**CHAPTER 5: TESTING**

**5.1 Testing Plan:**

Unit Testing

 Objective

The objective of Unit testing is to verify that a particular module of source code is working properly. Unit tests are designed to test a single class or component or module in isolation. Developers run unit tests, and only for the components they are working on.

 Entry Criteria

* Test cases are reviewed
* Build is complete and self-test done
* Unit Test environment is set up

 Exit Criteria

* All planned test cases are executed
* Units are working as per the expected results
* Defect are fixed in the code and tracked to closure

 Logging Tests and Reporting

The developer will fix the defects that are found in unit testing. Additionally, if defects corresponding to other modules or components are found during unit testing, these will be reported.

System Testing

In System Testing, separate units (packages / modules / components), or groups of units of the application are united and tested as a completely merged application. The purpose of System Testing is to identify defects that will only surface when a complete system is assembled. Verification of the system at this stage might include: functionality, usability, security, installation etc. It is intended to validate the application as a whole.

The rest of this document mainly explains how System Testing is performed by the testing team.

 Testing Procedure

The steps in testing consist of:

* Creation of all the test scenarios and test cases
* Preparation of a test case document that has a brief description of the test case , steps to conduct tests and expected result
* Defect Report generation.

Outlined below are the main test types that will be performed

a. **Application Characteristics (AC)** – Information about the application is provided to help the testing team in the testing work.

b. **Stability (ST)** – Focusing on the application being stable on the device.

c. **Application Launch (AL)**– Once an application is loaded it must start (launch) and stop correctly in relation to the device and other applications on the device.

d. **User Interface (UI)**

e. **Functionality (FN)** – Documented features are implemented in the application and work as expected. Sources for the information are user manuals, formatted application specification documents and online documentation.

f. **Connectivity (CO)** – the application must demonstrate its ability to communicate over a network correctly. It must be capable of dealing with both network problems and server-side problems.

g. **Personal Information Management (PI)** – The application accessing user information needs to be able to do it in an appropriate manner and not to destroy the information.

h. **Security**

Regression Testing

This is an additional step, and is done prior to taking up system testing which is to test new functionality. Regression testing consists of running a set of standard tests to ensure that old functionality has not been broken by new functionality. Regression tests are also run if a new release is made after fixing a number of defects.

Pass/Fail Conditions

It is expected that an application must pass all the tests in each test category to be successful.

Test Report

For each report, the following information is provided:

* The name of the application
* The version number of the application
* Device used for testing
* Device firmware version

For each error reported, the following information is provided:

* Description of the error
* Frequency of occurrence of error: Systematic or Random or Once
* Location of the error in the application
* Steps to reproduce the error

**5.2 Functional Test Cases for each page:**

**Test Case for Login Functionality:**

|  |  |
| --- | --- |
| Test Case ID | SM\_001 |
| Test Priority | High |
| Module Name | Login Module |
| Test Title | Test the login functionality |
| Description | Verify user with valid user name and password |
| Pre-Conditions | **User has valid user name and password** |
| Test Date | **10/4/2018** |

**Table 5.2.1: Login Module Info**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Steps | Test Steps | Test Data | Expected Results | Actual Results | Status (Pass/Fail) | Notes |
| 1 | Navigate to login page |  | User should be able to login | User is able to login | pass |  |
| 2 | Provide valid user name | User=example@  gmail.com | Credentials can be entered | As expected | pass |  |
| 3 | Provide valid password | Password:1234 | Credentials can be entered | As expected | pass |  |
| 4 | Click on Login button |  | User logged | User logged successfully | pass |  |

**Table 5.2.2: Login Test Case**

Test Case for Upload Image:

|  |  |
| --- | --- |
| Test Case ID | SM\_002 |
| Test Priority | Medium |
| Module Name | Upload Prescription Module |
| Test Title | Test the uploading prescription functionality |
| Description | Verify user can upload prescription successfully |
| Pre-Conditions | **User has proper prescription** |
| Test Date | **10/4/2018** |

**Table 5.2.3: Upload Image Module Info**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Steps | Test Steps | Test Data | Expected Results | Actual Results | Status (Pass/Fail) | Notes |
| 1 | Navigate to upload prescription page |  | User should be able to upload image | User is able to upload image | pass |  |
| 2 | Check if user can go back |  | User should be able to go back | As expected | pass |  |
| 3 | Check if upload button works |  | Upload button should work | As expected | pass |  |

**Table 5.2.4: Upload Image Test Case**

Test Case for Choose Medicine Type Module:

|  |  |
| --- | --- |
| Test Case ID | SM\_003 |
| Test Priority | Medium |
| Module Name | Choose Medicine Module |
| Test Title | Test the Onclick functionality |
| Description | Verify user is able to select prescribed medicine |
| Pre-Conditions | **User has prescription** |
| Test Date | **10/4/2018** |

**Table 5.2.5: Choose Medicine Type Module Info**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Steps | Test Steps | Test Data | Expected Results | Actual Results | Status (Pass/Fail) | Notes |
| 1 | Navigate to Choose Medicine Type page |  | User should be able to navigate to page | User is able to navigate to page | pass |  |
| 2 | Check if user can go back |  | User should be able to go back | As expected | pass |  |
| 3 | Check if user can select and place order |  | On click of Medicine order should be placed | As expected | pass |  |

**Table 5.2.6: Choose Medicine Type Test Case**