# Software Testing Documentation

Testing documentation involves the documentation of artifacts which should be developed before or during the testing of Software.

Documentation for Software testing helps in estimating the testing effort required, test coverage, requirement tracking/tracing etc. This section includes the description of some commonly used documented artifacts related to Software testing such as:

- Test Plan

- Test Scenario

- Test Case

- Traceability Matrix

## Test Plan

A test plan outlines the strategy that will be used to test an application, the resources that will be used, the test environment in which testing will be performed, the limitations of the testing and the schedule of testing activities. Typically the Quality Assurance Team Lead will be responsible for writing a Test Plan.

A test plan will include the following.

- Introduction to the Test Plan document

- Assumptions when testing the application

- List of test cases included in Testing the application

- List of features to be tested

- What sort of Approach to use when testing the software

- List of Deliverables that need to be tested

- The resources allocated for testing the application

- Any Risks involved during the testing process

- A Schedule of tasks and milestones as testing is started

## Test Scenario

A one line statement that tells what area in the application will be tested. Test Scenarios are used to ensure that all process flows are tested from end to end. A particular area of an application can have as little as one test scenario to a few hundred scenarios depending on the magnitude and complexity of the application.

The term test scenario and test cases are used interchangeably however the main difference being that test scenarios has several steps however test cases have a single step. When viewed from this perspective test scenarios are test cases, but they include several test cases and the sequence that they should be executed. Apart from this, each test is dependent on the output from the previous test.
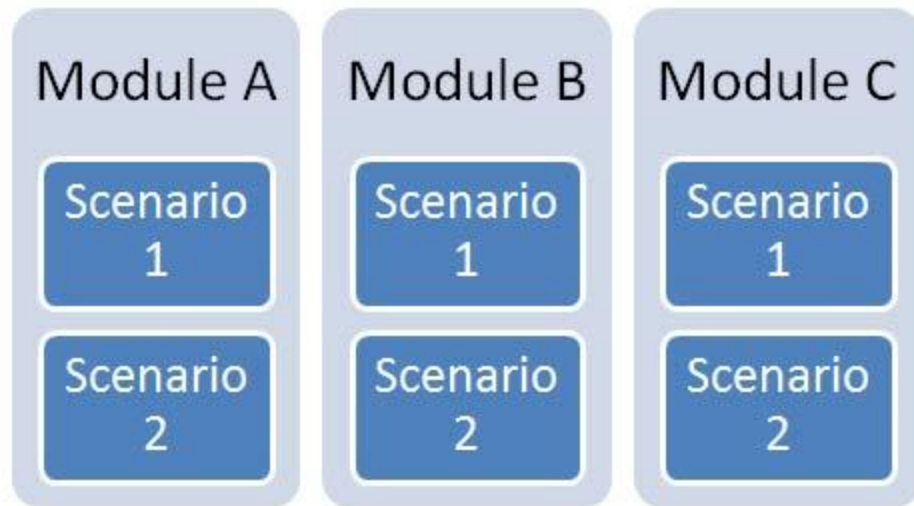
# Test Case

Test cases involve the set of steps, conditions and inputs which can be used while performing the testing tasks. The main intent of this activity is to ensure whether the Software Passes or Fails in terms of its functionality and other aspects. There are many types of test cases like: functional, negative, error, logical test cases, physical test cases, UI test cases etc.

Furthermore test cases are written to keep track of testing coverage of Software. Generally, there is no formal template which is used during the test case writing. However, following are the main components which are always available and included in every test case:

- Test case ID.

- Product Module.

- Product version.

- Revision history.

- Purpose

- Assumptions

- Pre-Conditions.

- Steps.

- Expected Outcome.

- Actual Outcome.

- Post Conditions.

Many Test cases can be derived from a single test scenario. In addition to this, some time it happened that multiple test cases are written for single Software which is collectively known as test suites.

# Traceability Matrix

Traceability Matrix (also known as Requirement Traceability Matrix - RTM) is a table which is used to trace the requirements during the Software development life Cycle. It can be used for forward tracing (i.e. from Requirements to Design or Coding) or backward (i.e. from Coding to Requirements). There are many user defined templates for RTM.

Each requirement in the RTM document is linked with its associated test case, so that testing can be done as per the mentioned requirements. Furthermore, Bug ID is also include and linked with its associated requirements and test case. The main goals for this matrix are:

- Make sure Software is developed as per the mentioned requirements.

- Helps in finding the root cause of any bug.

- Helps in tracing the developed documents during different phases of SDLC.

Source:

http://www.tutorialspoint.com/software_testing/testing_documentation.htm