**Dental Clinic Services System**

Software Requirement Specification

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**Software Requirement Specification**

**Revision Table**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Document Name** | **Detail** | **Status** | **Date** | **Viewable** | **Reviewer& Responsible** |
| Dental Clinic Services System-SRS-ver 0.1 |  | Draft | 04/06/2014 | Adviser | Kanokwan & Worapun |
| Dental Clinic Services System-SRS-ver 0.2 |  | Draft | 04/26/2014 | Adviser | Kanokwan & Worapun |
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# Chapter One: Introduction

## Introduction

### 1.1 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 Intended Audience and Reading Suggestions

### 1.3 Project Scope

The objective of this software requirement specification is to specify requirement to establish the application that:

* Dental clinic services system is application on web and mobile.
* Dental clinic services system on Mobile is ios application.
* Dental clinic services system supports English language.
* Dental clinic services system provides for dental clinics’ patient, officer and dentist.
* Dental clinic services system provides the reminder for patient through the application.
* Dental clinic services system provides the QR code that personal information is included
* Dental clinic services system provides the QR code instead the patients’ appointment information
* Dental clinic services system provides the dental information and advertisement.
* Dental clinic services system provides the treatment cost.
* Dental clinic services system following up dental clinics’ patient.
* **1.4Acronyms and Definitions Acronyms**

DCSS =Dental clinic services system

PMP = Project Management Plan

* SDD = Software Design Document
* SRS = Software Requirment Specification
* URS = User Requirement Specification
* SRS = Software Requirement Specification
* UC = Use Case
* AD = Activity Diagram

Definitions Registration information database contains e-mail as username, password, and

display name.

Users database contains information of user which is Email as username, password and display name.

Recipe Details database contains recipe name, recipe description and recipe image Shopping list database contains recipe menu name.

Ingredient item database contains recipe ID, Ingredient ID, Ingredient Amount and ingredient Unit.

Ingredient detail database contains ingredient name, ingredient description and ingredient image

Ingredient store location database contains store location, store name, store description and store image.

Cooking method database contains recipe id, section, cooking method description text and cooking method image.

# 

# Chapter Two: Overall Description

## Overall Description

### 2.1 Product Perspective

The Dental clinic services system is a mobile application base on ios and a web application. So this application helps users save their time to has a contact with the dental clinic by providing features such as First, making an appointment by your own. Second, unnecessary to contain appointment card by using the qr code which that provide by the officer of the clinic for the first time registered. Third, reduce officers’ work that is does not to call to any patient about the appointment. This application is grouping most of dental clinics' services into one application.

### Product Features

The dental clinic services system is divided the feature into six features. Each of features will create a step by a step suit by priority. The following list is a description of each part in more detail.

### 2.3 User Classes and Characteristics

The system divided users into 4 groups. Information and characteristics of each group are listed below.

* **Patient**

This group of person who already register for the system that receives patientID from the dental clinic, they can use the application both in web application and mobile application. Patient uses patientID to login. The patient is able to:

* + Patient can receive the pateintID from the dental clinic
  + Patient can login to the website and the mobile application
  + Patient can make an appointment with dental clinic and also change the appointment date
  + Patient can view their appointment date and details
* **Visitor**

This group of person who cannot login but they can make an appointment. After they confirm they will receive temporary patient from the dental clinic, they can use the application both in web application and mobile application. The visitor is able to:

* + Visitor can view the dentists’ schedule
* **Officer**

This group of person who has the highest privilege in the system. So they gain the management function for maintaining the system. Officer is able to:

* + Officer can login to the system by using officerID
  + Officer can provide the pateintID, dentistID to both users
  + Officer can manage the dental clinic schedule
  + Officer can make the appointment
* **Dentist**

This group of person who has the highest privilege in the system. So they gain the management function for maintaining the system. Dentist is able to:

* + Officer can login to the system by using dentistID
  + Officer can manage the dental clinic schedule
  + Officer can make the appointment

**2.4 Operation Environment**

Server Environment

This system supports windows server platform which capable of web-server, database-server and internet connection. The system also requires at least 10 gigabytes for a database and at least 4 gigabytes of main memory (RAM) for managing with a lot of customer’s session at peak hour.

Client Environment

The system supports only iOS platform which capable of internet connection. Patient may need the at least version 7 in order to make the system can run properly. The system also requires at least 1 gigahertz for processor (CPU), at least 16 gigabytes for hard disk space and at least 2 gigabytes of main memory (RAM) for managing with a lot of customer’s session at peak hour.

### 2.5 Design and Implementation Constraints

List of project constraints:

* The application work on only ios version7
* The application is requires the Internet connection.
* The application provides to user who is already registering in the system and also who is not.

# 

# Chapter Three: User Requirement

## 3. User requirement

### 3.1 Dental clinic services system URS

**Patient**

URS-01: Patient can view his/her appointment in patient schedule in a website and a mobile application

URS-02: Patient can view all appointment in the dental clinic appointment schedule

**Officer**

URS-03: Officer can view the dentist appointment in the dental clinic appointment schedule in the website

URS-04: Officer can view the patient appointment in the dental clinic appointment schedule in the website

**Dentist**

URS-05: Dentist can view his/her appointment in dentist schedule in a website

URS-06: Dentist can view all appointment in the dental clinic appointment schedule

**Appointment management**

**Officer**

URS-07: Officer can add new appointment into the database

URS-08: Officer can edit the patient and dentist appointment

URS-09: Officer can delete the patient or dentist appointment in the database

**User registration and authentication**

**Patient**

URS-10: Patient can login to the website and the mobile application by using patient ID and password

URS-11: Patient can logout from the website or application

**Officer**

URS-12: Officer can login to the dental clinic website

URS-13: Officer can create the patient account for new patient

URS-14: Officer can create dentist account for dentist

URS-15: Officer can edit patient and dentist information

URS-16: Officer can logout

URS-17: Officer can view all dental clinics’ patient in patient list

URS-18: Officer can view all dental clinics’ dentist in dentist list

**Dentist**

URS-19: Dentist can login to the dental clinic website

URS-20: Dentist can logout

### 

### 3.2 Dental clinic services system SRS

SRS-01: System shall provide login interface in mobile application

SRS-02: System shall provide login interface in website

SRS-03: System shall validate by match patientID and password with the database

SRS-04: System shall validate by match officerID and password with the database

SRS-05: System shall validate by match dentistID and password with the database

SRS-06: System shall show error message “Please input your id”

SRS-07: System shall show error message “Please input your password”

SRS-08: System shall show error message “Wrong username or password”

SRS-09: System shall save session after user login

SRS-10: System shall destroy session after user logout

SRS-11: System shall provide create account interface

SRS-12: System shall create account for patient to provide the patientID and patients’ password

SRS-13: System shall display error message if there is empty field “Please enter patient id”

SRS-14: System shall display error message if there is empty field “Please enter dentist id”

SRS-15: System shall display error message if there is empty field “Please enter first name”

SRS-16: System shall display error message if there is empty field “Please enter surname”

SRS-17: System shall display error message if there is empty field “Please enter password”

SRS-18: System shall display error message if there is empty filed “Please select gender”

SRS-19: System shall display error message if there is empty field “Please enter address”

SRS-20: System shall display error message if there is empty field “Please enter phone number”

SRS-21: System shall display error message if there is empty field “Please enter email address”

SRS-22: System shall collect patients’ name, surname, address, telephone number, and email into the database

SRS-23: System shall create account for dentist to provide the dentistID and dentists’ password to login

SRS-24: System shall collect dentists’ name, surname, address, telephone number, and email into the database

SRS-25: System shall display the list of all patients in the dental clinics’ patient page

SRS-26: System shall query the data from patient table in the database

SRS-27: System shall display the list of all dentists in the dental clinics’ dentist page

SRS-28: System shall query the data from dentist table in the database

SRS-29: System shall edit personal information of patient and dentist

SRS-30: System shall delete personal information of patient and dentist

SRS-31: System shall provide the dentist schedule interface that includes dentist appointment in website

SRS-32: System shall provide the patient schedule interface that include patient appointment in mobile application

SRS-33: System shall provide the patient schedule interface that include patient appointment in website

SRS-34: System shall provide the dental clinic appointment interface in website

SRS-35: System shall provide the dental clinic appointment interface in mobile application

SRS-36: System shall query data from appointment table in the database

SRS-37: System shall provide create new appointment interface

SRS-38: System shall add new patient appointment in to the database

SRS-39: System shall display error message if the time that officer select is already done “Please select date and time again”

SRS-40: System shall edit patient appointment in the database

SRS-41: System shall delete patient appointment in the database

# Chapter Four: System Features

## 4. System Features

### 4.1 User requirement specification with system requirement specification

URS-01: Patient can view his/her appointment in patient schedule in a website and a mobile application

SRS-32: System shall provide the patient schedule interface that include patient appointment in mobile application

SRS-33: System shall provide the patient schedule interface that include patient appointment in website

SRS-36: System shall query data from appointment table in the database

URS-02: Patient can view all appointment in the dental clinic appointment schedule

SRS-34: System shall provide the dental clinic appointment interface in website

SRS-35: System shall provide the dental clinic appointment interface in mobile application

SRS-36: System shall query data from appointment table in the database

URS-03: Officer can view the dentist appointment in the dental clinic appointment schedule in the website

SRS-34: System shall provide the dental clinic appointment interface in website

SRS-36: System shall query data from appointment table in the database

URS-04: Officer can view the patient appointment in the dental clinic appointment schedule in the website

SRS-32: System shall provide the dental clinic appointment interface in website

SRS-36: System shall query data from appointment table in the database

URS-05: Dentist can view his/her appointment in dentist schedule in a website

SRS-31: System shall provide the dentist schedule interface that includes dentist appointment in website

SRS-36: System shall query data from appointment table in the database

URS-06: Dentist can view all appointment in the dental clinic appointment schedule

SRS-32: System shall provide the dental clinic appointment interface in website

SRS-36: System shall query data from appointment table in the database

URS-07: Officer can add new appointment into the database

SRS-37: System shall provide create new appointment interface

SRS-38: System shall add new patient appointment in to the database

SRS-39: System shall display error message if the time that officer select is already done “Please select date and time again”

URS-08: Officer can edit the patient and dentist appointment

SRS-40: System shall edit the appointment in the database

SRS-34: System shall provide the dental clinic appointment interface in website

SRS-36: System shall query data from appointment table in the database

URS-09: Officer can delete the patient or dentist appointment in the database

SRS-41: System shall delete patient appointment in the database

SRS-34: System shall provide the dental clinic appointment interface in website

SRS-36: System shall query data from appointment table in the database

URS-10: Patient can login to the website and the mobile application by using patient ID and password

SRS-01: System shall provide login interface in mobile application

SRS-02: System shall provide login interface in website

SRS-03: System shall validate by match patientID and password with the database

SRS-06: System shall show error message “Please input your id”

SRS-07: System shall show error message “Please input your password”

SRS-08: System shall show error message “Wrong username or password”

SRS-09: System shall save session after user login

URS-11: Patient can logout from the website or application

SRS-10: System shall destroy session after user logout

URS-12: Officer can login to the dental clinic website

SRS-01: System shall provide login interface in mobile application

SRS-02: System shall provide login interface in website

SRS-04: System shall validate by match officerID and password with the database

SRS-06: System shall show error message “Please input your id”

SRS-07: System shall show error message “Please input your password”

SRS-08: System shall show error message “Wrong username or password”

SRS-09: System shall save session after user login

URS-13: Officer can create the patient account for new patient

SRS-11: System shall provide create account interface

SRS-12: System shall create account for patient to provide the patientID and patients’ password

SRS-13: System shall display error message if there is empty field “Please enter patient id”

SRS-14: System shall display error message if there is empty field “Please enter dentist id”

SRS-15: System shall display error message if there is empty field “Please enter first name”

SRS-16: System shall display error message if there is empty field “Please enter surname”

SRS-17: System shall display error message if there is empty field “Please enter password”

SRS-18: System shall display error message if there is empty filed “Please select gender”

SRS-19: System shall display error message if there is empty field “Please enter address”

SRS-20: System shall display error message if there is empty field “Please enter phone number”

SRS-21: System shall display error message if there is empty field “Please enter email address”

SRS-22: System shall collect patients’ name, surname, address, telephone number, and email into the database

SRS-25: System shall display the list of all patients in the dental clinics’ patient page

SRS-26: System shall query the data from patient table in the database

URS-14: Officer can create dentist account for dentist

SRS-11: System shall provide create account interface

SRS-23: System shall create account for dentist to provide the dentistID and dentists’ password to login

SRS-13: System shall display error message if there is empty field “Please enter patient id”

SRS-14: System shall display error message if there is empty field “Please enter dentist id”

SRS-15: System shall display error message if there is empty field “Please enter first name”

SRS-16: System shall display error message if there is empty field “Please enter surname”

SRS-17: System shall display error message if there is empty field “Please enter password”

SRS-18: System shall display error message if there is empty filed “Please select gender”

SRS-19: System shall display error message if there is empty field “Please enter address”

SRS-20: System shall display error message if there is empty field “Please enter phone number”

SRS-21: System shall display error message if there is empty field “Please enter email address”

SRS-24: System shall collect dentists’ name, surname, address, telephone number, and email into the database

SRS-27: System shall display the list of all dentists in the dental clinics’ dentist page

SRS-28: System shall query the data from dentist table in the database

URS-15: Officer can edit patient and dentist information

SRS-25: System shall display the list of all patients in the dental clinics’ patient page

SRS-26: System shall query the data from patient table in the database

SRS-27: System shall display the list of all dentists in the dental clinics’ dentist page

SRS-28: System shall query the data from dentist table in the database

SRS-29: System shall edit personal information of patient and dentist

SRS-30: System shall delete personal information of patient and dentist

URS-16: Officer can logout

SRS-10: System shall destroy session after user logout

URS-17: Officer can view all dental clinics’ patient in patient list

SRS-25: System shall display the list of all patients in the dental clinics’ patient page

SRS-26: System shall query the data from patient table in the database

URS-18: Officer can view all dental clinics’ dentist in dentist list

SRS-27: System shall display the list of all dentists in the dental clinics’ dentist page

SRS-28: System shall query the data from dentist table in the database

URS-19: Dentist can login to the dental clinic website

SRS-01: System shall provide login interface in mobile application

SRS-02: System shall provide login interface in website

SRS-05: System shall validate by match dentistID and password with the database

SRS-06: System shall show error message “Please input your id”

SRS-07: System shall show error message “Please input your password”

SRS-08: System shall show error message “Wrong username or password”

SRS-09: System shall save session after user login

URS-20: Dentist can logout

SRS-10: System shall destroy session after user logout

4.2 Use Case  Diagram

**4.2.1 Dental clinic services system Use Case for Patient**

**Patient**

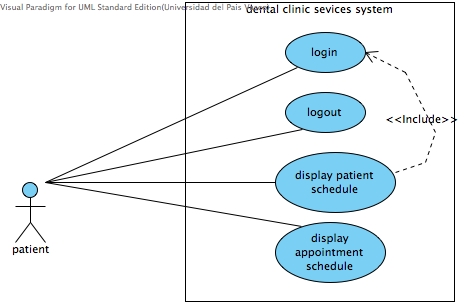


Figure 1: Dental clinic services system patient use case diagram

**4.2.2 Dental clinic services system Use Case for Officer**

**Officer**

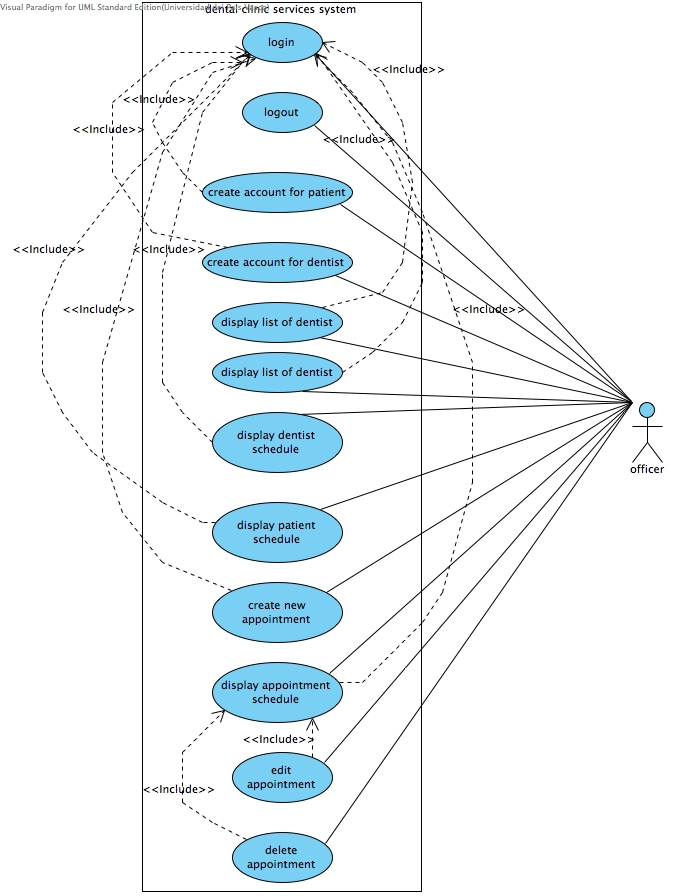


Figure 2: Dental clinic services system officer use case diagram

**4.2.3 Dental clinic services system Use Case for Dentist**

**Dentist**

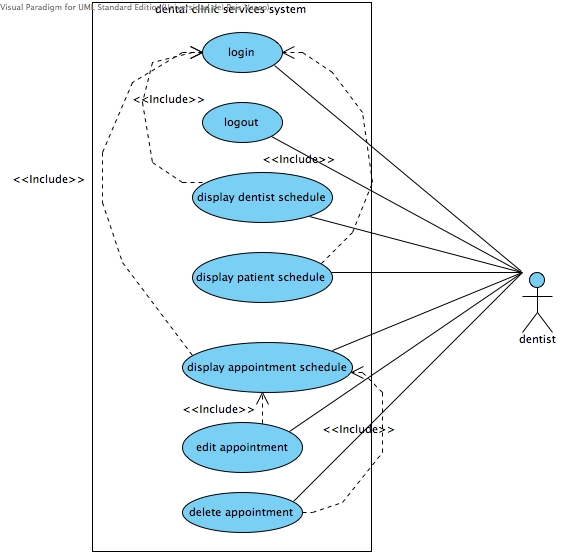
****

Figure 3: Dental clinic services system dentist use case diagram

### 4.3 Use case description

**4.3.1 Use case description for patient**

|  |  |  |  |
| --- | --- | --- | --- |
| **Use Case ID:** | UC-01 | | |
| **Use Case Name:** | Login | | |
| **Created By:** | Worapun Wongkium | **Last Updated By:** | Worapun Wongkium |
| **Date Created:** | 17/04/2014 | **Last Revision Date:** | 17/04/2014 |
| **Actors:** | Patient,Officer,Dentist | | |
| **Description:** | User can login for identifying him/herself to website and mobile application. Except patient can login to the dental clinic mobile application. | | |
| **Trigger:** | User select login to the dental clinic website or application. | | |
| **Preconditions:** | User enter to the dental clinic website or application. | | |
| **Postconditions:** | User enter to the home page | | |
| **Normal Flow:** | 1. User enters to website or application. 2. System shall provide the home page on website or application 3. User selects to login to the website or application 4. System shall provide login interface in mobile application 5. System shall provide login interface in website 6. User input ID(patientID for patient, dentistID for dentist, officerID for officer) and password. 7. System shall validate by match officerID and password with the database 8. System shall show error message “Please input your id” 9. System shall show error message “Please input your password” 10. System shall show error message “Wrong username or password” 11. System shall save session after user login 12. User enter to home page | | |
| **Alternative Flows:** | 5a.User login to the website or application  1. User input ID/password  2. User select login  3. System shall validate by match officerID and password with the database  4. System shall show error message “Wrong username or password”  4. Go back to basic flow 5 | | |
| **Exceptions:** | System initiated: System unavailable the information will not deliver. If there are no internet connection user cannot login to the website or the application. System validation finds that the user record does not exist in the database. | | |
| **Includes:** | Steps 1-11 in the normal flow would be required for all types of request for login. | | |
| **Frequency of Use:** | On demand | | |
| **Special Requirements:** | N/A | | |
| **Assumptions:** | User understands English language. User has to has his/her ID and password first. User id and password are provided by the dental clinics’ officer | | |
| **Notes and Issues:** | N/A | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **Use Case ID:** | UC-02 | | |
| **Use Case Name:** | Logout | | |
| **Created By:** | Worapun Wongkium | **Last Updated By:** | Worapun Wongkium |
| **Date Created:** | 17/04/2014 | **Last Revision Date:** | 17/04/2014 |
| **Actors:** | Patient,Officer,Dentist | | |
| **Description:** | User can logout from website and application | | |
| **Trigger:** | User select logout to the dental clinic website or application. | | |
| **Preconditions:** | User already login into the website or application | | |
| **Postconditions:** | User enter to the home page | | |
| **Normal Flow:** | 1. User already login into the website or application 2. User select logout from website or application 3. System shall destroy session after user logout 4. User enter to the home page | | |
| **Alternative Flows:** | N/A | | |
| **Exceptions:** | System initiated: System unavailable the information will not deliver. If there are no internet connection user cannot logout to the website or the application. | | |
| **Includes:** | Steps 1-4 in the normal flow would be required for all types of request for logout. | | |
| **Frequency of Use:** | On demand | | |
| **Special Requirements:** | N/A | | |
| **Assumptions:** | User understands English language. User has to login into the website or application already. | | |
| **Notes and Issues:** | N/A | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **Use Case ID:** | UC-03 | | |
| **Use Case Name:** | Display patient schedule | | |
| **Created By:** | Worapun Wongkium | **Last Updated By:** | Worapun Wongkium |
| **Date Created:** | 17/04/2014 | **Last Revision Date:** | 17/04/2014 |
| **Actors:** | Patient | | |
| **Description:** | Patient can view his/her own appointment in the patient schedule which provide in the website and mobile application | | |
| **Trigger:** | Patient select dentist schedule | | |
| **Preconditions:** | Patient has to login to the website or application by using patientID and password | | |
| **Postconditions:** | Patient enters to the patient schedule page | | |
| **Normal Flow:** | 1. Patient login to the website by using dentistID and password 2. System shall save session after user login 3. Patient enter to the home page 4. Patient select dentist schedule from the home page 5. System shall provide the patient schedule interface that includes dentist appointment in website 6. System shall provide the patient schedule interface that includes dentist appointment in mobile application 7. System shall query data from appointment table in the database | | |
| **Alternative Flows:** | N/A | | |
| **Exceptions:** | System initiated: System unavailable the information will not deliver. If there are no internet connection user cannot login to the website or the application. The patient schedule will not show up. | | |
| **Includes:** | Steps 1-6 in the normal flow would be required for all types of display dentist schedule. | | |
| **Frequency of Use:** | On demand | | |
| **Special Requirements:** | N/A | | |
| **Assumptions:** | Patient understands English language. Patient has to have his/her patient ID and password first. The dental clinics’ officer provides patient ID and password. | | |
| **Notes and Issues:** | N/A | | |

login

Home page

View Patient schedule

Figure 4: Display patient schedule [AD-01]

|  |  |  |  |
| --- | --- | --- | --- |
| **Use Case ID:** | UC-04 | | |
| **Use Case Name:** | Display dentist schedule | | |
| **Created By:** | Worapun Wongkium | **Last Updated By:** | Worapun Wongkium |
| **Date Created:** | 17/04/2014 | **Last Revision Date:** | 17/04/2014 |
| **Actors:** | Dentist | | |
| **Description:** | Dentist can view his/her own appointment in the dentist schedule which provide in the website | | |
| **Trigger:** | Dentist select dentist schedule | | |
| **Preconditions:** | Dentist has to login to the website by using dentistID and password | | |
| **Postconditions:** | Dentist enters to the dentist schedule page | | |
| **Normal Flow:** | 1. Dentist login to the website by using dentistID and password 2. System shall save session after user login 3. Dentist enter to the home page 4. Dentist select dentist schedule from the home page 5. System shall provide the dentist schedule interface that includes dentist appointment in website 6. System shall query data from appointment table in the database | | |
| **Alternative Flows:** | N/A | | |
| **Exceptions:** | System initiated: System unavailable the information will not deliver. If there are no internet connection user cannot login to the website or the application. The dentist schedule will not show up. | | |
| **Includes:** | Steps 1-6 in the normal flow would be required for all types of display dentist schedule. | | |
| **Frequency of Use:** | On demand | | |
| **Special Requirements:** | N/A | | |
| **Assumptions:** | Dentist understands English language. Dentist has to have his/her dentist ID and password first. The dental clinics’ officer provides dentist ID and password. | | |
| **Notes and Issues:** | N/A | | |

login

Home page

View Dentist schedule

Figure 5: Display dentist schedule [AD-02]

|  |  |  |  |
| --- | --- | --- | --- |
| **Use Case ID:** | UC-05 | | |
| **Use Case Name:** | Display appointment schedule | | |
| **Created By:** | Worapun Wongkium | **Last Updated By:** | Worapun Wongkium |
| **Date Created:** | 17/04/2014 | **Last Revision Date:** | 17/04/2014 |
| **Actors:** | Patient,Officer,Dentist | | |
| **Description:** | User can view all appointment that include patient and dentist appointment in the dental clinic appointment schedule page | | |
| **Trigger:** | User select appointment schedule | | |
| **Preconditions:** | User enter to the website or application | | |
| **Postconditions:** | User enter to the home page | | |
| **Normal Flow:** | 1. User enter to the website or application 2. System shall provide the home page on website or application 3. User enter to the home page 4. User select appointment schedule 5. System shall provide the dental clinic appointment interface in website 6. System shall provide the dental clinic appointment interface in mobile application 7. System shall query data from appointment table in the database 8. User view all appointment in the dental clinic appointment schedule | | |
| **Alternative Flows:** | N/A | | |
| **Exceptions:** | System initiated: System unavailable the information will not deliver. If there are no internet connection user cannot view the appointment | | |
| **Includes:** | Steps 1-8 in the normal flow would be required for all types of display appointment. | | |
| **Frequency of Use:** | On demand | | |
| **Special Requirements:** | N/A | | |
| **Assumptions:** | User understands English language. | | |
| **Notes and Issues:** | N/A | | |

login

Home page

View dental clinic appointment schedule

Figure 6: Display dental clinic appointment schedule [AD-03]

|  |  |  |  |
| --- | --- | --- | --- |
| **Use Case ID:** | UC-06 | | |
| **Use Case Name:** | Create account for patient | | |
| **Created By:** | Worapun Wongkium | **Last Updated By:** | Worapun Wongkium |
| **Date Created:** | 17/04/2014 | **Last Revision Date:** | 17/04/2014 |
| **Actors:** | Officer | | |
| **Description:** | Officer can create patients’ account to identify when his/her login to the website or application | | |
| **Trigger:** | Officer select create patients’ account | | |
| **Preconditions:** | Officer login to the website | | |
| **Postconditions:** | Officer enter to the patient list page | | |
| **Normal Flow:** | 1. Officer login to the website 2. System shall save session after user login 3. Officer enter to the home page 4. System provide the home page 5. Officer select create patients’ account 6. System shall provide create account interface 7. Officer input patientID, password, firstname, surname, age, gender, address, phone number, email address 8. System shall create account for patient to provide the patientID and patients’ password 9. System shall display error message if there is empty field 10. Officer select submit to save patients’ account to the database 11. System shall collect patients’ name, surname, address, telephone number, and email into the database 12. Officer enter to the patient list page 13. System shall display the list of all patients in the dental clinics’ patient page 14. System shall query the data from patient table in the database | | |
| **Alternative Flows:** | 7a.Officer input patientID   1. Officer input patientID, password, firstname, surname, age, gender, address, phone number, email address 2. System shall create account for patient to provide the patientID and patients’ password 3. System shall display error message if there is empty field 4. Go back to step 7 | | |
| **Exceptions:** | System initiated: System unavailable the information will not deliver. If there are no internet connection officer cannot login to the website. | | |
| **Includes:** | Steps 1-14 in the normal flow would be required for all types of create patients’ account. | | |
| **Frequency of Use:** | On demand | | |
| **Special Requirements:** | N/A | | |
| **Assumptions:** | User understands English language. | | |
| **Notes and Issues:** | N/A | | |

login

Login fail

Login success

Home page

Create account for patient

Input patient information

Form is invalid

Form is valid

Patient list page

Figure 7: Create patient account [AD-04]

|  |  |  |  |
| --- | --- | --- | --- |
| **Use Case ID:** | UC-07 | | |
| **Use Case Name:** | Create account for dentist | | |
| **Created By:** | Worapun Wongkium | **Last Updated By:** | Worapun Wongkium |
| **Date Created:** | 17/04/2014 | **Last Revision Date:** | 17/04/2014 |
| **Actors:** | Officer | | |
| **Description:** | Officer can create dentists’ account to identify when his/her login to the website | | |
| **Trigger:** | Officer select create dentists’ account | | |
| **Preconditions:** | Officer login to the website | | |
| **Postconditions:** | Officer enter to the dentist list page | | |
| **Normal Flow:** | 1. Officer login to the website 2. System shall save session after user login 3. Officer enter to the home page 4. System provide the home page 5. Officer select create patients’ account 6. System shall provide create account interface 7. Officer input dentistID, password, firstname, surname, age, gender, address, phone number, email address 8. System shall create account for patient to provide the dentistID and dentists’ password 9. System shall display error message if there is empty field 10. Officer select submit to save dentists’ account to the database 11. System shall collect dentists’ name, surname, address, telephone number, and email into the database 12. Officer enter to the dentist list page 13. System shall display the list of all dentists in the dental clinics’ dentist page 14. System shall query the data from dentist table in the database | | |
| **Alternative Flows:** | 7a.Officer input dentistD   1. Officer input dentistID, password, firstname, surname, age, gender, address, phone number, email address 2. System shall create account for patient to provide the dentistID and dentists’ password 3. System shall display error message if there is empty field 4. Go back to step 7 | | |
| **Exceptions:** | System initiated: System unavailable the information will not deliver. If there are no internet connection officer cannot login to the website. | | |
| **Includes:** | Steps 1-14 in the normal flow would be required for all types of create dentists’ account. | | |
| **Frequency of Use:** | On demand | | |
| **Special Requirements:** | N/A | | |
| **Assumptions:** | User understands English language. | | |
| **Notes and Issues:** | N/A | | |

login

Login fail

Login success

Home page

Add new appointment

Input appointment date/time/patient ID/dentist ID

Form is invalid

Form is valid

Dental clinic appointment schedule page

Figure 7: Create dentist account [AD-05]

|  |  |  |  |
| --- | --- | --- | --- |
| **Use Case ID:** | UC-08 | | |
| **Use Case Name:** | Display patient list | | |
| **Created By:** | Worapun Wongkium | **Last Updated By:** | Worapun Wongkium |
| **Date Created:** | 17/04/2014 | **Last Revision Date:** | 17/04/2014 |
| **Actors:** | Officer | | |
| **Description:** | Officer can view all dental clinics’ patient in patient list page | | |
| **Trigger:** | Officer select patient list page | | |
| **Preconditions:** | Officer login to the website | | |
| **Postconditions:** | Officer enter to the patient list page | | |
| **Normal Flow:** | 1. Officer login to the website 2. System shall save session after user login 3. Officer enter to the home page 4. System provide the home page 5. Officer select patient list page 6. System shall display the list of all patients in the dental clinics’ patient page 7. System shall query the data from patient table in the database 8. Officer view all patient | | |
| **Alternative Flows:** | N/A | | |
| **Exceptions:** | System initiated: System unavailable the information will not deliver. If there are no internet connection officer cannot login to the website. If without login officer cannot select to view patient list | | |
| **Includes:** | Steps 1-8 in the normal flow would be required for all types of display patient list | | |
| **Frequency of Use:** | On demand | | |
| **Special Requirements:** | N/A | | |
| **Assumptions:** | User understands English language. | | |
| **Notes and Issues:** | N/A | | |

login

Home page

Select patient list page

Figure 8: Display patient list [AD-06]

|  |  |  |  |
| --- | --- | --- | --- |
| **Use Case ID:** | UC-09 | | |
| **Use Case Name:** | Display dentist list | | |
| **Created By:** | Worapun Wongkium | **Last Updated By:** | Worapun Wongkium |
| **Date Created:** | 17/04/2014 | **Last Revision Date:** | 17/04/2014 |
| **Actors:** | Officer | | |
| **Description:** | Officer can view all dental clinics’ dentist in dentist list page | | |
| **Trigger:** | Officer select dentist list page | | |
| **Preconditions:** | Officer login to the website | | |
| **Postconditions:** | Officer enter to the dentist list page | | |
| **Normal Flow:** | 1. Officer login to the website 2. System shall save session after user login 3. Officer enter to the home page 4. System provide the home page 5. Officer select dentist list page 6. System shall display the list of all dentists in the dental clinics’ dentist page 7. System shall query the data from dentist table in the database 8. Officer view all dentists | | |
| **Alternative Flows:** | N/A | | |
| **Exceptions:** | System initiated: System unavailable the information will not deliver. If there are no internet connection officer cannot login to the website. If without login officer cannot select to view dentist list | | |
| **Includes:** | Steps 1-8 in the normal flow would be required for all types of display dentist list | | |
| **Frequency of Use:** | On demand | | |
| **Special Requirements:** | N/A | | |
| **Assumptions:** | User understands English language. | | |
| **Notes and Issues:** | N/A | | |

Select dentist list page

Home page

login

Figure 9: Display dentist list [AD-07]

|  |  |  |  |
| --- | --- | --- | --- |
| **Use Case ID:** | UC-10 | | |
| **Use Case Name:** | Add new appointment | | |
| **Created By:** | Worapun Wongkium | **Last Updated By:** | Worapun Wongkium |
| **Date Created:** | 17/04/2014 | **Last Revision Date:** | 17/04/2014 |
| **Actors:** | Officer | | |
| **Description:** | Officer can create new appointment for patient and dentist in to the dental clinic appointment | | |
| **Trigger:** | Officer select create new appointment | | |
| **Preconditions:** | Officer login to the website | | |
| **Postconditions:** | Officer enter to create new appointment page | | |
| **Normal Flow:** | 1. Officer login to the website 2. System shall save session after user login 3. Officer enter to the home page 4. System provide the home page 5. Officer select add new appointment 6. System shall provide add new appointment interface 7. Officer input patient ID, dentist ID and select date and time for making an appointment 8. System shall show error message if there are empty field 9. System shall add new patient appointment in to the database 10. Officer can view the new appointment in the dental clinic appointment schedule 11. System shall provide dental clinics’ appointment schedule page | | |
| **Alternative Flows:** | 7a. Officer input patient ID, dentist ID and select date and time for making an appointment   1. Officer input patient ID, dentist ID and select date and time for making an appointment 2. System shall add new patient appointment in to the database 3. Officer can view the new appointment in the dental clinic appointment schedule 4. Officer shall provide dental clinics’ appointment schedule page 5. System shall display error message if the time that officer select has already booked “Please select date and time again”   6. Go back to step 7 | | |
| **Exceptions:** | System initiated: System unavailable the information will not deliver. If there are no internet connection officer cannot login to add new appointment. | | |
| **Includes:** | Steps 1-6 in the normal flow would be required for all types of add new appointment | | |
| **Frequency of Use:** | On demand | | |
| **Special Requirements:** | N/A | | |
| **Assumptions:** | User understands English language. | | |
| **Notes and Issues:** | N/A | | |

login

Home page

Login fail

Login success

Select add new appointment page

Select appointment date in the schedule

Select time and input patient id ,dentist id to add new appointment

Cancel

save data

Dental clinic appointment schedule

Figure 10: Add new appointment [AD-07]

|  |  |  |  |
| --- | --- | --- | --- |
| **Use Case ID:** | UC-11 | | |
| **Use Case Name:** | Edit appointment | | |
| **Created By:** | Worapun Wongkium | **Last Updated By:** | Worapun Wongkium |
| **Date Created:** | 17/04/2014 | **Last Revision Date:** | 17/04/2014 |
| **Actors:** | Officer | | |
| **Description:** | Officer can edit patient or dentist appointment in dental clinics’ appointment schedule | | |
| **Trigger:** | Officer select the appointment in the dental clinics’ appointment schedule | | |
| **Preconditions:** | Officer login to the website | | |
| **Postconditions:** | Officer enter to dental clinics appointment schedule page | | |
| **Normal Flow:** | 1. Officer login to the website 2. System shall save session after user login 3. Officer enter to the home page 4. System provide the home page 5. Officer enter to the dental clinics’ appointment schedule page 6. System shall provide the dental clinic appointment interface in website 7. Officer select the appointment in the schedule 8. System shall query data from appointment table in the database 9. Officer edit the date, time, dentistID, or patientID and click edit for submit 10. System shall edit the appointment in the database 11. Officer enter to the dental clinic appointment page | | |
| **Alternative Flows:** | 7a. Officer edit the date, time, dentistID, or patientID and click edit for submit   1. Officer edit the date, time, dentistID, or patientID and click edit for submit 2. System shall display error message if the date or time that edited has already booked 3. Go back to step 7 | | |
| **Exceptions:** | System initiated: System unavailable the information will not deliver. If there are no internet connection officer cannot login to edit appointment. In the dental clinic appointment schedule should have an appointment first. | | |
| **Includes:** | Steps 1-11 in the normal flow would be required for all types of edit appointment | | |
| **Frequency of Use:** | On demand | | |
| **Special Requirements:** | N/A | | |
| **Assumptions:** | User understands English language. | | |
| **Notes and Issues:** | N/A | | |

Edit data

Cancel

Dental clinic appointment schedule

Select date / time /patient id /dentist id for edit

Login success

Login fail

Select appointment date in the schedule

Select dental clinic appointment

Home page

login

Figure 11: Edit appointment [AD-08]

|  |  |  |  |
| --- | --- | --- | --- |
| **Use Case ID:** | UC-11 | | |
| **Use Case Name:** | Delete appointment | | |
| **Created By:** | Worapun Wongkium | **Last Updated By:** | Worapun Wongkium |
| **Date Created:** | 17/04/2014 | **Last Revision Date:** | 17/04/2014 |
| **Actors:** | Officer | | |
| **Description:** | Officer can delete patient or dentist appointment in dental clinic appointment schedule | | |
| **Trigger:** | Officer select the appointment in the dental clinic appointment schedule | | |
| **Preconditions:** | Officer login to the website | | |
| **Postconditions:** | Officer enter to dental clinic appointment schedule page | | |
| **Normal Flow:** | 1. Officer login to the website 2. System shall save session after user login 3. Officer enter to the home page 4. System provide the home page 5. Officer enter to the dental clinic appointment schedule page 6. System shall provide the dental clinic appointment interface in website 7. Officer select the appointment in the schedule 8. System shall query data from appointment table in the database 9. Officer select delete button 10. System shall delete the appointment in the database 11. Officer enter to the dental clinic appointment page | | |
| **Alternative Flows:** | N/A | | |
| **Exceptions:** | System initiated: System unavailable the information will not deliver. If there are no internet connection officer cannot login to delete appointment. In the dental clinic appointment schedule should have an appointment first. | | |
| **Includes:** | Steps 1-11 in the normal flow would be required for all types of delete appointment | | |
| **Frequency of Use:** | On demand | | |
| **Special Requirements:** | N/A | | |
| **Assumptions:** | User understands English language. | | |
| **Notes and Issues:** | N/A | | |

login

Delete data

Cancel

Dental clinic appointment schedule

Login success

Login fail

Select appointment date in the schedule

Select dental clinic appointment

Home page

Select delete appointment

Figure 11: Delete appointment [AD-09]