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| **Manual testing** | **Automated testing** |
| Executing the test cases manually without any tool support is known as manual testing.   Time consuming and tedious: Since test cases are executed by human resources so it is very slow and tedious.   Huge investment in human resources: As test cases need to be executed manually so more testers are required in manual testing.   Less reliable: Manual testing is less reliable as tests may not be performed with precision each time because of human errors.   Non-programmable: No programming can be done to write sophisticated tests which fetch hidden information. | Taking tool support and executing the test cases by using automation tool is known as automation testing.   Fast Automation runs test cases significantly faster than human resources.   Less investment in human resources:Test cases are executed by using automation tool so less tester are required in automation testing.   More reliable: Automation tests perform precisely same operation each time they are run.   Programmable: Testers can program sophisticated tests to bring out hidden information. |

What is a Unit Test Case ?

A Unit Test Case is a part of code which ensures that the another part of code (method) works as expected. To achieve those desired results quickly, test framework is required .JUnit is perfect unit test framework for java programming language.

A formal written test-case is characterized by a known input and by an expected output, which is worked out before the test is executed. The known input should test a precondition and the expected output should test a post condition.

There must be at least two test cases for each requirement: one positive test and one negative test. If a requirement has sub-requirements, each sub-requirement must have at least two test cases as positive and negative.