CHAPTER

5

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

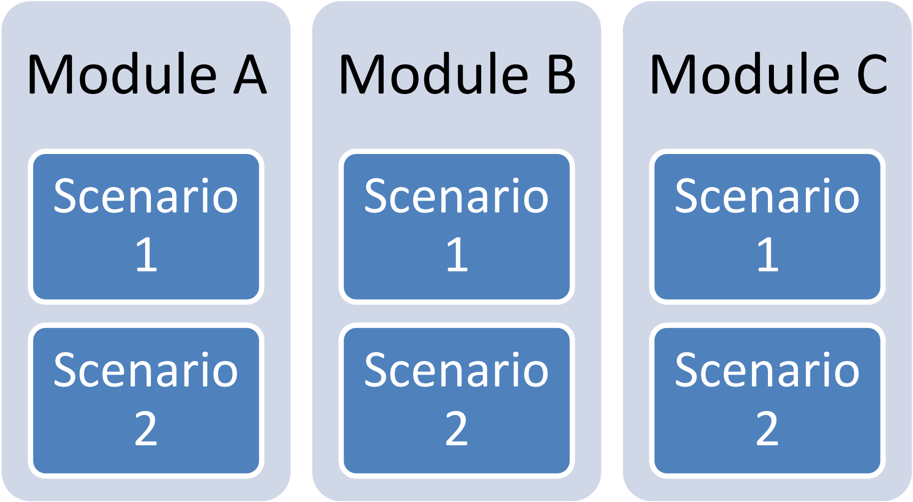
A test plan outlines the strategy that will be used to test an application, the resources that will be used, the test environment in which testing will be performed, the limitations of the testing and the schedule of testing activities. Typically the Quality Assurance Team Lead will be responsible for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

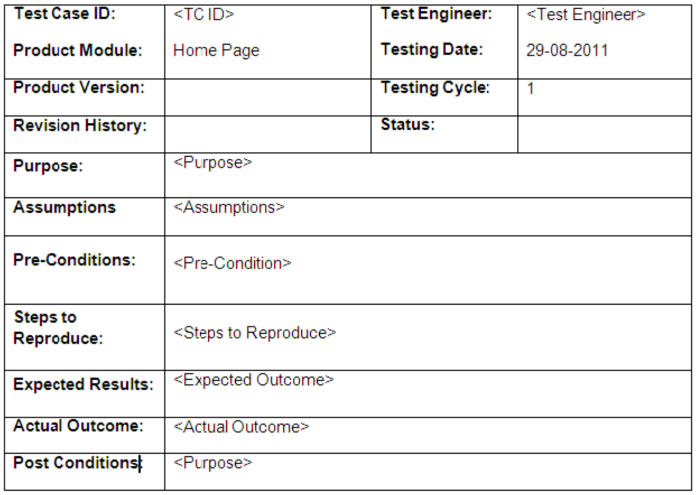


Test Case

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



Test Case ID:	<TC ID>	**Test Engineer:**	<Test Engineer>
Product Module:	Home Page	**Testing Date:**	29-08-2011
Product Version:		**Testing Cycle:**	1
Revision History:		**Status:**	
Purpose:	<Purpose>		
Assumptions	<Assumptions>		
Pre-Conditions:	<Pre-Condition>		
Steps to Reproduce:	<Steps to Reproduce>		
Expected Results:	<Expected Outcome>		
Actual Outcome:	<Actual Outcome>		
Post Conditions:	<Purpose>		

- Product version
- Revision history
- Purpose
- Assumptions
- Pre-Conditions.
- Steps.
- Expected Outcome.
- Actual Outcome.
- Post Conditions.

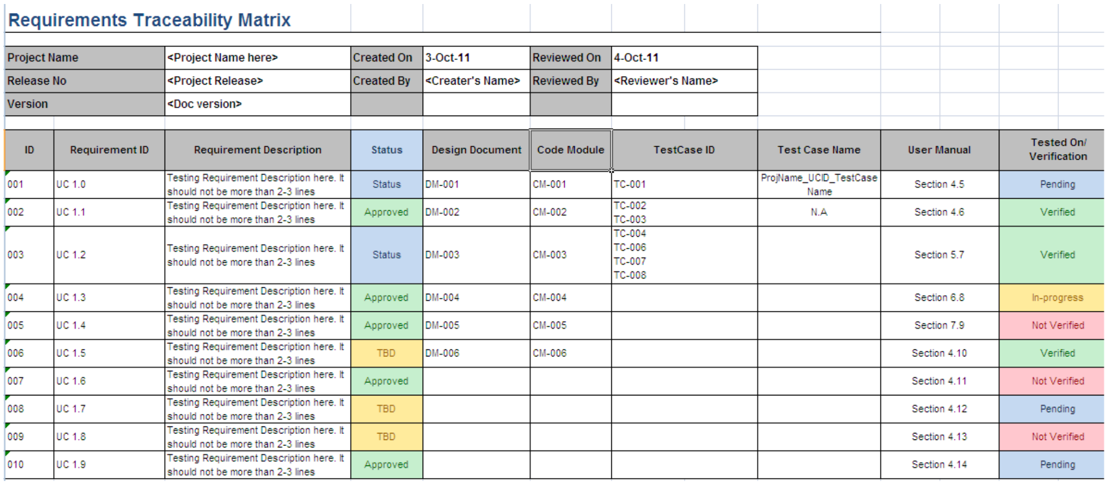
Many Test cases can be derived from a single test scenario. In addition to this, some time it happened that multiple test cases are written for single Software which is collectively known as test suites.

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.



Requirements Traceability Matrix

Project Name	<Project Name here>	Created On	3-Oct-11	Reviewed On	4-Oct-11
Release No	<Project Release>	Created By	<Creater's Name>	Reviewed By	<Reviewer's Name>
Version	<Doc version>				

ID	Requirement ID	Requirement Description	Status	Design Document	Code Module	TestCase ID	Test Case Name	User Manual	Tested On/ Verification
001	UC 1.0	Testing Requirement Description here. It should not be more than 2-3 lines	Status	DM-001	CM-001	TC-001	ProjName_UCID_TestCase Name	Section 4.5	Pending
002	UC 1.1	Testing Requirement Description here. It should not be more than 2-3 lines	Approved	DM-002	CM-002	TC-002 TC-003	N.A	Section 4.6	Verified
003	UC 1.2	Testing Requirement Description here. It should not be more than 2-3 lines	Status	DM-003	CM-003	TC-004 TC-006 TC-007 TC-008		Section 5.7	Verified
004	UC 1.3	Testing Requirement Description here. It should not be more than 2-3 lines	Approved	DM-004	CM-004			Section 6.8	In-progress
005	UC 1.4	Testing Requirement Description here. It should not be more than 2-3 lines	Approved	DM-005	CM-005			Section 7.9	Not Verified
006	UC 1.5	Testing Requirement Description here. It should not be more than 2-3 lines	TBD	DM-006	CM-006			Section 4.10	Verified
007	UC 1.6	Testing Requirement Description here. It should not be more than 2-3 lines	Approved					Section 4.11	Not Verified
008	UC 1.7	Testing Requirement Description here. It should not be more than 2-3 lines	TBD					Section 4.12	Pending
009	UC 1.8	Testing Requirement Description here. It should not be more than 2-3 lines	TBD					Section 4.13	Not Verified
010	UC 1.9	Testing Requirement Description here. It should not be more than 2-3 lines	Approved					Section 4.14	Pending