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Android Based Academic Scheduler

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Abstract— *In today's world of rat race and deadlines, it's very hard to keep track on all our day-to-day activities. Since everyday students are bombarded with new tasks and assignments, missing their due dates is the most common stress inducing factor among the students. So the need arises to have a follow up system for efficiently managing these activities.*

In this paper, we have attempted to create an application which will help students to avoid these mistakes. Academic Scheduler can record all the upcoming lectures, assignments, projects, exams, journals, etc. Apart from this, the application also helps the students to create and share notes that were given by professors. This paper introduces system concept and design principles of Academic Scheduler with emphasis on modular implementation of this android application.

Keywords— *Scheduler, Reminder, Notes, Attendance Tracker, TimeTable*

I. INTRODUCTION

Since mobile phones are popular with students and can be used in all walks of life, we have attempted to create an application that the students can easily access through their smartphones. Although there are many mobile platforms available in the market these days, Android OS is the most user-friendly and programmer friendly platform. Android is an Operating System supporting a large number of applications in smart phones. These applications make life more comfortable and advanced for the users. One such application that we are discussing here in the paper is the Academic Scheduler. This application mainly aims to minimize the difficulties that the students face in managing and planning their academic life. The user of this application will be the student itself and should have the application installed on the smart phone/android device.

II. FEATURES

Academic Scheduler is an application that will provide the various functionalities:

- Student can feed their class timetable or the exam schedule using this app. and obtain the necessary information as and when required.
- Informs the student about upcoming lectures, exams, assignments etc.
- Students can take notes in the form of text, images, audio, video, presentations .
- As the deadline of projects and assignments approaches students get reminders.
- It can also be used to keep a track of co-curricular activities like cultural festivals, sports competitions etc.
- It can automatically mute the mobile phone during all lectures.
- Helps students to track their attendance.

This application uses a server to connect with the user of the application. The server comes with an in-built backend database which will store all the necessary data required to access the application. The application has a simple and a self-explanatory interface, thus making it easy to use and navigate through different modules

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III. SYSTEM ARCHITECTURE

Modules:

Timetable Module

This part of the application displays the stored courses and their respective timings. At the start of the application, the user is asked to feed the format of the timetable as per requirements.

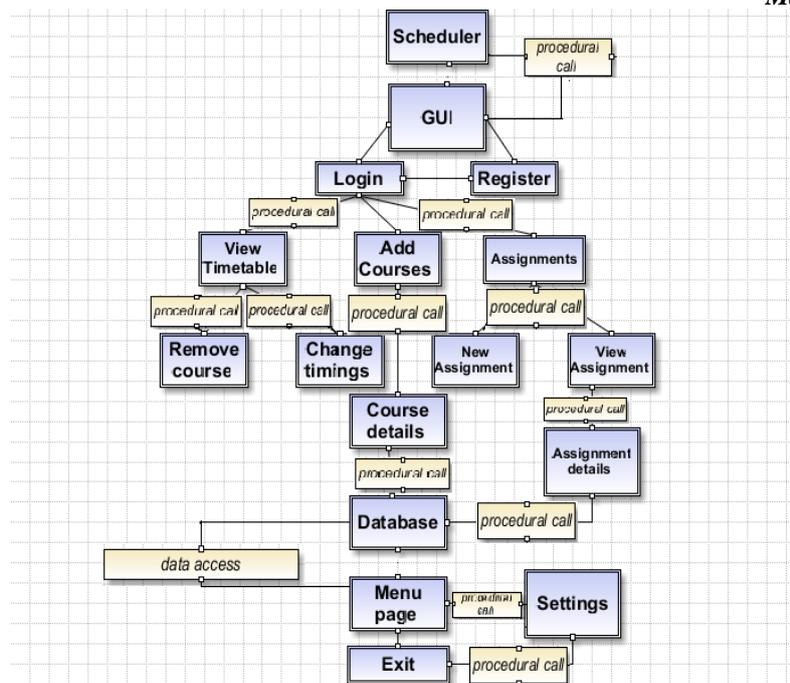


Fig 1: System Architecture

Course Module

Here, the user is required to feed the subject name, id and course timings day wise. The user can select multiple timings at a time to feed into the timetable.

Assignments Tracking

This module allows the user to keep a track of the assignments and projects so that the deadline is not bypassed. The user has to initially provide all the required details of the assignments/project/journal including the due date and important notes if any. As and when the user logs in to the application, he can view all the details stored and hence keep a track on their deadlines.

Alerts Module

As and when the user feeds a course into the timetable, an alert will be set regarding the same. The user will be prompted with an alarm at the respective timing of the lecture. He can put it on snooze if he wants by selecting clicking on the desired button. This will keep the students constantly informed of the upcoming lectures. Other than this, the user can create customized alerts for tasks and save notes for meetings if required. Also, there is an option to repeat the alarm on multiple days of the week [5].

Main Menu

This is a list of options on the main page of the application from where the user can access any of the above features. It has a very simple and self-explanatory interface.

Attendance

This module contains list of courses and the number of times user has bunked the lectures of a particular subject along with the dates

IV. LITERATURE SURVEY

In literature survey we have analysed the existing systems like:-

1) vinade reminder3.0:[8]

Remind yourself of bills, meetings, appointments, trips, etc. With this easy to use reminder tool you can send your reminder to your screen, cell phone, pager, or email. It has a very user friendly interface with an easy to use wizard for creating your reminders Import/Export your reminders to friends or colleagues with just a few clicks. Create time and date specific, daily, weekly, monthly or yearly reminders. From now on you can stay on top of things where ever you are.

2) greetings reminder:[3]

Reminder application which lists all upcoming events like birthdays ,anniversaries, festivals ,important meetings ,task of the day etc on android smartphone .it gives greeting notification of friends and relatives on registered date and time. the application will show lists of all contacts with birthdays, anniversary, meetings etc so the user does not have to search anymore. Its application cards include contact reminder system so the user doe not need to remember everyone's contact

number. User can direct select from contact list to whom he/she wants to send greeting message. This application is very user friendly and automatic.

3) Wedjat medicine reminder system.[2]

It is a smart application designed to help patients to avoid medicine administration errors. The software can issue medicine intake reminders approximately 5-15 minutes before the scheduled time to take certain medicines the alerts will be issued repetitively until it is cancelled by the users. It provides medicine identification and intake directions with the help of built in database. it stores information like photos of medicine ,intake directions ,precautions, pharmacists, physicians contact numbers etc .it also records the time at which its user cancels an intake alert and regard that at that time specific medicine was taken. these medicines intake records can be stored on board ,synchronized with the database on the host machine and/or onto a personal health record system.

4) Attendance tracker:

It intends to provide an interface to the teacher who will require minimal details to input for marking of attendance of a particular class of students. Apart from that, the application would support strong user authentication and quick

V. IMPLEMENTATION

Before using this application the user has to enter number of lectures and their timings.that helps to setup the timetable module .

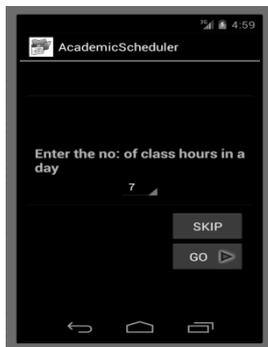


Fig 2: Startup Screen(add number of hours)

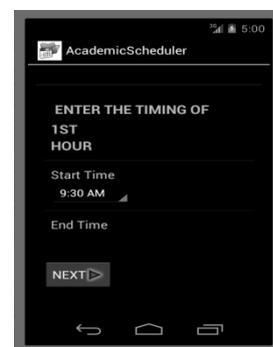


Fig 3: startup screen(set time for all lectures)

Then the user can access the main screen of the application .All the main modules are shown by the main activity that are Alerts ,Timetable ,Assignments ,Attendance , Notes .



Fig 4: Main Activity

Course module is just a submodule of timetable module which will shows the list of all subjects and helps in adding and deleting the courses in timetable. The student must enter all details of the course that are shown in the layout to enter any course. After timetable module is setup it will look like following:

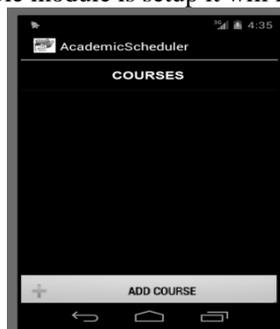


Fig 5 : Main Course Screen

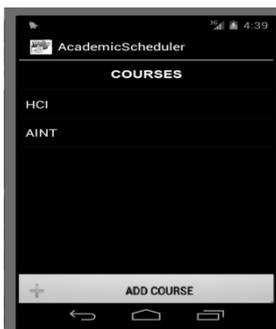
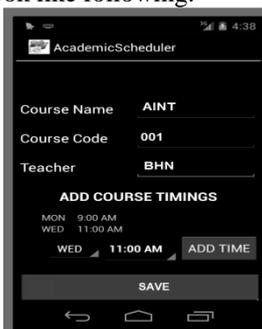


Fig 6 :Add Course Screen

For each entry in the timetable, the user will get a notification 5 minutes before the entered time. The notification will look as follows. The user can choose anyone action out of the 3 buttons. Its mandatory for the user to enter whether he/she has attended the lecture or not.

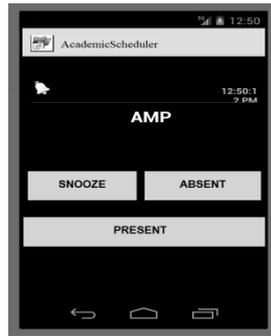


Fig 7 : Course Alerts Screen

Alerts module help us in setting up new task(Assignment) and new alarm(submission).while setting up new task and alarm we must first enter time and date .then ,it directs us to another activity which will help us in customizing the settings for alarm or task. Though both activities require same steps for setup the behaviour exhibited by them is different. Whenever u set up an alarm user gets the alert with the help of a ringtone. When we setup a task user gets simple notification which gives task details.

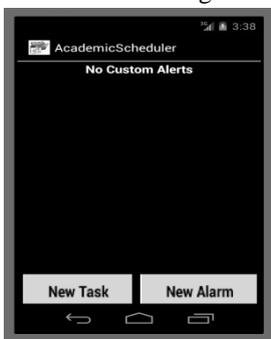


Fig 8 : Main Alerts Screen

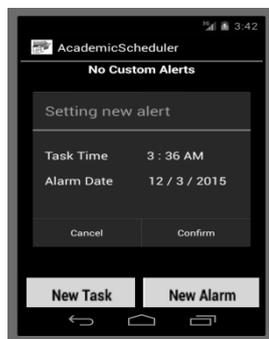


Fig 9 :Add Alert Screen

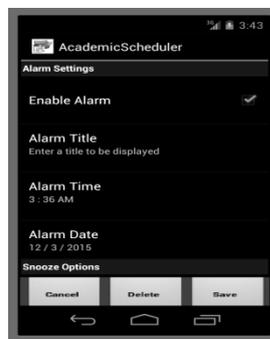


Fig 10 :Alerts Settings Screen



Fig 11:Add Alert titlescreen

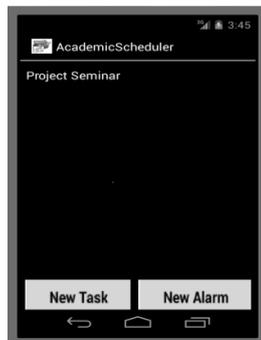


Fig 12 :Alert Screen

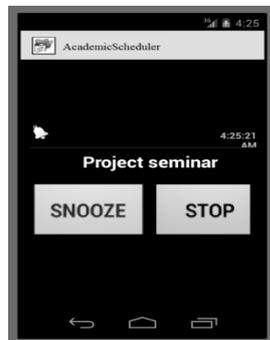


Fig 13 :Alert given to user

The layout of Assignment module is as shown. We can enter all the details of the assignment in this form. All these details will be recorded in the inbuilt database i.e SQLite. We can view all the assignments by clicking on show assignment button, which directs us to the following page.

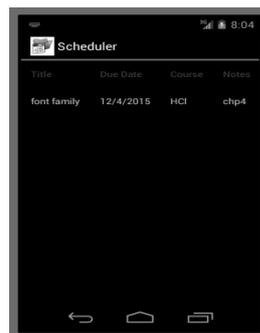
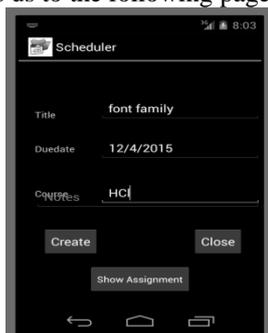


Fig 14 :Add Assignment Fig 15 :show assignment Screen

Students can monitor their attendance through Attendance tracker module. When alerts for a particular lecture is given to the user, the user must enter whether he/she is attending the particular lecture. If the user chooses to remain absent, the application will record the date. After that the user can retrieve the number of times he/she has missed the lecture and the respective dates too.

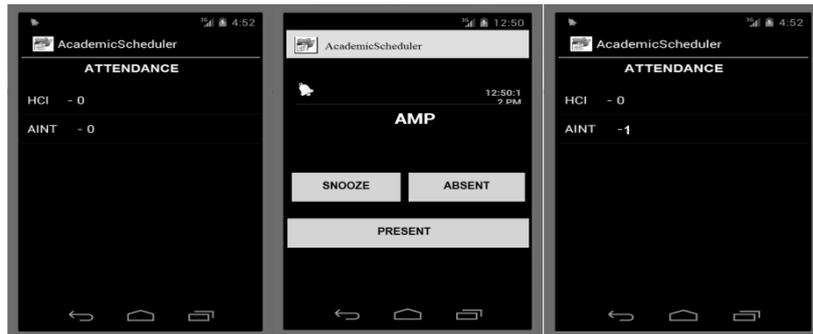


Fig 16 : Course Attendance Screen

Fig 17 :Course Alert Screen

VI. TOOLS AND TECHNOLOGIES

In this section we describe different tools and technologies we used for developing our application.

Eclipse IDE: Eclipse is a multi language software development platform which has a base workspace and an extensible plugin system for customizing the environment, which is called Android ADT plugins.

Android SDK: The Android SDK separates tools, platforms, and other components into packages we can download using the SDK Manager. it includes Android Virtual Device Manager (AVDM) provides virtual mobile emulator that runs on PC. this emulator was used to test our application.

Java JDK: since we are coding in java we require JDK to compile, run and test the application.

Microsoft Word: It was used to write our report.

Google Docs: it was used to share our code, presentations, report etc.

VII. CONCLUSIONS

Our application is mainly for Android-phone-users. AcademicScheduler is an application which helps the user about the registered events on specified date and time. Reminders for these events can be customized by the user. User can efficiently schedule and manage all their activities. They can also create, store and share notes taken by them. They can use the application to check their attendance in each subject and track their overall attendance of the term. Thus it helps students to tackle any management related problems in his/her academic life

VIII. FUTURE WORK

In future this application can be extended on several different operating systems like iOS, Windows etc. The timetable module currently accepts the input from user. In future it can be synced with college database server and the students can directly download their respective timetables, events, important dates etc. We can create a Dropbox like web facility which can be used by students to store and share their notes.

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