



Gyalpozhing College of Information Technology
Royal University of Bhutan



ITW202 MOBILE APPLICATION

Assignment 2

SECTION: A

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MyClock

Purpose

Aim : The aim of this project is to develop a mobile clock app where the users can keep track of their time, set time to complete a particular task and to set alarms to wake up early in the morning.

The **Objectives :** of this project are :

1. To build a mobile clock app with more features other than just viewing the current time.
2. To enable setting alarms on the android phones.
3. To enable features such as countdown of time and setting times (hours, minutes and seconds) to complete a particular task.

Scope

User Scope : This project aims to provide an android clock application to the students of Gyalpozhing College of Information Technology.

System Scope

- **Clock :** The users will be able to view the current time.
- **Alarm :** The users will be able to set alarms through this application.
- **Timer :** This feature is used for setting the number of hours, minutes and seconds to count down these time till the number zero is reached.
- **Stop Watch :** This feature is used for measuring the amount of time that elapses between its activation and deactivation.

Functional Requirements

This clock application will be an Android based application which will include the following features:

- **Clock** : This feature will be the main page/ home page of this application, which means that the clock feature will be displayed when this application is opened. This clock feature does not require the users to perform any task other than to view the current time of the day or night.
- **Alarm** : This alarm feature allows the users to set alarm. Users can set multiple alarms. To set the alarm, the user has to first set the alarm time and then select the am or pm format. The users will be alerted about the alarm with the help of a sound/ringtone. The users can set an alarm, stop an alarm and delete an alarm in this application.
- **Timer** : This feature allows to countdown the given(by the users) period of time by seconds. The setting can be done by the number of hours, minutes and seconds to count down these time till the number zero is reached. In between the countdown, the user can pause, resume and cancel the countdown.
- **Stop Watch** : This feature allows to record the period of time, for example; time taken to complete a task. when the start button on this feature is clicked, the timer will start from seconds to minutes and then hours till the timer is stopped. The user will be able the pause, resume and reset the stopwatch according to their wish. This feature measures the amount of time that elapses between its activation and deactivation.

Non-functional Requirements

The non-functional requirements of the project are as follows :

- Performances : This clock application entitled as, "MyClock" will be very fast in response to the users. As this application is an offline based application, the time taken to open the app, view the features and to make use these features will be very less. This application will be very efficient.
- Portability and compatibility : This application can be downloaded and used in any version of android phones regardless of the shape and size of the android phone. This clock app will not be dependent on any other application and therefore it will not conflict with other applications and processes.
- Reliability, Availability and Maintainability : This application will be available for the users for 24/7. A user will be able to view the time, set alarm, set timer and use stopwatch anytime of day and night. As this application is a simple application with no big files and data to be stored therefore, there is very less possibility of failures and damage leading to easy maintenance.
- Security : This application does not require storing of personal information and is a offline based app therefore, it is very secure.
- Usability : This application will be easy to use for the users as this application contains user friendly interfaces and the users will not be facing any problems while using this application.

Software Requirements

The software requirements for this project are :

- Operating System : Ubuntu or Windows
- Android Studio version 4 and above
- Android SDK(Software Development Kit) version 25 and above
- Java Development Kit (JDK) version 8 and above
- SQLite version 3.25.3
- DB Browser

Hardware Requirements

The hardware requirements for the developers are as follows :

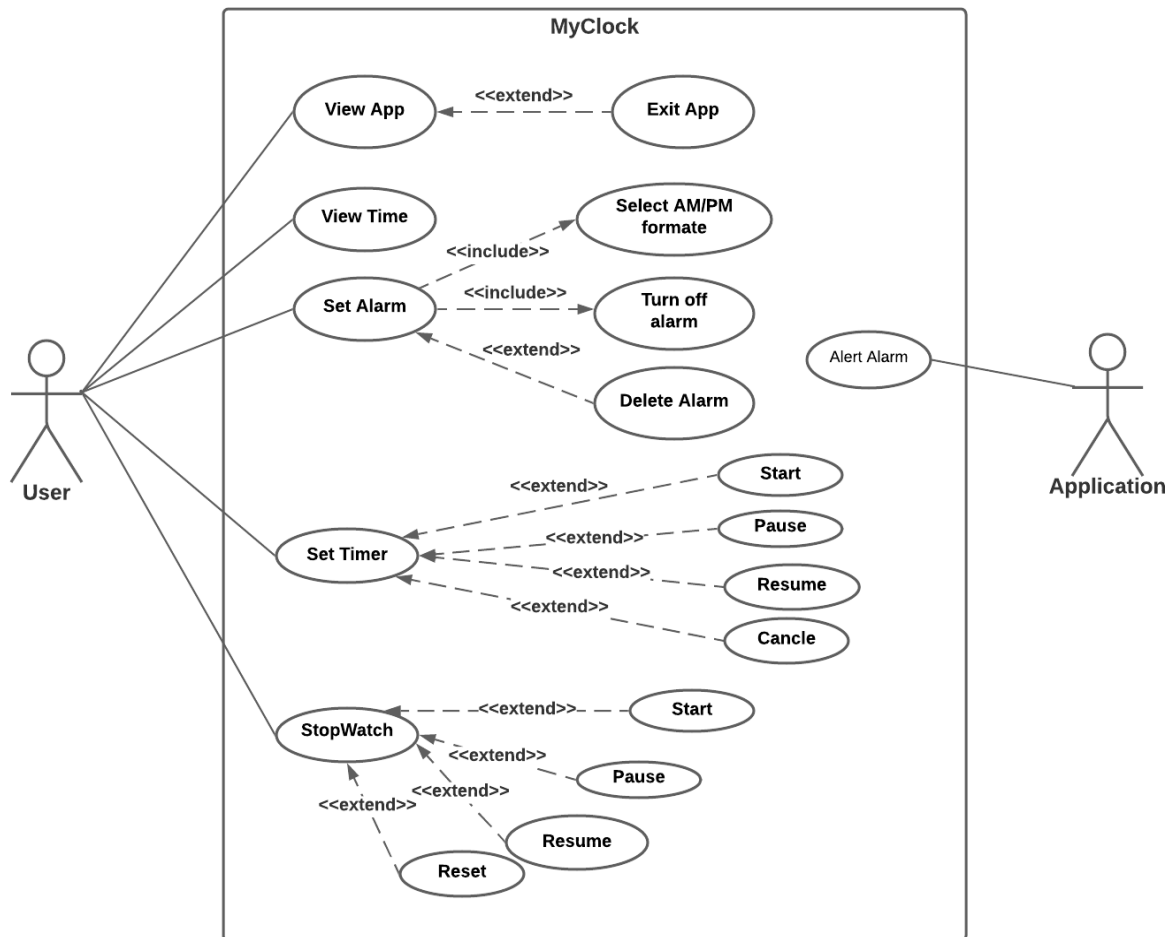
- RAM : 4-8 GB
- 2.00GHz*4 Processors

The hardware requirements for the users are as follows :

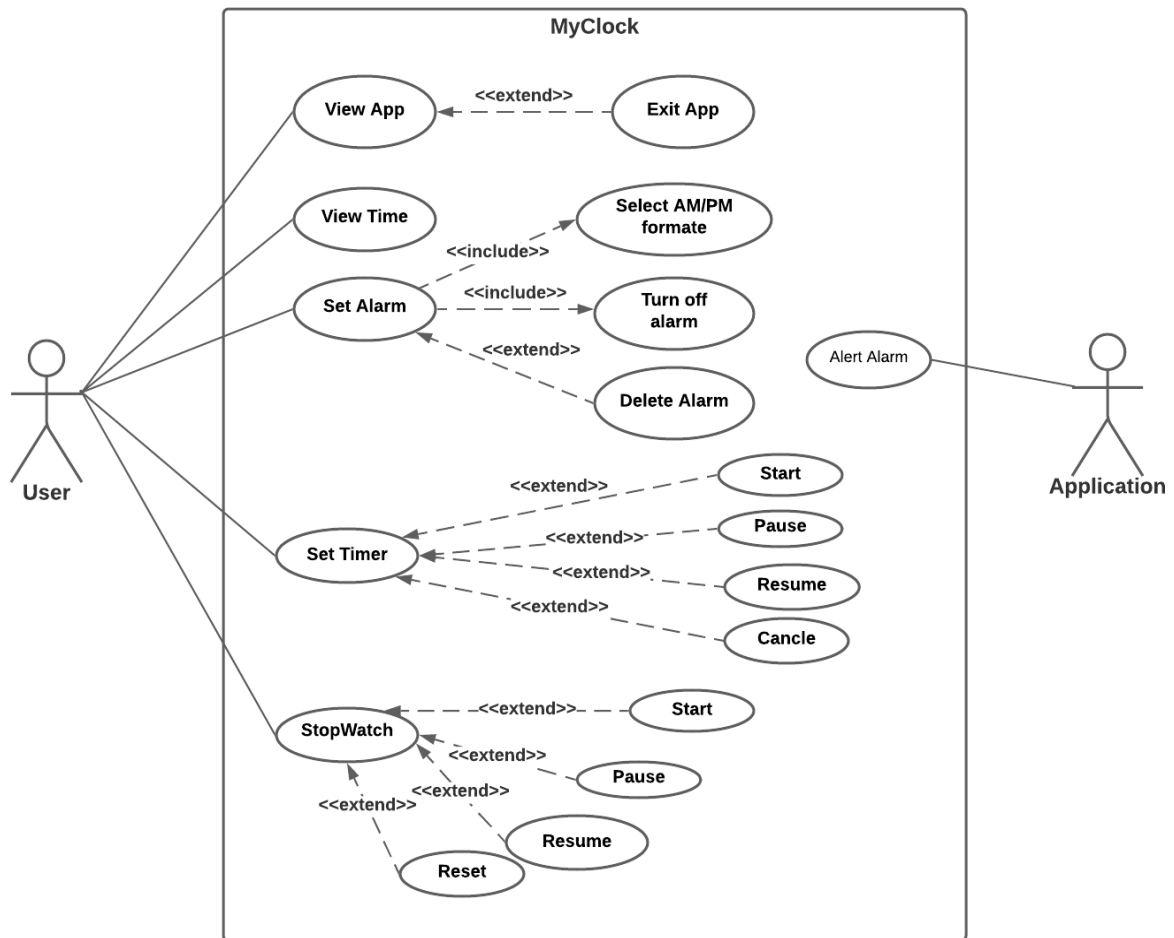
- An android phone

System Designs

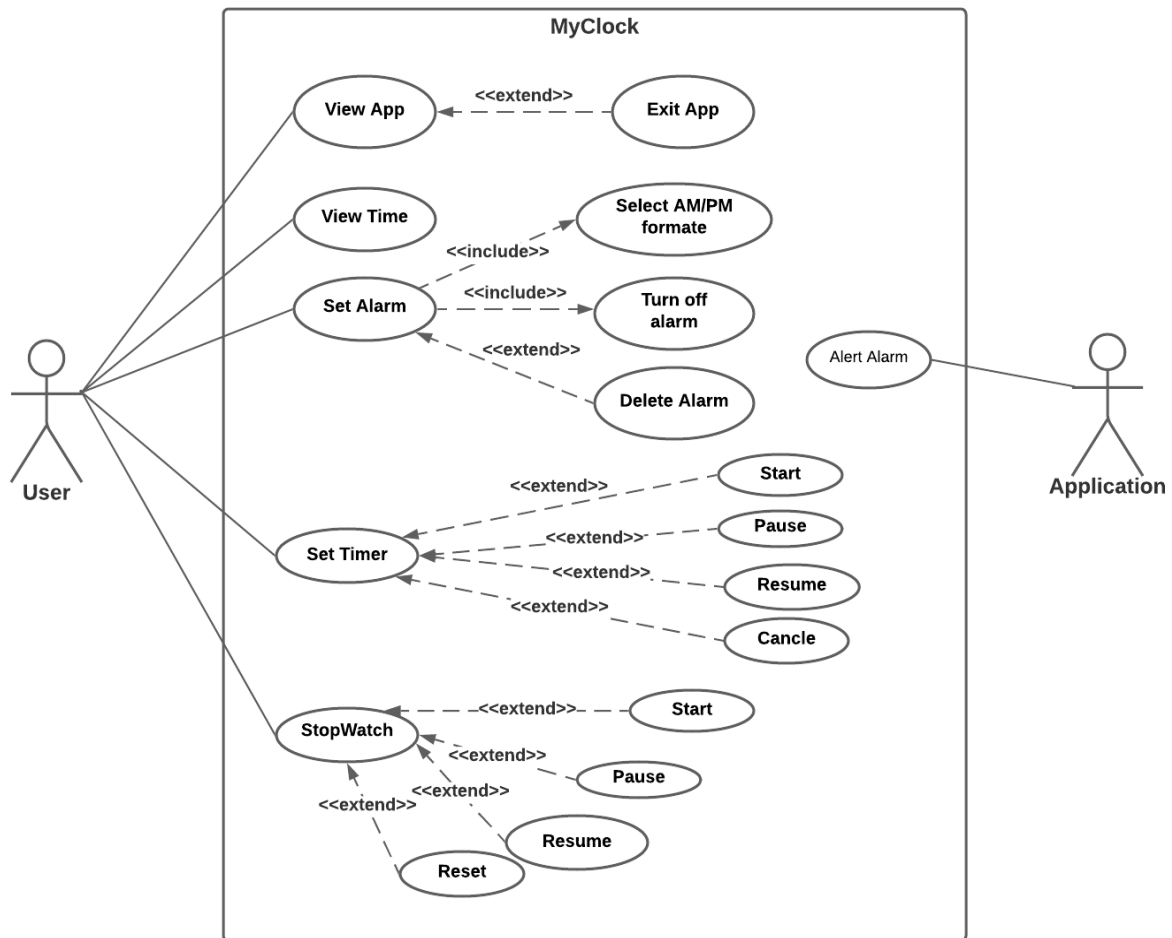
a. Use Case Diagram



b. Sequence Diagram



c. Entity Relational Diagram



d. Relational Schema Diagram

