Android App development project

With the almost complete accessibility of smartphones across the current population, epically the young adult population, the way information is managed has changed drastically in the last few years. This is most apparent in the development of social media sites, but our new ability to communicate has changed more than just the way we socialise. Custom made applications can now easily be deployed to a group of people almost instantly, a process that was all but impossible before smartphones and wireless internet. These applications can allow a user to not only receive information but also process and send data allowing for complex interactions to take place, mobile banking is one such example.

With this platform established it is possible to look at common processes which may be improved by the development of an app. University has many processes which could greatly benefit from more efficient information sharing (remember trying to enrol). One area which may evolve rapidly is the ability for a lecturer to engage with the students in the classroom. A lecture has no way of knowing who is showing up to the classes or if they are paying attention, as lecturing is very ‘one way’ communication. The lecturer also needs to rely on students having the notes from before the lecture (meaning they cannot be uploaded at the last minute). Overall this is an area of potential development.

Your project

The University of Newcastle would like to commission an application that will allow students to check-in to a lecture when they arrive. This will act as a ‘roll call’ application, where students will need to mark their attendance at the lecture using a unique identifier. When a student has successfully checked in, the application should be able to distribute associated lecture files to the student’s phone.

Using the MIT AppInventer platform your team is tasked with designing, documenting and building such an application. The design will detail all features of the client (phone application) and how it will interact with the roll call server, and any file distribution service you wish to incorporate.

With your permission one App will be published in the Play Store and used to check attendance in the week 12 lecture.

Restraints

Your design will be reviewed based on the following features of application development.

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| Property | Description |
| Presentation  / User Interface | The application must look good. Think about simple branding features as well as symmetrical layouts. |
| Robust Client | The application gives meaningful error messages, and makes use of conditional statements so that incorrect data cannot be passed to the server.  The user is unable to make incorrect selection when using the application, for example; the user cannot download the files unless they have successfully checked-in. |
| Robust Server Interaction | The application sends details to the server in the required format.  The application makes use of the responses from the server, to provide meaningful statements to the user about their check-in status. |
| Cannot Cheat the System | This application will cater for students who attend the lecture. The design should include safeguards, so that students cannot check-in if they are not at the lecture. |
| Innovation Feature | Extra marks are available for groups who add innovative (unspecified) features into their design. |

You will be supplied with a number of tutorials to help you learn how to use the MIT AppInventer platform and an android phone to work with during tutorials. Once you have built up your skills using the platform your team will use these skills to design and build your own app.

The design process is intentionally open ended. Proper scoping of the project and justification of your decisions will be required for a highly successful project.