**Dental Clinic Services System**

Software Requirement Specification

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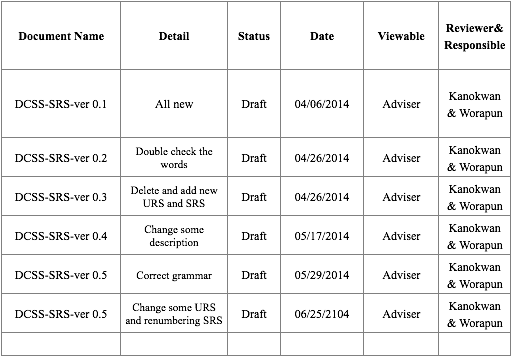
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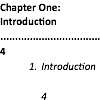
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**Software Requirement Specification**

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**Chapter One: Introduction**

1. **Introduction**

**1.1 Objectives**

Dental clinic service system consists of a web application and mobile application, which support ios7. It offers most of the services needed by dental clinics into the web application and mobile application. This application supports patients, officers or dentists of a dental clinic. Furthermore, it allows visitors to use. This application will reduce officers’ work and save patients’ time also. Patient can find information about the dental clinic, personal information, and others from it. For visitors who want to get a dental treatment from the clinic, they can make an appointment with a dentist 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 has described 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.
* Dental clinic services system provides for dental clinics’ 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 per son who already register to the system at the dental clinic. They will get patientID and password from the clinic to use the services in website and mobile phone. Patient uses patientID to login. Patient is 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 appointment in the dental clinic 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 website by using officerID and password
  + Officer can logout from the website
  + Officer can register for new patient and dentist
  + Officer can add appointment into the dental clinic schedule
  + Officer can edit appointment in the dental clinic schedule
  + Officer can delete appointment in the dental clinic schedule
* **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:

* + Dentist can login to the website by using dentistID 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 web application and mobile application for iOS. All user must have the Internet connection. Mobile devices must supports iOS version 7.

**1.5 Acronyms and Definitions Acronyms**

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**

1. **Overall Description**

**2.1 Product Perspective**

The Dental clinic services system is a mobile application base on iOS and web application. So this application helps patients save their time to contact with the dental clinic by providing features such as make an appointment, view upcoming appointment, and cost estimation. Help dentist to following up their patient, view and their appointment schedule. Also reduce works of officer by providing features such as use QR code to identify patient at the clinic, manage appointment for patient and dentist. This application is grouping most of dental clinics' services into one application.

**2.2 Product Features**

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

**2.3 Design and Implementation Constraints**

List of project constraints:

The application works on only iOS version7.

* The application requires the Internet connection.
* The application is available for the users who are already registered to the system and also who are not.

**Chapter Three: User Requirement**

**3. User requirement**

**3.1 Dental clinic services system URS**

**Schedule management**

URS-01: User can view patients’ appointment in mobile application

URS-02: User can view patients’ appointment in website

URS-03: User can view the dentist appointment in website

URS-04: User can view all appointment in mobile application

URS-05: User can view all appointment in website

**Appointment management**

URS-06: User can add new appointment into the database

URS-07: User can edit the appointment

URS-08: User can delete the appointment

URS-09: User can save the appointment to google calendar

**User registration and authentication**

URS-10: User can login to the mobile application

URS-11: User can login to the website

URS-12: User can logout from the mobile application

URS-13: User can logout from the website

URS-14: User can create an account for new patient

URS-15: User can edit patients’ information

URS-16: User can delete patients’ account

URS-17: User can create an account for new dentist

URS-18: User can edit dentists’ information

URS-19: User can delete dentists’ account

URS-20: User can view all patients’ account as a list

USR-21: User can view all dentists’ account as a list

**3.2 Dental clinic services system SRS**

SRS-01: System shall provide patients’ appointment schedule interface in mobile application

SRS-02: System shall query data from appointment table in database

SRS-03: System shall provide patients’ appointment schedule interface in website

SRS-04: System shall provide dentists’ appointment schedule interface in website

SRS-05: System shall provide all appointment schedule of dental clinic in mobile application

SRS-06: System shall provide all appointment schedule of dental clinic in website

SRS-07: System shall provide interface for make a new appointment

SRS-08: System shall add new appointment to appointment table in the database which contains patientID, dentistID, date, startTime, endTime, treatment, and description

SRS-09: System shall show error message “Please fill out this field” for any field that require to not empty

SRS-10: System shall update new appointments’ data to appointment table in the database

SRS-11: System shall delete appointment from appointment table in database

SRS-12: System shall open google calendar page to save the data to calendar

SRS-13: System shall provide the login interface for patient in mobile application

SRS-14: System shall validate by match patientID with the data in patient table in the database

SRS-15: System shall validate by match password with the data in patient table in the database

SRS-16: System shall validate by match userID with the data in clinic users’ table in the database

SRS-17: System shall show error message “Your login failed”

SRS-18: System shall save session after user login

SRS-19: System shall provide the main page interface for patient in mobile application

SRS-20: System shall show error message “Wrong username or password”

SRS-21: System shall save session after user login

SRS-22: System shall provide the login interface for patient in website

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

SRS-24: System shall provide the login interface for dentist in website

SRS-25: System shall provide the index page for patient

SRS-26: System shall provide the index page for officer

SRS-27: System shall provide the index page for dentist

SRS-28: System shall provide logout button for logout

SRS-29: System shall destroy session after user logout

SRS-30: System shall provide main home page interface in mobile application

SRS-28: System shall provide logout button for logout

SRS-29: System shall destroy session after user logout

SRS-31: System shall provide main home page interface in website

SRS-32: System shall provide interface for create a new account for patient

SRS-33: System shall add new patient to patients’ table in the database which contains patientID, password, firstname, lastname, age, gender, address, phone number, and email address

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

SRS-35: System shall query data from patients’ table in the database

SRS-36: System shall provide interface for edit patients’ information

SRS-37: System shall delete patient from patients’ table in database

SRS-38: System shall provide interface for create a new account for dentist

SRS-39: System shall add new dentist to clinic users’ table in the database

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

SRS-41: System shall query data from dentists’ table in the database

SRS-42: System shall delete patient from dentists’ table in database

SRS-43: System shall provide interface for show list of patient

SRS-44: System shall provide interface for show list of patient

**Chapter Four: System Features**

**4. System Features**

**4.1 User requirement specification with system requirement specification**

**URS-01: User can view patients’ appointment in mobile application**

SRS-01: System shall provide patients’ appointment schedule interface in mobile application

SRS-02: System shall query data from appointment table in database

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

SRS-02: System shall query data from appointment table in database

SRS-03: System shall provide patients’ appointment schedule interface in website

**URS-03: User can view the dentist appointment in website**

SRS-02: System shall query data from appointment table in database

SRS-04: System shall provide dentists’ appointment schedule interface in website

**URS-04: User can view all appointment in mobile application**

SRS-02: System shall query data from appointment table in database

SRS-05: System shall provide all appointment schedule of dental clinic in mobile application

**URS-05: User can view all appointment in website**

SRS-02: System shall query data from appointment table in database

SRS-06: System shall provide all appointment schedule of dental clinic in website

**URS-06: User can add new appointment into the database**

SRS-07: System shall provide interface for make a new appointment

SRS-08: System shall add new appointment to appointment table in the database which contains patientID, dentistID, date, startTime, endTime, treatment, and description

SRS-09: System shall show error message “Please fill out this field” for any field that require to not empty

**URS-07: User can edit the appointment**

SRS-02: System shall query data from appointment table in database

SRS-10: System shall update new appointments’ data to appointment table in the database

**URS-08: User can delete the appointment**

SRS-11: System shall delete appointment from appointment table in database

**URS-09: User can save the appointment to google calendar**

SRS-02: System shall query data from appointment table in database

SRS-12: System shall open google calendar page to save the data to calendar

**URS-10: User can login to the mobile application**

SRS-09: System shall show error message “Please fill out this field” for any field that require to not empty

SRS-13: System shall provide the login interface for patient in mobile application

SRS-14: System shall validate by match patientID with the data in patient table in the database

SRS-15: System shall validate by match password with the data in patient table in the database

SRS-16: System shall validate by match userID with the data in clinic users’ table in the database

SRS-17: System shall show error message “Your login failed”

SRS-18: System shall save session after user login

SRS-19: System shall provide the main page interface for patient in mobile application

**URS-11: User can login to the website**

SRS-14: System shall validate by match patientID with the data in patient table in the database

SRS-15: System shall validate by match password with the data in patient table in the database

SRS-16: System shall validate by match userID with the data in clinic users’ table in the database

SRS-20: System shall show error message “Wrong username or password”

SRS-21: System shall save session after user login

SRS-22: System shall provide the login interface for patient in website

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

SRS-24: System shall provide the login interface for dentist in website

SRS-25: System shall provide the index page for patient

SRS-26: System shall provide the index page for officer

SRS-27: System shall provide the index page for dentist

**URS-12: User can logout from the mobile application**

SRS-28: System shall provide logout button for logout

SRS-29: System shall destroy session after user logout

SRS-30: System shall provide main home page interface in mobile application

**URS-13: User can logout from the website**

SRS-28: System shall provide logout button for logout

SRS-29: System shall destroy session after user logout

SRS-31: System shall provide main home page interface in website

**URS-14: User can create an account for new patient**

SRS-09: System shall show error message “Please fill out this field” for any field that require to not empty

SRS-32: System shall provide interface for create a new account for patient

SRS-33: System shall add new patient to patients’ table in the database which contains patientID, password, firstname, lastname, age, gender, address, phone number, and email address

**URS-15: User can edit patients’ information**

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

SRS-35: System shall query data from patients’ table in the database

SRS-36: System shall provide interface for edit patients’ information

**URS-16: User can delete patients’ account**

SRS-37: System shall delete patient from patients’ table in database

**URS-17: User can create an account for new dentist**

SRS-09: System shall show error message “Please fill out this field” for any field that require to not empty

SRS-38: System shall provide interface for create a new account for dentist

SRS-39: System shall add new dentist to clinic users’ table in the database

**URS-18: User can edit dentists’ information**

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

SRS-41: System shall query data from dentists’ table in the database

**URS-19: User can delete dentists’ account**

SRS-42: System shall delete patient from dentists’ table in database

**URS-20: User can view all patients’ account as a list**

SRS-35: System shall query data from patients’ table in the database

SRS-43: System shall provide interface for show list of patient

**USR-21: User can view all dentists’ account as a list**

SRS-41: System shall query data from dentists’ table in the database

SRS-44: System shall provide interface for show list of patient

**4.2 Use Case Diagram**

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

**Patient**

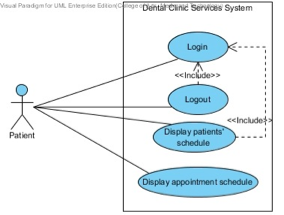


Figure 1: Dental clinic services system patient use case diagram

**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**

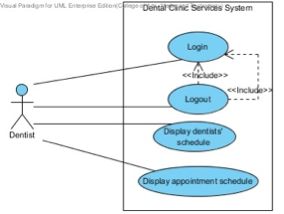


Figure 3: Dental clinic services system dentist use case diagram

**4.3 Use case description**

**4.3.1 Use case description for patient**

