

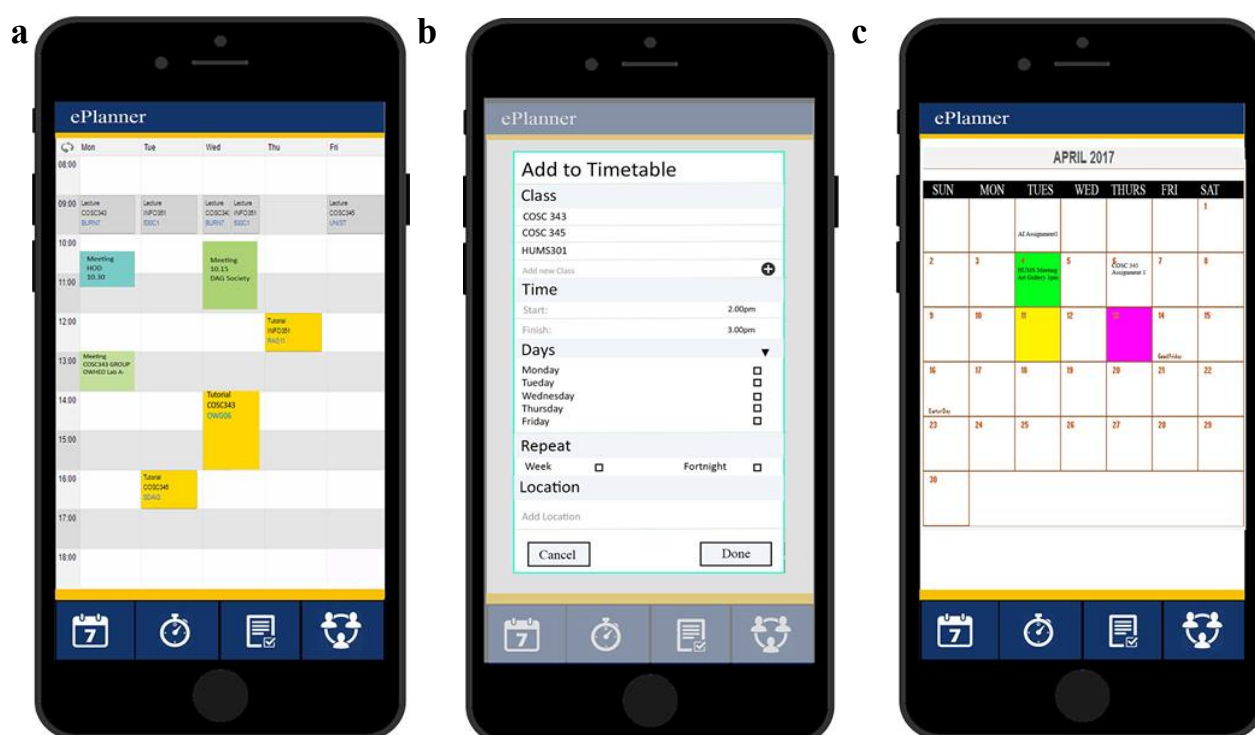
# COSC345 Year-Long Project Assignment 1

Luke Falvey, Molly Patterson, Xinru Chen

Accessing eVision through our mobile devices is inconvenient, which is why we decided to build a mobile app called ePlanner. This app is design for university students that want their lecture, tutorial and lab times, as well as their deadlines, tasks and group meetings in one easy-to-use environment. In this report, we will discuss the current issues with eVision, how our app will look and work, each team member's role in building the app, how we're going to build it, how long it will take to build and why we expect us and many other students to use this app frequently.

Accessing our university timetable through our mobile phones is difficult and a hassle. First, Wi-Fi access is required, and second; we must go through a series of pages to finally arrive at our timetable. This process is slow and inefficient. Once accessed, the display is terrible. If the phone is held upright and displaying in portrait mode, the timetable is squashed and un-readable as the font is too small. If the phone is displaying in landscape mode, only a section of the timetable can be seen. The timetable is also unmodifiable and gives the student no ability to personalise it. There is no option for adding important information such as: test dates, assignment deadlines and group project meetings. The ability to effectively prioritise and allocate time is essential for a student's education, which is why we decided to develop our eVision app.

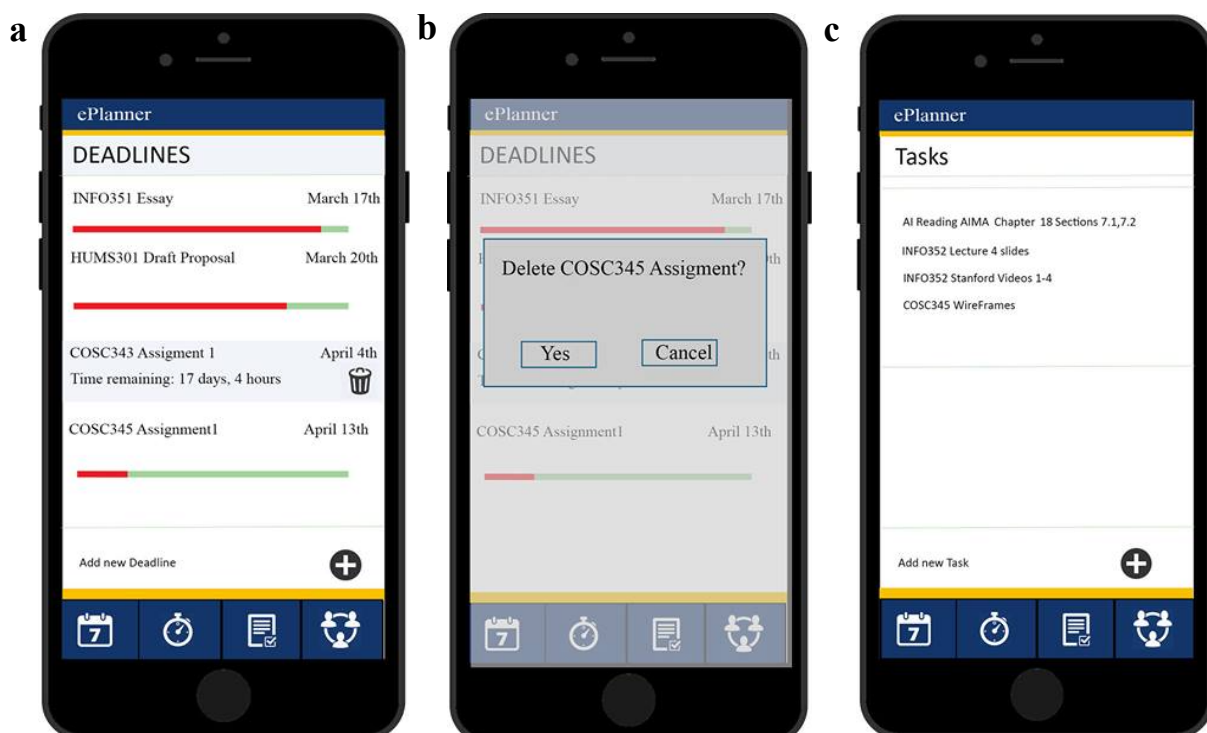
This app will be designed so that students can easily access their timetable on their phone. Upon opening the app, users will be directed to the calendar screen (Figure 1a).



**Figure 1. Calendar Screen for ePlanner.** Going from left to right we have: (a) the weekly calendar display, (b) the input menu for the calendar and (c) the monthly calendar display.

Here, the student will be able to view their university timetable as well as deadlines, test dates and group study meetings. As we didn't gain approval to access timetable information using student account information (more on this later), users will manually input their timetable information. To do this, the user simply holds down on a time they wish to add an event for 1 second and an input menu will appear (Figure 1b). This window will allow the user to input all details about the lecture name, location, duration and the frequency of the lecture. In addition, by using a touch screen "zoom out" motion on the week display, users can access their monthly display screen (Figure 1c). This display will only show non-routine events such as meetings and deadlines, as lecture timetable information will only clutter this view. Unlike eVision, the calendar view will be calibrated for iOS devices so that the full timetable is readable.

The app will also have separate meetings, task and deadlines screens, which can be navigated to using the tab bar (Figure 2).

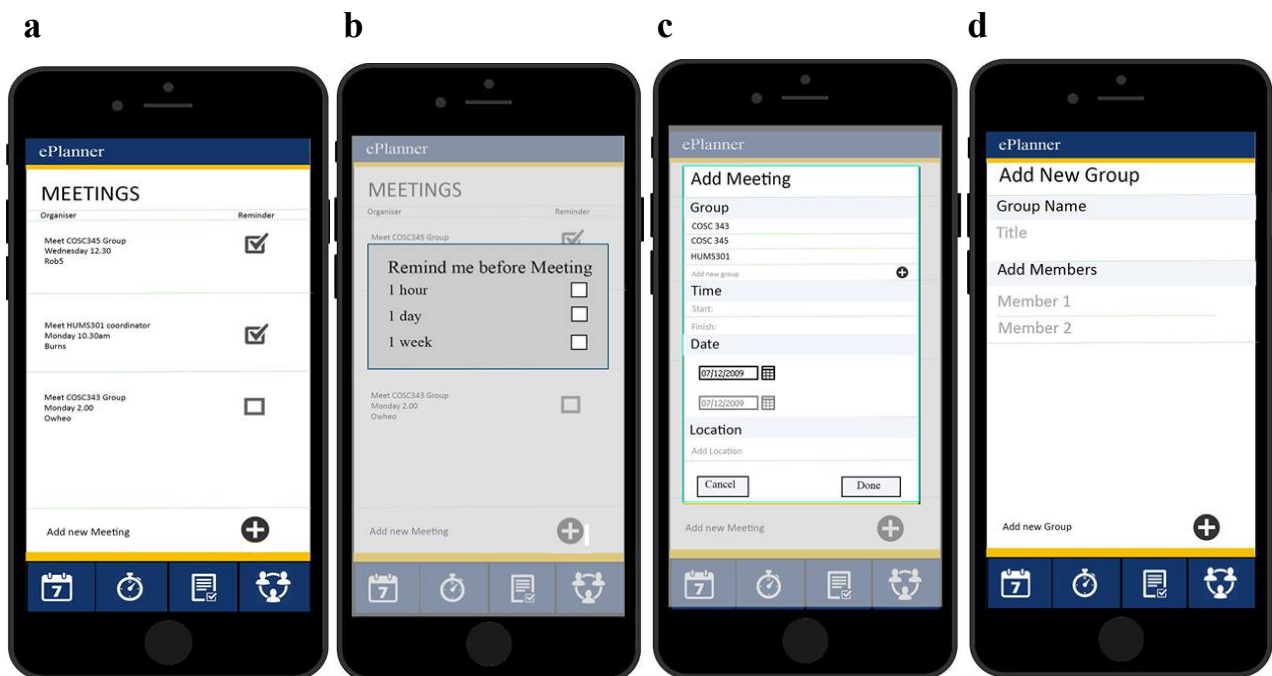


**Figure 2. Deadlines and Tasks Screens for ePlanner.** Going from left to right we have: (a) the deadlines screen, (b) the delete confirmation window and (c) the tasks screen. The COSC343 Assignment 1 deadline in deadlines screen is displaying the remaining time until the due date. It also displays the trash bin, which can be pressed to bring up the delete confirmation window.

Deadlines will be displayed in an earliest-to-latest due order and each will have its own 'countdown bar' associated (Figure 2a). Pressing on a deadline will bring up the exact amount of time until the deadline has to be met; this will create a sense of urgency for the student. Like many iOS apps,

pressing down on an item on the screen for 1 second will bring up an option for deleting. A confirmation window will be displayed before the item is deleted. The task screen allows users to manually create new tasks to help them keep track of their workflow. Pressing the "+" button in this screen will let the user to write a new task.

The meetings screen will enable the user to view all their group meetings in one area and have the ability to add new meetings (Figure 3a). Reminders can be set for 1 hour, 1 day and 1 week before the event by checking the tick box next to the meeting (Figure 3b). Pressing the "+"



**Figure 3. The Meeting Screens for ePlanner.** Going from left to right we have: (a) the meetings screen, (b) the reminder window, (c) add meetings window and (d) add group window.

button in this screen, opens a new window where new meetings can be created with all the relevant details (Figure 3c). Users can also save groups that they are working with so that future meetings with these groups can be added more promptly. As members of the group are being added, more member input lines will appear so that more group members can be added (Figure 3d). After meetings are added, they will automatically appear on their calendar view.

Our development team comprises of 3 people. Luke Falvey, the project manager, organises meetings within the group and allocates tasks to be completed. Molly Patterson, our graphics designer and relations officer, designed the interface for our eVision app and organises meeting with outside groups such as eVision. Tony Chen, our core programmer, is in charge of building the app, although each member of the team will play and role in programming the app.

For this project, our team will be using programming in C++ and be making calls to Swift to build the interface. Our integrative development environment and testing tool will be XCode and we'll also be using Travis to test our designs as we develop the app and upload it into GitHub.

To ensure quality in our app, during our research phase of the app's development we surveyed Otago university students to see if they thought this app was needed. Molly made wireframes of the app using Photoshop and we asked students if they liked the design and the concept of the app. Initially, we had separate screens for groups and meetings; however students found a lot of redundancy between the two screens and thought a tasks screen would be more useful. Student feedback also helped confirm that there was a need for this app, which gave us more motivation to build a user-friendly app that could be used by all students. Furthermore, a discussion with Tricia McNaughton and the team behind eVision raised security issues with the app. Our original app was going to use student account information to access their timetable information, however, because of the open-source nature of this project and the fact that student account information could also be used to access other - more sensitive - information, we didn't gain approval to proceed with this model. The team at eVision also prohibited use of their API and access to the timetable database. For these reasons, unfortunately, we decided to have users manually input their timetable.

Our ability to estimate how long this app will take to build is confounded by our experience. This is the first app-building experience for all members of our team and we've spent a significant amount of time planning the specifics of our app by waiting for user feedback and eVision. However, we are confident that this app will be completed by the 29th of May.

As highlighted at the start, we expect many students to benefit from a calendar app designed specifically to meet university needs. As students ourselves, we find balancing lecture, tutorial and labs times, as well as deadlines, tasks and group meetings a constant struggle. Having one environment that neatly organises these elements of a student's life would not only be beneficial to us, but also many other students.