School of Computing

Graduate Diploma in Information and Communication Technologies

Bachelor of Information and Communication Technologies

BCIT388 – Mobile Technology

Practical Assessment 1

Semester Two, 2018

Due date: Friday 28 September

Time: 5.00 pm

ARA and its faculty members reserve the right to use electronic means to detect and help prevent plagiarism. Students agree that when submitting this assignment, it may be subject to submission for textual similarity review to Turnitin.com.

Submissions received late will be subject to a penalty of 10% of the student's mark per working day.
This assignment is worth 30% of the total marks for BCIT 388.
This paper has five (5) pages including the cover sheet.

Ara
Institute of Canterbury
Ara rau, taumata rau

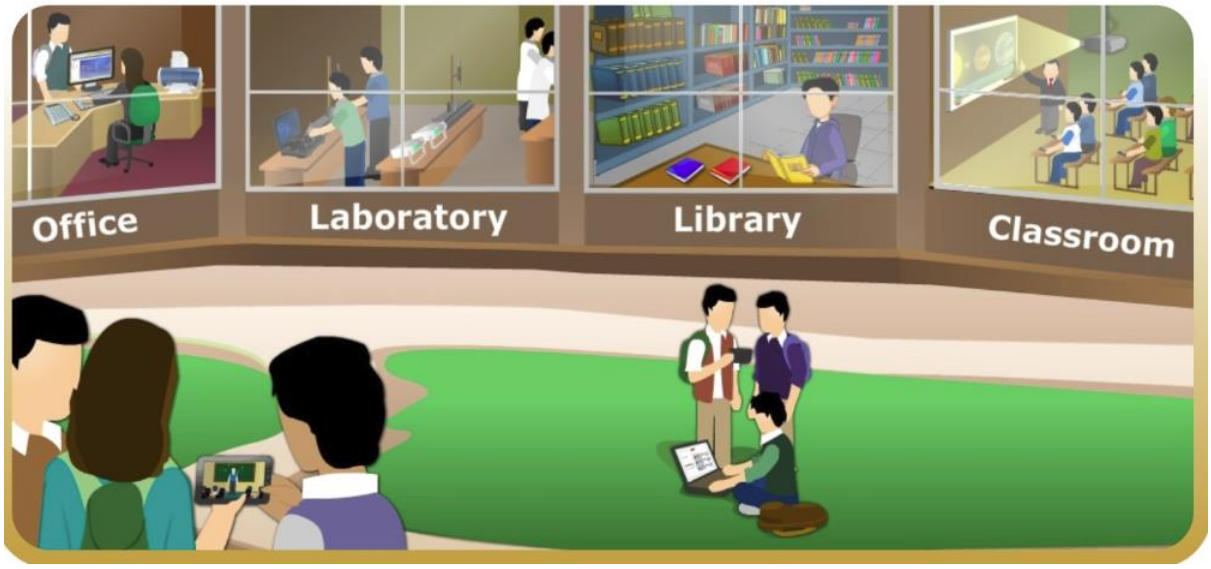

Figure 1: Smart Campus Initiative

Source: http://www.scientechworld.com/smart-solutions

Practical Assessment 1

This assignment assesses Learning Outcomes 3, 4 & 5

3. *Demonstrate the characteristic features of a proposed innovative mobile application by creating a prototype proof of concept solution.* 4. *Investigate specific design issues pertaining to mobile applications and develop a conceptual framework and architecture for solutions.* 5. *Design, develop and test prototype applications for mobile devices.*

Your task for this assessment is to build a prototype app relevant to the **Smart Campus Initiative** (to have an idea, do watch this video on Smart Campus Initiative, available at https://www.youtube.com/watch?v=ynancmi2Tpw&t=274s). One of the visions of any Smart Campus is to connect people (primarily students) to campus services more efficiently and diligently. The development of the Smart Campus is part of the wider development Christchurch City Council Smart City Initiative.

Who is your audience?

So, your task for this exercise is to create a student focused smart app using a mobile device that will allow Ara students to either:

a) Enjoy a 'healthy' or a 'safe' campus lifestyle (healthy in this sense is not restricted to only eating habits)
b) Build a better or more efficient group study experience

The purpose of a prototype is to provide the user with a working app that allows him or her to experience how the application functions. It does not provide the full functionality of the intended complete product. A working prototype (no broken links, no errors in code). NOTE: A zero mark will be awarded for no **apk** file submitted. Unhindered and unambiguous licence to all recorded sounds and images (See http://creativecommons.org.nz/licences/licences-explained/). Below are the requirements of the application which follows the MoSCoW prioritisation technique.

MUST Have

- An app relevant Ara Students
- Must include Ara name and logo
- Notices / event calendar
- Ara main (Madras) campus focus
- Personalisation

SHOULD HAVE

- GAMIFICATION features
- Include a CASUAL GAME (See https://en.wikipedia.org/wiki/Casual_game) derived from an existing game in App Inventor or Scratch. NOTE: Make sure that the source of the original game is acknowledged appropriately. This game must be relevant to the theme of your app.
    - Extremely simple gameplay, like a puzzle game that can be played entirely using a one-button mouse or cell phone keypad
    - Familiar genre, like a card game or board game
    - Allowing gameplay in short bursts, during breaks or, in the case of portable and cell phone games, on public transportation
    - The ability to quickly reach a final stage, or continuous play with no need to save the game

NOTE: do NOT produce a drill or testing program QUIZ multi-choice NOT PEERWISE!!!!!!!!!!!!

COULD HAVE

- Student radio
- Map showing food places found around campus offering deals
- Group chats
- Social groups and forums, timetable synced with calendar
- Timetable
- Contact details of lecturers and availability
- Student services / student support
- Student profile
- Account information
- Lost and Found
- Listings of Ara clubs, locations, meeting times
- Campus Map / directions to class
- Bus routes
- Parking lots
- Campus Virtual Tour

WOULD LIKE TO HAVE

- Social media integration
- Cloud database integration
- Monetization
- Geo-location
- Security

It is important that your application is all your own work. We reserve the right to request you to explain the logic of your App Inventor blocks to our satisfaction.

Deliverables

1. **Planning and Design**

   A report containing a Wireframe drawing of each proposed screen and a Story board for the application. You may need to research wireframes and storyboards for this purpose. To be submitted to a drop box in Moodle.

2. **Produce a Prototype**

   A working prototype created with App Inventor. The resulting **APK** file to be submitted to a drop box in Moodle.

Marking Guide

Prototype fulfilling:

• **'MUST HAVE'** requirements as stated above do all	25
• '**SHOULD HAVE'** requirements as stated above Do ONE of the two choices	10
• '**COULD HAVE'** requirements as stated above Do any ONE feature **WELL. Support at least 3 different use cases.**	30
• '**WOULD LIKE TO HAVE'** requirements as stated above Do ONE of the features	5
Report containing a **Wireframe** and a **Story board**	10
Design	10
Usability	10
Total Possible mark	**100**

If you cannot successfully code some effect then document what you would have LIKED to have got working and you may get 'some' marks according to how close you got it to working.

Apart from submitting this assignment on Moodle, the prototype will be marked in class during a lab session to be communicated to you by your tutors.