

Test Plan

OneClickVitals

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1. Introduction

1.1 Purpose

The purpose of this test plan document is to provide a guideline to plan, execute and manage the testing of OneClickVitals software. It describes the scope, approach and strategy for testing the application. A variety of testing tools will be used to test OneClickVitals software and the same will be discussed further in this test plan document.

1.2 Scope

OneClickVitals is web-based medical record system software that seeks to improve the efficiency of patient medical data storage and management. It will also allow doctors and their medical staff to focus their time and attention on the patient instead of spending hours on documentation, thus improving the quality of the care provided by their office. OneClickVitals is designed to cater to a medical clinic with one doctor, his/her medical staff and their patients. Users can add, view and edit information based on the role they play and the permissions assigned to them. OneClickVitals allows users to create, view and edit new patient accounts, add, view and edit appointments, add and view vital signs, diagnosis, prescriptions, order lab tests and add lab test results.

The test plan for OneClickVitals will include testing the functional requirements using various methodologies and tools. All the functional requirements listed in the software requirement specification document will be tested against the implemented application to ensure 100% implementation of all the requirements. Further, at least 30% of the code will be covered for unit testing. Static testing will be performed to ensure that the code is written as per the recommended programming conventions and standards.

1.3 Roles and Responsibilities

Project Manager is responsible for the planning, execution and deployment of the project. He/she is also expected to be familiar with the Software Development Life Cycle so they can make informed decisions about budget, schedule and resources.

Responsibilities of a project manager:

- Develop the project plan
- Review and approve the test plan, budget
- Manage communication
- Manage conflict

- Manage the team

Development Team consists of Developer Lead and Developers.

The development team is responsible for researching, designing, implementing, and testing the software.

Responsibilities of the development team:

- Requirement specification
- Requirement analysis
- Design and implementation
- Support the Testing team and
- Review the deliverables
- Maintenance

Testing Team consists of Testing Team Lead and Testers

Testing lead is responsible for facilitating the communication between the testing team and developer team. He/she should also approve the test plan and review the test cases.

Testing team is responsible to test the software and ensure that:

- It meets the requirements as stated in the SRS
- It responds correctly to all types of inputs
- It performs the expected functions within an acceptable time
- It is user friendly
- It achieves the general result the stakeholders desire

1.4 Definitions, Acronyms, and Abbreviations

| Term | Definition and Information |
|-----------------|---|
| SRS | Software requirement specification |
| User | Person who uses the software application |
| Patient Account | Created by the doctor's office to maintain patient records |
| Summary | Brief description of the patient's visit on a particular date including diagnosis, prescription, vital signs, appointment information |

| | |
|-----------------|--|
| System | An assembly of interconnected electronic components. This word refers to the OneClickVitals application |
| Web application | A computer application that runs on a web browser |
| Staff | A person who performs routine clinical and administrative duties under the direct supervision of a physician or other health care professional |
| Doctor | Licensed physician permitted by law and by a hospital to provide medical care within that hospital or facility |
| Patient | A person who seeks medical care |

2. Testing Strategy

2.1 Test Types

There are many different types of software testing technique, and they all have their own strengths and weaknesses. There are two main categories of testing techniques, Static testing and Dynamic testing. Testing team for OneClickVitals will perform tests from both categories using various testing tools.

Static testing techniques do not execute the code and are therefore called non-execution techniques. It is performed to check if the programs written by the development team meet the coding standards of the programming language used. Static testing is also done to check the correctness of the all documents and ensure that all the requirements are met as per the contract.

Dynamic testing includes both white box and black box testing. White box testing for OneClickVitals was done by writing test cases for unit testing. Black-box testing is done by using Selenium IDE and writing python scripts.

2.1.1 Unit Testing

In unit testing, individual units of source code, usually a function or entire module are tested. Unit testing is key to a successful and error free software as it helps find problems early in the development cycle. It helps identify the bugs in the programmer's implementation and flaws or missing parts of the specification for the unit. Unit tests are usually written by the developers to ensure that their code behaves as intended.

Please refer to Attachment “ ” for the unit tests.

2.1.2 User Acceptance Testing

User acceptance testing is a test conducted to determine if the requirements listed in the SRS document and/or the contract is met. Acceptance tests are black-box tests where the user tests to see if the system is behaving as expected.

User acceptance test for OneClickVitals is performed using Selenium IDE and Selenium Python scripts.

Please refer to Attachment “ ” for test cases and test reports of testing using Selenium.

2.1.3 Static Testing

Static testing for OneClickVitals is done using Pylint, which is a source code bug and quality checker for Python programming language. Pylint generates a very verbose report of the analysis, which helps in improving the quality of the source code.

Please refer to Attachment “ ” for the static test report generated for OneClickVitals.

2.2 Testing Tools

The software for OneClickVitals was tested using the following testing tools:

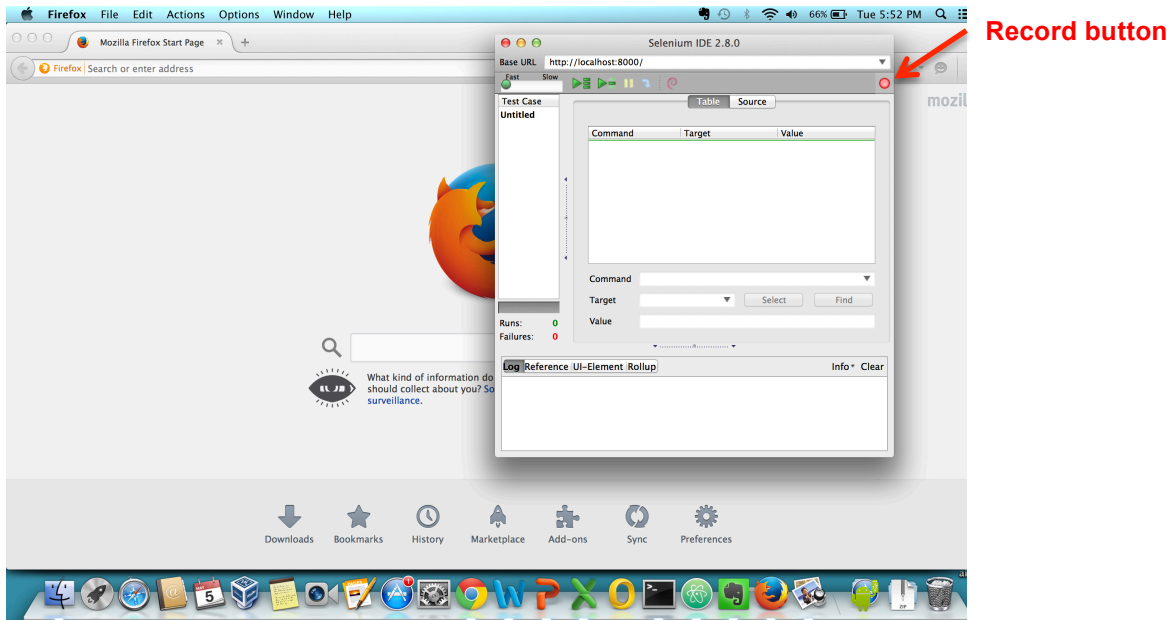
Black-box testing: Selenium

White-box testing: Django Unittest

Static testing: Pylint

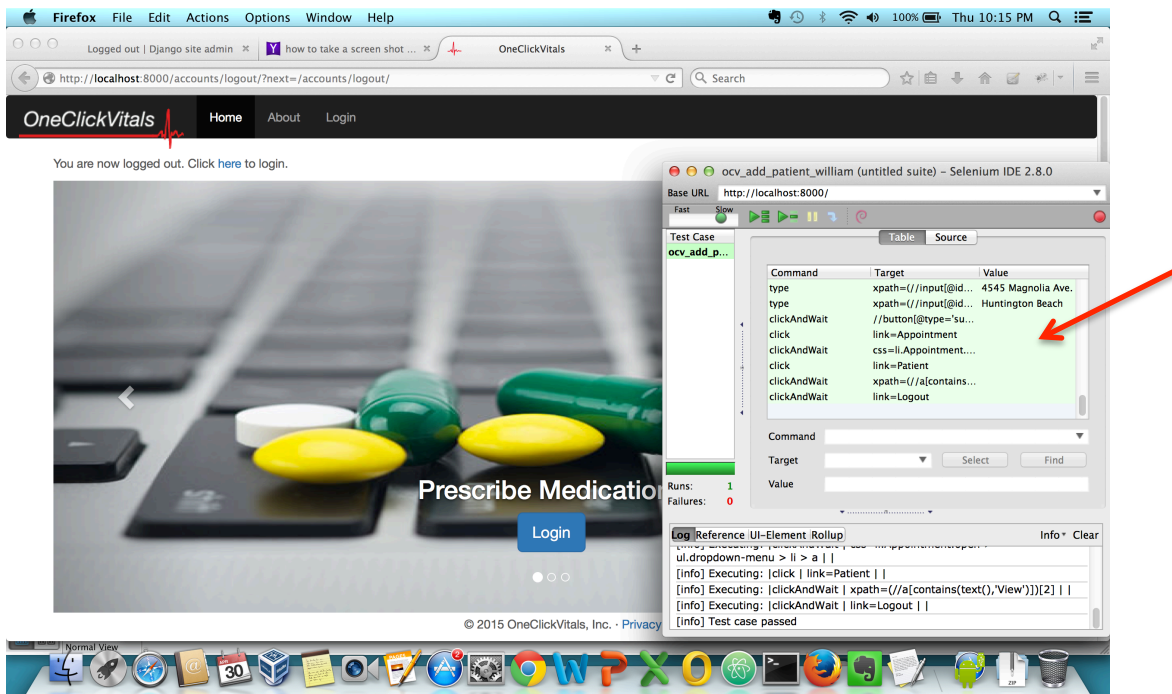
Selenium is a portable software-testing framework for web applications. Selenium is implemented as a Firefox Add-On and allows recording, editing, and debugging tests.

A screenshot of the Selenium IDE pop up window in Firefox:



Selenium IDE can be selected from the Firefox Tools menu. It opens as follows with an empty script-editing window as shown in the above screenshot and a menu for loading, or creating new test cases.

The record button is on by default and it starts recording the user's actions into a test case.



Please refer to Attachment "C" for OneClickVitals test reports generated by Selenium.

Selenium Python bindings provides a simple API to write functional/acceptance tests using Selenium WebDriver. It can be installed by using pip (Python installation packages). It is also recommended to use virtual environment to create isolated Python environments. Once installed, we can write test scripts in Python and save them as .py extension files and run on the terminal. Please refer to Attachment “D” for Python scripts and report.

Pylint is a Python source code analyzer, which looks for programming errors, helps enforcing a coding standard. It can be installed using pip(python installation package) and run on the terminal.

Installation(for mac): pip install pylint

Run: pylint ./<modulename>.py

After analyzing the source code, it generates a verbose report including all the metrics and produces a rating for the code.

Please refer to Attachment “A” for Pylint analysis reports.

Unittest is a dynamic testing tool or white-box testing and it comes as a part of the Django framework. In order to ensure that the software is robust, it is a good practice to write and develop tests and test suites. It saves time and helps identify and prevent problems.

When an application is created using the Django framework, a test.py file is created. Tests can be written using some of the following general rules:

- Tests should focus on one small bit of functionality
- Tests should have a clear purpose
- Tests should be independent.
- Run your tests, before you code, and before your commit and push your code.
- Even better create a hook that tests code on push.
- Use long and descriptive names for tests.

When we run the tests on terminal, a temporary database is constructed, which the tests can populate, and perform operations on. This way the testing is performed independently of the live database. The temporary database is destroyed once the tests are run.

Please refer to the Attachment “B” for unit test cases for OneClickVitals.

2.3 Test Cases and Results

The following are the test cases corresponding to the functional requirements of OneClickVitals:

| Test Case ID | Type of the Test Case | Action | Expected | Status |
|----------------------------------|------------------------|---|--|--------|
| TC_login_user_001 | Login User | The User clicks on "Login" button | The system displays the login page with two fields for Username and Password | Pass |
| TC_login_success_001 | Login Validation | The User enters correct Username and password | The system displays the User's Homepage | Pass |
| TC_login_empty_002 | Login Validation | The User leaves one or both of the fields empty | The system prompts the User to fill in the required fields | Pass |
| TC_login_incorrect_003 | Login Validation | The User enters incorrect Username and Password | The system displays an invalid login page and prompts the User to re-enter the correct Username and Password | Pass |
| TC_logout_user_001 | Logout User | The User clicks on "Logout" button | The system displays a confirmation message that the User has been logged out of the application | Pass |
| TC_display_patient_form_001 | Manage Patient Account | The User clicks on "Add New Patient " button | The system displays New Patient Information Forms in tabs | Pass |
| TC_display_next_patient_form_002 | Manage Patient Account | The User fills the form and clicks on "Next" button | The system displays the form in the next tab | Pass |
| TC_empty_patient_form_003 | Manage Patient Account | The user leaves some required fields empty and clicks on "Save " button | The system prompts the User to fill in the required fields | Pass |
| TC_save_patient_form_004 | Manage Patient Account | The User fills all the fields in the form and clicks on "Save" button | The system confirms that the patient account is created by adding the new patient to the existing patient list | Pass |
| TC_view_patient_list_005 | Manage Patient Account | The User clicks on "View Patient" button | The system displays a list of existing patient profiles | Pass |
| TC_view_patient_details_006 | Manage Patient Account | The User clicks on the patient's first name | The system displays complete profile of the selected patient in tabs | Pass |

| | | | | |
|-----------------------------------|------------------------|---|---|------|
| TC_edit_patient_profile_007 | Manage Patient Account | The User clicks on "Edit" profile button | The system displays a pre-populated profile that the User can edit | Pass |
| TC_empty_edit_patient_profile_008 | Manage Patient Account | The User leaves some required fields empty and clicks on "Save " button | The system prompts the User to fill in the required fields | Pass |
| TC_save_edit_patient_profile_009 | Manage Patient Account | The User fills all the fields in the form and clicks on "Save" button | The system confirms that the patient account is edited by adding the new patient to the existing patient list | Pass |
| TC_display_appointment_form_001 | Manage Appointments | The User clicks on " Add Appointment" button | The system displays the Add New Appointment Form | Pass |
| TC_empty_appointment_form_002 | Manage Appointments | The User leaves some required fields empty and clicks on "Save " button | The system prompts the User to fill in the required fields | Pass |
| TC_save_appointment_form_03 | Manage Appointments | The User fills in all the required fields in the appointment form and clicks on "Save" button | The system confirms that appointment is saved | Pass |
| TC_edit_appointment_04 | Manage Appointments | The User clicks on "Edit" button and makes the required changes and clicks on "Save " button | The system confirms that appointment is saved | Pass |
| TC_display_vitalsigns_form_001 | Add Vital Signs | The User clicks on "Add Vital Signs/Diagnosis button | The system displays Add Vitals Signs form | Pass |
| TC_empty_vitalsigns_form_002 | Add Vitals Signs | The User leaves some or all of the required fields empty in the Add Vitals Signs Form and clicks on the "Save" button | The system prompts the User to fill in the required fields | Pass |
| TC_save_vitalsigns_form_003 | Add Vitals Signs | The User fills all the required fields in the form and clicks on "Save" button | The system confirms that the vitals are saved for the patient by displaying a list | Pass |
| TC_view_vitalsigns_list_004 | Add Vital Signs | The User clicks on the patient | The system displays the vitals signs list | Pass |

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|----------------------------------|----------------------|--|--|------|
| | | name in the list vitals signs list | | |
| TC_view_vitalsigns_details_005 | Add Vital Signs | The User clicks on the patient name in the list vitals signs details | The system displays the vitals signs details | Pass |
| TC_display_diagnosis_form_001 | Add Diagnosis | The User clicks on "Add Diagnosis" button in the vital sign details page | The system displays a Add Diagnosis Form | Pass |
| TC_empty_diagnosis_form_002 | Add Diagnosis | The User fails to fill all or some of the required fields in the Add Diagnosis Form and clicks on "Save" button | The system prompts the User to fill in all the required fields | Pass |
| TC_save_diagnosis_form_003 | Add Diagnosis | The User fills all the fields in the form and clicks on "Save" button | The system confirms that the diagnosis for the patient is saved | Pass |
| TC_display_prescription_form_001 | Manage Prescriptions | The User clicks on "Add Prescription" button | The system displays a Prescription form | Pass |
| TC_empty_prescription_form_002 | Manage Prescriptions | The User leaves some or all of the required fields empty in the Prescription Form and clicks on the "Save" button | The system prompts the User to fill in the required fields of the Prescription form | Pass |
| TC_save_prescription_form_003 | Manage Prescriptions | The User fills all the fields in the form and clicks on "Save" button | The system confirms that the prescription is saved | Pass |
| TC_view_prescription_list_004 | Manage Prescriptions | The User clicks on "View Prescription" button | The system displays a list of all the existing prescriptions | Pass |
| TC_view_prescription_details_005 | Manage Prescriptions | The User clicks on the patient name | The system displays prescription details | Pass |
| TC_display_radiology_form_001 | Manage Radiology | The User clicks on "Add Radiology" button | The system displays Add Radiology form | Pass |
| TC_empty_radiology_form_002 | Manage Radiology | The User leaves some or all required fields in the form and | The system prompts the User to fill in the required fields | Pass |

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|------------------------------------|-------------------|--|--|------|
| | | clicks on "Save" button | | |
| TC_save_radiology_form_003 | Manage Radiology | The User fills the required fields and selects a file to be uploaded and clicks on "Save" button | The system confirms that the radiology film is added by displaying the list of all the radiology films | Pass |
| TC_view_radiology_list_004 | Manage Radiology | The User clicks on the "View Radiology" button | The system displays the radiology list | Pass |
| TC_display_lab_test_order_form_001 | Manage Lab Test | The User clicks on "Order Lab Test " | The system displays a Lab Test form | Pass |
| TC_empty_lab_test_order_form_002 | Manage Lab Test | The User leaves some or all of the required fields empty and clicks on "Save" button | The system prompts the User to fill in all the required fields | Pass |
| TC_save_lab_test_order_form_003 | Manage Lab Test | The User fills the lab test form and clicks on "Save" button | The system confirms that the newly added lab test is saved | Pass |
| TC_view_lab_test_order_list_004 | Manage Lab Test | The user clicks on "View Lab Test Order" button | The system displays a list of all the lab test orders placed | Pass |
| TC_display_lab_result_form_001 | Manage Lab Result | The User selects the "Add Lab Result" button | The system displays the Lab Result form | Pass |
| TC_save_lab_result_form_002 | Manage Lab Result | The User clicks on the "Save" button | The system confirms that the lab result has been saved | Pass |
| TC_view_lab_result_list_003 | Manage Lab Result | The User clicks on "View Lab Result" button | The system displays a Lab Test Result List | Pass |
| TC_patient_summary_001 | View Summary | The User navigates to Appointment list page, selects a patient and clicks on "summary" button | The system displays the visit summary for the specific patient | Pass |
| TC_staff_login_user_001 | Login User | The User clicks on "Login" button | The system displays the login page with two fields for Username and Password | Pass |
| TC_staff_login_success_001 | Login Validation | The User enters correct Username and password | The system displays the User's Homepage | Pass |
| TC_staff_login_empty_ | Login Validation | The User leaves | The system prompts | Pass |

| | | | | |
|---|------------------------|---|--|------|
| 002 | | one or both of the fields empty | the User to fill in the required fields | |
| TC_staff_login_incorrect_003 | Login Validation | The User enters incorrect Username and Password | The system displays an invalid login page and prompts the User to re-enter the correct Username and Password | Pass |
| TC_staff_logout_user_001 | Logout User | The User clicks on "Logout" button | The system displays a confirmation message that the User has been logged out of the application | Pass |
| TC_staff_display_patient_form_001 | Manage Patient Account | The User clicks on "Add New Patient " button | The system displays New Patient Information Forms in tabs | Pass |
| TC_staff_display_next_patient_form_002 | Manage Patient Account | The User fills the form and clicks on "Next" button | The system displays the form in the next tab | Pass |
| TC_staff_empty_patient_form_003 | Manage Patient Account | The user leaves some required fields empty and clicks on "Save " button | The system prompts the User to fill in the required fields | Pass |
| TC_staff_save_patient_form_004 | Manage Patient Account | The User fills all the fields in the form and clicks on "Save" button | The system confirms that the patient account is created by adding the new patient to the existing patient list | Pass |
| TC_staff_view_patient_list_005 | Manage Patient Account | The User clicks on "View Patient" button | The system displays a list of existing patient profiles | Pass |
| TC_staff_view_patient_details_006 | Manage Patient Account | The User clicks on the patient's first name | The system displays complete profile of the selected patient in tabs | Pass |
| TC_staff_edit_patient_profile_007 | Manage Patient Account | The User clicks on "Edit" profile button | The system displays a pre-populated profile that the User can edit | Pass |
| TC_staff_empty_edit_patient_profile_008 | Manage Patient Account | The User leaves some required fields empty and clicks on "Save " button | The system prompts the User to fill in the required fields | Pass |
| TC_staff_save_edit_patient_profile_009 | Manage Patient Account | The User fills all the fields in the form and clicks on "Save" button | The system confirms that the patient account is edited by adding the new patient to the existing patient list | Pass |
| TC_staff_display_appointment_form_001 | Manage Appointments | The User clicks on " Add Appointment" | The system displays the Add New Appointment Form | Pass |

| | | | | |
|--------------------------------------|---------------------|---|--|------|
| | | button | | |
| TC_staff_empty_appointment_form_002 | Manage Appointments | The User leaves some required fields empty and clicks on "Save " button | The system prompts the User to fill in the required fields | Pass |
| TC_staff_save_appointment_form_03 | Manage Appointments | The User fills in all the required fields in the appointment form and clicks on "Save" button | The system confirms that appointment is saved | Pass |
| TC_staff_edit_appointment_004 | Manage Appointments | The User clicks on "Edit" button and makes the required changes and clicks on "Save " button | The system confirms that appointment is saved | Pass |
| TC_staff_display_vitalsigns_form_001 | Add Vital Signs | The User clicks on "Add Vital Signs/Diagnosis button | The system displays Add Vitals Signs form | Pass |
| TC_staff_empty_vitalsigns_form_002 | Add Vitals Signs | The User leaves some or all of the required fields empty in the Add Vitals Signs Form and clicks on the "Save" button | The system prompts the User to fill in the required fields | Pass |
| TC_staff_save_vitalsigns_form_003 | Add Vitals Signs | The User fills all the required fields in the form and clicks on "Save" button | The system confirms that the vitals are saved for the patient by displaying a list | Pass |
| TC_staff_view_vitalsigns_list_004 | Add Vital Signs | The User clicks on the patient name in the list vitals signs list | The system displays the vitals signs list | Pass |
| TC_staff_view_vitalsigns_details_005 | Add Vital Signs | The User clicks on the patient name in the list vitals signs details | The system displays the vitals signs details | Pass |
| TC_staff_display_radiology_form_001 | Manage Radiology | The User clicks on "Add Radiology" button | The system displays Add Radiology form | Pass |
| TC_staff_empty_radiology_form_002 | Manage Radiology | The User leaves some or all required fields in the form and clicks on "Save" button | The system prompts the User to fill in the required fields | Pass |

| | | | | |
|--------------------------------------|-------------------|--|--|------|
| TC_staff_save_radiology_form_003 | Manage Radiology | The User fills the required fields and selects a file to be uploaded and clicks on "Save" button | The system confirms that the radiology film is added by displaying the list of all the radiology films | Pass |
| TC_staff_view_radiology_list_004 | Manage Radiology | The User clicks on the "View Radiology" button | The system displays the radiology list | Pass |
| TC_staff_display_lab_result_form_001 | Manage Lab Result | The User selects the "Add Lab Result" button | The system displays the Lab Result form | Pass |
| TC_staff_save_lab_result_form_002 | Manage Lab Result | The User clicks on the "Save" button | The system confirms that the lab result has been saved | Pass |
| | | | | |
| TC_staff_view_lab_result_list_003 | Manage Lab Result | The User clicks on "View Lab Result" button | The system displays a Lab Test Result List | Pass |
| TC_staff_patient_summary_001 | View Summary | The User navigates to Appointment list page, selects a patient and clicks on "summary" button | The system displays the visit summary for the specific patient | Pass |
| TC_patient_login_user_001 | Login User | The User clicks on "Login" button | The system displays the login page with two fields for Username and Password | Pass |
| TC_patient_login_success_001 | Login Validation | The User enters correct Username and password | The system displays the User's Homepage | Pass |
| TC_patient_login_empty_002 | Login Validation | The User leaves one or both of the fields empty | The system prompts the User to fill in the required fields | Pass |
| TC_patient_login_incorrect_003 | Login Validation | The User enters incorrect Username and Password | The system displays an invalid login page and prompts the User to re-enter the correct Username and Password | Pass |
| TC_patient_logout_user_001 | Logout User | The User clicks on "Logout" button | The system displays a confirmation message that the User has been logged out of the application | Pass |
| TC_view_personal_profile_001 | View Profile | The User clicks on "profile" button | The system displays the profile of the User who is signed in to the application | Pass |

| | | | | |
|-------------------------------------|--------------------|---|---|------|
| TC_view_personal_appointment_001 | View Appointment | The User clicks on "Appointment" button | The system displays the list of all the appointments of the User who is signed in to the application | Pass |
| TC_view_personal_prescription_001 | View Prescriptions | The User clicks on the "Prescriptions" button | The system displays a list of all prescriptions received by the User who is signed into the application | Pass |
| TC_view_personal_diagnosis_001 | View Diagnosis | The User clicks on the "Diagnosis" button | The system displays a list of all diagnosis received by the User who is signed into the application | Pass |
| TC_view_personal_lab_test_order_001 | View Lab Test | The User clicks on "Lab Test" button | The system displays a list of all the lab tests ordered for the User who is signed into the application | Pass |
| TC_view_personal_vitals_chart_001 | View Vitals Charts | The User clicks on the "Vitals Charts" button | The system displays the vitals charts | Pass |

3. Test Deliverables

3.1 Test Plan

Traceability Table

| Test Case | Shall |
|----------------------------------|---------------|
| TC_login_user_001 | Shall_3.1.1.0 |
| TC_login_success_001 | Shall_3.1.1.1 |
| TC_login_empty_002 | Shall_3.1.1.2 |
| TC_login_incorrect_003 | Shall_3.1.1.3 |
| TC_logout_user_001 | Shall_3.1.2.0 |
| TC_display_patient_form_001 | Shall_3.1.3.0 |
| TC_display_next_patient_form_002 | Shall_3.1.3.1 |
| TC_empty_patient_form_003 | Shall_3.1.3.2 |
| TC_save_patient_form_004 | Shall_3.1.3.3 |
| TC_view_patient_list_005 | Shall_3.1.3.4 |
| TC_view_patient_details_006 | Shall_3.1.3.5 |

| | |
|------------------------------------|----------------|
| TC_edit_patient_profile_007 | Shall_3.1.3.6 |
| TC_empty_edit_patient_profile_008 | Shall_3.1.3.7 |
| TC_save_edit_patient_profile_009 | Shall_3.1.3.8 |
| TC_display_appointment_form_001 | Shall_3.1.4.0 |
| TC_empty_appointment_form_002 | Shall_3.1.4.1 |
| TC_save_appointment_form_003 | Shall_3.1.4.2 |
| TC_edit_appointment_004 | Shall_3.1.4.3 |
| TC_display_vitalsigns_form_001 | Shall_3.1.5.0 |
| TC_save_vitalsigns_form_003 | Shall_3.1.5.1 |
| TC_empty_vitalsigns_form_002 | Shall_3.1.5.2 |
| TC_view_vitalsigns_list_004 | Shall_3.1.6.0 |
| TC_view_vitalsigns_details_005 | Shall_3.1.6.1 |
| TC_display_diagnosis_form_001 | Shall_3.1.7.0 |
| TC_empty_diagnosis_form_002 | Shall_3.1.7.1 |
| TC_save_diagnosis_form_003 | Shall_3.1.7.2 |
| TC_display_prescription_form_001 | Shall_3.1.8.0 |
| TC_empty_prescription_form_002 | Shall_3.1.8.1 |
| TC_save_prescription_form_003 | Shall_3.1.8.2 |
| TC_view_prescription_list_004 | Shall_3.1.8.3 |
| TC_view_prescription_details_005 | Shall_3.1.8.4 |
| TC_display_radiology_form_001 | Shall_3.1.9.0 |
| TC_empty_radiology_form_002 | Shall_3.1.9.1 |
| TC_save_radiology_form_003 | Shall_3.1.9.2 |
| TC_view_radiology_list_004 | Shall_3.1.9.3 |
| TC_display_lab_test_order_form_001 | Shall_3.1.10.0 |
| TC_empty_lab_test_order_form_002 | Shall_3.1.10.1 |
| TC_save_lab_test_order_form_003 | Shall_3.1.10.2 |
| TC_view_lab_test_order_list_004 | Shall_3.1.10.3 |
| TC_display_lab_result_form_001 | Shall_3.1.11.0 |
| TC_save_lab_result_form_002 | Shall_3.1.11.1 |
| TC_view_lab_result_list_003 | Shall_3.1.11.2 |
| TC_patient_summary_001 | Shall_3.1.12.0 |
| TC_staff_login_user_001 | Shall_3.1.13.0 |
| TC_staff_login_success_001 | Shall_3.1.13.1 |
| TC_staff_login_empty_002 | Shall_3.1.13.2 |
| TC_staff_login_incorrect_003 | Shall_3.1.13.3 |

| | |
|---|----------------|
| TC_staff_logout_user_001 | Shall_3.1.14.0 |
| TC_staff_display_patient_form_001 | Shall_3.1.15.0 |
| TC_staff_display_next_patient_form_002 | Shall_3.1.15.1 |
| TC_staff_empty_patient_form_003 | Shall_3.1.15.2 |
| TC_staff_save_patient_form_00 | Shall_3.1.15.3 |
| TC_staff_view_patient_list_005 | Shall_3.1.15.4 |
| TC_staff_view_patient_details_006 | Shall_3.1.15.5 |
| TC_staff_edit_patient_profile_007 | Shall_3.1.15.6 |
| TC_staff_empty_edit_patient_profile_008 | Shall_3.1.15.7 |
| TC_staff_save_edit_patient_profile_009 | Shall_3.1.15.8 |
| TC_staff_display_appointment_form_001 | Shall_3.1.16.0 |
| TC_staff_empty_appointment_form_002 | Shall_3.1.16.1 |
| TC_staff_save_appointment_form_03 | Shall_3.1.16.2 |
| TC_staff_edit_appointment_004 | Shall_3.1.16.3 |
| TC_staff_display_vitalsigns_form_001 | Shall_3.1.17.0 |
| TC_staff_empty_vitalsigns_form_002 | Shall_3.1.17.1 |
| TC_staff_save_vitalsigns_form_003 | Shall_3.1.17.2 |
| TC_staff_view_vitalsigns_list_004 | Shall_3.1.18.0 |
| TC_staff_view_vitalsigns_details_005 | Shall_3.1.18.1 |
| TC_staff_display_radiology_form_001 | Shall_3.1.19.0 |
| TC_staff_empty_radiology_form_002 | Shall_3.1.19.1 |
| TC_staff_save_radiology_form_003 | Shall_3.1.19.2 |
| TC_staff_view_radiology_list_004 | Shall_3.1.19.3 |
| TC_staff_display_lab_result_form_001 | Shall_3.1.20.0 |
| TC_staff_save_lab_result_form_002 | Shall_3.1.20.1 |
| TC_staff_view_lab_result_list_003 | Shall_3.1.20.2 |
| TC_staff_patient_summary_001 | Shall_3.1.21.0 |
| TC_patient_login_user_001 | Shall_3.1.22.0 |
| TC_patient_login_success_001 | Shall_3.1.22.1 |
| TC_patient_login_empty_002 | Shall_3.1.22.2 |
| TC_patient_login_incorrect_003 | Shall_3.1.22.3 |
| TC_patient_logout_user_001 | Shall_3.1.23.0 |
| TC_view_personal_profile_001 | Shall_3.1.24.0 |
| TC_view_personal_appointment_001 | Shall_3.1.25.0 |
| TC_view_personal_prescription_001 | Shall_3.1.26.0 |
| TC_view_personal_diagnosis_001 | Shall_3.1.27.0 |

| | |
|-------------------------------------|----------------|
| TC_view_personal_lab_test_order_001 | Shall_3.1.28.0 |
| TC_view_personal_vitals_chart_001 | Shall_3.1.29.0 |

3.2. Test Cases and Reports

Refer to Attachment “A” for Pylint

Refer to Attachment “B” for Unittest

Refer to Attachment “C” for Selenium IDE

Refer to Attachment “D” for Selenium Scripts

Refer to Attachment “E” for Code Coverage Report

4. Features to be Tested

All the functional requirements listed in the software requirement specification document for OneClickVitals will be tested for completion and meeting the stated requirements. This will be done by unit testing, manual testing and user acceptance test.

The features to be tested include:

- Login User
- Logout User
- Manage Patient Account
- Manage Appointments
- Add Vital Signs
- View Vital Signs
- Add Diagnosis
- Add Prescriptions
- Manage Radiology
- Order Lab Tests
- Add Lab Results

- Print Summary
- View Personal Profile
- View Appointments
- View Prescriptions
- View Diagnosis
- View Lab Tests
- View Vital Signs charts

5. Features not to be Tested

Non-functional requirements listed in the software requirement specification document for OneClickVitals will not be tested as a part of this Test Plan.

6. Risks and Mitigation

| Risk Factors | Description | Risk Level | Mitigation Plan |
|--------------------------|---|------------|--|
| Resource risk | A team member might be sick for more than one day | Medium | The team will ensure that every member of the team is well aware of what other members are doing so he/she can take over the gap created by the absent member. |
| Resource risk | Team member might not be contribute as per expectations and requirements | High | The team will ensure proper delegation of work and have clearly defined roles and responsibilities. Also conduct regular status meetings. |
| Technical knowledge risk | Some or all the team members might not have the knowledge and experience is using the proposed tools and technology | High | Proper training sessions should be conducted and the same should be included in project budget and schedule. |

| | | | |
|--------------------|---|------|--|
| Schedule risk | Team might not finish the project on time | High | The team should periodically check the status of the project and modules being implemented against the schedule. |
| Project Scope Risk | Scope of the project is not defined clearly and is subject constant changes | High | The team has to agree on the scope of the project prior to implementation. Team should have a contract signed by the client agreeing to the scope of the requirements and the project. |

7. References

- Pressman, Roger S. *Software Engineering: A Practitioner's Approach*. 7th ed. New York: McGraw-Hill, 2010. Print.
- Futrell, Robert T., Donald F. Shafer, and Linda I. Shafer. *Quality Software Project Management*. Upper Saddle River, NJ: Prentice Hall PTR, 2002. Print.
- Larman, Craig. *Applying Uml and Patterns: An Introduction to Object-Oriented Analysis and Design and Iterative Development*. Upper Saddle River, N.J: Prentice Hall PTR, c2005, 2005. Print.
- IEEE Recommended Practice for Software Requirements Specifications," *IEEE Std 830-1998* , vol., no., pp.1,40, Oct. 20 1998