Recording in Progress

This class is being recorded

Please turn off your video and/or video if you do not wish to be recorded
CMSC436: Programming Handheld Systems
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, graphics, networking

Special topics & projects
   Cloud connectivity, testing, security, AI, etc.
Part 1 - Basic Platform

Overview

Android development tools

Application building blocks

As we go along, I’ll point out the patterns and approaches that underlie many mobile platforms.
Part 2 - Higher-Level Services

Graphics and Animation
Maps
Sensors
Networking
Many others
Special Topics

Security
AI
Programming patterns
Cloud connectivity
Others? Let’s hear from you
Semester Project

One large semester project

Students will work in 3 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 present their projects
Class Style

This course will involve a lot of hands-on work
Will often have lecture on Tuesday do hands-on 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

Week begins on Monday

Each week’s work due at 23:59 pm ET the following Monday
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

Will use a git repo for submitting assignments
Work Grading and Class Accounts

You should bring your own laptop to class for course work.

Programming assignments will generally be done in an emulator.
Work Grading and Class Accounts

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

Linked from course web page resources
Software & Hardware

I will mostly be using

Kotlin – programming language
AndroidStudio – IDE
Assessments

Will have traditional exams

Midterm: Th., March 17, 2022, 9:30am-10:45pm
Final: Friday, May. 16, 2022, 8:00am-10:00am
## Grading

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<tbody>
<tr>
<td>Weekly Activities</td>
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<td>Semester Project</td>
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<td>Midterm Assessment</td>
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Discussion and Questions

Web-based discussion pages
Can post questions to forum
Linked from course web page
https://piazza.com/um/d/spring2022/cm/4360201/home
Discussion and Questions

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

Will be monitored by Professor and TAs

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 other students of their chance to figure things out. Please don’t do this.
Personnel

Professor: Adam Porter,
aporter@cs.umd.edu, 5212 IRB

TA: Multiple – see class webpage

All hours will be posted on web page

https://www.cs.umd.edu/class/spring2022/cmsc436-0201

Will use Zoom for office hours

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 always sufficient
Stay Up To Date

Class website

https://www.cs.umd.edu/class/spring2022/cmsc436-0201

Contains:

- Announcements
- Lecture notes
- Project assignments
- Resources
- And more!