GEEN165 Mobile Computing Module

Lecture Units (3)

1) Introduction to mobile computing:
   a. Hardware devices (Smart phones, tablets, etc.)
   b. Hardware features: GPS, WiFi, Cellular, Motion, Camera, Sound, Video, bluetooth
   c. Android programming tools
   d. IOS programming tools

2) Android
   a. Android Architecture
   b. Anatomy of an Android Application
      i. Activities – Front-end UI Screens
      ii. Services – back-end support
      iii. Content Providers – Application data (SQLite, web or SD card)
      iv. Broadcast Receivers – handle system events

3) Demonstrate compile, load execute cycle in class as well as show navigation in IDE (Eclipse).

Lab Units (2)

Students will bring their personal laptops to lab if I cannot get the Android tools loaded on the lab workstations. The lab will require the students configure the IDE for Android development. We will then distribute a simple Android application for them to make small enhancements, compile and execute on an Android Virtual Device.

KU Contribution:

GEEN165 has 8 units in the Software Development Fundamentals knowledge area. The lecture and lab units above will reinforce basic OOP concepts learned earlier in the semester and provide exposure to a new programming IDE (Eclipse) and platform (Android and IOS). In addition, basic programming paradigms such as event handling will be covered. This material fits nicely with the current syllabus and could potentially be substituted for parallel topics covered for traditional non-mobile computing.