CS 477 Project 3 Fall 2022

Due date on blackboard

For this last project, I'm going to give you some flexibility in terms of an app to write but there are requirements for getting full credit. In particular, you will have to some Android element (camera, animation, accelerometer, Bluetooth, WiFi direct, firebase, location and maps, …) in a non-trivial way. You may work with a partner – if you choose to do this, you will need to use two Android elements in a non-trivial way.

I have a few suggestions for projects (unless marked otherwise). **You can also propose your own project.**

- (one person) Extend a simple game like tic-tac-toe app to allow two players using two phones via firebase, WiFi Direct, or Bluetooth. For Bluetooth, you will need access to two physical phones.
- (with a partner) You could implement a more complicated game in terms of graphics and/or UI and use some technology (firebase, Wifi direct, bluetooth).

You can also come up with your own app. To help me keep track and make sure the app you build meets the requirements, everyone will have to fill out the following google survey before Nov.4: https://forms.gle/V45s23srVSEwhuis6

Grading for this project:

- Filling out initial survey before end of day **Nov 4**: 5%
    - Some adjustments to your project can be made after this point but I need an initial idea of what you want to do. After this point, you can't add or remove a partner.
- Short report **Nov 22** end of the day (start of Thanksgiving Break)) – 10%
    - One-two pages with info on your architecture and implementation status of your project. Goal is to convince me you have already put some time into this project.
- Project (all files created for the project and the APK) is due last day of classes – end of the day **Saturday Dec 3**.
    - Use of chosen feature(2) – 50%
    - UI and overall execution – 25%
- Poster Session (**Dec 8 4:30-7:20**) – 10%

Usages of these Android features this semester:

Camera: you will write a lab that uses implicit invocation to take a photo and create a list of photos.

Accelerometer: you won't write a lab with this but I will show you a sample that displays the info and uses it to do an animation.

Animation: you will write a lab that has the feel of 'whack-a-mole' – simple touch combined with a changing screen. In the past, students have built other simple games. If this is the direction you want to go, talk with me about what you want to do.

Bluetooth: You will see sample code bluetoothchat that works like a simple texting app.

Location/Maps: You will see sample code that uses GPS to get a current location. You will also write a lab that uses geocoding to get a location and place it on a map.