

Software Engineering Group 11

SE_11_QA_06

Test Procedure Standards Summary

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1. Introduction

1.1. Purpose of Document

The purpose of this document is to provide an outline and summary of the content included in SE.QA.06^[1] for group members to use as a basic reference when creating a test specification.

1.2. Scope

This document aims to be a basic guide and a quick referencing material for all members of the group and is to be used in conjunction with the original SE.QA.06^[1] provided.

1.3. Objectives

This document covers:

- Outline plan for testing
- Format of testing
- Information which must be included

2. General Approach to Testing

- Used to establish Defects
- Used to establish usability of program
- It can demonstrate the presence of errors is can't prove the absence of them
- Testing is used to detect not correct
- Correction should be left till after all specified testing has happened
- If Problems are found the correct problem reporting and change control procedure must be used (SE.QA.08^[2])
- Then all tests which exercise the amended system must be tested
- Test boundary situations both inside and outside boundaries
- Error conditions should be tested
- Software will be submitted to 3 types of testing:-
 - Module – exercising a collection of related components
 - System – integrating all module and exercising the complete system
 - Acceptance – exercising the system against a set of specs and procedures made by the client

3. Test Plan

- Module testing is left to the Coder
 - Java code should be in form of a set of Junit tests that try all significant behaviour of a class
 - Should be written before code is finished
 - For other languages equivalent testing should be defined
- System testing will be done whilst writing the test spec during the design phase
 - Cover all major functionality
 - When system has been completed a test report will document any features of the implementation that work incorrectly

4. Test Specification

- Purpose is to specify in detail each system test
- The tests must cross reference with the requirement spec (SE.QA.RS^[3])
- The test Spec provides a set reproducible actions to test all of main functionality
- Each test spec will have an introductory section followed by a collection of test procedures.
- The introductory section will have the form SE.QA.03^[4]
- Every document which the test spec is derived from should be included in the intro
- Each individual test must be described in detail.

E.g.

Test Ref	Requirement being tested	Test content	Input	Output	Pass Criteria
SE-F-001	FR1	Check that system can store the first two days of the earliest permitted year	Enter 1st March 1971 at date prompt. Hit return, and enter 2nd March 1971 at Date prompt.	List of stored dates should now include Those dates.	Data is stored correctly
SE-F-002	FR1	Check that system can store the last two days of the latest permitted year	Enter 30th December 2072 at Date prompt. Hit return, and enter 31st December 2072 at date prompt	List of stored dates should now include Those dates.	Data is stored correctly
SE-F-003	FR2	Dates too early are rejected	Enter 1st January 1971.	Error message warns of date Too early. List of stored dates should not have Been changed.	System displays "wrong date" error Message.

5. Test Result Reporting

- Details of test results must be maintained in a test report folder
- This must have 2 sections – Module testing and System testing respectively
- On completion of coding the tests should be run and results included in the test report deliverable

6. Baselines

- All items being tested should be frozen into a identified configuration
- Could use git tag command
- Test log form should be kept each time a system is tested and then stored in appropriate folders on GitHub

7. REFERENCES

[1] QA Document SE.QA.06 – Test Procedure Standards

[2] QA Document SE.QA.08 - Operating Procedures and Configuration Management Standards.

[3] QA Document SE.QA.RS - Reserve Plant Species Recording Requirements Specification

[4] QA Document SE.QA.03 - General Documentation Standards

8. DOCUMENT HISTORY

Version	CCF No.	Date	Changes made to document	Changed by
1.0	N/A	18/10/14	Document Created and Structured	Tcg2
1.1	N/A	11/11/14	Document Updated Onto new Template supplied by als48	Tcg2