Final Report Team #8

Spring 2018

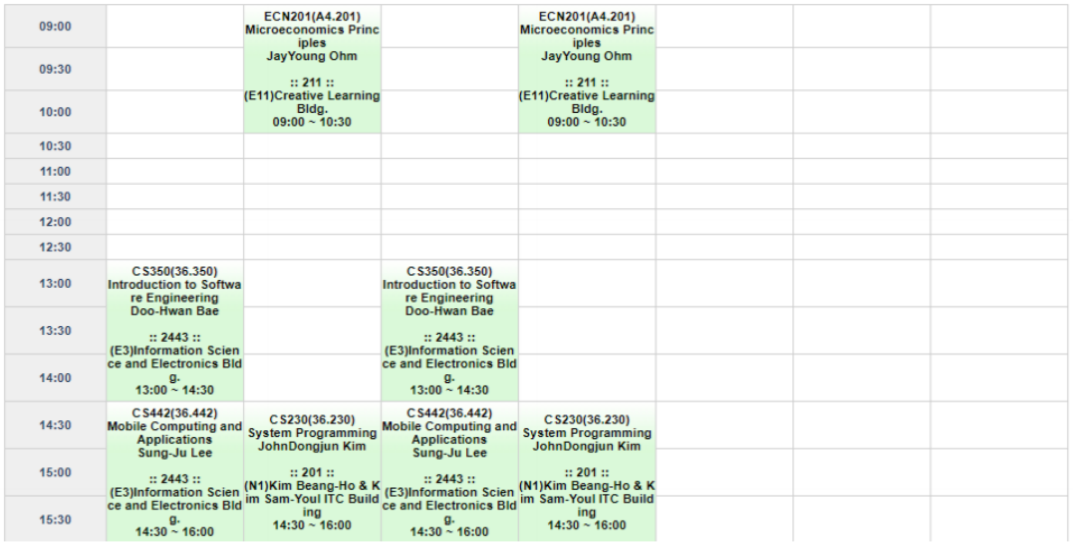
Alexandre Allani, Shin Seung Hun, Kuntae Park, Bilgehan Bingol

June 7, 2018

Contents

1 Project Overview

Here, we developed an Android mobile application to help KAIST students managing their schedules. This application will bring important improvements over the currently existing portal KAIST timetable (**See Figure 1**). First of all, this timetable is not designed for mobile devices. Secondly, the default timetable is fixed. That is, the user can only see his/her weekly classes, but not extraordinary events like homeworks, extra classes, etc. You can see this in the figure below. To follow all events, user has to follow KLMS as well, but KLMS does not have a timetable and following multiple sources is tiresome. So, we are creating a more integrated and interactive timetable where users can see all their events day by day, also where the users can create and share new events.



09:00		ECN201(A4.201) Microeconomics Princ iples JayYoung Ohm :: 211 :: (E11)Creative Learning Bldg. 09:00 ~ 10:30		ECN201(A4.201) Microeconomics Princ iples JayYoung Ohm :: 211 :: (E11)Creative Learning Bldg. 09:00 ~ 10:30			
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15:00							
15:30							

Figure 1: Kaist TimeTable

Product features are listed as below:

- Every user can only see his/her schedule, for this they log in to the system with their Ids and passwords.
- On the front side, our project has a clean and easy to use GUI (graphical user interface) where user can see all his/her events. Behind, there is a database that holds event information for each user.
- Users can modify their schedules, they can create and share new events, or delete some non-compulsory events from their timetable. But coursework related events cannot be deleted. Professors have additional capabilities in our timetable compared to the students.
- Changes to event/class schedules are automatically updated to the schedules of all the subscribed people.

2 System Design

2.1 System Architecture

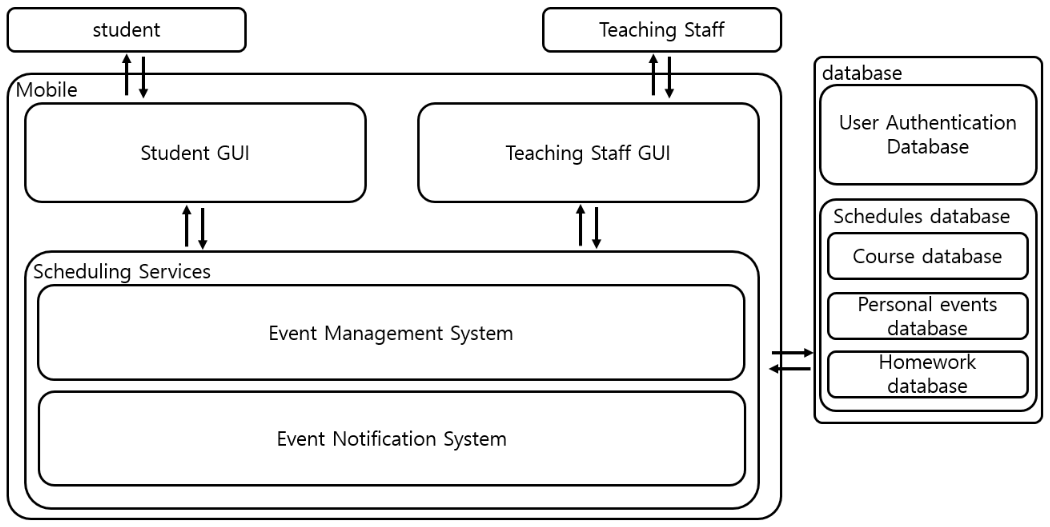
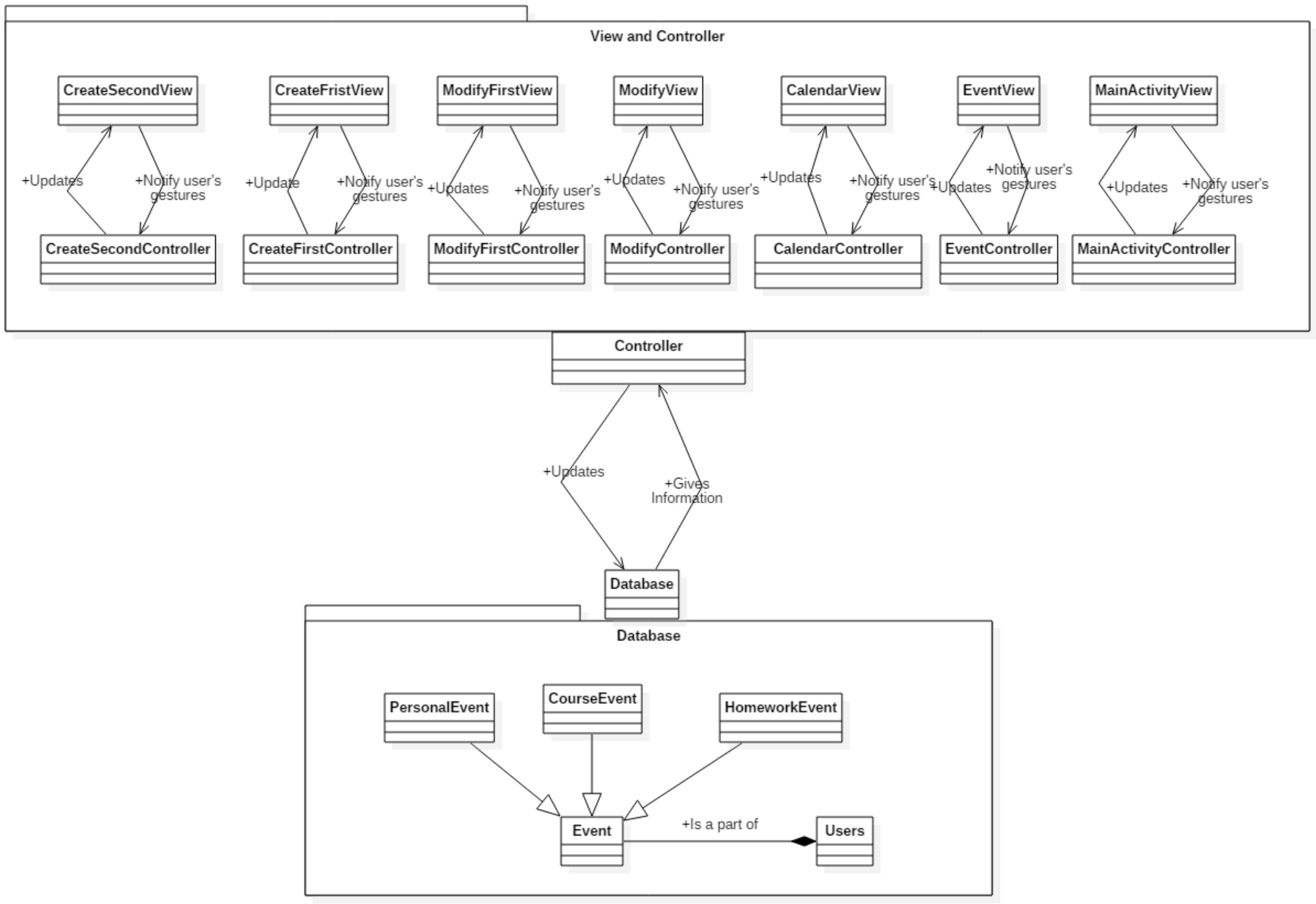


Figure 2: Overview of our application

This architecture is the one we used to implement our system. Although, Students and Teaching staff will mostly share the same GUI, there are some part of the GUI that are specific to the teaching staff (such as add a student to the database, delete one, create a class event etc.). That's why there are two different GUI in our architecture.
As far as the events are concerned, there is only one Event Management System, which will handle all creation(s)/modifcation(s) of events. At the begining, we were thinking of two different management system, one for the teaching staff, and one for students. But it appeared to be much more simpler to handle both at the same time, since there are still event, and same actions are done on them (delete an event, create one doesn't require to discriminate the type of event).
Finally, the database is divided in two distinct part, one that will contain, all the informations related to user (Id, password, list of events), and one that will contain the characteristics of each event.
Let's take the student side. Basically, the user (student), will make an action on the GUI. This action will be transfered to the Event Management System. The Event Management System, will ask information to the database. According to them, it will decide what to display on the screen.

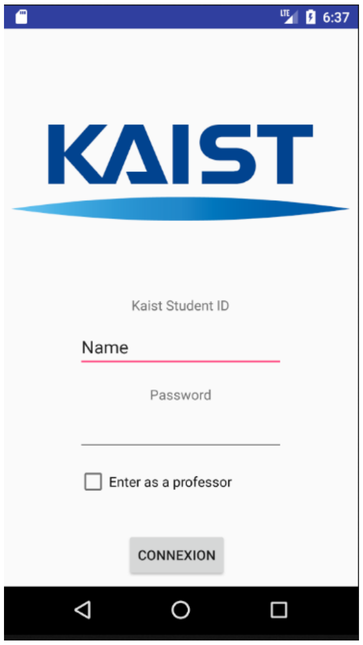
2.2 Overall Class Diagram

The figure bellow describe our overall class Diagram

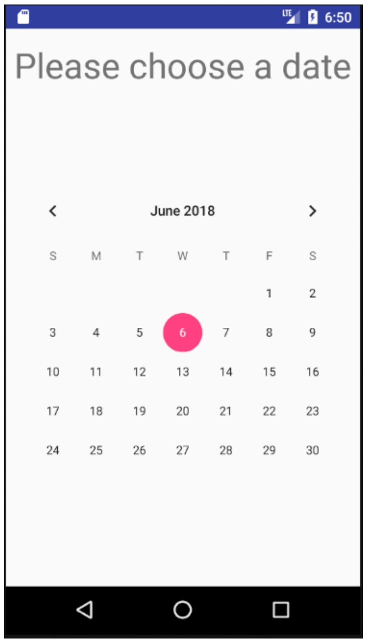


Each view, represents in Android Studio a layout, and the model part of our system is the database which contains, 3 types of event and a user class. I did not included two classes, called EventDecorator and Appdatabase. EventDecorator because it was just a way to decorate the calendarView, and Appdatabase represents the database by itself.
As far as the model is concerned, we kept our projet on the MVC model. Views are updated by Controllers which receive notification from Views. And the model, will be the "place" where relevant data are stored, and which the Controller will use to update the Views. Here we consider that MainActivity is the Connection View.
As you will see on **Section 3**, each View correspond to one screen that will be updated by the controller. There are two screens to modify an event, two screens to create an event, one screen to actually see the schedule (CalendarView), and one screen to see the events.
During the implementation key features such as, creation of a user, removal of a user, don't have dedicated views, but mere pop-ups that appear according to what has been sent to the controller.

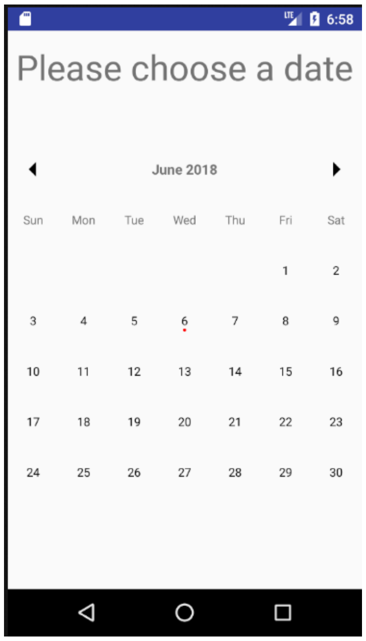
3 Simple User Manual



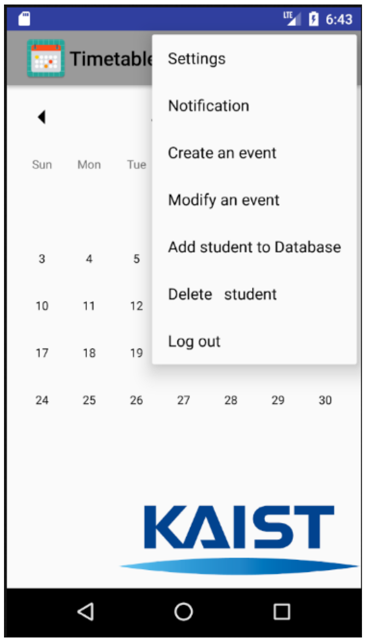
1/ Connection Screen : you enter your KAIST ID, and your password. If you are a professor, you check the box.



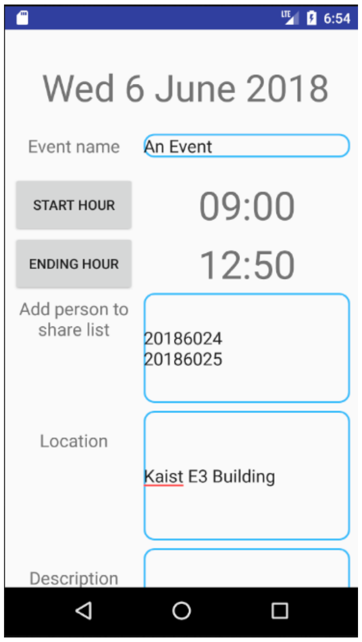
3/Creation event (first) :By clicking on "Create event" on the Main Screen, you will go to this page. Select the date of the event you want to create



4/Modify event (first) : By clicking on "Modify event" on the Main Screen, you will go to this page. Select the date of the event you want to modify



2/ Main Screen : you can select the menu from here, and also see the events


Wed 6 June 2018

Event name: An Event

START HOUR 09:00

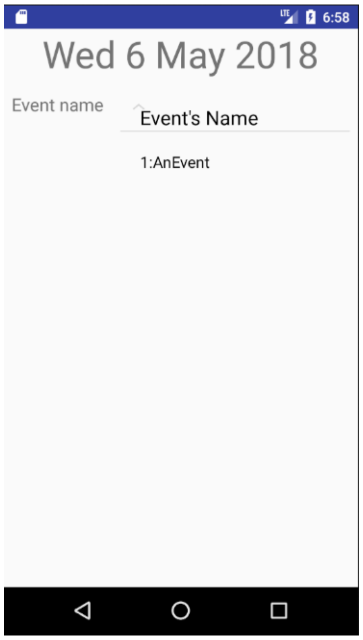
ENDING HOUR 12:50

Add person to share list: 20186024 20186025

Location: Kaist E3 Building

Description

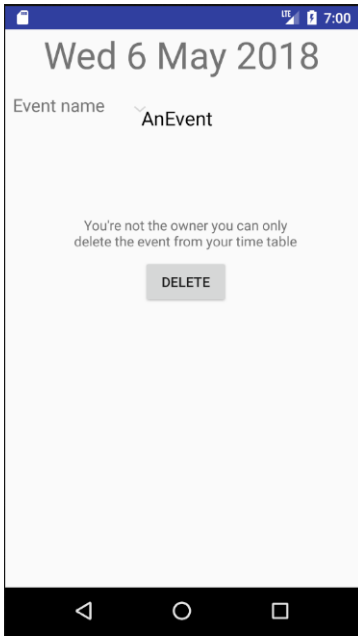
3 bis/Create event (second) : You can write down what is related to your event


Wed 6 May 2018

Event name: Event's Name

1:AnEvent

4 bis/Modify event (owner) : You can modify what you want to modify here (if you are the owner of the event

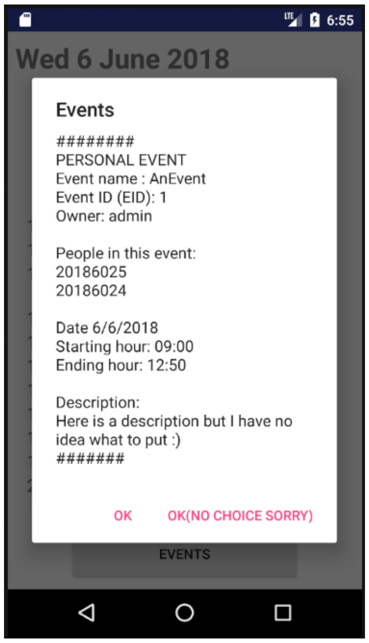

7:00

Wed 6 May 2018

Event name AnEvent

You're not the owner you can only delete the event from your time table

4 ter/Modify event (not owner) : If you are not the owner of the event that you want to modify, you can only delete the event from your timetable.


6:55

Wed 6 June 2018

Events

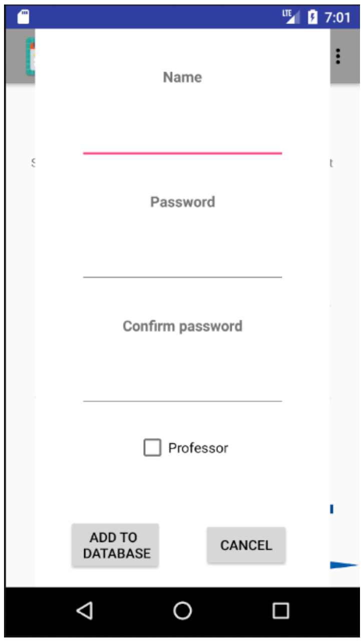
########
PERSONAL EVENT
Event name : AnEvent
Event ID (EID): 1
Owner: admin

People in this event:
20186025
20186024

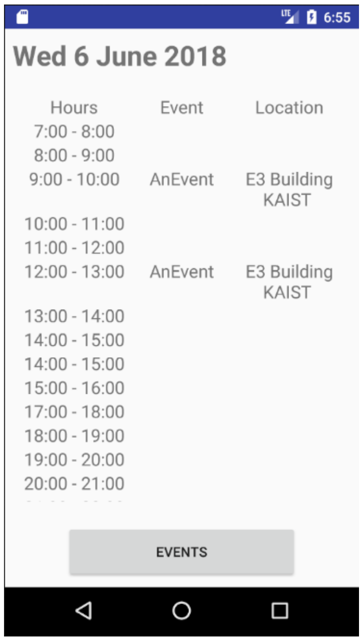
Date 6/6/2018
Starting hour: 09:00
Ending hour: 12:50

Description:
Here is a description but I have no idea what to put :)
#######

5 bis/ If you click on the event button, on the Event Screen, you will see all the information displayed.


7:01

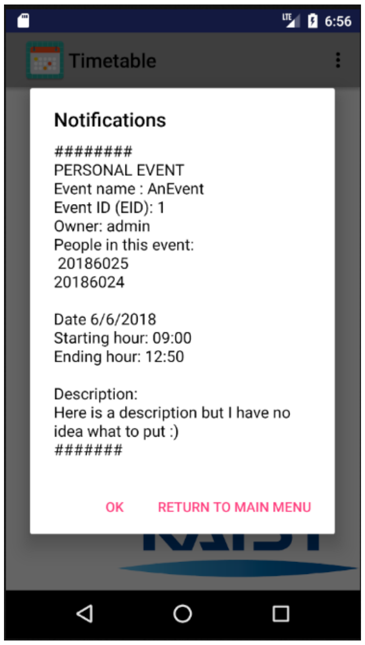
7/ By clicking on "Add student to database" on the Main Screen. you will go to this page. This is available only for professors. You can enter students or other professor informations.


6:55

Wed 6 June 2018

Hours	Event	Location
7:00 - 8:00		
8:00 - 9:00		
9:00 - 10:00	AnEvent	E3 Building KAIST
10:00 - 11:00		
11:00 - 12:00		
12:00 - 13:00	AnEvent	E3 Building KAIST
13:00 - 14:00		
14:00 - 15:00		
14:00 - 15:00		
15:00 - 16:00		
17:00 - 18:00		
18:00 - 19:00		
19:00 - 20:00		
20:00 - 21:00		

5/Event Screen : By clicking on a date on the Main Screen, you will go to this page. You will find a summary of the different event happening on this date


6:56

Timetable

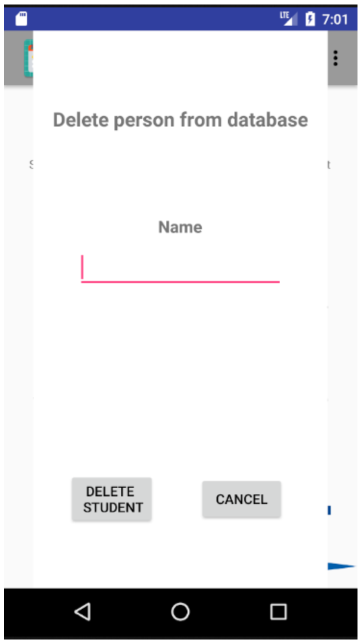
Notifications

########
PERSONAL EVENT
Event name : AnEvent
Event ID (EID): 1
Owner: admin
People in this event:
20186025
20186024

Date 6/6/2018
Starting hour: 09:00
Ending hour: 12:50

Description:
Here is a description but I have no idea what to put :)
#######

6/ By clicking on "Notification" on the Main Screen, you will go to this page. It sums up, all the event of the current day.


7:01

Delete person from database

8/ By clicking on "Delete student" on the Main Screen, you will go to this page. This is only available for professors. You can enter student or professor IDs.

4 Roles and Responsabilities

Editor of this document : Alexandre Allani

Redactors:

- Project Overview : Bilgehan Bingol
- System Architecture: Shin Seung Hun and Alexandre Allani
- System Design, Overall Class Diagram : Alexandre Allani
- Simple User Manual : Alexandre Allani

Roles:

- Architecture Designer : Shin Seung Hun
- Model Designer : Alexandre Allani
- Database Designer : Alexandre Allani
- GUI Designer : Bilgehan Bingol and Alexandre Allani
- Developper and tester : Alexandre Allani

5 Acknoledgements

We thank the team behind this GitHub : https://github.com/prolificinteractive/material-calendarview This library was used to have colorful calendarViews, and most importantly, calendarViews that can be modified.
Concerning litterature : https://developer.android.com/ and stackoverFlow to understand how we could make a database on an Android Smartphone.