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# **Software Requirements Specification**

**For**

## **CPENews**

**Version 1.0 approved**

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## 1.0 Introduction

This software requirements specification (SRS) document covers a brief introduction consisting of this document's purpose, scope, the definitions, acronyms, and abbreviations of the terms used in this document.

### **1.1 purpose**

The purpose of this document is to give a detailed description of the requirements for the "CPENews" software. It will explain the purpose, feature of system, interface and interactions with other external applications. This document is intended to be proposed to attend in software engineering course, a customer and the developers of the system.

### **1.2 scope**

The "CPENews" is a mobile application which show information in department of computer engineering for visitors. The application was designed to understand easily for use. The information in "CPENews" is about computer competition, admission, activities, upcoming event in department and time schedule which show event in real time on widescreen and mobile application. The application can download for free from either a mobile phone application store or similar services.

Administrators can verify and manage information using the web-portal. This information will act as the bases for the search results displayed to the user. An administrator also uses the web-portal in order to administer the system and keep the information accurate.

Furthermore, the software need internet to fetch and display results. All system information is maintained in a database, which is located on a web-server.

### **1.3 Definitions, acronyms, and abbreviations**

Term	Definition
User	Someone who interacts with the mobile phone application
Admin/Administrator	System administrator who is given specific permission for managing and controlling the system.
Web-Portal	A web application which present special facilities for admin.

Database	Collection of all the information monitored by this system.
Application Store	An installed application on mobile phone which helps user to find new compatible applications with mobile phone platform and download them from Internet
Stakeholder	Any person who has interaction with the system who is not a developer.

#### 1.4 Overview

The next chapter, the Overall Description section. This document gives an overview of the functionality of the product, system interaction with other systems, introduces different types of stakeholders and their interaction with the system. Further, the chapter also mentions the system constraints and assumptions about the product.

The third chapter provides the requirements specification in detailed terms and a description of the different system interfaces. Different specification techniques are used in order to specify the requirements more precisely for different audiences.

## 2.0 Overall description

### 2.1 User Classes and Characteristics

This application is about giving information for people who interesting in this department -computer engineering-. So that, Firstly, we have to have an Administrator who is given specific permission for managing and controlling the system. Second, the user of this application is professor or teacher that can check a teaching timetable and an available room. And next is Students can follow announcing from the department and check the timetable. Lastly, visitors can follow the information and announcement about admission and computer competition.

### 2.2 Operating Environment

This application was developed to run on android operating system requirement version 4.2.0 (Jellybean) and higher. And didn't need any software component.

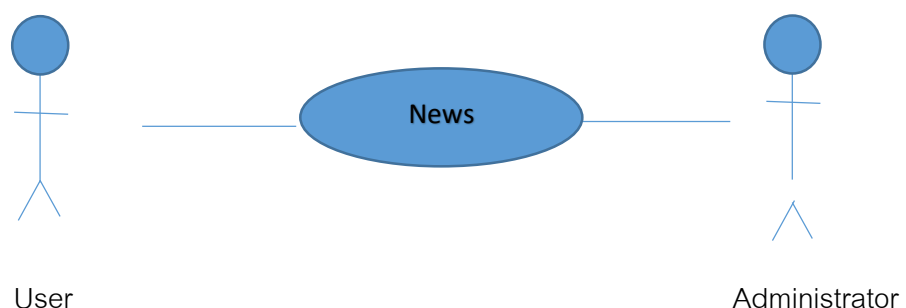
In this website is need HTML version 4.0 and higher.

### 2.3 Functional Requirements Specification

This section outlines the use cases for each of the active user separately. The user has many function for user requirement. And Administrator can update the application.

#### 2.3.1. Use case: news

Diagram:



**Brief Description:** The user and Administrator can read the news of department.

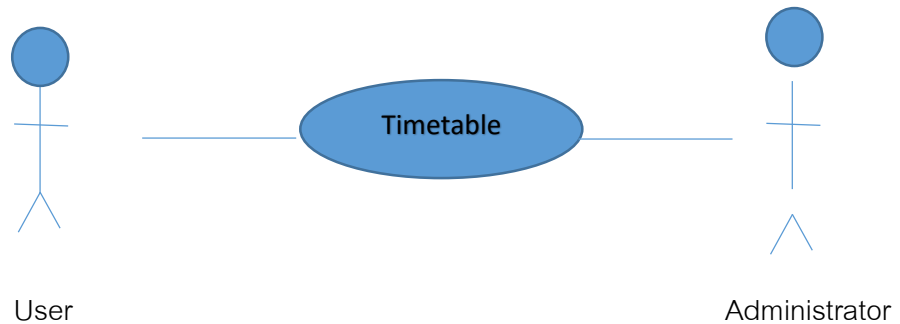
**Initial Step-By-Step Description:**

1. User and Administrator Choose the *news* button
2. The system displays the news of department to the User.
3. User and Administrator select news for description.

4. The system presents the description of the new User.

### 2.3.2. Use case: Timetable

Diagram:



**Brief Description:** User and Administrator can read the timetable of activity in the department.

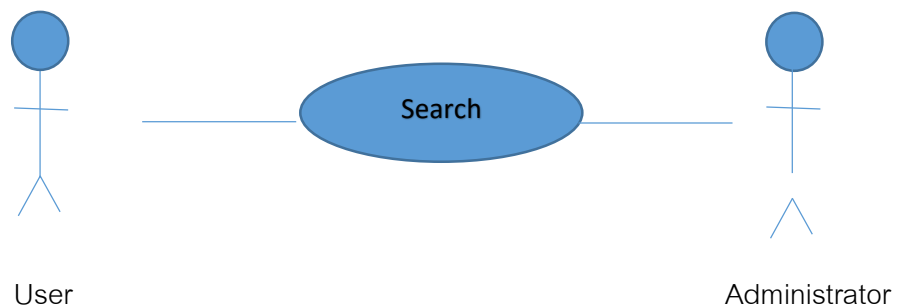
\*User can choose the type of table. Such as Day type, week type, month type.

**Initial Step-By-Step Description:**

1. User and Administrator Choose the *Timetable* button
2. The system displays the timetable of activity in the department to the User.
3. User and Administrator select the activity in timetable for see the description.
4. The system presents the description of the activity to User.

### 2.3.3. Use case: Search news

Diagram:



**Brief Description:** User and Administrator can search news in the department.

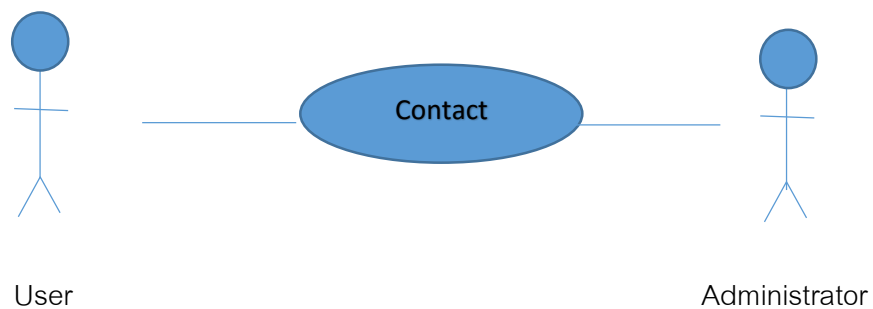
**Initial Step-By-Step Description:**

1. User and Administrator Input text in *Textbox* and Press *Search* button

2. The system displays the title of activity in the department that just searched.
3. User and Administrator select the news for see the description.
4. The system presents the description of the activity to User.

#### 2.3.4 Use case: Contact

Diagram:



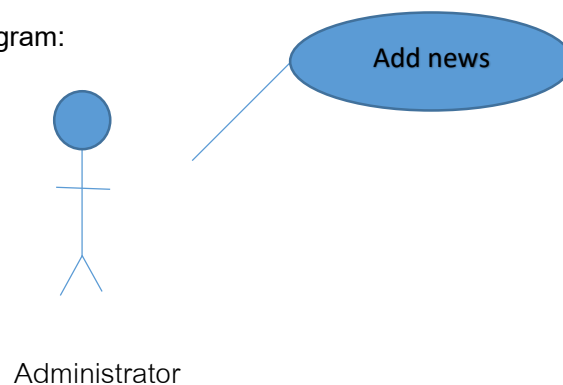
**Brief Description:** The user can read the information for contact the department.

**Initial Step-By-Step Description:**

1. User Choose the *Contact* button
2. The system displays the information of the department to the User.

#### 2.3.4. Use case: Add news (On website only)

Diagram:



**Brief Description:** The Administrator can add the news in the department.

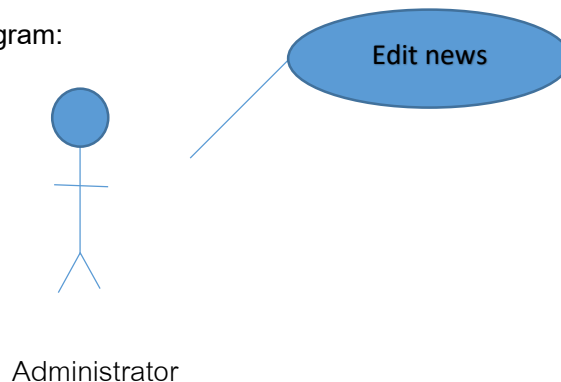
**Initial Step-By-Step Description:**

1. Administrator Choose the *Add* button

2. The system displays the textbox for input the information of Title, Description and there are date time box for input the start date and end date. And there are select box to choose the category and browse button for upload the picture.
3. Administrator input the data and upload the picture. And then Administrator selects the *Submit* button to upload the data to the database.
4. The system presents the news page again to show the news that just added.

#### 2.3.5. Use case: Edit news (On website only)

Diagram:



**Brief Description:** The Administrator can edit the news in the department.

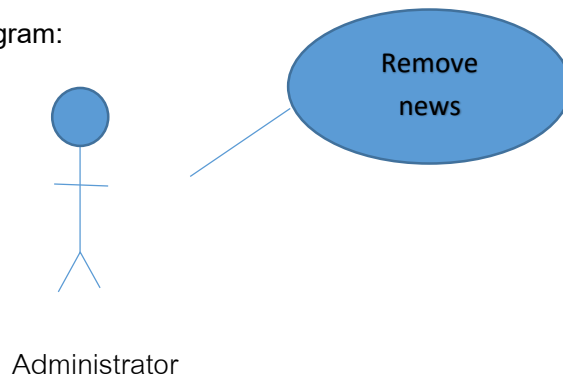
**Initial Step-By-Step Description:**

1. Administrator Choose the *Edit* button
2. The system displays the textbox for input the information of Title, Description and there are date time box for input the start date and end date. And there are select box to choose the category and browse button for upload the picture.
3. Administrator input the data and upload the picture. And then Administrator selects the *Submit* button to upload the data to the database.
4. The system presents the news page again to show the news that just edited.



### 2.3.6. Use case: Remove news (On website only)

Diagram:



**Brief Description:** The Administrator can remove the news in the department.

**Initial Step-By-Step Description:**

1. Administrator Choose the *Remove* button.
2. The system presents the news page again that without the news that just removed.

## 2.4 Assumptions and Dependencies

An application's speed will be on speed of internet capability. The access will be on server such as when server is down user can't access to application. Accuracy and reliability of information that be shown will be on admin. So, admin must screen and review before update information. Furthermore, information that will be updated by admin is based on faculty professor and faculty officer.

### 3.0. Requirements Specification

This section contains of the functional and quality requirements of the system. It gives a detailed description of the system and all its features.

#### 3.1 External interface Requirements

This section provides a detailed description of the system. It also gives a description of the hardware, software and communication interfaces and provides basic prototypes of the user interface.

##### 3.1.1 User interfaces

When the application is opened, It show news page which upcoming event or activities (see [Figure 1](#)) here the user can choose the news by category and search on the top menu. The application will show the detail of news in [Figure2](#).

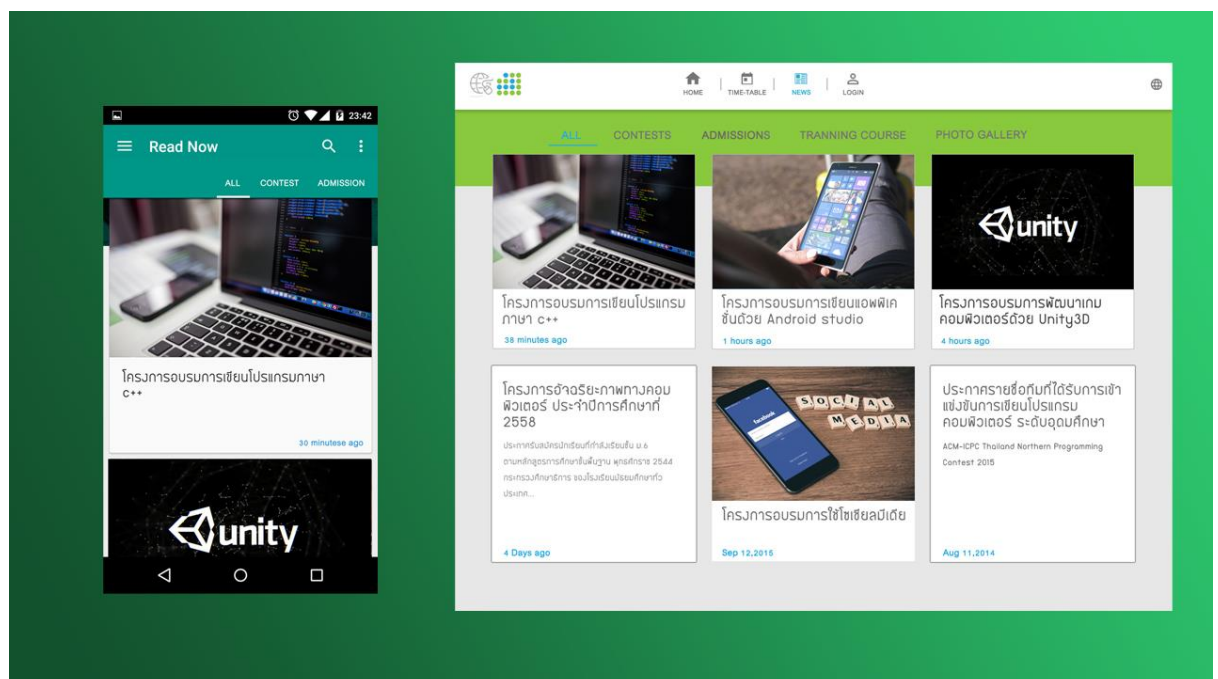


Figure 1.

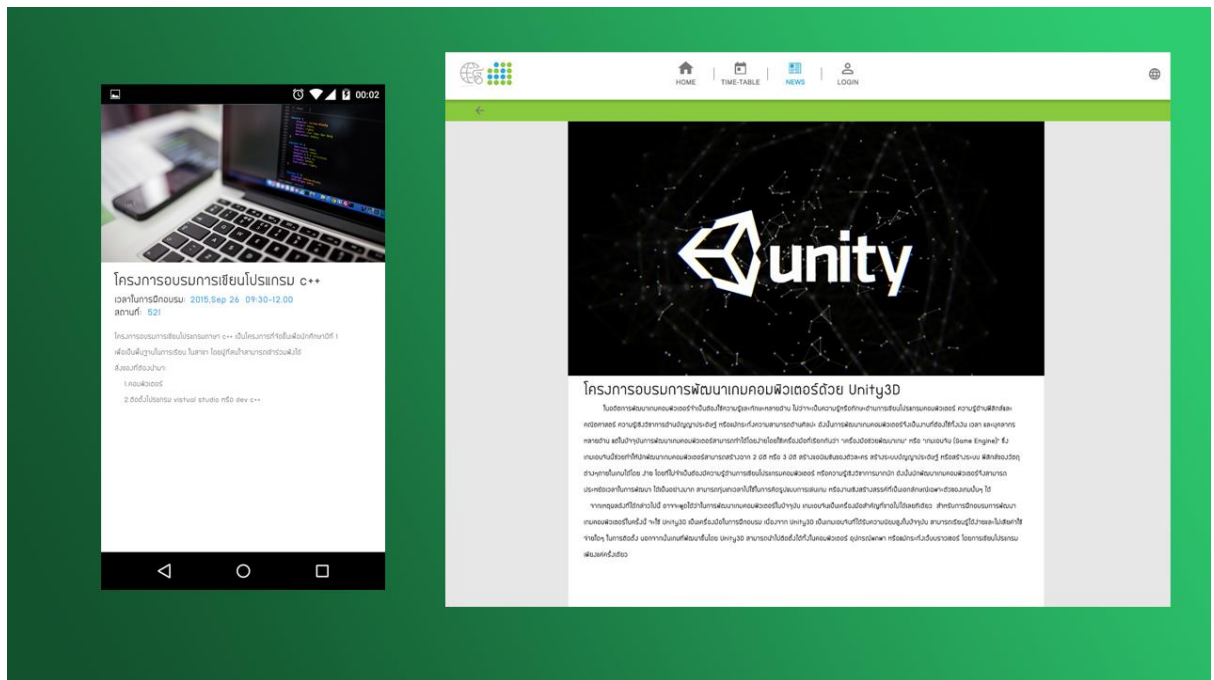


Figure 2.

The user can choose time-table menu and contact detail in sidebar. In time-table menu will show table of event or activities in real time see in Figure 3. When user choose event or activity from the table the detail will show.

Administrators interact with the system through a web-portal. The administrators in order to login. Then function add, edit and delete will show in menu. In add function is similar to edit function.

ALL ROOM EVENT			
ACTIVITIES IN CERRENT TIME			ROOM
08:00	Opertion Systems (ISNE)	08:00-09:30	501
	อบรมการเขียน Andriod โดย Andriod studio	08:00-12:00	521
	Logic (CPE)	08:00-09:30	502
09:00	Algorithm for information and network engineering (ISNE)	09:30-11:00	310
	การสอบโครงการอัจฉริยะภาพทางคอมพิวเตอร์ ประจำปีการศึกษาที่ 2559	09:00-14:00	309
	การสอบโครงการอัจฉริยะภาพทางคอมพิวเตอร์ ประจำปีการศึกษาที่ 2559	09:00-14:00	308

Figure 3

### 3.1.2 Hardware interfaces

Since neither the mobile application nor the web portal have any designated hardware, it does not have any direct hardware interfaces. The hardware connection to the database server is managed by the underlying operating system on the mobile phone and the web server.

### 3.1.3 Software interfaces

The mobile application communicates with the database in order to get the information about News, see [Figure 1](#). The communication between the database and the web portal consists of operation concerning both reading and modifying the data, while the communication between the database and the mobile application consists of only reading operations.

### 3.1.4 Communications interfaces

The communication between the different parts of the system is important since they depend on each other. However, in what way the communication is achieved is not important for the system and is therefore handled by the underlying operating systems for both the mobile application and the web portal.

## 3.2 Functional Requirement

### 3.2.1 News

- News will present about the activity, event, competition and admission in the form of article, so each news will have the picture (Optional) and information. Start date and End date also include in the article too.
- For read News, The application can select by categories for convenient and easy to read.

### 3.2.2 Timetable

- Timetable was designed for show the activity, course and event in current time.
- Timetable has good features in readable. Because the timetable will show the many of activity in the screen and each activity it will separate type by color.

- Timetable can switch into day form and week form. In each activity is based on Room in department.
- The old activity on timetable will be removed automatically.

### **3.2.3 Search**

- Search has two mode, Search from News and Search from Timetable.
- Search from News can search by word from topic and description of activity.
- Search from Timetable can search by Room, Title, Course Name and Tag. If Search from Room it will show timetable of room in current date and the application can see the week mode of Room. In searching Title and Course Name, There are room, date, time and description shown in form of table.