EG-M42 Software for Smartphone:
Module Outline

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College of Engineering

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Swansea University
Prifysgol Abertawe

Module Information

- Classes
  - Lectures: Wednesday 11-12pm, Talbot 286
  - Lab: Tuesday 10-12pm, Talbot 286
- Instructor: Dr. Kyeong Soo (Joseph) Kim
  - Office: Digital Technium 112
  - Office hours: Friday 2:00-4:00pm
  - E-mail: k.s.kim@swansea.ac.uk
  - Home: http://iat-hnrl.swan.ac.uk/~kks/
- Reading List
  - **MIT App Inventor**
    - http://appinventor.mit.edu/
    - For building main logic and UI
  - Android Developers
    - http://developer.android.com/
    - For helper apps
  - *Lecture slides and supporting materials on the Blackboard*
    - http://blackboard.swan.ac.uk/

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Grading

- Continuous assessment: 100%
  - Term project (with Apps and report): 70%
  - Demo and presentation: 30%
  - To be submitted in person
  - ***Late submission will be given a zero mark!***
    - Dec. 2013 (TBA)

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Module Overview

- Prerequisites
  - Basic knowledge of networking (esp. WLAN)
  - Some programming experience in Java and other languages

- *Task-driven* learning and programming
  - Task: To build apps for *indoor wireless localisation* based on WLAN signal strength map.
  - Tools: MIT App Inventor, (optional) Android ADT.
  - Open project: Which algorithm to implement given the signal strength map is open.

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Schedules

- Week 2 (Sep./30 ~)
  - Introduction and Overview of Android
- Week 3 (Oct./7 ~)
  - Task Introduction: Indoor Wireless Localisation
- Week 4 (Oct./14 ~)
  - Hello World: Introduction of MIT App Inventor
- Week 5 (Oct./21 ~)
  - Text and List Processing
- Week 6 (Oct./28 ~)
  - TinyWebDB: Persistent Data Storage

- Week 7 (Nov./4 ~)
  - Activity Starter: Interaction with Other Apps
- Week 8 (Nov./11 ~)
  - Wi-Fi Scanner and Signal Strength Map Building
- Week 9 (Nov./18 ~)
  - Q&A Session
- Week 10/11 (Nov./25 ~)
  - Group Project
- Week 12 (Dec./9 ~)
  - Demo & Presentation