Programming Handheld Systems
CMSC436

Fall 2017

Course Goals

Introduce programming technologies & design approaches for handheld systems

Study relevant applications to better understand these technologies & design approaches

Construct our own applications using the Android Platform

General Topics

Basic Android Platform

    APIs & underlying patterns

Higher-level services

    Maps, Sensors, Networking, etc.

Special Topics & Projects

    Cloud Connectivity

Basic Platform

Overview

Android Development tools

Application Building Blocks

As we go along, I'll point out the patterns and approaches that underlie Android (and other platforms as well)

Higher-Level Services

Graphics and Animation

Maps

Sensors

Networking

Many others

Special Topics

Security

User Interface Design

Programming Patterns

Others?

    Let's hear from you

Semester Project

You will do one large semester

Students will work in 3-5 person teams

I will post some project suggestions and allow students to provide some of their own

Students will bid on specific projects and then be assigned to teams

Teams will formally present their projects at the end of the semester

Class Style

This course will involve a lot of hands-on work

Will usually have lecture on Tuesday and assignments on Thursday

Expected Benefits

The one who does the work, is the one who learns

Valuable class time is available for hands-on activities that cement learning

Instructors are available when students are experimenting

Additional Reference Materials

Lots of resources

    many on-line and free

I'll point some out during the semester

Find your own & share

    If you copy code from any resource, acknowledge it

Work Submission

Each week's work due at 23:59 pm ET the
  Sunday following that school week

  (i.e., work from the week of 9/4 is due on 9/10)

Work Submission

You must submit a good-faith effort

    Can be failed for the course if you do not

Late submission up to 9am the next morning

    Score is multiplied by 0.8 (it's not in your best interest to submit late)

Only last submission will be graded!

Work Grading and Class Accounts

We will use the submit server for work
submission

Work Grading and Class Accounts

Laptop cart can be available

At various points, we'll have some handheld devices available as well

I encourage students to use their own laptops and devices for course work

Work Grading and Class Accounts

Course grades and accounts will be managed
using grades.cs.umd.edu

All linked from course web page resources

Software & Hardware

The TA and I will mostly be using:

Java 1.8

AndroidStudio 3.0

If you can, please bring your laptop to class, so you can have your own environment set up the way you want

Exams

Midterm: Thursday, Oct. 26, 2017, 9:30-10:45am

Final: Thursday, Dec. 14, 2017 8:00-10:00am

Grading

	% total
Weekly work	30
Semester project	30
Midterm exam	20
Final exam	20

Discussion and Questions

Web-based discussion pages

Can post to forum from off-campus

Linked from course web page

 https://piazza.com/umd/fall2017/cmsc436/home

Discussion and Questions

Post questions, comments, pointers to resources, test cases, etc.

Will be monitored by professor and TA

It's your forum, though. Speak up, but be professional

Discussion and Questions

Use good judgment

Collaboration is highly encouraged

    Except for tasks designated as "individual effort"

Posting code or pseudocode that gives away exact solution approaches, robs students of their chance to figure things out. Please don't do this.

Personnel

Professor: Adam Porter,

  aporter@cs.umd.edu

  4125 AVW

TA: Heba Aly

  heba@cs.umd.edu, rasevic@cs.umd.edu

All hours will be posted on web page

  http://www.cs.umd.edu/class/fall2017/cmsc436

  Or set up an appointment

Excused Absences

Religious holidays or other personal conflicts

    Let us know as soon as you can

Medical and other emergencies

    Must provide documentation stating what dates/times you were incapacitated

    Self reporting is not sufficient

Stay Up To Date

https://www.cs.umd.edu/class/fall2017/cmsc43

Contains:

Announcements

Lecture notes

Project assignments

Resources

And more!