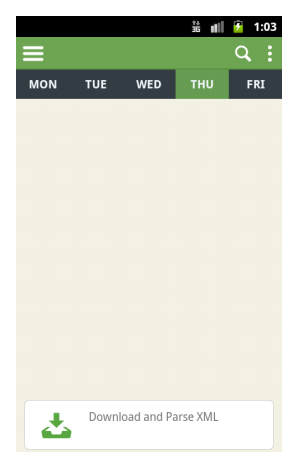# 1   Introduction

The purpose of this document is to present the UoE Informatics Timetable application for Android devices. A list of features accompanied with screenshots will be provided. Additionally, future improvement of the application will be discussed.
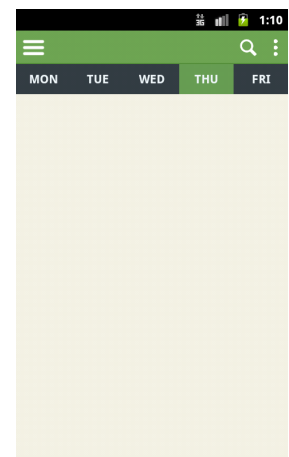
2   Features

2.1 Downloading XML Files

Clicking the *Download and Parse XML* button, and asynchronous task is initiated and the xml files (timetable, venues, courses) are downloaded and parsed using the parses in *com.ug3.selp.timetableapp.parser.* Results are saved into the SQLite database. Separate table is created for each file.
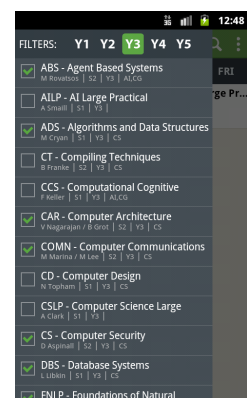
2.2 Default view with no courses selected

When download is complete, no courses are being tracked by default. Switching the tabs (MON, TUE, ..) will not make any difference at this point. Clicking the Menu icon (left top corner) will bring out a sidebar drawer with courses.

2.3 Sidebar

The sidebar contains a list of selectable courses. It is organized into year groups and can be filtered by pressing Y1, Y2 etc on the top of the sidebar. By default before any filter is selected all courses are displayed. The sidebar can also be opened by swiping right from the left edge of the screen. To dismiss the sidebar click on the right side where the layer below is visible.

Courses selected will automatically appear in the main window as long as they match the correct semester.
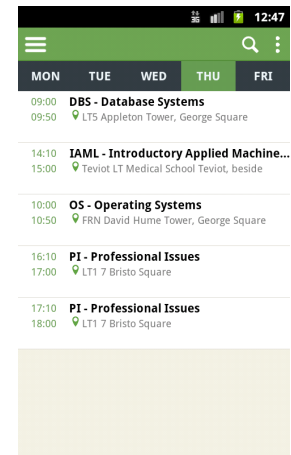
2.4 Lectures list

The lectures list contains an agenda for the day specified by the tab on top of the view. The courses are displayed in order of starting time, earlier goes first.
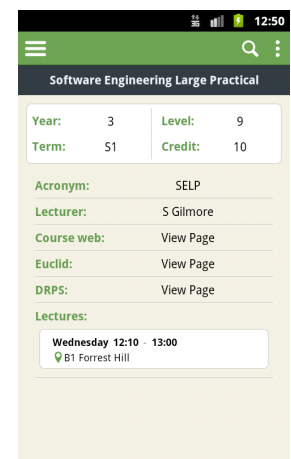
Tapping the tab (MON, TUE, ..) will change the day. The current day today is default tab unless it is a Saturday or Sunday, then the default tab is Monday.

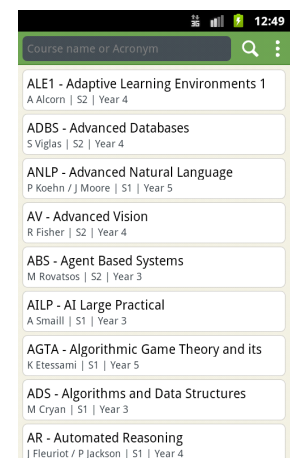Tapping the row will show a detail view for the Course/Lecture.

2.5 Detail View

The detail view contains detailed information about the Course as well as an overview of all lectures and their days. Tapping the Lecture element will automatically redirect to the university building map to give location. Additionally, tapping on View Page for each of Course Web, Euclid and DRPS will open the browser at the specified url.
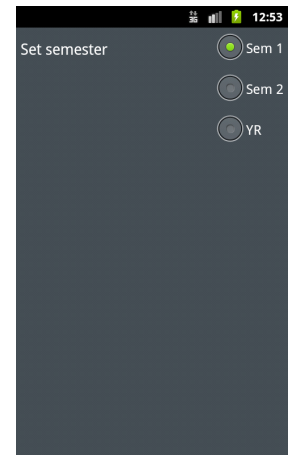
2.6 Search View

Tapping the search icon will bring a search bar with all the courses available. Tapping a course will redirect to the same fragment as detail view for Lecture/Course. Typing into the input field will dynamically filter the list. It is possible to search both by acronym and course name.

2.7 Semester override

Clicking the triple dot icon will bring up a view that allows to override the semester setting.

The semester setting is Semester 1 if current month is between July - December, Semester 2 if between January - June. This setting can be overridden through this view. The value YR can be selected to select only courses running for the whole duration of the year.

3 Libraries

The project uses *android.support.v4.app* library to implement the sidebar and Fragments. It is bundled with the project and to install open the libs directory, right click and add to build path.

There are no other libraries used for this project.

4 Performance

The application performs relatively well on an actual Android phone. The virtual machine responsiveness is lower unless GPU emulation is enabled. Array Adapter are being used through out the application. If a much larger number of courses were to added, they would need to be converted to dynamic Array Adapters in order to remove and add elements on scroll and provide responsivness. In the current setup it does not present any major latency issues for the app.

5 Resources

For the image resources contained in the application, *http://icomoon.io/app/#/select* has been used as the image source.

6 Styling

The style is inspired by a Dribbble.com post on
http://dribbble.com/shots/1245684-Whatsapp-for-iOS-7-redesign/attachments/169194.

7 Improvements

Improvements the the fragment management could be done with better message passing between the controller and the fragment view. It has been a learning experience for me and in the future I would structure the fragments differently.

The app could be made to use google maps and its navigation rather than redirecting to the university page. Searching could also be improved to allow searching for lecturer as well as filtering on the number of credits for each course.

8 Conclusion

To conclude, developing the application has been great experience with a very enjoyable learning curve.