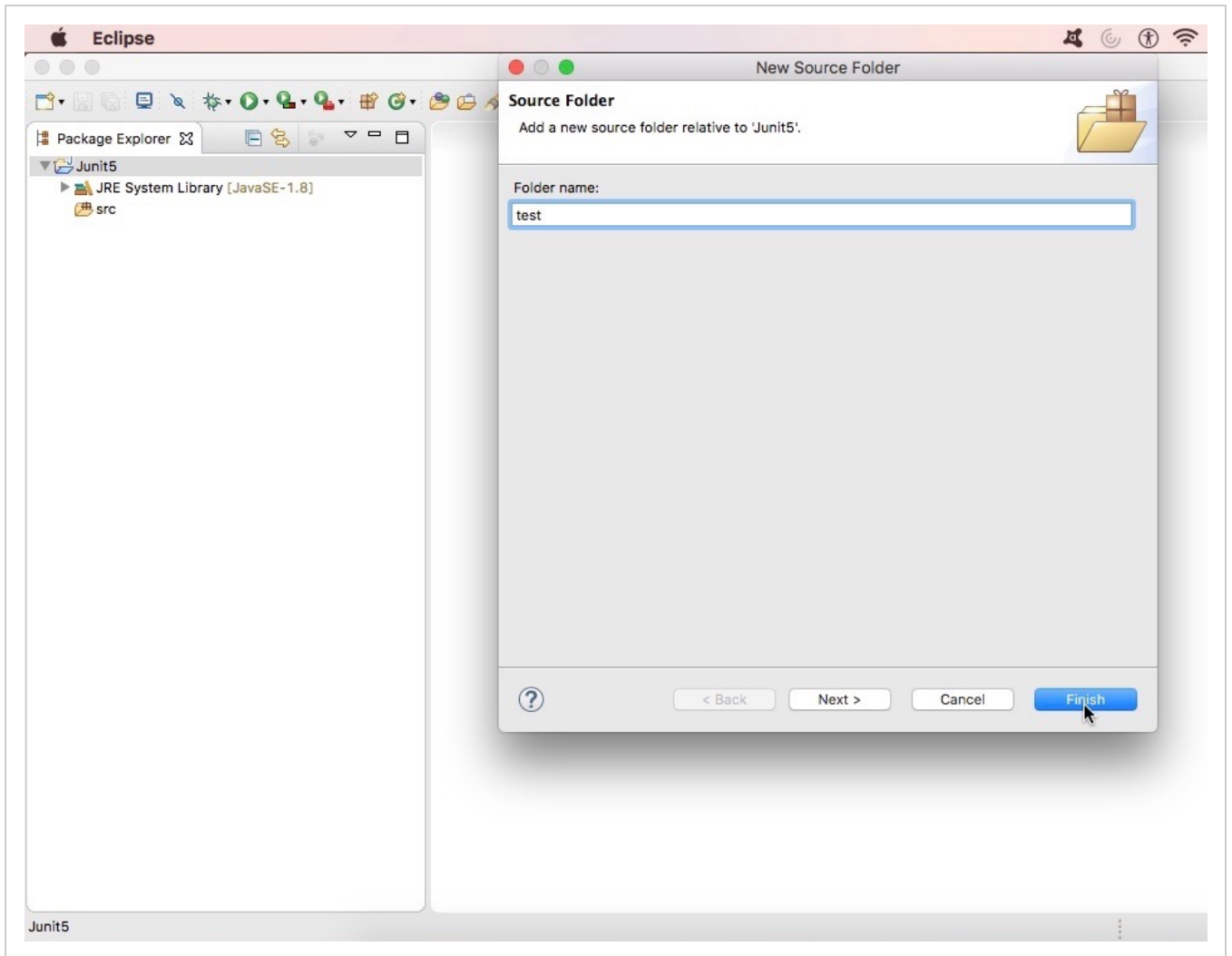
It's a best practice to create JUnit test cases in the test folder.

Step 6 - Expand the Junit5 Java project. Right-click on project root. Traverse to Build Path --> New Source Folder... as shown in the figure below.

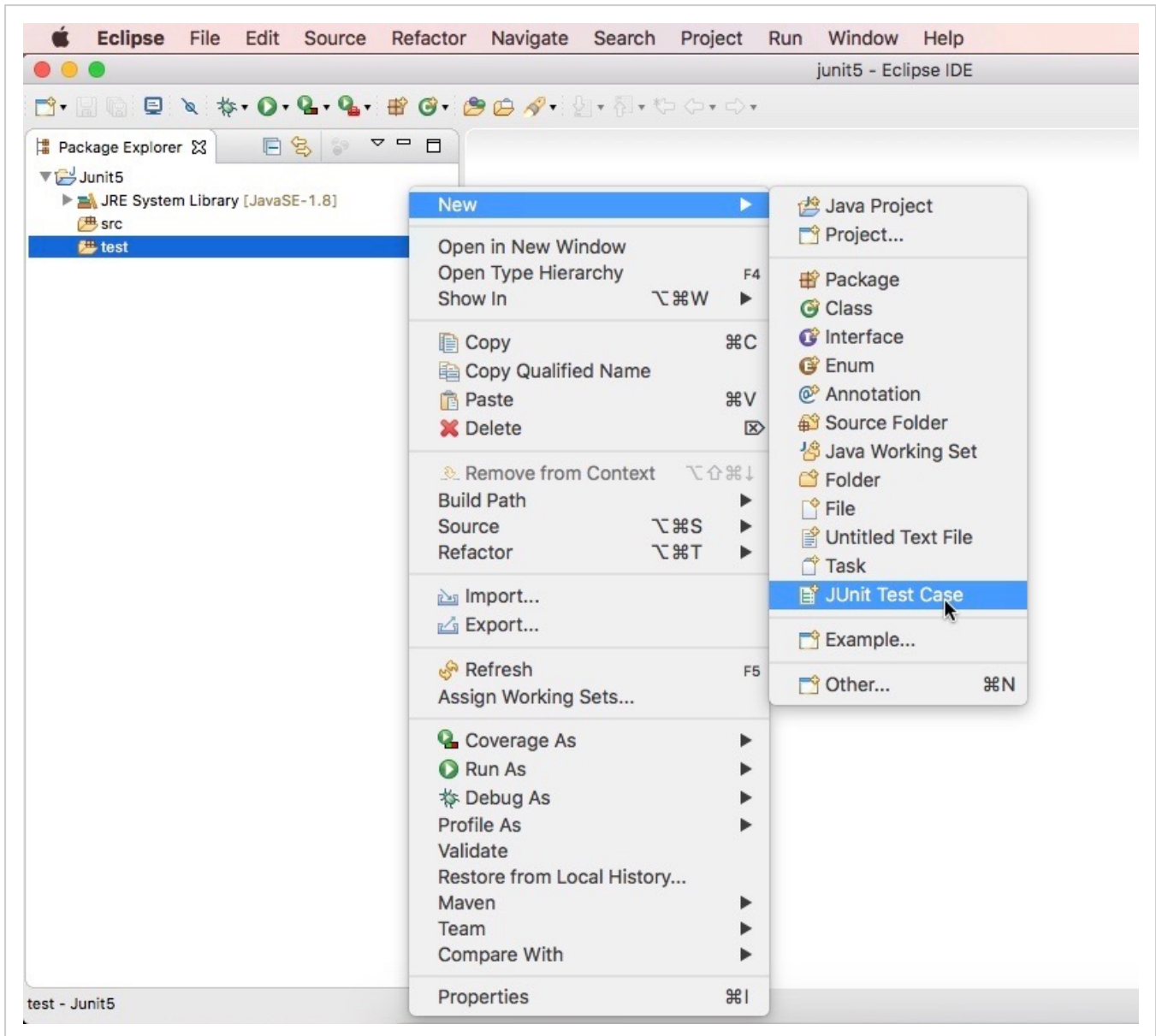


Step 7 - A "New Source Folder" popup will be opened as shown in the figure below.

Step 8 - Provide folder name as "test" and click Finish.



Step 9 - Right-click on test folder and traverse to New --> Junit Test Case as demonstrated in the figure below.



Step 10 - A "New Junit Test Case" popup will be opened as shown in the figure below.

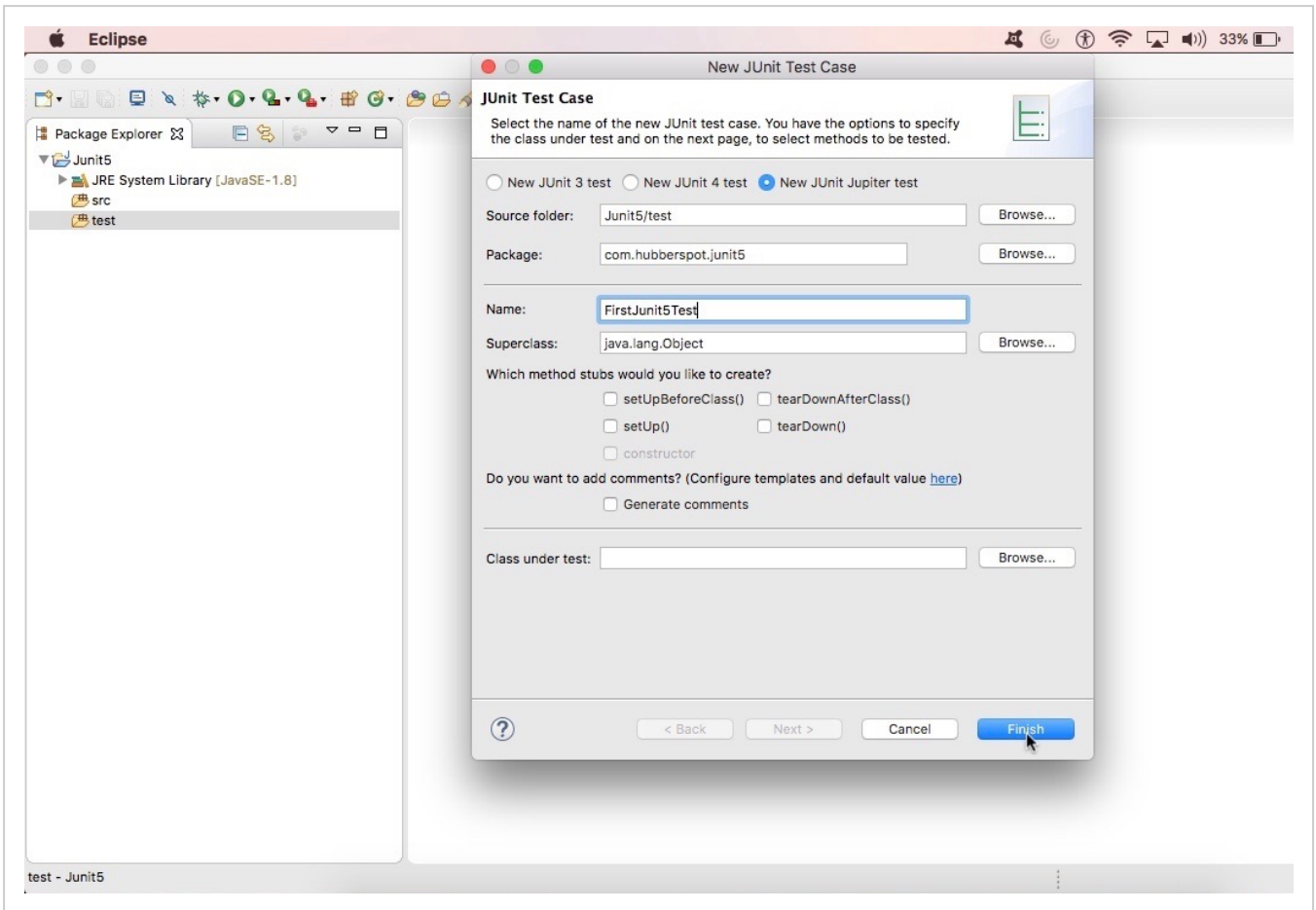
In order to create a new JUnit 5 test case, perform the following steps:-

Step 11 - Select "New Junit Jupiter test". This will create Junit 5 test case.

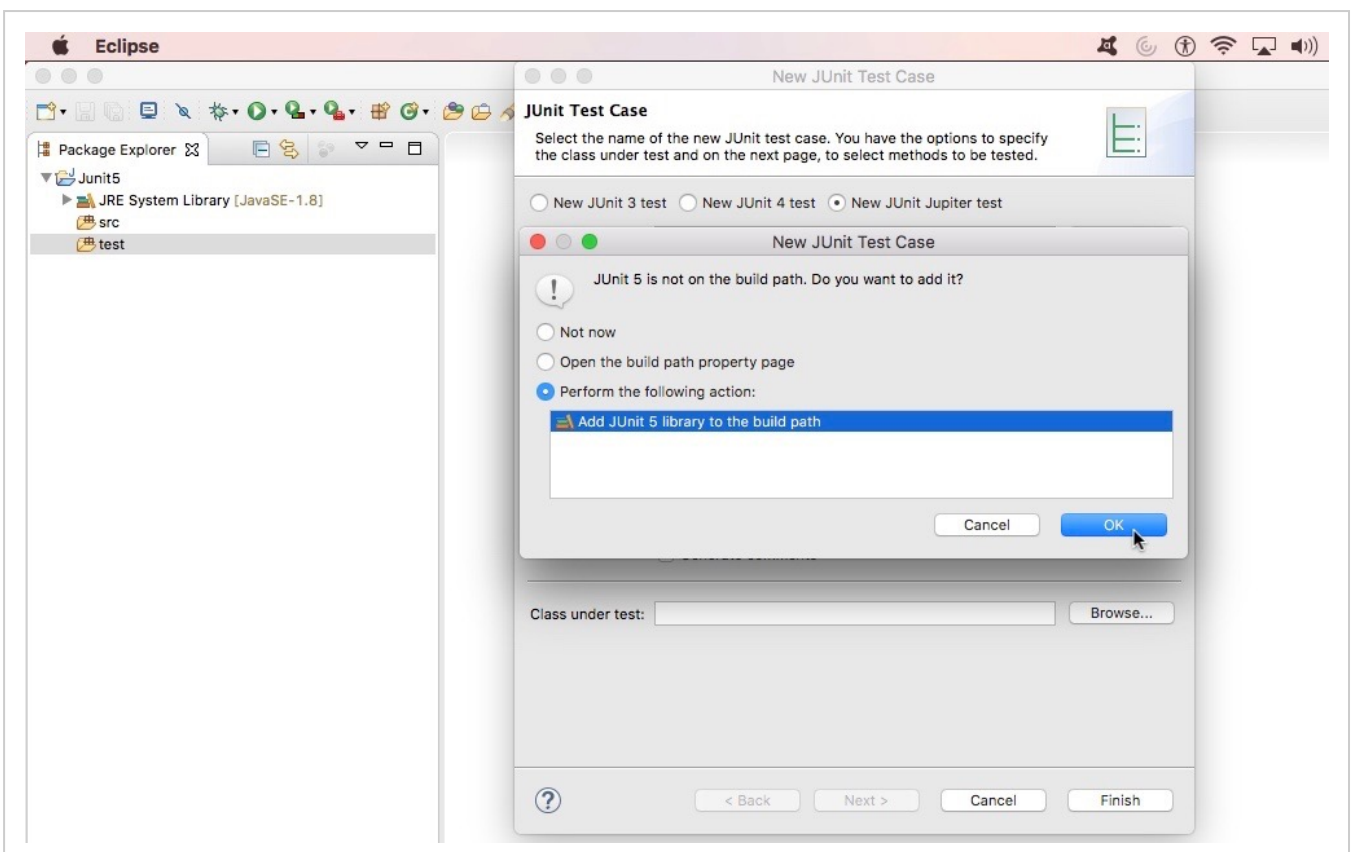
Step 12 - Provide any package name of your choice.

Step 13 - Provide class name as, FirstJUnit5Test.

Step 14 - Click Finish.



Step 15 - Add JUnit 5 library to the build path. Click Ok as shown in the figure below.



A new test class by name “FirstJUnit5Test” will be created. It will have

A new test class by name `FirstJunit5Test` will be created. It will have following snippet of code as shown below.

5 FirstJunit5Test.java

```
package io.educative.junit5;

import static org.junit.jupiter.api.Assertions.*;

import org.junit.jupiter.api.Test;

class FirstJunit5Test {

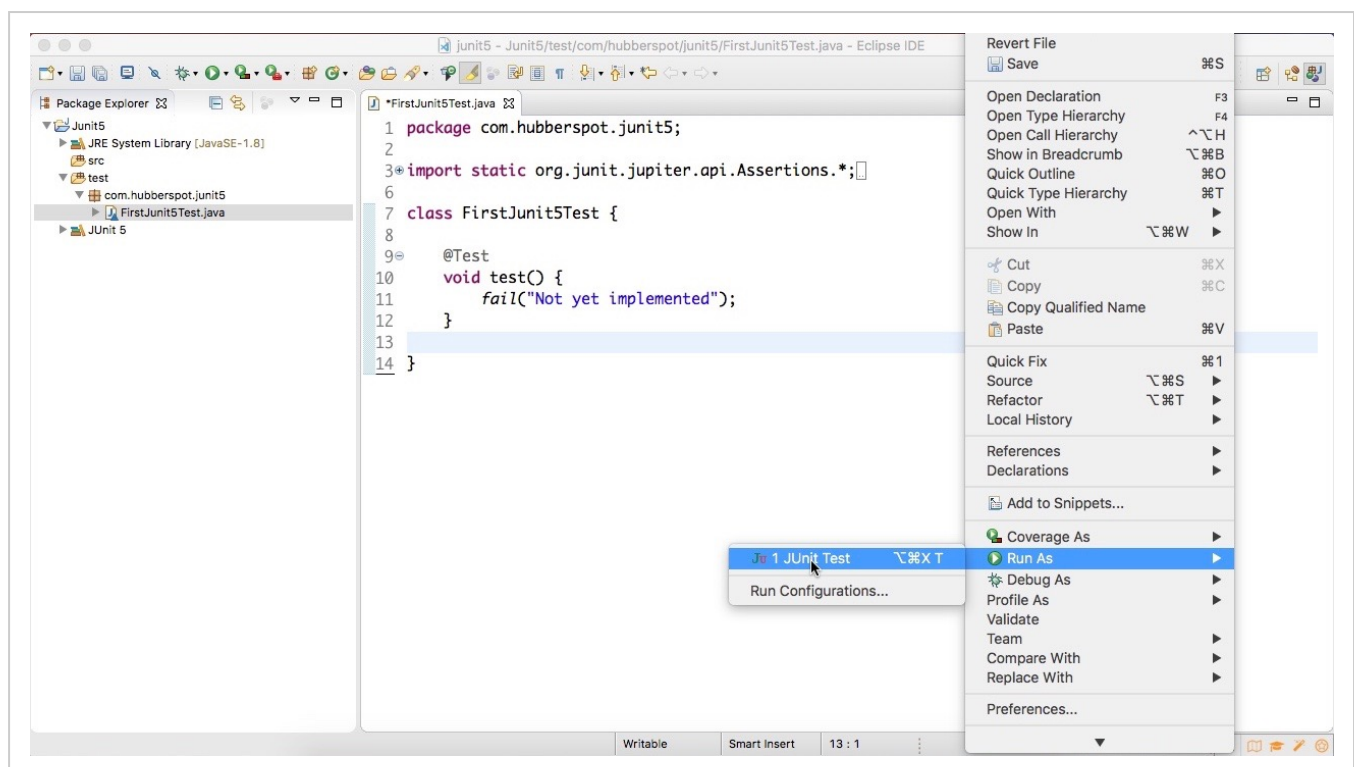
    @Test
    void test() {
        fail("Not yet implemented");
    }

}
```



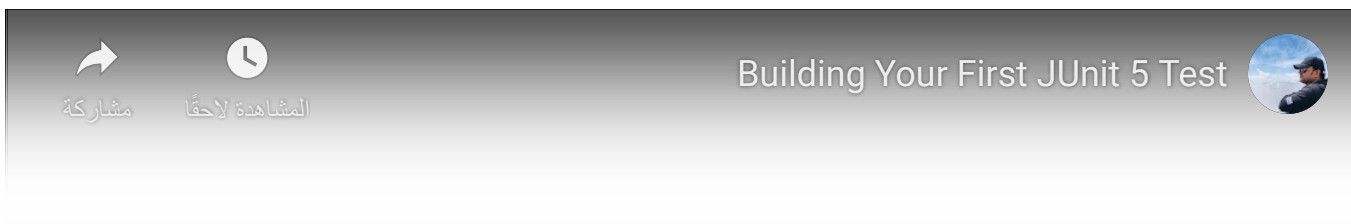
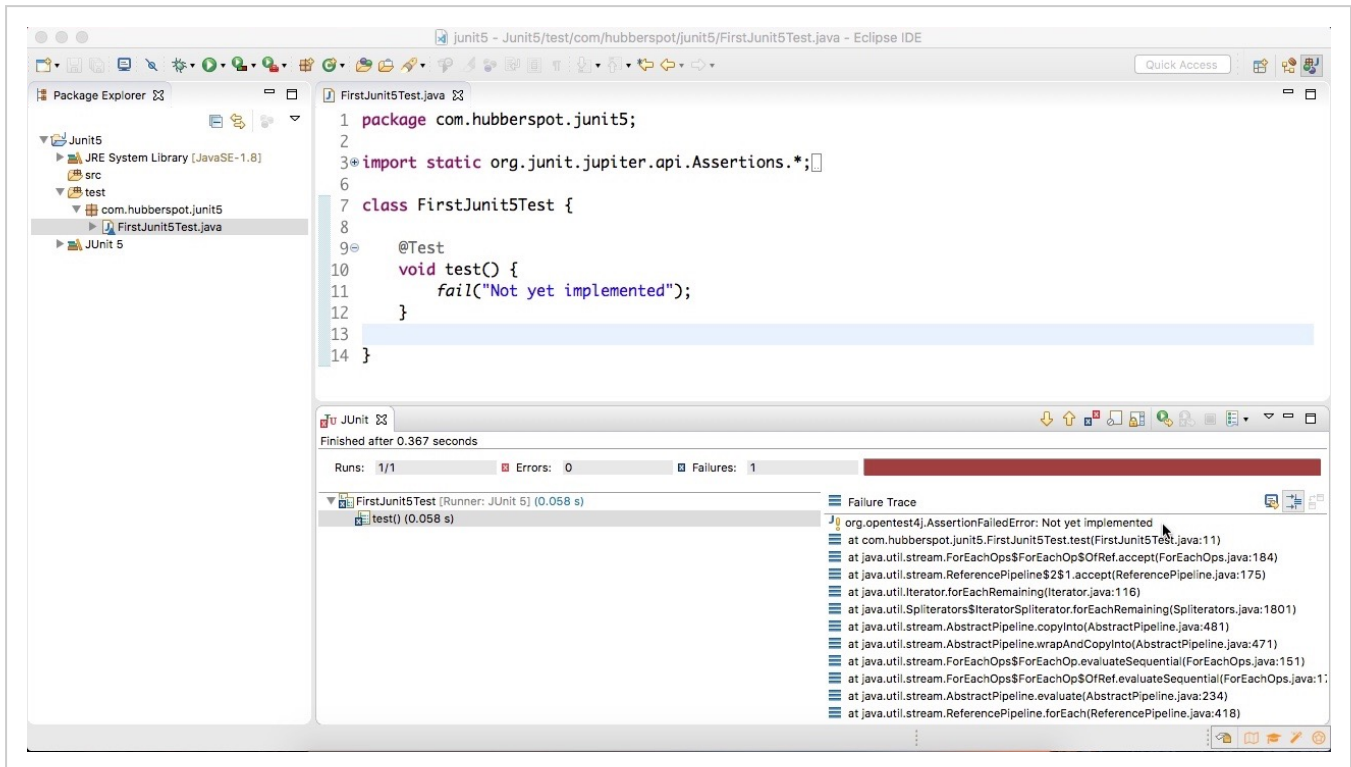
It has a method “test()”. This method has an annotation as, `@Test`. It signifies that this is a test method in to which we write our code to test.

Step 16 - Right-click on editor window and run as Junit test case, as shown in the figure below.



The test case fails as shown in fig below. It gives “AssertionFailedError: Not yet implemented”. It is because in test() method it is written ‘fail(“Not yet

implemented”)’ assertion. This assertion fails the test case as it is not yet implemented. More on `@Test` and `fail()` in upcoming lessons.



Java Unit Testing with JUnit 5

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nesh Varyani
<https://www.hubberspot.com>

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In the next lesson, we will look into `@Test` annotation in JUnit 5.

