COMP7506 - CourseSchedule

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1 Background Research

1.1 Category & Function Synopsis

CourseSchedule is an eduactional Andriod application that aims to make HKU students get their course schedule easier.

In this App, students can get their course schedule once they logged in with right portal account, and it's the mian function of this App. With this App, users can view their course with different colors. Meanwhile, this App also provides the function of GPA calculator, add the events to calendar, add notes, check the exam time, etc.

1.2 Market Analysis

There are some similar eduactional App in the market, have different features and functions, but most of them only provide the course schedule of **mainland universities**.

HKU as an international university has thousands of students all over the world, and they all need to view the course information whenever they go to school. Usually, students get the course information by visiting the HKU website. For CS postgraduate programme students, they need to view the course information via CS intranet, which is more difficult for the App that posted in the App store to get.

Based on thess fact and considering the inconvenience of checking the course information of CS postgraduate programme students in HKU, we designed this App, and we believe that this App will have a considerable market. With this App, students will be able to check their course schedule more easier, and their only need to log in this App only once, this is one of its conveniences.

Besides, this App provides the function of checking the exam timetable, which transform the big exam timetable which shows all the exam that faculty holds into the specific exam timetable of usres themselves. And along with the timetable, it also comments with the notes given by the office, such as "bring the calculator", "bring A4 paper sheet". Thus users do not need to check the informs one by one, this is another of its conveniences.

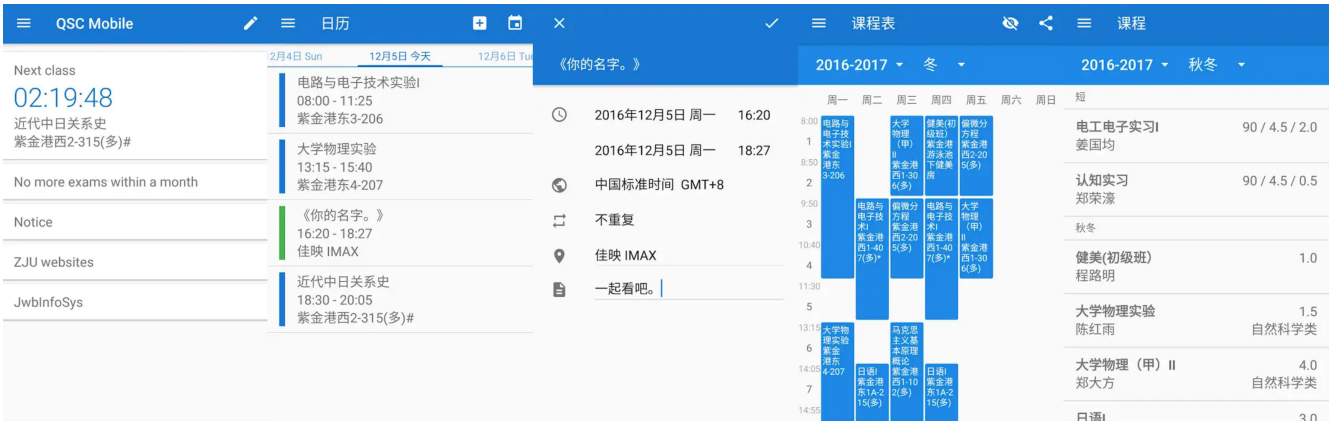
With these main features, students of CS postgraduate programme may have a motivation to download this App, and with the download, they will find this App have more useful functions like GPA calculator, calendar adding and making notes. These functions will help users to schedule their time more easier and have benifits on their study, which are attractive for students.

Even constrain this App's target users to the student of CS postgraduate programme, it will have a "big" market based on the consideration of the time cost in its developing. This App will have a considerable market because of its own useful functions and the fact that the market did not provides any similar Apps that can applied out of mainland.

Once we got more supports by other departments, this App may be popular in the whole school of HKU.

1.3 Similar Apps

1.3.1 QSC



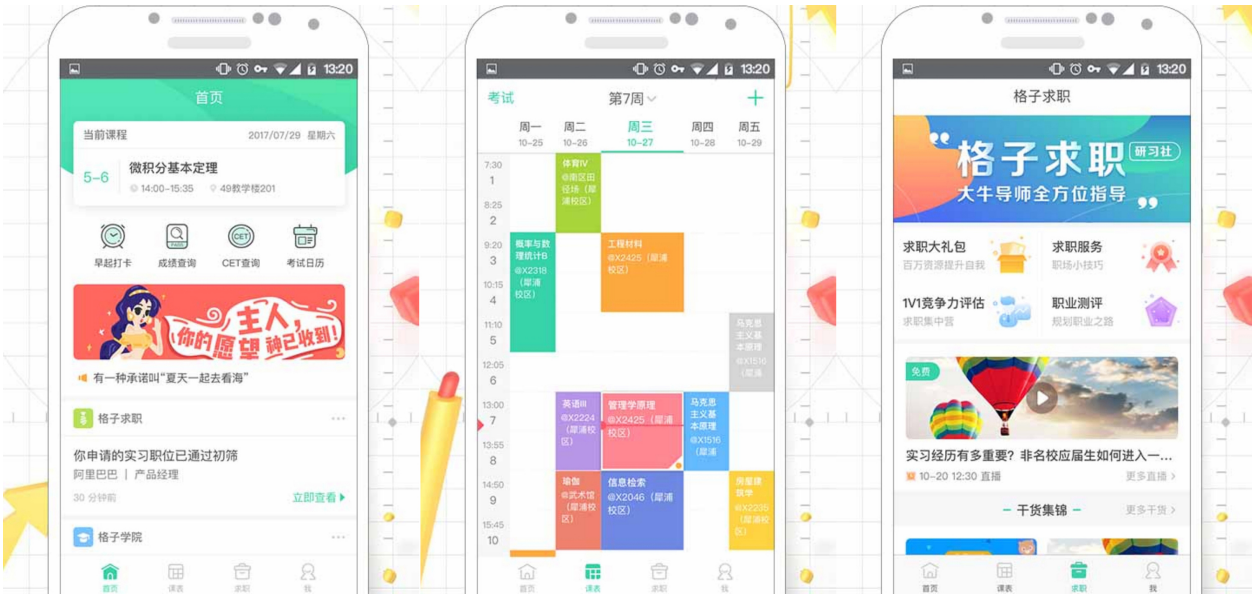
i) Main Features

- Show course schedule in days and weeks, with exam countdown.
- Users can add the calendar to this App.
- Review users' GPA.
- Check the useful website.

ii) Short-Comings / Possible Improvements

- Only provide the service for Zhejiang University.
- All the course lookes similar.
- Other web information are just copy to the App.

1.3.2 CourseGrid



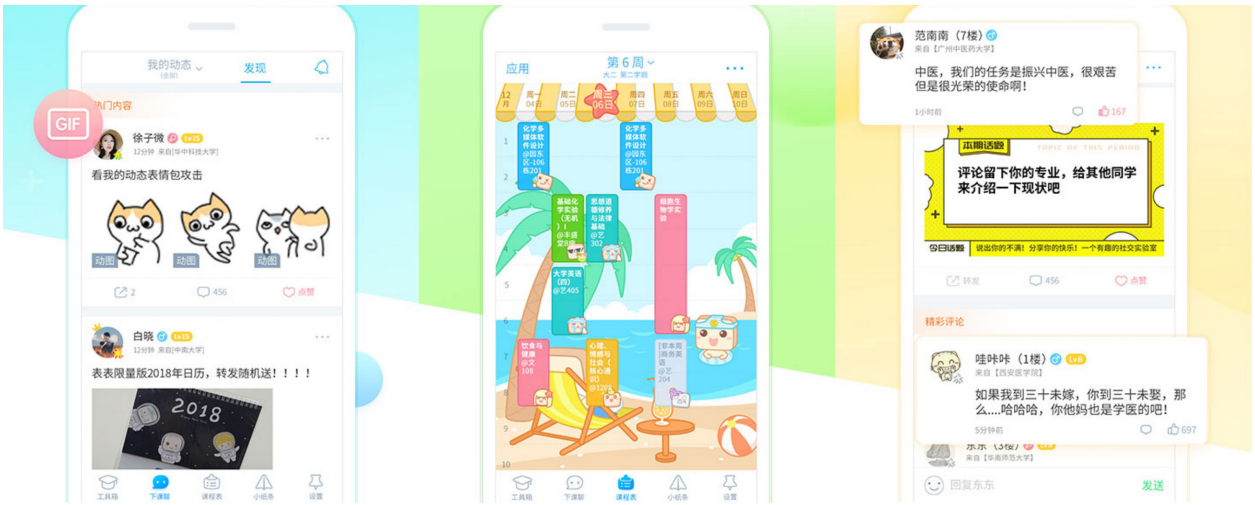
i) Main Features

- Quick access to class schedules and docking of more than 1,500 university educational systems.
- A collection of practical tools, such as CET scores checking.
- Combined with ZAKER News, providing quality reading content.
- Provide a job plaza.

ii) Short-Comings / Possible Improvements

- Too many useless information.
- Cannot add other schedules or make notes.
- Cannot provide the GPA review.
- Cannot access the course schedule of HKU.

1.3.3 SuperCurriculum



i) Main Features

- Quick access to class schedules.
- A collection of practical tools, such as CET scores checking.
- Provide a alumni platform.

ii) Short-Comings / Possible Improvements

- Too many useless information, like a social tool.
- Cannot add other schedules or make notes.
- Cannot access the course schedule of HKU.

2 Summary of our Application

2.1 Motivation

With the rapid development of mobile networks, it's very common to bring a smart phone. But when we want to view today's class schedule or venue, we still need to open HKU page using any browser on the smart phone. The operation is so cumbersome that we want to replace it with a smart, convenient app. But in the App store, we could not find a properly App to do so, thus we developed this App.

2.2 Functions

a) Login with HKU Portal UID and PIN

Different student get login in the system with their own HKU Portal UID and PIN to view their own courses or use other features. If the UID and PIN is not matched, you will not access other information.

This also ensures the independence of User data.

b) Personal course schedule

View personal courses here in a time table sort by time, usually in weeks.

You can get the whole semester courses information including Holiday and Reading Week information. Whenever you want to see other week's schedule, just click the "Week XX" in the top, and you then can click the week you want to see. Also, you can modify the current week with the information showed in the App.

Click the course item to get more information about the course, such as the instructor and the venue.

Because data is saved in from remote server, you will not miss any courses.

c) Add reminder to calendar

You can add a course reminder to calendar by hold the course item. But you still needs to modify the calendar cuase this reminder is too simple.

Of course, before doing this, you need to permit the app reading/writing your calendar.

d) Calculate personal GPA

You can use this feature to transform score into GPA by drag the seek bar control. This calculator transform the score into GPA by the equation:

$$GPA = \begin{cases} max\{1.0, \frac{min\{90,score\}-50}{10}\} & score \geq 60 \\ 0 & score < 60 \end{cases}$$

e) Check personal exam time

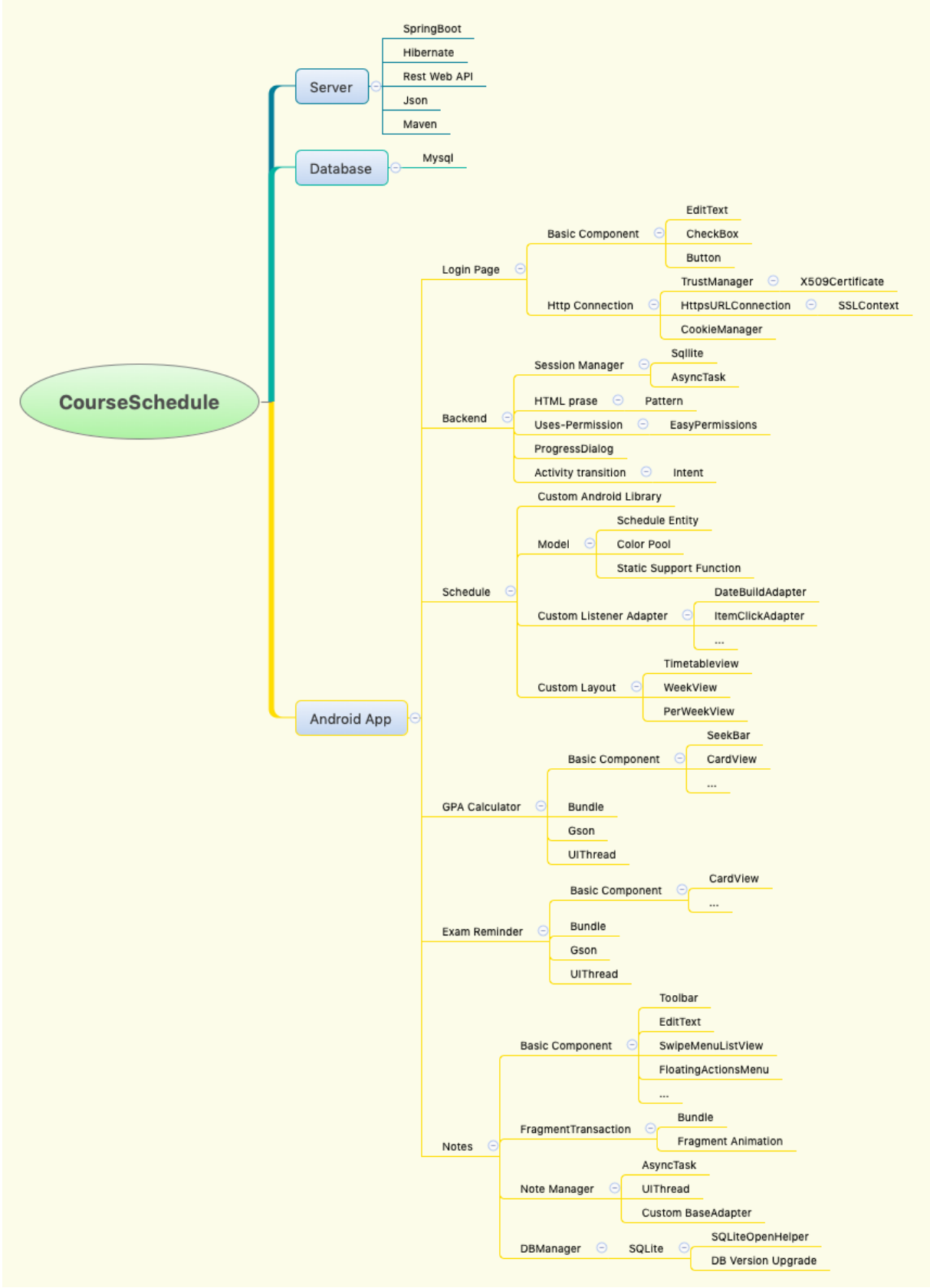
You can check out your exam information in blocks, including date, venue, note of each exam. The remain days count will give you a precise time to make preparation, and we alos listed other things you can bring to the exam, such as calculator or A4 paper.

f) Add/Modify/Delete personal notes

You can manage your notes here. Each note has their own title and body, you can only add text here. Taking notes at any time may keep you from missing any deadline. And modify or delete the notes whenever you want. This won't be shared to anyone else.

For more information and vivid demonstration, please watch the video.

2.3 Framework Design



3 Contributions

ZHANG Kai	Project framework design, feature design
	The development of Web Server by using spring boot and MySQL
	Main Activity, corresponding layout xml files
	Fragment of login page, including corresponding layout xml files
	Http Connection, including progressing dialog, session manager
	Uses-permission of Calendar and Internet
	HTML parse with the use of Gson
	Complete the draft documentation and Readme.md
WANG Dezhao	Provide ideas
	Custom TimeTableView library. This is an individual library with different views, models, operators and listener.
	Fragment of Schedule, including corresponding layout xml files
	Fragment of GPACalculator, including corresponding layout xml files
	Fragment of exam reminder, including corresponding layout xml files.
	Proofread the documentation
YAN Qiangyu	Fragment of notes, including corresponding layout xml files.
	Custom SwipeMenuListView and FloatActionsMenu, with custom basic animation
	Note Manager with custom BaseAdapter, add/delete/modify personal notes in asynchronous tasks and update UI in UIThread.
	Database Manager, using SQLite to manage the notes information
	Do background research
	Make the video
	Add details and complete the final documentation