

## Using JUnit: Summative Assessment **Answer**

Create a list of the steps necessary to create a JUnit test case, using the development tools used in class. Explain how the test is connected to the design process and how it could be implemented.

**Answer:**

The process of writing a JUnit test involves thinking about what you are trying to test (which type of test) (analysis phase) and what the test is going to check. To implement the test, the steps below should be done in order. After the test is run, if your results are “failed” or “error” you should go back to the analysis and then design phase to troubleshoot the problem.

To create a JUnit test case with NetBeans:

- Right-click your project in the Projects window and choose “New -> JUnit test” from the pop-up menu that appears.
- In the dialog box that appears, give your test class a name. Typically, a test class has the same name as the class it is testing, with the word “Test” appended, so a test class for a class named Foo would be named FooTest. The test class’ package should be set to be the same as the tested class’ package. Click Finish.
- If NetBeans offers you a choice between JUnit 3.x and JUnit 4.x, choose JUnit 4.x.
- In the newly created test class, create your test methods (functions that test stuff). Each test method must:
  - Be preceded by the *annotation* @Test
  - Contain one or more *assertions* (calls to functions such as assertEquals, assertTrue, or assertFalse)

To run your test cases, choose Test Project from the Run menu. NetBeans will display the Test Results window, showing the results of running your test(s). Each test is classified as “passed” (it worked), “failed” (an assertion in the test did not check, or the test unexpectedly threw an exception), or “error” (the test could not be compiled).