**Dental Clinic Services System**

Software Requirement Specification

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Mrs. Yun Rim Park

**Software Requirement Specification**

**Revision Table**

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# Chapter One: Introduction

## 1. Introduction

### 1.1 Objectives

Dental clinic service system consists of a web application and a mobile application which supports iOS7. The system offers most of the services needed by dental clinics supporting patients, officers or dentists of a dental clinic. Furthermore, it provides some services for non-registered users who would like to get information about dental care and the clinic. This application will reduce officers’ work and save patients’ time also. Patients can find information about the dental clinic, personal information, and others from it. For visitors who want to get dental treatment from the clinic, they can view the available time for them to visit the dentist at the clinic through the application, and also the dentist can use it for checking patients’ schedule. When all these services are integrated into the system, it can provide much convenience to dental clinic users.

This Software Requirement Specification describes in more detail of each requirement and each function that the system should have. The document includes the scope of the project, the system’s functionalities, user characteristic, functional requirements, and non-functional requirements.

### 1.2 Project Scope

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

* Dental clinic services system is a web application for both computers and mobile devices.
* Dental clinic services system for mobile devices supports iOS.
* Dental clinic services system supports English language only.
* Dental clinic services system provides for dental clinics’ registered user whose are patients, officers and dentists.
* Dental clinic services system provides the appointments of patients and dentists.
* Dental clinic services system provides user authentication for patients and dentists, which is maintained by dental clinic officers.

### 1.3 User Classes and Characteristics

The system divides users into 3 groups. Information and characteristics of each group are listed below.

* **Patient**

This group of users need to be registered to the system at the dental clinic. They will get patientID and password from the clinic to use the services on the website or using their mobile phone. Patients use their patientID to login. Patients are able to:

* Patient can receive the pateintID and password from the dental clinic.
* Patient can login to the website and the mobile application.
* Patient can logout from the website and mobile application.
* Patient can view his/her appointment in the patient schedule.
* Patient can view all appointments in the dental clinic schedule.
* **Officer**

This group of users have the highest privilege in the system. They are given access to management functions for maintaining the system. Officers are able to:

* Officer can login to the website by using userID and password.
* Officer can logout from the website.
* Officer can register for new patients and dentists.
* Officer can add an appointment into the dental clinic schedule.
* Officer can edit an appointment in the dental clinic schedule.
* Officer can delete an appointment in the dental clinic schedule.

**Dentist**

This group of users need to be registered to the system at the dental clinic. They will register their account at the clinic. Dentist use their userID and password to login to the system to use the services. Dentists are able to:

* Dentist can login to the website by using userID and password
* Dentist can logout from the website
* Dentist can view his/her appointment in the dentist schedule
* Dentist can view all appointment in the dental clinic schedule

**1.4 Operation Environment**

Dental clinic services system provides a web application and a mobile application for iOS. All users must have the Internet connection. Mobile devices must support iOS version 7.

### 1.5 Acronyms and Definitions Acronyms

Registered User = Patient, Officer, Dentist

Non-register User = Visitor

DCSS = Dental clinic services system

PMP = Project Management Plan

SDD = Software Design Document

SRS = Software Requirement Specification

URS = User Requirement Specification

SRS = Software Requirement Specification

UC = Use Case

AD = Activity Diagram

# Chapter Two: Overall Description

## 2. Overall Description

### 2.1 Product Perspective

The Dental clinic services system consists of a mobile application base on iOS and a web application. The system helps patients save their time to contact the dental clinic by providing features such as making an appointment, viewing upcoming appointment, and getting cost estimation. It helps dentist to follow up their patients and check their appointments and schedule. Also the system reduces works of officers by providing them with features such as using QR code to identify patients at the clinic, managing appointments for patients and dentists. This system combines most of dental clinics' services into one application.

### 2.2 Product Features

The dental clinic services system offers seven features.

* Feature 1: Schedule management
* Feature 2: User registration and authentication
* Feature 3: Appointment management
* Feature 4: Patient identification using QR code
* Feature 5: Dental care consulting and following up
* Feature 6: A dental clinic information and promotion
* Feature 7: Cost estimation of dental treatments

Each of features will create a step-by-step suit by priority. In this progress we will develop Feature 1, 2, and 3

### 2.3 Design and Implementation Constraints

### List of project constraints:

* The application works only on iOS version7.
* The application requires the Internet connection.
* The application is available for users who are already registered to the system to use all the services and who are not registered to the system will be a visitor whose can be able to use only some services.

# Chapter Three: User Requirement

## 3. User requirement

### 3.1 Dental clinic services system URS

**Schedule management**

URS-01: Patient can view the patients’ own appointment in mobile application

URS-02: Patient can view the patients’ own appointment in website

URS-03: Patient can view the dentist own appointment in website

URS-04: Patient can view all appointments from Google calendar in mobile application

URS-05: Registered User can view all appointments from Google calendar in website

URS-06: Officer can view all appointments as list in website

URS-07: Officer can view patients’ own appointment list

URS-08: Officer can view dentists’ own appointment

**Appointment management**

URS-09: Officer can add new appointment into the database

URS-10: Officer can edit the appointment

URS-11: Officer can delete the appointment

URS-12: Officer can save the appointment to Google calendar

**User registration and authentication**

URS-13: Patient can login to the mobile application

URS-14: Registered User can login to the website

URS-15: Patient can logout from the mobile application

URS-16: Registered User can logout from the website

URS-17: Officer can create an account for new patient

URS-18: Officer can edit patients’ information

URS-19: Officer can delete patients’ account

URS-20: Officer can create an account for new dentist

URS-21: Officer can edit dentists’ information

URS-22: Officer can delete dentists’ account

URS-23: Officer can view all patients’ account as a list

USR-24: Officer can view all dentists’ account as a list

### 

### 3.2 Dental clinic services system SRS

**SRS-01:** System shall connect with database

**SRS-02:** System shall retrieve patient appointments’ data including patientID, userID, appointment date, start time, end time,treatment, and description from appointment table in database

**SRS-03:** System shall provide patients’ appointment data from database in patient appointment schedule interface in mobile application

**SRS-04:** System shall provide patients’ appointment data in patient appointment schedule interface in website

**SRS-05:** System shall provide dentists’ appointment data from database in dentist appointment schedule interface in website

**SRS-06:** System shall retrieve appointments’ data including patientID,appointment date,start time, end time in Google calendar from Google website

**SRS-07:** System shall provide appointments’ data of all appointments information from database into calendar page in mobile application

**SRS-08:** System shall provide appointments’ data of all appointments information in calendar page in website

**SRS-09:** System shall connect with Google website

**SRS-10:** System provide interface for make a new appointment

**SRS-11:** System add new appointment to appointments’ table in the database

**SRS-12:** System retrieve appointments’ data including patientID, userID, appointment date, start time, end time,treatment, and description from the database

**SRS-13:** System provide appointments’ data from database in appointment schedule interface in website

**SRS-14:** System provide appointments’ data in edit appointment interface for edit appointment

**SRS-15:** System update new appointment data to clinic useres’ table in the database

**SRS-16:** System delete appointment from appointments’ table in database

**SRS-17:** System shall add appointments’ data from Google calendar form to Google calendar

**SRS-18:** System shall provide the login interface for patient in mobile application

**SRS-19:** System shall validate by match patientID with the data in patient table in the database

**SRS-20:** System shall validate by match password with the data in patient table in the database

**SRS-21:** System shall save session after user login

**SRS-22:** System shall provide the main home page for patient in mobile application

**SRS-23:** System shall provide the login interface for user in website

**SRS-24:** System shall validate by match patientID (or userID for user who is officer or dentist) with the data in patient (or clinic user for officer and dentist) table in the database

**SRS-25:** System shall validate by match password with the data in patient (or clinic user for officer and dentist) table in the database

**SRS-26:** System shall provide the main home page interface for patient (or officer or dentist follow a type of Registered user) in website

**SRS-27:** System shall destroy session after patient logout

**SRS-28:** System shall destroy session after Registered User logout

**SRS-29:** System shall provide create patients’ account interface for create a new account

**SRS-30:** System add new patients’ account to patients’ table in the database

**SRS-31:** System shall retrieve patients’ data including patientID, password, firstname, lastname, age, gender, address, phone number, and email address from patient table in the database

**SRS-32:** System provide patients’ data from database in patient list page after finish creating

**SRS-33:** System provide patients’ data in edit patient interface for edit patients’ information

**SRS-34:** System update new patients’ data to patients’ table in the database

**SRS-35:** System delete patient from patients’ table in database

**SRS-36:** System shall provide create dentists’ account interface for create a new account

**SRS-37:** System add new dentists’ account to dentists’ table in the database

**SRS-38:** System shall retrieve dentists’ data userID, password, role, firstname, lastname, address, phone number, email from dentist table in the database

**SRS-39:** System provide dentists’ data from in dentist list page after finish creating

**SRS-40:** System update new dentists’ data to dentists’ table in the database

address, phone number, email of dentist from database

**SRS-41:** System shall retrieve dentist appointments’ data including patientID, userID, appointment date, start time, end time,treatment, and description from appointment table in database

Chapter Four: System Features

## 4. System Features

### 4.1 User requirement specification with system requirement specification

**URS-01: Patient can view the patients’ own appointment in mobile application**

SRS-01: System shall connect with database

SRS-02: System shall retrieve patient appointments’ data including patientID, userID, appointment date, start time, end time,treatment, and description from appointment table in database

SRS-03: System shall provide patients’ appointment data from database in patient appointment schedule interface in mobile application

**URS-02: Patient can view patients’ own appointment in website**

SRS-01: System shall connect with database

SRS-02: System shall retrieve patient appointments’ data including patientID, userID, appointment date, start time, end time,treatment, and description from appointment table in database

SRS-04: System shall provide patients’ appointment data in patient appointment schedule interface in website

**URS-03: Dentist can view the dentists’ own appointment in website**

SRS-01: System shall connect with database

SRS-41: System shall retrieve dentist appointments’ data including patientID, userID, appointment date, start time, end time,treatment, and description from appointment table in database

SRS-05: System shall provide dentists’ appointment data from database in dentist appointment schedule interface in website

**URS-04: Patient user can view all appointments from Google calendar in mobile application**

SRS-01: System shall connect with database

SRS-09:System shall connect with Google website

SRS-06: System shall retrieve appointments’ data including patientID,appointment date,start time, end time in Google calendar from Google website

SRS-07: System shall provide appointments’ data of all appointments information from database into calendar page in mobile application

**URS-05: Registered user can view all appointments from Google calendar in website**

SRS-01: System shall connect with database

SRS-09: System shall connect with Google website

SRS-06: System shall retrieve appointments’ data including patientID,appointment date,start time, end time in Google calendar from Google website

SRS-08: System shall provide appointments’ data of all appointments information in calendar page in website

**URS-06: Officer can view all appointment list in website**

SRS-01: System shall connect with database

SRS-12: System shall retrieve appointment’ data including usertID,patientID,appointment date,start time,end time,treatment, and description in appointment table from the database

SRS-13: System shall provide appointments’ data in appointment list in appointment schedule in website

**URS-07: Officer can view patients’ own appointment list**

SRS-01: System shall connect with database

SRS-31: System shall retrieve patients’ data including patinetID,firstname,lastname,age,gender,treatment,address,tel,and email from the database

SRS-32: System shall provide patients’ data in patient list interface

SRS-02: System shall retrieve patient appointments’ data including userID,pateintID,appointment date, start time, end time,treatment and description from the database

SRS-04: System shall provide patient appointments’ data in patient appointment schedule interface

**URS-08: Officer can view dentists’ own appointment list**

1. SRS-01: System shall connect with database

SRS-38: System shall retrieve dentists’ data including usertID,firstname,lastname,tel, and email from the database

SRS-39: System shall provide dentists’ data in dentist list interface

SRS-41: System shall retrieve dentist appointments’ data including userID,pateintID,appointment date, start time, end time,treatment and description from the database

SRS-05: System shall provide dentist appointments’ data in dentist appointment schedule interface

**URS-09: Officer can create new appointment into the database**

SRS-10: System provide interface for make a new appointment

SRS-01: System shall connect with database

SRS-11: System add new appointment to appointments’ table in the database

SRS-12: System retrieve appointments’ data including patientID, userID, appointment date, start time, end time,treatment, and description from the database

SRS-13: System provide appointments’ data from database in appointment schedule interface in website

**URS-10: Officer can edit the appointment**

SRS-01: System shall connect with database

SRS-12: System retrieve appointments’ data including patientID, userID, appointment date, start time, end time,treatment, and description from the database

SRS-14: System provide appointments’ data in edit appointment interface for edit appointment

SRS-15: System update new appointment data to clinic useres’ table in the database

SRS-13: System shall provide appointments’ data from database in appointment schedule interface in website

**URS-11:Officer can delete the appointment**

SRS-01: System shall connect with database

SRS-16: System delete appointment from appointments’ table in database

SRS-12: System retrieve appointments’ data including patientID,userID, appointment date, start time, end time, treatment, description of appointment from database

SRS-13: System provide appointments’ data from in appointment schedule interface in website

**URS-12: Officer can save the appointment to Google calendar**

SRS-09: System shall connect with Google website

SRS-01: System shall connect with database

SRS-12: System shall retrieve appointments’ data including userID,pateintID,appointment date, start time, end time,treatment and description from the database

SRS-13: System shall provide appointments’ data in appointment schedule interface in website

SRS-06: System shall retrieve appointments’ data including userID,pateintID,appointment date, start time, end time,treatment and description from the database in Google calendar

SRS-17: System shall add appointments’ data from Google calendar form to Google calendar

**URS-13: Patient can login to the mobile application**

SRS-18: System shall provide the login interface for patient in mobile application

SRS-01 System shall connect with database

SRS-19: System shall validate by match patientID with the data in patient table in the database

SRS-20: System shall validate by match password with the data in patient table in the database

SRS-21: System shall save session after user login

SRS-22: System shall provide the main home page for patient in mobile application

**URS-14: Registered user can login to the website**

SRS-23: System shall provide the login interface for user in website

SRS-01: System shall connect with database

SRS-24: System shall validate by match patientID (or userID for user who is officer or dentist) with the data in patient (or clinic user for officer and dentist) table in the database

SRS-25: System shall validate by match password with the data in patient (or clinic user for officer and dentist) table in the database

SRS-21: System shall save session after user login

SRS-26: System shall provide the main home page interface for patient (or officer or dentist follow a type of Registered user) in website

**URS-15: Patient can logout from the mobile application**

SRS-01: System shall connect with the database

SRS-27: System shall destroy session after patient logout

SRS-22: System shall provide main home page interface in mobile application

**URS-16: Registered user can logout from the website**

SRS-01: System shall connect with database

SRS-28: System shall destroy session after Registered User logout

SRS-26: System shall provide main home page interface in website

**URS-17: Officer can create an account for new patient**

SRS-01: System shall connect with database

SRS-29: System shall provide create patients’ account interface for create a new account

SRS-30: System add new patients’ account to patients’ table in the database

SRS-31: System shall retrieve patients’ data including patientID, password, firstname, lastname, age, gender, address, phone number, and email address from patient table in the database

SRS-32: System provide patients’ data from database in patient list page after finish creating

**URS-18: Officer can edit patients’ information**

1. SRS-01: System shall connect with database

SRS-33: System provide patients’ data in edit patient interface for edit patients’ information

SRS-34: System update new patients’ data to patients’ table in the database

SRS-31: System shall retrieve patients’ data including patientID, password, firstname, lastname, age, gender, address, phone number, and email address from paitent table from database

1. SRS-32: System provide patients’ data from in patient list interface

**URS-19: Officer can delete patients’ account**

1. SRS-01: System shall connect with database

SRS-35: System delete patient from patients’ table in database

SRS-31: System retrieve patients’ data including patientID, firstname, lastname, age, gender, treatment, tel, email, and address from the database

SRS-32: System provide patients’ data from in patient list interface for show list of patient

**URS-20: Officer can create an account for new dentist**

SRS-01: System shall connect with database

SRS-36: System shall provide create dentists’ account interface for create a new account

SRS-37: System add new dentists’ account to dentists’ table in the database

SRS-38: System shall retrieve dentists’ data userID, password, role, firstname, lastname, address, phone number, email from dentist table in the database

SRS-39: System provide dentists’ data from in dentist list page after finish creating

**URS-21: Officer can edit dentists’ information**

1. SRS-01: System shall connect with database

SRS-38: System shall retrieve dentists’ data userID, password, role, firstname, lastname, address, phone number, email of dentist from database

SRS-39: System provide dentists’ data in edit dentist interface for edit dentists’ information

SRS-40: System update new dentists’ data to dentists’ table in the database

address, phone number, email of dentist from database

1. SRS-39: System provide dentists’ data from database in dentist list interface

**URS-22: Officer can delete dentists’ account**

SRS-01: System shall connect with database

SRS-41: System delete patient from dentists’ table in database

SRS-38: System retrieve dentists’ data including userID, password, role, firstname, lastname, address, phone number, email of dentist from database

SRS-39: System provide dentists’ data from database in dentist list interface for show list of dentist

**URS-23: Officer can view all patients’ account as a list**

SRS-01: System connect with the database

SRS-31: System retrieve patients’ data including patientID, firstname, lastname, age, gender, treatment, tel, address, and email from database

SRS-32: System provide patients’ data from database in patient list interface for show list of patient

**USR-24: Officer can view all dentists’ account as a list**

SRS-01: System connect with the database

SRS-38: System retrieve dentists’ data including userID, role, firstname, lastname, tel , address, and email from database

SRS-39: System provide dentists’ data from database in dentist list interface for show list of dentist

### 4.2 Use Case Diagram

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

**Patient**

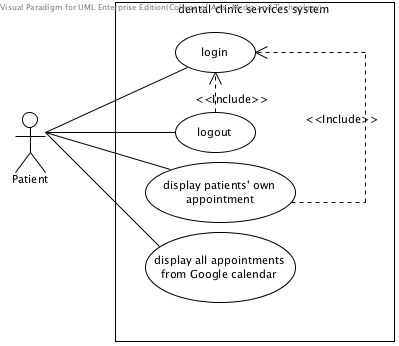


Figure 1: Dental clinic services system patient use case diagram

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

**Officer**

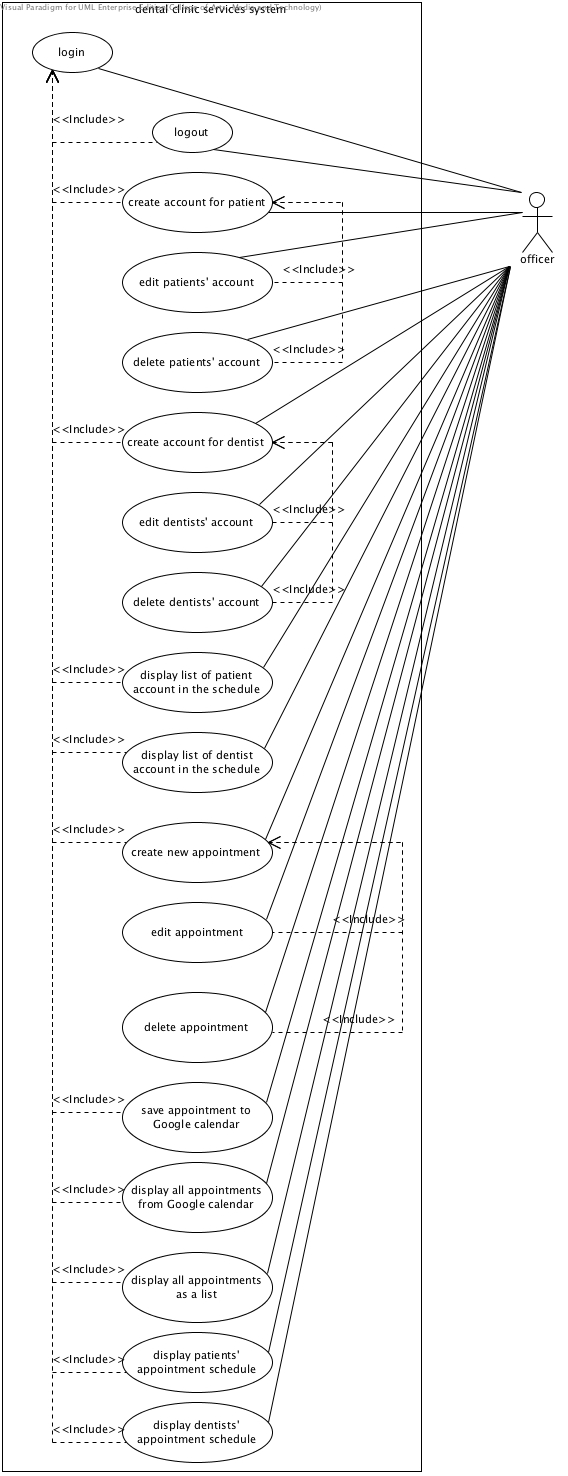
****

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

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|  |  |  |  |
| --- | --- | --- | --- |
| **Use Case ID:** | UC-01 | | |
| **Use Case Name:** | Login (in mobile application) | | |
| **Created By:** | Worapun Wongkium | **Last Updated By:** | Kanokwan Maneerat |
| **Date Created:** | 17/04/2014 | **Last Revision Date:** | 23/06/2014 |
| **Actors:** | Patient | | |
| **Description:** | Patient can login for identifying him/herself to mobile application. | | |
| **Trigger:** | Patient selects login menu in dental clinic services application | | |
| **Preconditions:** | Patient enters to the dental clinic services application. | | |
| **Postconditions:** | Patient can use the services that requires log in. | | |
| **Normal Flow:** | 1. Patient select at login menu 2. System shall provide the login interface for patient in mobile application 3. Patient input patientID and password 4. Patient press ‘Login’ button 5. System shall connect with database 6. System shall validate by match patientID with the data in patient table in the database 7. System shall validate by match password with the data in patient table in the database 8. System shall save session after user login 9. System shall provide the main home page interface for patient in mobile application | | |
| **Alternative Flows:** | * 6a. patientID are not match with the data in patient table in the database  1. System shall show error message “Your login failed” 2. Go back to normal flow 2  * 7a. password are not match with the data in patient table in the database  1. System shall show error message “Your login failed” 2. Go back to normal flow 2 | | |
| **Exceptions:** | System will not connect to the database and deliver information. If there are no internet connection patient cannot login to the mobile application. | | |
| **Includes:** | Steps 1-9 in the normal flow would be required for all types of request for login. | | |
| **Frequency of Use:** | On demand | | |
| **Special Requirements:** | N/A | | |
| **Assumptions:** | Patient understands English language. Patient has to have his/her ID and password first. Patient id and password are provided by the dental clinics’ officer | | |
| **Notes and Issues:** | N/A | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **Use Case ID:** | UC-02 | | |
| **Use Case Name:** | Login (in website) | | |
| **Created By:** | Worapun Wongkium | **Last Updated By:** | Kanokwan Maneerat |
| **Date Created:** | 17/04/2014 | **Last Revision Date:** | 23/06/2014 |
| **Actors:** | Patient, Officer, Dentist | | |
| **Description:** | Registered user can login for identifying him/herself to website | | |
| **Trigger:** | Registered user selects login menu in dental clinic website | | |
| **Preconditions:** | Registered user enters to the dental clinic website | | |
| **Postconditions:** | Registered user can use the services that requires log in. | | |
| **Normal Flow:** | 1. Registered user select at login menu 2. System shall provide the login interface for user in website 3. Registered user input patientID(or userID for user who is officer or dentist) and password 4. Registered user press ‘Login’ button 5. System shall connect with database 6. System shall validate by match patientID (or userID for user who is officer or dentist) with the data in patient (or clinic user for officer and dentist) table in the database 7. System shall validate by match password with the data in patient (or clinic user for officer and dentist) table in the database 8. System shall save session after user login 9. System shall provide the main home page interface for patient (or officer or dentist follow a type of Registered user) | | |
| **Alternative Flows:** | * 6a. patientID are not match with the data in patient(or clinic user for officer and dentist) table in the database  1. System shall show error message “Invalid username or password” 2. Go back to normal flow 2  * 7a. password are not match with the data in patient(or clinic user for officer and dentist) table in the database  1. System shall show error message “Invalid username or password” 2. Go back to normal flow 2 | | |
| **Exceptions:** | System will not connect to the database and deliver information. If there are no internet connection Registered user cannot login to the website | | |
| **Includes:** | Steps 1-9 in the normal flow would be required for all types of request for login (in website). | | |
| **Frequency of Use:** | On demand | | |
| **Special Requirements:** | N/A | | |
| **Assumptions:** | Registered user understands English language. Registered user has to have his/her ID and password first. Registered user will get id and password from dental clinics’ officer | | |
| **Notes and Issues:** | N/A | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **Use Case ID:** | UC-03 | | |
| **Use Case Name:** | Logout (in mobile application) | | |
| **Created By:** | Worapun Wongkium | **Last Updated By:** | Kanokwan Maneerat |
| **Date Created:** | 17/04/2014 | **Last Revision Date:** | 23/06/2014 |
| **Actors:** | Patient | | |
| **Description:** | Patient can logout from the system | | |
| **Trigger:** | Patient selects logout button | | |
| **Preconditions:** | Patient is already logged into the system | | |
| **Postconditions:** | Patient logged out of the system and redirect to main home page | | |
| **Normal Flow:** | 1. Patient selects logout menu 2. System shall connect with the database 3. System shall destroy session after patient logout 4. System shall provide main home page interface in mobile application | | |
| **Alternative Flows:** | N/A | | |
| **Exceptions:** | System will not connect to the database and deliver information. If there are no internet connection patient cannot logout to the mobile 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:** | Patient understands English language. Patient has to login into the website or application already. | | |
| **Notes and Issues:** | N/A | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **Use Case ID:** | UC-04 | | |
| **Use Case Name:** | Logout (in website) | | |
| **Created By:** | Worapun Wongkium | **Last Updated By:** | Kanokwan Maneerat |
| **Date Created:** | 17/04/2014 | **Last Revision Date:** | 23/06/2014 |
| **Actors:** | Patient, Officer, Dentist | | |
| **Description:** | Registered User can logout from the system | | |
| **Trigger:** | Registered User selects logout button | | |
| **Preconditions:** | Registered User is already logged into the system | | |
| **Postconditions:** | Registered User logged out of the system and redirect to main home page | | |
| **Normal Flow:** | 1. Registered User selects logout menu 2. System shall connect with database 3. System shall destroy session after Registered User logout 4. System shall provide main home page interface in website | | |
| **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 1-3 in the normal flow would be required for all types of request for logout. | | |
| **Frequency of Use:** | On demand | | |
| **Special Requirements:** | N/A | | |
| **Assumptions:** | Registered user understands English language. Registered user has to have his/her ID and password first. Registered user will get id and password from dental clinics’ officer | | |
| **Notes and Issues:** | N/A | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **Use Case ID:** | UC-05 | | |
| **Use Case Name:** | Display patients’ own appointment (in mobile application) | | |
| **Created By:** | Worapun Wongkium | **Last Updated By:** | Kanokwan Maneerat |
| **Date Created:** | 17/04/2014 | **Last Revision Date:** | 24/06/2014 |
| **Actors:** | Patient | | |
| **Description:** | Patient can view his/her own appointment in the patient schedule which provide in the mobile application | | |
| **Trigger:** | Patient selects appointment schedule | | |
| **Preconditions:** | Patient is already logged into the application by using patientID and password | | |
| **Postconditions:** | Patient can view their appointment schedule | | |
| **Normal Flow:** | 1. Patient selects appointment menu 2. System shall connect with database 3. System shall retrieve patient appointments’ data including patientID,userID,appointment date,start time,end time,treatment, and description from appointment table in database 4. System shall provide patients’ appointment data in patient appointment schedule interface in mobile application 5. Patient can view patients’ own appointment in appointment page | | |
| **Alternative Flows:** | N/A | | |
| **Exceptions:** | System will not connect to the database and deliver information. If there are no internet connection patient cannot view his/her appointment in mobile application. | | |
| **Includes:** | Steps 1-5 in the normal flow would be required for all types of display patients’ own appointment. | | |
| **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 | | |

User select login

User input pateintID and password

Login fail

Display error message

Login success

User selects appointment menu

User view his/her appointment

Figure 4: Display patients’ own appointment (in website) [AD-01]

|  |  |  |  |
| --- | --- | --- | --- |
| **Use Case ID:** | UC-06 | | |
| **Use Case Name:** | Display patients’ own appointment (in website) | | |
| **Created By:** | Worapun Wongkium | **Last Updated By:** | Kanokwan Maneerat |
| **Date Created:** | 17/04/2014 | **Last Revision Date:** | 24/06/2014 |
| **Actors:** | Patient | | |
| **Description:** | Patient can view his/her own appointment in the patients’ schedule(for patient,  dentists’ schedule for dentist, and officer can view both of them) which provide in the website | | |
| **Trigger:** | Patient selects appointment schedule | | |
| **Preconditions:** | Patient is already logged into the application by using patientID and password | | |
| **Postconditions:** | Patient can view their appointment schedule | | |
| **Normal Flow:** | 1. Patient selects patients’ schedule menu 2. System shall connect with database 3. System shall retrieve patient appointments’ data including patientID,userID,appointment date,start time,end time,treatment, and description from appointment table in database 4. System shall provide patients’ appointment data in patient appointment schedule interface in website 5. Patient can view patients’ own appointment in patients’ appointment page | | |
| **Alternative Flows:** | N/A | | |
| **Exceptions:** | System will not connect to the database and deliver information. If there are no internet connection patient cannot view his/her appointment in website. | | |
| **Includes:** | Steps 1-5 in the normal flow would be required for all types of display patients’ appointment (in website). | | |
| **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 | | |

User select login

User input pateintID and password

Login fail

Display error message

Login success

User select appointment function

User view his/her appointment

Figure 5: Display patients’ own appointment (in website) [AD-02]

|  |  |  |  |
| --- | --- | --- | --- |
| **Use Case ID:** | UC-07 | | |
| **Use Case Name:** | Display dentists’ own appointment (in website) | | |
| **Created By:** | Worapun Wongkium | **Last Updated By:** | Kanokwan Maneerat |
| **Date Created:** | 17/04/2014 | **Last Revision Date:** | 24/06/2014 |
| **Actors:** | Dentist | | |
| **Description:** | Dentist can view his/her own appointment in the dentists’ schedule( for dentist,  patients’ schedule for patient, and officer can view both of them) which provide in the website | | |
| **Trigger:** | Dentist selects appointment schedule | | |
| **Preconditions:** | Dentist is already logged into the application by using userID and password | | |
| **Postconditions:** | Dentist can view their appointment schedule | | |
| **Normal Flow:** | 1. Dentist selects dentists’ schedule menu 2. System shall connect with database 3. System shall retrieve dentist appointments’ data including patientID,userID,appointment date,start time,end time,treatment, and description from appointment table in database 4. System shall provide dentists’ appointment data in dentist appointment schedule interface in website 5. Dentist can view dentists’ own appointment in dentists’ appointment page | | |
| **Alternative Flows:** | N/A | | |
| **Exceptions:** | System will not connect to the database and deliver information. If there are no internet connection dentist cannot view his/her appointment in website. | | |
| **Includes:** | Steps 1-5 in the normal flow would be required for all types of display dentists’ own appointment (in website). | | |
| **Frequency of Use:** | On demand | | |
| **Special Requirements:** | N/A | | |
| **Assumptions:** | Dentist understands English language. Dentist has to have his/her user ID and password first. The dental clinics’ officer provides user ID and password. | | |
| **Notes and Issues:** | N/A | | |

User select login

User input userID and password

Login fail

Display error message

Login success

User select appointment function

User view his/her appointment

Figure 6: Display dentists’ own appointment (in website) [AD-03]

|  |  |  |  |
| --- | --- | --- | --- |
| **Use Case ID:** | UC-08 | | |
| **Use Case Name:** | Display all appointments from Google calendar (in mobile application) | | |
| **Created By:** | Worapun Wongkium | **Last Updated By:** | Kanokwan Maneerat |
| **Date Created:** | 17/04/2014 | **Last Revision Date:** | 25/06/2014 |
| **Actors:** | Patient | | |
| **Description:** | Patient can view all appointments from Google calendar which provide in the mobile application | | |
| **Trigger:** | Patient selects calendar menu | | |
| **Preconditions:** | Patient enter to index page | | |
| **Postconditions:** | Patient can view all appointment schedule | | |
| **Normal Flow:** | 1. Patient selects calendar menu 2. System shall connect with Google website 3. System shall retrieve appointments’ data including patientID,appointment date,start time, end time in Google calendar from Google website 4. System shall provide appointments’ data of all appointments information in calendar page in website 5. Patient can view all appointments from Google calendar in calendar interface | | |
| **Alternative Flows:** | N/A | | |
| **Exceptions:** | System will not connect to Google website and deliver information. If there are no internet connection so, patient cannot view all appointments. | | |
| **Includes:** | Steps 1-5 in the normal flow would be required for all types of display all appointments from Google calendar schedule (in mobile application). | | |
| **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 | | |

User select calendar menu

User view all appointments from Google calendar

Figure 7: Display appointment schedule (in mobile application) [AD-04]

|  |  |  |  |
| --- | --- | --- | --- |
| **Use Case ID:** | UC-09 | | |
| **Use Case Name:** | Display all appointments from Google calendar | | |
| **Created By:** | Worapun Wongkium | **Last Updated By:** | Kanokwan Maneerat |
| **Date Created:** | 17/04/2014 | **Last Revision Date:** | 25/06/2014 |
| **Actors:** | Patient, Officer, Dentist | | |
| **Description:** | Registered user can view all appointments from Google calendar in the calendar page which provide in the website | | |
| **Trigger:** | Registered user selects calendar menu | | |
| **Preconditions:** | Registered user open website | | |
| **Postconditions:** | Registered user can view all appointment schedule | | |
| **Normal Flow:** | 1. Registered user selects calendar menu 2. System shall connect with Google website 3. System shall retrieve appointments’ data including patientID,appointment date,start time, end time in Google calendar from Google website 4. System shall provide appointments’ data of all appointments information in calendar page in website 5. Registered user can view all appointments from Google calendar in calendar interface | | |
| **Alternative Flows:** | N/A | | |
| **Exceptions:** | System will not connect to Google website and deliver information. If there are no internet connection so, registered user cannot view all appointments. | | |
| **Includes:** | Steps 1-5 in the normal flow would be required for all types of display appointment schedule (in website). | | |
| **Frequency of Use:** | On demand | | |
| **Special Requirements:** | N/A | | |
| **Assumptions:** | Patient understands English language. Registered user has to have his/her patient ID, userID and password first. The dental clinics’ officer provides patient ID, userID and password. | | |
| **Notes and Issues:** | N/A | | |

User select calendar appointment function

User view all appointment

Figure 8: Display patients’ own appointment (in website) [AD-05]

|  |  |  |  |
| --- | --- | --- | --- |
| **Use Case ID:** | UC-10 | | |
| **Use Case Name:** | Create new account for patient | | |
| **Created By:** | Worapun Wongkium | **Last Updated By:** | Kanokwan Maneerat |
| **Date Created:** | 17/04/2014 | **Last Revision Date:** | 25/06/2014 |
| **Actors:** | Officer | | |
| **Description:** | Officer can create an account for new patient to use the services from dental clinic | | |
| **Trigger:** | Officer selects new patient menu | | |
| **Preconditions:** | Officer is already logged into the application by using userID and password | | |
| **Postconditions:** | New patients’ account is add to the system and can view as a list | | |
| **Normal Flow:** | 1. Officer selects new patient menu 2. System shall connect with database 3. System shall provide create patients’ account interface for create a new account 4. Officer inputs patientID, password, firstname, lastname, age, gender, address, phone number, and email address of patient 5. Officer press submit button 6. System add new patients’ account to patients’ table in the database 7. Officer redirect to patient list interface 8. System shall retrieve patients’ data including patientID, password, firstname, lastname, age, gender, address, phone number, and email address from patient table in the database 9. System provide patients’ data in patient list page after finish creating 10. Officer can view to all patient accounts in patient list interface | | |
| **Alternative Flows:** | * 4a. Officer press submit button and some field is empty  1. System show error message “Please fill out this field” for any field that require to not empty 2. Go back to normal flow 3 | | |
| **Exceptions:** | System will not connect to the database and deliver information. If there are no internet connection. | | |
| **Includes:** | Steps 1-10 in the normal flow would be required for all types of Create new account for patient. | | |
| **Frequency of Use:** | On demand | | |
| **Special Requirements:** | N/A | | |
| **Assumptions:** | Officer understands English language. Officer has to have his/her user ID and password first. The dental clinics’ officer provides user ID and password. | | |
| **Notes and Issues:** | N/A | | |

User select login

User input userID and password

Display error message

Login fail

Login success

User select create new patients’ account

User input patients’ information

Invalid form

Display error message

Valid form

User views patient account in patient list page

Figure 9: Create new account for patient [AD-06]

|  |  |  |  |
| --- | --- | --- | --- |
| **Use Case ID:** | UC-11 | | |
| **Use Case Name:** | Edit patients’ information | | |
| **Created By:** | Kanokwan Maneerat | **Last Updated By:** | Kanokwan Maneerat |
| **Date Created:** | 25/06/2014 | **Last Revision Date:** | 25/06/2014 |
| **Actors:** | Officer | | |
| **Description:** | Officer can edit patients’ information | | |
| **Trigger:** | Officer selects edit menu in all patient page | | |
| **Preconditions:** | Officer is already logged into the application by using userID and password | | |
| **Postconditions:** | New information of patient is add to the system and can view as a list | | |
| **Normal Flow:** | 1. Officer selects edit menu 2. System shall connect with database 3. System shall retrieve patients’ data including patientID, password, firstname, lastname, age, gender, address, phone number, and email address from database 4. System provide patients’ data in edit patient interface for edit patients’ information 5. Officer inputs data which needs to edit such as password, firstname, lastname, age, gender, address, phone number, and email address of patient 6. Officer press submit button 7. System update new patients’ data to patients’ table in the database 8. System shall retrieve patients’ data including patientID, password, firstname, lastname, age, gender, address, phone number, and email address from database 9. System provide patients’ data in patient list interface | | |
| **Alternative Flows:** | * 4a. Officer press submit button and some field is empty  1. System show error message “Please fill out this field” for any field that require to not empty 2. Go back to normal flow 3 | | |
| **Exceptions:** | System will not connect to the database and deliver information. If there are no internet connection. | | |
| **Includes:** | Steps 1-9 in the normal flow would be required for all types of Edit patients’ information. | | |
| **Frequency of Use:** | On demand | | |
| **Special Requirements:** | N/A | | |
| **Assumptions:** | Officer understands English language. Officer has to have his/her user ID and password first. The dental clinics’ officer provides user ID and password. | | |
| **Notes and Issues:** | N/A | | |

User select login

User input userID and password

Login fail

Display error message

Login success

User select patient list page

Invalid form

User select edit function

Display error message

User input information in to the edit form

Valid form

User views patient account in patient list page

Figure 10: Edit patients’ information [AD-07]

|  |  |  |  |
| --- | --- | --- | --- |
| **Use Case ID:** | UC-12 | | |
| **Use Case Name:** | Delete patients’ information | | |
| **Created By:** | Kanokwan Maneerat | **Last Updated By:** | Kanokwan Maneerat |
| **Date Created:** | 25/06/2014 | **Last Revision Date:** | 25/06/2014 |
| **Actors:** | Officer | | |
| **Description:** | Officer can delete patients’ account | | |
| **Trigger:** | Officer selects delete menu in all patient page | | |
| **Preconditions:** | Officer is already logged into the application by using patientID and password | | |
| **Postconditions:** | Patients’ account is delete from the system | | |
| **Normal Flow:** | 1. Officer selects delete menu 2. System shall connect with database 3. System delete patient from patients’ table in database 4. System retrieve patients’ data including patientID, firstname, lastname, age, gender, treatment, tel, email, and address from the database 5. System provide patients’ data in patient list interface for show list of patient 6. Officer can view all patients’ account in patient list page | | |
| **Alternative Flows:** | N/A | | |
| **Exceptions:** | System will not connect to the database and deliver information. If there are no internet connection. | | |
| **Includes:** | Steps 1-6 in the normal flow would be required for all types of delete patients’ information. | | |
| **Frequency of Use:** | On demand | | |
| **Special Requirements:** | N/A | | |
| **Assumptions:** | Officer understands English language. Officer has to have his/her user ID and password first. The dental clinics’ officer provides user ID and password. | | |
| **Notes and Issues:** | N/A | | |

Login fail

User input userID and password

User select login

Display error message

Login success

User select patient list page

User select delete function

User views patient account in patient list page

Delete fail

Delete success

Figure 11: Delete patients’ information [AD-08]

|  |  |  |  |
| --- | --- | --- | --- |
| **Use Case ID:** | UC-13 | | |
| **Use Case Name:** | Create new account for dentist | | |
| **Created By:** | Worapun Wongkium | **Last Updated By:** | Kanokwan Maneerat |
| **Date Created:** | 17/04/2014 | **Last Revision Date:** | 25/06/2014 |
| **Actors:** | Officer | | |
| **Description:** | Officer can create an account for new dentist to use the services from dental clinic | | |
| **Trigger:** | Officer selects new dentist menu | | |
| **Preconditions:** | Officer is already logged into the application by using userID and password | | |
| **Postconditions:** | New dentist s’ account is add to the system and can view as a list | | |
| **Normal Flow:** | 1. Officer selects new patient menu 2. System shall connect with database 3. System shall provide create dentists’ account interface for create a new account 4. Officer inputs userID, password, role, firstname, lastname, address, phone number, email of dentist 5. Officer press submit button 6. System add new dentists’ account to dentists’ table in the database 7. Officer redirect to dentist list interface 8. System shall retrieve dentists’ data userID, password, role, firstname, lastname, address, phone number, email from dentist table in the database 9. System provide dentists’ data in dentist list page after finish creating 10. Officer can view to all dentist accounts in dentist list interface | | |
| **Alternative Flows:** | * 4a. Officer press submit button and some field is empty  1. System show error message “Please fill out this field” for any field that require to not empty 2. Go back to normal flow 3 | | |
| **Exceptions:** | System will not connect to the database and deliver information. If there are no internet connection. | | |
| **Includes:** | Steps 1-10 in the normal flow would be required for all types of Create new account for dentist. | | |
| **Frequency of Use:** | On demand | | |
| **Special Requirements:** | N/A | | |
| **Assumptions:** | Officer understands English language. Officer has to have his/her user ID and password first. The dental clinics’ officer provides user ID and password. | | |
| **Notes and Issues:** | N/A | | |

User select login

User input userID and password

Login fail

Display error message

Login success

User select create new dentists’ account

User input dentists’ information

Invalid form

Display error message

Valid form

User views dentist account in dentist list page

Figure 12: Create new account for dentist [AD-09]

|  |  |  |  |
| --- | --- | --- | --- |
| **Use Case ID:** | UC-14 | | |
| **Use Case Name:** | Edit dentists’ information | | |
| **Created By:** | Kanokwan Maneerat | **Last Updated By:** | Kanokwan Maneerat |
| **Date Created:** | 25/06/2014 | **Last Revision Date:** | 25/06/2014 |
| **Actors:** | Officer | | |
| **Description:** | Officer can edit dentist s’ information | | |
| **Trigger:** | Officer selects edit menu in all dentist page | | |
| **Preconditions:** | Officer is already logged into the application by using userID and password | | |
| **Postconditions:** | New information of dentist is add to the system and can view as a list | | |
| **Normal Flow:** | 1. Officer selects edit menu 2. System shall connect with database 3. System shall retrieve userID, password, role, firstname, lastname, address, phone number, email of dentist from database 4. System provide dentists’ data in edit dentist interface for edit dentists’ information 5. Officer inputs data which needs to edit such as password, firstname, lastname, address, phone number, and email address of dentist 6. Officer press submit button 7. System update new dentists’ data to dentists’ table in the database 8. System shall retrieve userID, password, role, firstname, lastname, address, phone number, email of dentist from database 9. System provide dentists’ data in dentist list interface | | |
| **Alternative Flows:** | * 4a. Officer press submit button and some field is empty  1. System show error message “Please fill out this field” for any field that require to not empty 2. Go back to normal flow 3 | | |
| **Exceptions:** | System will not connect to the database and deliver information. If there are no internet connection. | | |
| **Includes:** | Steps 1-9 in the normal flow would be required for all types of edit dentists’ information. | | |
| **Frequency of Use:** | On demand | | |
| **Special Requirements:** | N/A | | |
| **Assumptions:** | Officer understands English language. Officer has to have his/her user ID and password first. The dental clinics’ officer provides user ID and password. | | |
| **Notes and Issues:** | N/A | | |

User select login

User input userID and password

Login fail

Display error message

Login success

User select dentist list page

Display error message

Invalid form

User input information in to the edit form

User select edit function

Valid form

User views dentist account in dentist list page

Figure 13: Edit dentists’ information [AD-010]

|  |  |  |  |
| --- | --- | --- | --- |
| **Use Case ID:** | UC-15 | | |
| **Use Case Name:** | Delete dentist s’ account | | |
| **Created By:** | Kanokwan Maneerat | **Last Updated By:** | Kanokwan Maneerat |
| **Date Created:** | 25/06/2014 | **Last Revision Date:** | 25/06/2014 |
| **Actors:** | Officer | | |
| **Description:** | Officer can delete dentist s’ account | | |
| **Trigger:** | Officer selects delete menu in all dentist page | | |
| **Preconditions:** | Officer is already logged into the application by using userID and password | | |
| **Postconditions:** | Dentists’ account is delete from the system | | |
| **Normal Flow:** | 1. Officer selects delete menu 2. System shall connect with database 3. System delete patient from dentists’ table in database 4. System retrieve dentists’ data including userID, password, role, firstname, lastname, address, phone number, email of dentist from database 5. System provide dentists’ data from database in dentist list interface for show list of dentist 6. Officer can view all dentists’ account in dentist list page | | |
| **Alternative Flows:** | N/A | | |
| **Exceptions:** | System will not connect to the database and deliver information. If there are no internet connection. | | |
| **Includes:** | Steps 1-6in the normal flow would be required for all types of delete dentist s’ account. | | |
| **Frequency of Use:** | On demand | | |
| **Special Requirements:** | N/A | | |
| **Assumptions:** | Officer understands English language. Officer has to have his/her user ID and password first. The dental clinics’ officer provides user ID and password. | | |
| **Notes and Issues:** | N/A | | |

Login fail

User input userID and password

User select login

Display error message

Login success

User select dentist list page

User select delete function

User views dentist account in dentist list page

Delete fail

Delete success

Figure 14: Delete dentists’ information [AD-11]

|  |  |  |  |
| --- | --- | --- | --- |
| **Use Case ID:** | UC-16 | | |
| **Use Case Name:** | Display patients’ list | | |
| **Created By:** | Worapun Wongkium | **Last Updated By:** | Kanokwan Maneerat |
| **Date Created:** | 17/04/2014 | **Last Revision Date:** | 25/06/2014 |
| **Actors:** | Officer | | |
| **Description:** | Officer can view list of patient from website | | |
| **Trigger:** | Officer selects patient account menu | | |
| **Preconditions:** | Officer is already logged into the application by using userID and password | | |
| **Postconditions:** | The list of patient is shown | | |
| **Normal Flow:** | 1. Officer selects patient account menu 2. System connect with the database 3. System retrieve patients’ data including patientID, firstname, lastname, age, gender, treatment, tel, address, and email from database 4. System provide patients’ data from database in patient list interface for show list of patient 5. Officer can view patients list in patient list page | | |
| **Alternative Flows:** | N/A | | |
| **Exceptions:** | System will not connect to the database and deliver information. If there are no internet connection. | | |
| **Includes:** | Steps 1-4 in the normal flow would be required for all types of display patients’ list. | | |
| **Frequency of Use:** | On demand | | |
| **Special Requirements:** | N/A | | |
| **Assumptions:** | Officer understands English language. Officer has to have his/her user ID and password first. The dental clinics’ officer provides user ID and password. | | |
| **Notes and Issues:** | N/A | | |

Login fail

User input userID and password

User select login

Display error message

Login success

User select patient list page

User views patient account in patient list page

Figure 15: Display patients’ list [AD-12]

|  |  |  |  |
| --- | --- | --- | --- |
| **Use Case ID:** | UC-17 | | |
| **Use Case Name:** | Display dentists’ list | | |
| **Created By:** | Worapun Wongkium | **Last Updated By:** | Kanokwan Maneerat |
| **Date Created:** | 17/04/2014 | **Last Revision Date:** | 25/06/2014 |
| **Actors:** | Officer | | |
| **Description:** | Officer can view list of patient from website | | |
| **Trigger:** | Officer selects dentist account menu | | |
| **Preconditions:** | Officer is already logged into the application by using userID and password | | |
| **Postconditions:** | The list of dentist is shown | | |
| **Normal Flow:** | 1. Officer selects patient account menu 2. System connect with the database 3. System retrieve dentists’ data including userID, role, firstname, lastname, tel. , address, and email from database 4. System provide dentists’ data from database in dentist list interface for show list of dentist 5. Officer can view dentists’ list in dentist list page | | |
| **Alternative Flows:** | N/A | | |
| **Exceptions:** | System will not connect to the database and deliver information. If there are no internet connection. | | |
| **Includes:** | Steps 1-4 in the normal flow would be required for all types of display dentists’ list. | | |
| **Frequency of Use:** | On demand | | |
| **Special Requirements:** | N/A | | |
| **Assumptions:** | Officer understands English language. Officer has to have his/her user ID and password first. The dental clinics’ officer provides user ID and password. | | |
| **Notes and Issues:** | N/A | | |

Login fail

User input userID and password

User select login

Display error message

Login success

User select dentist list page

User views dentist account in dentist list page

Figure 16: Display dentists’ list [AD-13]

|  |  |  |  |
| --- | --- | --- | --- |
| **Use Case ID:** | UC-18 | | |
| **Use Case Name:** | Create new appointment | | |
| **Created By:** | Worapun Wongkium | **Last Updated By:** | Kanokwan Maneerat |
| **Date Created:** | 17/04/2014 | **Last Revision Date:** | 25/06/2014 |
| **Actors:** | Officer | | |
| **Description:** | Officer can create a new appointment for patient and save to the Google calendar | | |
| **Trigger:** | Officer selects make appointment menu | | |
| **Preconditions:** | Officer is already logged into the application by using userID and password | | |
| **Postconditions:** | New appointment added to the database and can view in Google calendar | | |
| **Normal Flow:** | 1. Officer selects make appointment menu 2. System provide interface for make a new appointment 3. Officer inputs which contains patientID, dentistID, date, startTime, endTime, treatment, and description 4. System shall connect with database 5. Officer press submit button 6. System add new appointment to appointments’ table in the database 7. System retrieve appointments‘ data including patientID, userID, appointment date, start time, end time,treatment, and description from database 8. System provide appointments’ data in appointment schedule interface in website 9. Officer can view all appointment in appointment schedule interface in website | | |
| **Alternative Flows:** | * 3a. Officer press submit button and some field is empty  1. System show error message “Please fill out this field” for any field that require to not empty 2. Go back to normal flow 3 | | |
| **Exceptions:** | System will not connect to the database and deliver information. If there are no internet connection. | | |
| **Includes:** | Steps 1-9 in the normal flow would be required for all types of create new appointment. | | |
| **Frequency of Use:** | On demand | | |
| **Special Requirements:** | N/A | | |
| **Assumptions:** | Officer understands English language. Officer has to have his/her user ID and password first. The dental clinics’ officer provides user ID and password. | | |
| **Notes and Issues:** | N/A | | |

User select login

User input userID and password

Display error message

Login fail

Login success

User select create new appointment

User input appointment information in the form

Display error message

Invalid form

Valid form

User views appointment information schedule in appointment page

Figure 17: Create new appointment [AD-14]

|  |  |  |  |
| --- | --- | --- | --- |
| **Use Case ID:** | UC-19 | | |
| **Use Case Name:** | Edit appointment | | |
| **Created By:** | Kanokwan Maneerat | **Last Updated By:** | Kanokwan Maneerat |
| **Date Created:** | 25/06/2014 | **Last Revision Date:** | 25/06/2014 |
| **Actors:** | Officer | | |
| **Description:** | Officer can edit appointment | | |
| **Trigger:** | Officer selects edit menu in all appointment page | | |
| **Preconditions:** | User is already logged into the application by using userID and password | | |
| **Postconditions:** | New information of appointment is add to the system and can view as a list | | |
| **Normal Flow:** | 1. Officer selects edit menu 2. System shall connect with database 3. System retrieve appointments’ data including patientID, userID, appointment date, start time, end time,treatment, and description from the database 4. System provide appointments’ data in edit appointment interface for edit appointment 5. Officer inputs data which needs to edit such as patientID, userID(dentist), appointment date, startTime, endTime, treatment, and description 6. Officer press submit button 7. System update new appointment data to clinic useres’ table in the database 8. System retrieve appointments’ data including patientID, userID, appointment date, start time, end time,treatment, and description from the database 9. System provide appointments’ data in appointment schedule interface in website 10. Officer can view all appointment in appointment schedule interface | | |
| **Alternative Flows:** | * 5a. Officer press submit button and some field is empty  1. System show error message “Please fill out this field” for any field that require to not empty 2. Go back to normal flow 3 | | |
| **Exceptions:** | System will not connect to the database and deliver information. If there are no internet connection. | | |
| **Includes:** | Steps 1-9 in the normal flow would be required for all types of edit appointment. | | |
| **Frequency of Use:** | On demand | | |
| **Special Requirements:** | N/A | | |
| **Assumptions:** | Officer understands English language. Officer has to have his/her user ID and password first. The dental clinics’ officer provides user ID and password. | | |
| **Notes and Issues:** | N/A | | |

User select login

User input userID and password

Display error message

Login fail

Login success

User select appointment page

User input appointment information in the form

Display error message

Invalid form

User views appointment information schedule in appointment page

User select edit function

Valid form

Figure 18: Edit appointment [AD-15]

|  |  |  |  |
| --- | --- | --- | --- |
| **Use Case ID:** | UC-20 | | |
| **Use Case Name:** | Delete appointments’ account | | |
| **Created By:** | Kanokwan Maneerat | **Last Updated By:** | Kanokwan Maneerat |
| **Date Created:** | 25/06/2014 | **Last Revision Date:** | 25/06/2014 |
| **Actors:** | Officer | | |
| **Description:** | Officer can delete appointment | | |
| **Trigger:** | Officer selects delete menu in all appointment page | | |
| **Preconditions:** | Officer is already logged into the application by using userID and password | | |
| **Postconditions:** | Appointment is delete from the system | | |
| **Normal Flow:** | 1. Officer selects delete menu 2. System shall connect with database 3. System delete dentist from appointments’ table in database 4. System retrieve appointments’ data including patientID,userID, appointment date, start time, end time, treatment, description of appointment from database 5. System provide appointments’ data from in appointment schedule interface for show list of appointment 6. Officer can view all appointments in appointment schedule page | | |
| **Alternative Flows:** | N/A | | |
| **Exceptions:** | System will not connect to the database and deliver information. If there are no internet connection. | | |
| **Includes:** | Steps 1-6 in the normal flow would be required for all types of delete appointment. | | |
| **Frequency of Use:** | On demand | | |
| **Special Requirements:** | N/A | | |
| **Assumptions:** | Officer understands English language. Officer has to have his/her user ID and password first. The dental clinics’ officer provides user ID and password. | | |
| **Notes and Issues:** | N/A | | |

Login fail

User input userID and password

User select login

Display error message

Login success

User select appointment page

User select delete function

Cancel

Delete success

User views appointment information schedule in appointment page

Figure 19: Delete appointments’ account [AD-16]

|  |  |  |  |
| --- | --- | --- | --- |
| **Use Case ID:** | UC-21 | | |
| **Use Case Name:** | Save the appointment to google calendar | | |
| **Created By:** | Worapun Wongkium | **Last Updated By:** | Kanokwan Maneerat |
| **Date Created:** | 17/04/2014 | **Last Revision Date:** | 25/06/2014 |
| **Actors:** | Officer | | |
| **Description:** | Officer can save appointment to the Google calendar | | |
| **Trigger:** | Officer selects view appointment page | | |
| **Preconditions:** | User is already logged into the application by using userID and password | | |
| **Postconditions:** | New appointment added google calendar and can view in Google calendar | | |
| **Normal Flow:** | 1. Officer selects view appointment schedule interface 2. System shall coonect with Google website 3. System shall connect with database 4. System shall retrieve appointments’ data including userID,pateintID,appointment date, start time, end time,treatment and description from the database 5. System shall provide appointments’ data in appointment schedule interface 6. Officer press save button to save appointment to google calendar 7. System shall retrieve appointments’ data including userID,pateintID,appointment date, start time, end time,treatment and description from the database in Google calendar 8. Officer click save for saving appointment in Google calendar 9. System shall add appointments’ data from Google calendar form to Google calendar 10. Officer can view all appointments in calendar interface which is from Google calendar in the website | | |
| **Alternative Flows:** | * 8a. Officer press submit button or cancel saving appointments’ data  1. Appointments’ data will not save to Google Calendar 2. Go back to normal flow | | |
| **Exceptions:** | System will not connect to the database, Google website and deliver information. If there are no internet connection. | | |
| **Includes:** | Steps 1-9 in the normal flow would be required for all types of delete appointment. | | |
| **Frequency of Use:** | On demand | | |
| **Special Requirements:** | N/A | | |
| **Assumptions:** | Officer understands English language. Officer has to have his/her user ID and password first. The dental clinics’ officer provides user ID and password. | | |
| **Notes and Issues:** | N/A | | |

User select login

User input userID and password

Login fail

Display error message

Login success

User select appointment page

User select save to google calendar function

User view appointment information in google calendar in google website

User confirm saving appointment

Cancel

Saving success

User views appointment information schedule in appointment page

Figure 20: Delete appointments’ account [AD-17]

|  |  |  |  |
| --- | --- | --- | --- |
| **Use Case ID:** | UC-22 | | |
| **Use Case Name:** | Display patients’ appointment for officer | | |
| **Created By:** | Worapun Wongkium | **Last Updated By:** | Kanokwan Maneerat |
| **Date Created:** | 17/04/2014 | **Last Revision Date:** | 25/06/2014 |
| **Actors:** | Officer | | |
| **Description:** | Officer can view patients’ appointment in the patient schedule interface | | |
| **Trigger:** | Officer selects patientID to view his/her appointment | | |
| **Preconditions:** | Officer is already logged into the application by using userID and password | | |
| **Postconditions:** | Display patients’ appointment in patient schedule | | |
| **Normal Flow:** | 1. Officer selects view patient list menu 2. System shall connect with database 3. System shall retrieve patients’ data including patinetID,firstname,lastname,age,gender,treatment,address,tel,and email from the database 4. System shall provide patients’ data in patient list interface 5. Officer select patientID to view his/her appointment 6. System shall retrieve appointments’ data of patient including userID,pateintID,appointment date, start time, end time,treatment and description from the database 7. System shall provide appointments’ data of patient in patient appointment schedule interface 8. Officer can view patients’ appointment in patient schedule page | | |
| **Alternative Flows:** | N/A | | |
| **Exceptions:** | System will not connect to the database, Google website and deliver information. If there are no internet connection. | | |
| **Includes:** | Steps 1-8 in the normal flow would be required for all types of display patients’ appointment for officer. | | |
| **Frequency of Use:** | On demand | | |
| **Special Requirements:** | N/A | | |
| **Assumptions:** | Officer understands English language. Officer has to have his/her user ID and password first. The dental clinics’ officer provides user ID and password. | | |
| **Notes and Issues:** | N/A | | |

User select login

User input userID and password

Login fail

Display error message

Login success

User select patient list menu

User select patientID in patient list page

User view patients’ appointment in patient appointment page

Figure 21: Display patients’ appointment for officer [AD-18]

|  |  |  |  |
| --- | --- | --- | --- |
| **Use Case ID:** | UC-23 | | |
| **Use Case Name:** | Display dentists’ appointment for officer | | |
| **Created By:** | Worapun Wongkium | **Last Updated By:** | Kanokwan Maneerat |
| **Date Created:** | 17/04/2014 | **Last Revision Date:** | 25/06/2014 |
| **Actors:** | Officer | | |
| **Description:** | Officer can view dentists’ appointment in the dentist schedule interface | | |
| **Trigger:** | Officer selects userID(dentist) to view his/her appointment | | |
| **Preconditions:** | Officer is already logged into the application by using userID and password | | |
| **Postconditions:** | Display dentists’ appointment in dentist schedule | | |
| **Normal Flow:** | 1. Officer selects view dentist list interface 2. System shall connect with database 3. System shall retrieve dentists’ data including usertID,firstname,lastname,tel, and email from the database 4. System shall provide dentists’ data in dentist list interface 5. Officer select userID(dentist) to view his/her appointment 6. System shall retrieve appointments’ data of patient including userID,pateintID,appointment date, start time, end time,treatment and description from the database 7. System shall provide appointments’ data of dentist in dentist appointment schedule interface 8. Officer can view dentists’ appointment in dentist schedule page | | |
| **Alternative Flows:** | N/A | | |
| **Exceptions:** | System will not connect to the database, Google website and deliver information. If there are no internet connection. | | |
| **Includes:** | Steps 1-8 in the normal flow would be required for all types of display dentists’ appointment for officer. | | |
| **Frequency of Use:** | On demand | | |
| **Special Requirements:** | N/A | | |
| **Assumptions:** | Officer understands English language. Officer has to have his/her user ID and password first. The dental clinics’ officer provides user ID and password. | | |
| **Notes and Issues:** | N/A | | |

User select login

User input userID and password

Login fail

Display error message

Login success

User select dentist list menu

User select usertID(dentist) in dentist list page

User view dentists’ appointment in dentist appointment page

Figure 22: Display dentists’ appointment for officer [AD-19]

|  |  |  |  |
| --- | --- | --- | --- |
| **Use Case ID:** | UC-24 | | |
| **Use Case Name:** | Display all appointments as list in website | | |
| **Created By:** | Worapun Wongkium | **Last Updated By:** | Kanokwan Maneerat |
| **Date Created:** | 17/04/2014 | **Last Revision Date:** | 25/06/2014 |
| **Actors:** | Officer | | |
| **Description:** | Officer can view all appointment as a list in website | | |
| **Trigger:** | Officer selects view appointment | | |
| **Preconditions:** | Officer is already logged into the application by using userID and password | | |
| **Postconditions:** | Display all appointments as list in website | | |
| **Normal Flow:** | 1. Officer selects view appointment list menu 2. System shall connect with database 3. System shall retrieve appointment’ data including usertID,patientID,appointment date,start time,end time,treatment, and description in appointment table from the database 4. System shall provide appointments’ data in appointment list in appointment schedule page 5. Officer can view all appointments in appointment schedule page | | |
| **Alternative Flows:** | N/A | | |
| **Exceptions:** | System will not connect to the database, Google website and deliver information. If there are no internet connection. | | |
| **Includes:** | Steps 1-5 in the normal flow would be required for all types of display all appointments as list in website. | | |
| **Frequency of Use:** | On demand | | |
| **Special Requirements:** | N/A | | |
| **Assumptions:** | Officer understands English language. Officer has to have his/her user ID and password first. The dental clinics’ officer provides user ID and password. | | |
| **Notes and Issues:** | N/A | | |

User select login

User input userID and password

Login fail

Display error message

Login success

User select appointment list menu

User view all appointments in appointment schedule page

Figure 23: Display dentists’ appointment for officer [AD-20]