SMART PRESCRIPTION APPLICATION

Project Plan

By

Mr. Natthakan Kaeokanpai 552115020
Mr. Phithiwat Sitthitun 552115051

Department of Software Engineering
College of Arts, Media and Technology
Chiang Mai University

Project Advisor

_____

Dr.Prompong Sugunnasil

Document History

Document Name	Version	Status	Date	Viewable	Editable	Responsible
Documents						
Smart Prescription Application _Project Plan	Project Plan _V1.0	Reviewed	July 10th 2016	NAT,PHI, PROM	NAT,PHI	NAT,PHI
Smart Prescription Application _Project Plan	Project Plan _V2.0	Released	July 30th 2016	NAT,PHI, PROM	NAT,PHI	NAT,PHI

Acronym

NAT = Natthakan Kaeokanpai
PHI = Phithiwat Sitthitun
PROM = Prompong Sugunnasil

Table of contents

Chapter One | Introduction

1.1 Identification

This project plan is the document for planning, scheduling activities and evaluating overall of the project so that the project will complete as successfully as possible in spite of all risks. The project plan documents the plan before starting the project. When the project starts, the project plan is used to track the progress and monitor whether the project follows the plan.

1.2 Project Scope

Smart prescription application consists of a web application and a mobile application. Smart prescription application requires a web application for creating a patient‘s profile and allergy report by a doctor and the Smart prescription application require a mobile application to generate and scan the QR code on a mobile phone by a pharmacist.

The features of the web application consist of:

Feature#1: Prescription system
Feature#2: Account management system
Feature#3: Authentication system
Feature#5: Report allergy system
Feature#6: Allergy drug summary report system

The features of the mobile application consist of:

Feature#4: Prescription verification system

Chapter Two | Overall Description

2.1 Product Perspective

"Smart prescription application" is an android application and web application that uses the electronic prescription in type of QR code that use for doctor, patient, pharmacist, and FDA. Smart prescription application require web application create the prescription of patient by doctor. Android application creates QR code from prescription of patient and scan QR code by pharmacist. Pharmacist can get the prescription with name and detail of drug that doctor give to patient on android application.

"Smart prescription application" can also can collect and report information of all allergy of patient to the Food and Drug Administration, Ministry of Public Health organization or (FDA) for observing unusually dispensation that have been found in Thailand.

2.2 Product Features

From the architecture of our project with schedule we separated the whole project of develops application according to this. The description is shown below:

Feature#1: Prescription system
Feature#2: Account management system
Feature#3: Authentication system
Feature#4: Verify prescription system
Feature#5: Report allergy system
Feature#6: Allergy drug summary report

2.3 User Classes and Characteristics

The intended users for this application. They have to know basic of how to use android application to scan QR code.

2.4 Operation Environment

- Internet
- Laptops

1. Asus X550DP-DS101
   AMD A-Series A10-5750M (2.50GHz) 8GB
   Memory 1TB
   HDD AMD Radeon
   Windows 8 64-Bit

- Mobile phone: Android Operating System with camera

1. Asus zenfone 4.5
   Android 4.4.2 (KitKat)
   Processor: Intel Atom Z2520DualCore
   CPU Speed: 1.2 GHz
   Memory 8GB (Internal)
   RAM 1GB

Chapter Three | Management Procedures

3.1 Project Team Structure

Team	Activity
Mr. Natthakan Kaeokanpai Mr. Phithiwat Sitthitun	Project Proposal
	Project Requirements
	Project Plan
	Software Architectural Design
	Software Detailed Design
	Implementation
	Testing

3.2 Monitoring and Controlling Mechanisms

3.2.1 Project Meeting

Participants	Roles
Dr. Prompong Sugunnasil	Project Advisor
Mr. Natthakan Kaeokanpai	Development team member
Mr. Phithiwat Sitthitun	Development team member

Chapter Three | Quality Planning

4.1 ISO 29110 for Very Small Entity (VSE)

ISO 29110 is a guide applies to a very small entity, enterprise, organization, department or project up to 25 people dedicated to software development. The guide provides project management and software implementation process which integrate practice based on the selection of ISO/IEC 12207 systems and software engineering-software life cycle process and ISO/IEC 15289 software engineering-software life cycle process guideline for the content of software life cycle process information product (documentation) standards elements.

4.1.1 Project management process

The purpose of the software management process is to establish and carry out in a systematic way the task of the software implementation project which allows complying with the project's objectives in the expected quality.

Selected process

3.1.1.1 Project planning process
3.1.1.2 Project plan execution process
3.1.1.3 Project assessment and control process
3.1.1.4 Project closer process

4.1.2 Software implementation process

The purpose of the software implementation process is the systematic performance of the analysis, design, construction, integration and test actives for new or modified software products according to the specified requirements.

Selected process

3.1.2.1 Software implementation process
3.1.2.2 Software requirement analysis process
3.1.2.3 Software architectural design process
3.1.2.4 Software construction process
3.1.2.5 Software integration process and test process
3.1.2.6 Software delivery process

4.2 Review/Responsibility

No	Step	Review	Responsibility
1	Requirement gathering	Project Proposal	NAT,PHI
2	Project Planning	Project Plan	NAT,PHI
3	Requirement Analysis and Specification	Software Requirement Specification	NAT,PHI
4	Architecture and Detailed Design	Software Design Document	NAT,PHI
5	Software Implementation	Coding	NAT,PHI
6	Unit Testing and Software Testing	Test Plan, Test Record	NAT,PHI
7	Project Monitoring and Control	Traceability Record	NAT,PHI

4.3 Testing

No	Test	Responsibility
1	Unit Testing	NAT,PHI
2	System Testing	NAT,PHI

4.4 Quality Factors

No	User Requirement Specification Name	Quality Factor
URS-1:	Doctors can view a doctor home page on the web application.	Correctness Reliability Testability
URS-2:	Doctors can create a patient's profile on the web application by inputting personal id, name, surname, prescription and username.	Correctness Reliability Testability
URS-3:	Doctors can update a patient's profile on the web application by application by input personal id, name, surname, prescription and username.	Correctness Reliability Testability
URS-4:	Doctors can delete a patient's profiles on the web application.	Correctness Reliability Testability
URS-5:	Doctors can search patient's profiles on the web application by using personal id, name, or surname.	Correctness Reliability Testability
URS-6:	Doctors can view a patient's profiles on the web application.	Correctness Reliability Testability
URS-7:	Doctors can view a list of patient's profiles on the web application	Correctness Reliability Testability
USR-8:	Administrators can view an admin home page on the web application.	Correctness Reliability Testability
URS-9:	Administrators can create a user's profile on the web application by inputting name, surname, username, password, confirm-password and position.	Correctness Reliability Testability
URS-10:	Administrators can update a user's profile on the web application by inputting name, surname, username, password, confirm-password and position.	Correctness Reliability Testability
URS-11:	Administrators can delete a user's profiles on the web application.	Correctness Reliability
URS-12:	Administrators can search a user's profile on the web application by using name, surname, or username.	Correctness Reliability

		Testability
URS-13:	Administrators can view a user's profiles on the web application.	Correctness Reliability Testability
URS-14:	Administrators can view a list of users on the web application	Correctness Reliability Testability
URS-15:	Doctors, Administrations, and FDAs can login to the web application by using username and password.	Correctness Reliability Testability
URS-16:	Doctors, Administrators, and FDAs can logout from the web application.	Correctness Reliability Testability
URS-17:	Patients can login to the mobile application by using username and password.	Correctness Reliability Testability
URS-18:	Patients can logout from the mobile application.	Correctness Reliability Testability
URS-19:	Patients can view the QR code on the mobile application.	Correctness Reliability Testability
URS-20:	Pharmacists can scan the QR code on the mobile application.	Correctness Reliability Testability
URS-21:	Pharmacists can add the time of dispensation to the patient's profile on the mobile application.	Correctness Reliability Testability
URS-22:	Doctors can create an allergy report on the web application by inputting personal id, name, surname, and allergy drug.	Correctness Reliability Testability
URS-23:	Doctors can update an allergy report on the web application by inputting personal id, name, surname, and allergy drug.	Correctness Reliability Testability
URS-24:	Doctors can delete an allergy reports on the web application.	Correctness Reliability Testability
URS-25:	Doctors can search an allergy report on the web application by using personal id, name, or surname.	Correctness Reliability Testability
URS-26:	Doctors can view an allergy drug reports on the web application.	Correctness Reliability Testability
URS-27:	Doctors can view a list of allergy drug reports on the web application.	Correctness Reliability Testability

URS-28:	FDAs can view a FDA home page on the web application.	Correctness Reliability Testability
URS-29:	FDAs can view an allergy reports on the web application.	Correctness Reliability Testability
URS-30:	FDAs can view a list of allergy reports on the web application.	Correctness Reliability Testability

Chapter Five | Schedule

5.1 Project Schedule

Process 1: Proposal and Project plan
Process 2:
Feature#1: Prescription system
Description: This feature supports the doctor to manage patient's profile. The doctor can create, delete, search, update and view patient's profile on the web application.
User: Doctor
Detail:

1: Doctors can view a doctor home page on the web application.
2: Doctors can create a patient's profile on the web application by inputting personal id, name, surname, prescription and username.
3: Doctors can update a patient's profile on the web application by application by input personal id, name, surname, prescription and username.
4: Doctors can delete patient's profiles on the web application.
5: Doctors can search patient's profiles on the web application by using personal id, name, or surname.
6: Doctors can view patient's profiles on the web application.
7: Doctors can view a list of patient's profiles on the web application.

Feature#2: Account management system
Description: This feature supports the administrator to manage user's profile.
The administrators can create, delete, search, update, and view user's profile on the web application.
User: Administrator
Detail:

1: Administrators can view an admin home page on the web application.
2: Administrators can create a user's profile on the web application by inputting name, surname, username, password, confirm-password and position.
3: Administrators can update a user's profile on the web application by inputting name, surname, username, password, confirm-password and position.
4: Administrators can delete user's profiles on the web application.
5: Administrators can search a user's profile on the web application by using name, surname, or username.
6: Administrators can view user's profiles on the web application.
7: Administrators can view a list of users on the web application.

Feature#3: Authentication system
Description: This feature supports accessing to the system and exiting from the system Doctor, FDA, patients, pharmacists and administrator can login to the system and log-out from the system.
User: Doctor, FDA, patients, pharmacists and administrators
Detail:

1: Doctors, Administrations, and FDAs can login to the web application by using username and password.
2: Doctors, Administrators, and FDAs can logout from the web application.
3: Patients can login to the mobile application by using username and password.
4: Patients can logout from the mobile application.

Feature#4: Verify prescription system
Description: This feature supports the patient to view QR code on the mobile application and pharmacist can verify QR code by scan QR code function and can notify the time of dispensation to patient's prescription on the mobile application.
User: Patient and pharmacist
Detail:

1: Patients can view the QR code on the mobile application.
2: Pharmacists can scan the QR code on the mobile application.
3: Pharmacists can notify the time of dispensation to patient's profile on the mobile application.

Feature#5: Report allergy system
Description: This feature supports doctor to report a drug allergy to FDA.
User: Doctor
Detail:

1: Doctors can view a doctor home page on the web application.
2: Doctors can create an allergy report on the web application by inputting personal id, name, surname, and allergy drug.
3: Doctors can update an allergy report on the web application by inputting personal id, name, surname, and allergy drug.
4: Doctors can delete allergy reports on the web application.
5: Doctors can search an allergy report on the web application by using personal id, name, or surname.
6: Doctors can view allergy drug reports on the web application.
7: Doctors can view a list of allergy drug reports on the web application.

Feature#6: Allergy drug summary report
Description: This feature support the FDA can view the allergy report.
User: FDA
Detail:

1: FDAs can view a FDA home page on the web application.
2: FDAs can view allergy reports on the web application.
3: FDAs can view a list of allergy reports on the web application.

.

FDA*= Food and Drug Administration, Ministry of Public Health organization

5.2 Project Milestone

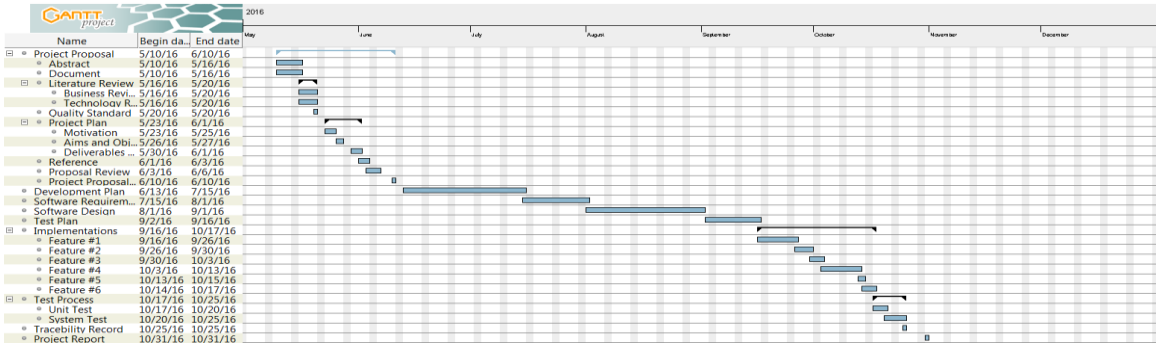

Figure 1: Project Milestone

Chapter Six | Software Configuration Management

6.1 Software Configuration Management

Software Configuration Management or Software Control Managements the task of tracking and controlling changes in the software, part of the larger cross-disciplinary field of configuration management. SCM practices include revision control and the establishment of baselines. If something goes wrong, SCM can determine what was changed and who changed it. If a configuration is working well, SCM can determine how to replicate it across many hosts.[1]

6.2 Software configuration Item Table

No.	Item	Filename	File Type	Owner	Path	Baseline Version
1	Project Plan	Smart Prescription Application _Project Plan_V2.0	.doc	NAT,PHI	Smart Prescription Application /Project Plan	2.0
2	Software Requirement Specification	Smart prescription application _Software Requirement Specification _V2.0	.doc	NAT,PHI	Smart Prescription Application /Software Requirement Specification	2.0
3	Software Design	Smart prescription application _Software Design _V2.0	.doc	NAT,PHI	Smart Prescription Application /Software Design	2.0
4	Test Plan	Smart prescription application _Test Plan_V2.0	.doc	NAT,PHI	Smart Prescription Application /Test Plan	2.0
5	Test Record	Smart prescription application _Test Record _V2.0	.doc	NAT,PHI	Smart Prescription Application /Test Record	2.0
6	Traceability Record	Smart prescription application _Traceability Record _V2.0	.doc	NAT,PHI	Smart Prescription Application /Traceability Record	2.0

Chapter Seven | Estimate Effort and Cost

We develop this application with open source tools, so the cost of this project quite a few. Use only textbook and document.

Chapter Eight | Reference

[1] Definition of Software_configuration_management
https://en.wikipedia.org/wiki/Software_configuration_management

[2] Definition of Use Case
http://searchsoftwarequality.techtarget.com/definition/use-case

[3] Definition of Activity Diagram
https://en.wikipedia.org/wiki/Activity_diagram

[4] Definition of Use Case Diagram
http://www.uml-diagrams.org/use-case-diagrams.html