**Dental Clinic Services System**

Test Plan

By

**Kanokwan Maneerat 542115002**

**Worapun Wongkium 542115055**

Department of Software Engineering

College of Arts, Media, and Technology

Chiang Mai University

Project Adviser

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Mrs. Yun Rim Park

**Test Plan**

**Revision Table**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Document Name** | **Detail** | **Status** | **Date** | **Viewable** | **Reviewer& Responsible** |
| DCSS - Test plan - ver 0.1 | Add all document | Draft | 04/26/2014 | Adviser | Kanokwan&Worapun |
| DCSS - Test plan - ver 0.2 | Edit the unit testing and system testing | Draft | 06/10/2014 | Adviser | Kanokwan&Worapun |
| DCSS - Test plan - ver 0.3 | Edit the unit testing and system testing | Draft | 07/01/2014 | Adviser | Kanokwan&Worapun |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |

**Table of Content**

**Chapter One: Introduction**

* 1. **Objectives**

Dental clinic service system is a web application and mobile application, which support ios7. This application is support English language for the person who is the patient, the officer or the dentist of the dental clinic furthermore it allow visitor can use. This application will reduce officers’ work and do not waste patients’ time so, patient can find anything about dental clinic information or personal information and others from it. For the visitor who want to has a dental treatment from the clinic he/she can make an appointment to the dentist through the application and also the dentist can use it for checking patients’ schedule. The Dental clinic services system is gathered most of the services in the clinic into the web application and mobile application. When the application is grouping all the services together it will be uncomplicated for dental clinic user.

This Software Requirement Specification has described in more detail of each requirement and each function that the system should have. The document includes the scope of project, product function, user characteristic, Functional Requirement, and Non-Functional Requirement.

**1.2 Purpose**

The purpose of the test plan of Dental clinic services system is to establish the bug or other defect that occur in the website and the mobile application and fixed. The test plan creates for guarantee that all the defect will found before release the program so, the program should be faultless. The unit testing is cover all implemented of Dental clinic services system and also testing the user requirement.

**1.3 Scope**

Dental clinic services system is a website and mobile application for dental clinic’s patient. This program can reduce clinic’s officer works and convenient for patient. The dental clinic provides patientID and password for clinic’s patient use for login into the application and website. In the website and application.

The test plan describes the units testing and to solve the defects in the system and describes the system testing activities for testing a completely integrated system to verify that it meets the user requirements.

**1.4 Acronyms and Definitions**

**1.3.1 Acronyms**

DCSS = Dental Clinic Services System

PMP = Project Management Plan

SDD = Software Design Document

SRS = Software Requirement Specification

SRS = Software Requirement Specification

UC = Use Case

UI = User Interface

UTC = Unit Test Case

STC = System Test Case

**1.3.2 Definitions**

Feature Transformation of input parameters to output parameters based on a specified algorithm. It describes the functionality of a produce in the language of the product. Used for requirements analysis, design, coding, testing or maintenance. [IEEE90]

Design The period of time in the software life cycle during which the designs for architecture, software component, interfaces and data are created, documented, and verified to satisfy requirements. [IEEE90]

IEEE Institute for Electrical and Electronics Engineers. Biggest global interest group for engineers of different branches and for computer scientists. [IEEE90]

Requirement (1) A condition or capability needed by a user to solve a problem or achieve an objective. (2) A condition or capability that must be met or processed by system or system component to satisfy a contract, standard, specification, or other formally imposed document. (3) A documented representation of a condition or capability as in definition (1) or (2). [IEEE90]

Specification Precise description of an activity or work product which serves as basis or input for further activities or work product. A specification can comprise requirements to a product and how they will be solved. Different parts of a specification (e.g. what is to be done, how it will be done) must not be mixed. [IEEE90]

White box testing Testing process that focus on internal structure. The tester should know the code inside the program and test it through the code and determines the appropriate outputs.

Black box testing Process, device or system that focus on input, output and transfer characteristics without knowledge about it internal structure.

Unit Testing A level of the software testing process where individual units/components of a software/system are tested. The purpose is to validate that each unit of the performs as designed.

System testing A level of the software testing process where a complete, integrated system/software is tested. The purpose of this test is to evaluate the system's compliance with the specified requirements.

**Chapter Two | Test Plan and Test Procedure**

**2.1 Test Objectives**

The objectives of testing Dental clinic services system in web application and in Mobile application project are:

1. All bugs or defects are detected.
2. Those bugs or defects are fixed.
3. Meet user's requirements.
4. All functionalities and features must be there.

**2.2 Scope**

Dental clinic services system will test by white-box testing and black-box testing techniques that are unit testing and system testing and record the test result in the test record.

**2.3 Test Duration**

|  |  |
| --- | --- |
| **Progress** | **Date and Duration** |
| **Progress 1 report** | Perform date: 2nd June 2013 - 5th June 2014(Unit test, System test) Duration: 3 days |
| **Progress 2 report** |  |
| **Progress 3 report** |  |
| **Final Progress report** |  |

**2.4 Test Responsibility**

|  |  |
| --- | --- |
| **Item** | **Responsibility** |
| Unit test of web application |  |
| Unit test of iOS mobile application |  |
| Record unit test of web application |  |
| Record unit test of iOS mobile application |  |
| System test of web application |  |
| System test of iOS mobile application |  |
| Record system test of web application |  |
| Record system test of iOS mobile application |  |

**2.5 Test Strategy**

Dental clinic services system test strategy will be follow by:

1. Design test case for each feature.
2. Prepare test data for each feature.
3. Determine expected results.
4. Perform testing on individual feature.
5. Result testing will be record.
6. All test files will be store in the project repository.

**2.6 Result of Testing**

In the test record the test result will separate into two parts, which are:

1. Actual output: The actual outputs that are performed by each test case.

2. Pass/Fail criteria:

2.1 Pass: the result of actual result is same like expected result.

2.2 Fail: the result if actual result is not same like expected result.

**2.7 Test Environment**

**2.7.1 Hardware**

* **Computer**
* **Dell Inspiron N4110**

**Processor:** Intel(R) Core(TM) i3-2310M CPU@ 2.10GHz, 2.10 GHz

**Memory:** 6.00 GB

**Operating system:** Window 7 Ultimate

* **Sony VAIO SVE14118FHB**

**Processor:** Intel(R) Core(TM) i7-3612QM CPU@ 2.10GHz, 2.10 GHz

**Memory:** 8.00 GB

**Operating system:** Windows 7 Home Premium

* **MacBook Pro**

**Processor:** 2.5 GHz Intel Core i5

**Memory:** 4 GB 1600 MHz DDR38.00 GB

**Operating system:** W OS X 10.9.2 (13C1021)

* **iPhone**
* **iPhone 5s**

**Processor:** Dual core, 1300 MHz

**Memory:** 32 GB internal storage, 1 GB RAM DDR3

**Operating** System: iOS7

**2.7.2 Software**

* Google Chrome Version 19.0 or later
* HTML version 5
* PHP editor Version 5
* Xcode version 5.1.1
* Codeigniter framework version 2.1.4
* Phonegap version 3.0
* Ios operating system version ios7
* Adobe Dreamweaver CC
* Zxing qr code generater

**Chapter Three | Unit Testing of LCR Web Application**

**Chapter Four | System Testing**

**System Test Case 01(STC-01):** Users can login into the websites

**Class Patient Controller**

STC-01: login

**Description:**

To test the login function of patient that can login to the website with correct username and password and cannot login to the website if there are wrong username or password

**Test script:**

1. Login to the website select login function.
2. Login user input id(dentist/officer/patient) and password in login form.
3. Select login button.
4. The system shall validate the id and password.
5. The system shall provide index page if id and password are correct.
6. The system shall provide alert message if id and password are incorrect.

**Data needs:** Table patient

|  |  |
| --- | --- |
| patientID | patient |
| password | 1234 |
| Firstname | xxxx |
| Lastname | xxxx |
| Age | 21 |
| Gender | 1 |
| Treatment | xxxx |
| Address | xxxx |
| Tel | 0800000000 |
| Email | xxxx@xxx.com |

**Test Cases:**

|  |  |  |
| --- | --- | --- |
| **ID** | 01 | |
| **Test Item(s)** | Patient\_Controller, index | |
| **Test Description** | Patient can login to the website | |
| **Input** | **userID:** | officer |
| **password:** | 1234 |
| **Expected Output** | Redirect to index | |

|  |  |  |
| --- | --- | --- |
| **ID** | 02 | |
| **Test Item(s)** | Officer\_Controller, index | |
| **Test Description** | Patient cannot login to the website | |
| **Input** | **userID:** | patient |
| **password:** | aaaaa |
| **Expected Output** | Error message appear “ Incorrect Id or password” | |

**System Test Case 02(STC-02):** Users can login into the mobile application

**Class Patient Controller**

STC-02: login mobile application

**Description:**

To test the login function of patient that can login to the mobile application with correct username and password and cannot login to the mobile application if there are wrong username or password

**Test script:**

1. Login to the mobile application select login function.
2. Login user input patientID and password in login form.
3. Select login button.
4. The system shall validate the id and password.
5. The system shall provide index page if id and password are correct.
6. The system shall provide alert message if id and password are incorrect.

**Data needs:** Table patient

|  |  |
| --- | --- |
| patientID | patient |
| password | 1234 |
| Firstname | xxxx |
| Lastname | xxxx |
| Age | 21 |
| Gender | 1 |
| Treatment | xxxx |
| Address | xxxx |
| Tel | 0800000000 |
| Email | xxxx@xxx.com |

**Test Cases:**

|  |  |  |
| --- | --- | --- |
| **ID** | 01 | |
| **Test Item(s)** | login, index | |
| **Test Description** | Patient can login to the mobile application | |
| **Input** | **userID:** | patient |
| **password:** | 1234 |
| **Expected Output** | Redirect to index | |

|  |  |  |
| --- | --- | --- |
| **ID** | 02 | |
| **Test Item(s)** | login, index | |
| **Test Description** | Patient cannot login to the mobile application | |
| **Input** | **userID:** | patient |
| **password:** | aaaaa |
| **Expected Output** | Error message appear “Your login failed” | |

**System Test Case 03(STC-03):** Users can view appointment schedule in the website

**Class Patient Controller**

STC-03: View appointment schedule in the website

**Description:**

To test the view appointment function of user to view the appointment schedule in the appointment page without login

**Test script:**

1. User select appointment function
2. The system shall provide appointment schedule in appointment page

**Data needs:**

**Test Cases:**

|  |  |
| --- | --- |
| **ID** | 01 |
| **Test Item(s)** | Patient\_Controller, view\_schedule |
| **Test Description** | Patient can access to view\_schedule page |
| **Input** | Click at view schedule button |
| **Expected Output** | Redirect to view\_schedule page |

|  |  |
| --- | --- |
| **ID** | 02 |
| **Test Item(s)** | Patient\_Controller, view\_schedule |
| **Test Description** | Patient can access to view\_schedule page |
| **Input** | …/Patient\_Controller/callCalendar |
| **Expected Output** | Redirect to view\_schedule page |

**System Test Case 04(STC-04):** Users can view appointment schedule in mobile application

**Class Patient Controller**

STC-04: View appointment schedule in the website mobile application

**Description:**

To test the view appointment function in mobile application of user to view the appointment schedule in the appointment page without login

**Test script:**

1. User select appointment function
2. The system shall provide appointment schedule in appointment page

**Data needs:**

**Test Cases:**

|  |  |
| --- | --- |
| **ID** | 01 |
| **Test Item(s)** | checkappointment, appointment page |
| **Test Description** | Patient can access to appointment page |
| **Input** | Click at view appointment function |
| **Expected Output** | Redirect to appointment page |

|  |  |
| --- | --- |
| **ID** | 02 |
| **Test Item(s)** | checkappointment, appointment page |
| **Test Description** | Patient can access to appointment page |
| **Input** | Click at view appointment function |
| **Expected Output** | Fail to view appointment schedule. |

**System Test Case 05(STC-05):** Users can logout from the website

**Class Patient Controller**

STC-05: logout from the website

**Description:**

To test the logout from the website

**Test script:**

1. User select logout function
2. The system shall provide index page without the patientID on the index page

**Data needs:**

**Test Cases:**

|  |  |
| --- | --- |
| **ID** | 01 |
| **Test Item(s)** | Patient\_Controller |
| **Test Description** | Patient can log out from website |
| **Input** | Click at logout button |
| **Expected Output** | Redirect to view\_schedule page |

|  |  |
| --- | --- |
| **ID** | 02 |
| **Test Item(s)** | Patient\_Controller |
| **Test Description** | Patient can log out from website |
| **Input** | …/Patient\_Controller/logout |
| **Expected Output** | Redirect to view\_schedule page |

**System Test Case 06(STC-06):** Users can logout from the mobile application

**Class Patient Controller**

STC-06: logout from the mobile application

**Description:**

To test the logout from mobile application

**Test script:**

1. User select logout function
2. The system shall provide index page without the patientID on the index page

**Data needs:**

**Test Cases:**

|  |  |
| --- | --- |
| **ID** | 01 |
| **Test Item(s)** | Logout |
| **Test Description** | Patient can log out from mobile application |
| **Input** | Click at logout button |
| **Expected Output** | Redirect to index page |

|  |  |
| --- | --- |
| **ID** | 02 |
| **Test Item(s)** | Logout |
| **Test Description** | Patient can log out from mobile application |
| **Input** | Click at logout button |
| **Expected Output** | Fail to logout from mobile application |

**System Test Case 07(STC-07):** Users can create patient account

**Class Officer Controller**

STC-07: Create account for patient

**Description:**

Test the patient register function of officer that can register for new patient.

**Data needs:** Table patient

|  |  |
| --- | --- |
| patientID |  |
| password |  |
| Firstname |  |
| Lastname |  |
| Age |  |
| Gender |  |
| Treatment |  |
| Address |  |
| Tel |  |
| Email |  |

**Test Cases:**

|  |  |  |
| --- | --- | --- |
| **ID** | 01 | |
| **Test Item(s)** | Officer\_Controller, all\_patient | |
| **Test Description** | Officer can register for the new patient | |
| **Input** | patientID: | P0001 |
| Password: | 1234 |
| Firstname: | John |
| Lastname: | Doe |
| Age: | 23 |
| Gender: | 1 |
| Treatment: | Tooth zepline |
| Address: | 817 Cedar st. Honolulu, US, 452144 |
| Tel: | 0332145822 |
| Email: | john.d@aloha.com |
| **Expected Output** | Redirect to all\_patient page | |

**System Test Case 08(STC-08):** Users can create dentist account

**Class Officer Controller**

STC-08: Create account for dentist

**Description:**

Test the dentist register function of officer that can register for new dentist.

**Data needs:** Table dentist

|  |  |
| --- | --- |
| dentistID |  |
| password |  |
| Firstname |  |
| Lastname |  |
| Age |  |
| Gender |  |
| Treatment |  |
| Address |  |
| Tel |  |
| Email |  |

**Test Cases:**

|  |  |  |
| --- | --- | --- |
| **ID** | 01 | |
| **Test Item(s)** | Officer\_Controller, all\_dent | |
| **Test Description** | Officer can register for the new patient | |
| **Input** | userID: | D001 |
| Role: | Dentist |
| Password: | 1234 |
| F\_name: | Marry |
| L\_name: | Lee |
| Address: | 133 |
| Email: | lee.m@gmail.com |
| TelNum: | 0820034528 |
| **Expected Output** | Redirect to all\_dent page | |

**System Test Case 09(STC-09):** Users can edit patient account

**Class Officer Controller**

STC-09: Edit account for patient

**Description:**

Test the edit patient function that can change/edit patients’ information.

**Data needs:** Table patient

|  |  |
| --- | --- |
| patientID: | P0001 |
| Password: | 1234 |
| Firstname: | John |
| Lastname: | Doe |
| Age: | 23 |
| Gender: | 1 |
| Treatment: | Tooth zepline |
| Address: | 817 Cedar st. Honolulu, US, 452144 |
| Tel: | 0332145822 |
| Email: | john.d@aloha.com |

**Test Cases:**

|  |  |  |
| --- | --- | --- |
| **ID** | 01 | |
| **Test Item(s)** | Officer\_Controller, all\_patient, patient\_edit | |
| **Test Description** | Officer can edit the patients’ information | |
| **Input** | patientID: | P0001 |
| Password: | 1234 |
| Firstname: | John |
| Lastname: | Doe |
| Age: | 23 |
| Gender: | 1 |
| Treatment: | Tooth zepline |
| Address: | 594 front st. Honolulu, US, 45211 |
| Tel: | 0444449999 |
| Email: | john.d@aloha.com |
| **Expected Output** | Redirect to all\_patient page | |

**System Test Case 10(STC-10):** Users can edit dentists’ information

**Class Officer Controller**

UTC-10: Edit dentists’ information

**Description:**

Test the edit dentist function that can change/edit dentists’ information.

**Data needs:** clinic\_user table

|  |  |
| --- | --- |
| userID: | D001 |
| Role: | Dentist |
| Password: | 1234 |
| F\_name: | Marry |
| L\_name: | Lee |
| Address: | 133 |
| Email: | lee.m@gmail.com |
| TelNum: | 0820034528 |

**Test Cases:**

|  |  |  |
| --- | --- | --- |
| **ID** | 01 | |
| **Test Item(s)** | Officer\_Controller, all\_dent, dent\_edit | |
| **Test Description** | Officer can register for the new patient | |
| **Input** | userID: | D001 |
| Role: | Dentist |
| Password: | 1234 |
| F\_name: | Marry |
| L\_name: | Black |
| Address: | 133 |
| Email: | lee.m@gmail.com |
| TelNum: | 0820034528 |
| **Expected Output** | Redirect to all\_dent page | |

**System Test Case 11(STC-11):** Users can make an appointment

**Class Officer Controller**

STC-11: Make appointment

**Description:**

Test the make appointment function of officer.

**Data needs:** google emails’ account of dental clinic

**Test Cases:**

|  |  |  |
| --- | --- | --- |
| **ID** | 01 | |
| **Test Item(s)** | Addevent function | |
| **Test Description** | Officer can make appointment for patient | |
| **Input** | **Title:** | P0001 |
| **StartTime:** | 10:00am |
| **EndTime:** | 10:30am |
| **Description:** | Dr. Marry - Toothbraces |
| **Expected Output** | Redirect to google calendar, add event page | |

**System Test Case 12(STC-12):** Users login to the website

**Class Dentist Controller**

STC-12: login

**Description:**

To test the login function of dentist that can login to the website with correct username and password and cannot login to the website if there are wrong username or password

**Data needs:** Table clinic\_user

|  |  |
| --- | --- |
| userID | dentist |
| role | officer |
| password | 1234 |
| f\_name | xxxx |
| l\_name | xxxx |
| telNum | 0811111111 |

**Test Cases:**

|  |  |  |
| --- | --- | --- |
| **ID** | 01 | |
| **Test Item(s)** | Dentist\_Controller, index | |
| **Test Description** | Dentist can login to the website | |
| **Input** | **userID:** | dentist |
| **password:** | 1234 |
| **Expected Output** | Redirect to index | |

|  |  |  |
| --- | --- | --- |
| **ID** | 02 | |
| **Test Item(s)** | Dentist\_Controller, index | |
| **Test Description** | Dentist cannot login to the website | |
| **Input** | **userID:** | dentist |
| **password:** | aaaaa |
| **Expected Output** | Error message appear “ Incorrect Id or password” | |

**System Test Case 13(STC-13):** Users can view the appointment schedule

**Class Dentist Controller**

STC-13: view appointment schedule

**Description:**

Test the view appointment schedule function of dentist.

**Data needs:**

**Test Cases:**

|  |  |
| --- | --- |
| **ID** | 01 |
| **Test Item(s)** | Dentist\_Controller, view\_schedule |
| **Test Description** | Dentist can access to view\_schedule page |
| **Input** | Click at view schedule button |
| **Expected Output** | Redirect to view\_schedule page |

|  |  |
| --- | --- |
| **ID** | 02 |
| **Test Item(s)** | Dentist\_Controller, view\_schedule |
| **Test Description** | Dentist can access to view\_schedule page |
| **Input** | …/Dentist\_Controller/callCalendar |
| **Expected Output** | Redirect to view\_schedule page |

**System Test Case 14(STC-14):** Users logout from the website

**Class Dentist Controller**

STC-14: view appointment schedule

**Description:**

Test the logout function of dentist.

**Data needs:**

**Test Cases:**

|  |  |
| --- | --- |
| **ID** | 01 |
| **Test Item(s)** | Dentist\_Controller |
| **Test Description** | Dentist can log out from website |
| **Input** | Click at logout button |
| **Expected Output** | Redirect to view\_schedule page |

|  |  |
| --- | --- |
| **ID** | 02 |
| **Test Item(s)** | Dentist\_Controller |
| **Test Description** | Dentist can log out from website |
| **Input** | …/Dentist\_Controller/logout |
| **Expected Output** | Redirect to view\_schedule page |