# **Test Plan and Cases (TPC)**

**The Study App**

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# **Version History**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Date** | **Author** | **Version** | **Changes** | **Rationale/Comments** |
| 3/14/17 | Vishal Ravuri, Jeffrey Woo | 1.0 | Original template for use | initial draft for use |
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### **Introduction**

*<< This section should include the following information*

* *Provide the purpose, background of testing within this project.*
* *Provide scope of testing within this project*
* *Provide the focus of this testing*
* *Provide information about type of testing you are going to implement in this project >>*
* Stress testing for the data capacity
  + Must be able to handle data from multiple users
  + Focus will be on stressing multiple uploads as well as large data packets.
* Bug Testing for UI
  + UI must be functional, and user friendly, intuitive.
  + User testing for glitches and defects
* Accessibility integration for multimedia devices/services
  + Services like Twitter/Facebook/etc must be integrated correctly
  + The various API’s must be seamless and must not cause errorsu

### 

### **Test Strategy and Preparation**

*<< Describe the project’s test strategy with respect to such options as:*

* *Agile test-first*
* *Agile continuous integration*
* *Boundary and exit/entry criteria between unit testing and integration testing*
* *Integration order-of-build*
* *Value-based test prioritization*
* *Test environment preparation*
* *Requirements-test traceability >>*

#### **Hardware preparation**

*<<Describe the procedures needed to prepare the hardware for the test, including support hardware (e.g., test equipment). Reference any operating manuals, if applicable.*

*Provide the following as applicable:*

* *Specification of each hardware that will be used in testing and number (if applicable)*
* *Purpose of each hardware item, security and privacy considerations. >>*

#### **Software preparation**

*<< Describe the procedures needed to prepare the software for the test, including test scaffolding and support software (e.g., input generators, simulators, data recording/reduction software, test output orales). Reference any software manuals, if applicable.*

*Provide the following as applicable:*

* *The specific software to be used, identified by name and, if applicable, version number*
* *Purpose of each software item, security and privacy considerations*
* *Type and description of test data>>*

#### **Other pre-test preparations**

*<< Describe any other pre-test personnel actions, preparations, or procedures needed to perform the test not accounted for in 2.1 or 2.2 above. >>*

#### **Requirements Traceability**

*<< Include a Requirements Verification Matrix specifying how each requirement from SSRD will be verified either by Testing, Demonstration, Analysis, Simulation, Inspection, etc. You can use the following table to illustrate the matrix:*

***Table 1: Requirements Traceability Matrix***

|  |  |  |
| --- | --- | --- |
| ***Requirement ID*** | ***Verification Type*** | ***Test Case ID (if applicable)*** |
| *PR-1 Zero Monetary budget* | *Demonstration* |  |
| *CR-1 Generate summary report* | *Testing* | *TC-01: Generate summary report* |

### **Test Identification**

#### **Test Identifier**

*<< This identifies the test by a project unique identifier and test case name. It shall provide a brief description of the test.*

*For example: TC-01Generate summary report. >>*

##### **Test Level**

*<< This section shall describe the level at which the testing will be performed, for example, software item level or system performance (level of service) level.*

*For example: Software item level >>*

##### **Test Class**

*<< This section shall describe the type or class of the test that will be performed, for example, timing tests, erroneous tests, maximum capacity tests, etc.*

*For example: Erroneous test >>*

##### **Test Completion Criteria**

*<< In this section, list of completion criteria specific for this test identifier*

*For example: The test for generate summary report will be completed when*

* *The system generates a complete and correct summary report*
* *The generated summary report is correctly displayed on the monitor and printed through the printer*
* *Etc.,*

*>>*

##### **Test Cases**

*<< A test case specification specifies inputs, expected results, and a set of execution conditions for a test item. For each test case, create a sub-heading using the following structure:*

*Identify a test (one of the tests in the test set comprising the application testing addressed by this test description) by a project-unique identifier and provide the information specified below for the test. The name includes the identification of the applicable unit.* ***There may be several test cases for one test identifier.*** *Use the following table to provide test case information.*

**Table 2: TC-01-01 Check report completeness**

|  |  |
| --- | --- |
| Test Case Number | *<<Unique test identifier number with brief information>>*  <*< e.g. TC-01-01 Check report completeness >>* |
| Test Item | *<<Identify and briefly describe the test item and features to be exercised by this test case>>* |
| Test Priority | *<<The relative importance of this test to satisfy the project requirement of the client organization; using the MSCW (MoSCoW) prioritization scheme: M (Must have), S (Should have), C (Could have), W (Want to have)>>* |
| Pre-conditions | *<< Describe the prerequisite conditions that must be established prior to performing this test case>>* |
| Post-conditions | *<< Describe the conditions that must be established after performing this test case>>* |
| Input Specifications | *<< Describe each input required to execute the test case>>* |
| Expected Output Specifications | *<<Identify all the expected results of the test case>>* |
| Pass/Fail Criteria | *<< Identify all the pass/fail criteria to be used for evaluating the results of this test case>>* |
| Assumptions and Constraints | *<< Identify any assumptions made or constraints imposed in this test case>>* |
| Dependencies | *<< List the identifiers of the test cases that depend on this test case i.e. the test cases that must be executed prior to the execution of this test case>>* |
| Traceability | *< < Provide mapping to requirement(s) from SSRD >>* |

**Table 3: TC-01-02 Check report correctness**

|  |  |
| --- | --- |
| Test Case Number | *<<Unique test identifier number with brief information>>*  <*< e.g. TC-01-02 Check report correctness >>* |
| Test Item | *<<Identify and briefly describe the test item and features to be exercised by this test case>>* |
| Test Priority | *<<The relative importance of this test to satisfy the project requirement of the client organization; using the MSCW (MoSCoW) prioritization scheme: M (Must have), S (Should have), C (Could have), W (Want to have)>>* |
| Pre-conditions | *<< Describe the prerequisite conditions that must be established prior to performing this test case>>* |
| Post-conditions | *<< Describe the conditions that must be established after performing this test case>>* |
| Input Specifications | *<< Describe each input required to execute the test case>>* |
| Expected Output Specifications | *<<Identify all the expected results of the test case>>* |
| Pass/Fail Criteria | *<< Identify all the pass/fail criteria to be used for evaluating the results of this test case>>* |
| Assumptions and Constraints | *<< Identify any assumptions made or constraints imposed in this test case>>* |
| Dependencies | *<< List the identifiers of the test cases that depend on this test case i.e. the test cases that must be executed prior to the execution of this test case>>* |
| Traceability | *< < Provide mapping to requirement(s) from SSRD >>* |

#### **Test Identifier**

*<< Repeat the same structure for the next test identifier.*

*For example: TC-02 Submit job requests >>*

##### **Test Level**

##### **Test Class**

##### **Test Completion Criteria**

##### **Test Cases**

### **Resources and schedule**

*<<In this section, specify the people, time, budget, resources and schedule allocated for testing, etc. >>*

#### **Resources**

*<< Identify all resources need for testing, such as test data set, software, budget, and etc >>*

#### **Staffing and Training Needs**

*<< Identify the stakeholders responsible for managing, designing, preparing, executing, witnessing, inspecting and resolving test items. In addition, provide the groups responsible for providing items to be tested. Specify test-staffing needs by skill level. Identify training options for providing necessary skills. >>*

#### **Schedule**

**Table 4: Testing Schedule**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Date** | **Test Identifier** | **Responsible person** | **Resources** | **Training needs** |
| *01/02/09* | *TC-01-01 to TC-01-04* | *John Smith* | *Report test data sets,*  *JUnit* | *N/A* |
|  |  |  |  |  |
|  |  |  |  |  |