

Software Engineering Group 11

SE.QA.06.S

Test Procedure Standards Summary

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SE.QA.06 – Test Procedure Standards

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

The Summary aims to act as 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

SE.QA.06^[1] identifies ways to aid production of good quality test documents. It 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

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

DOCUMENT HISTORY

| Version | CCF No. | Date | Changes made to document | Changed by |
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