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/ML
Programming patterns
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 and 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

Each 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., October 20, 2022
Final: Mon., Dec. 19, 2022, 1:30pm-3:30pm
# Grading

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<tbody>
<tr>
<td>Weekly Activities</td>
<td>30</td>
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<tr>
<td>Semester Project</td>
<td>30</td>
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<tr>
<td>Midterm Assessment</td>
<td>20</td>
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<tr>
<td>Final 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/umd/fall2022/cmsc436/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

Multiple TAs— see class webpage

All hours will be posted on web page

https://www.cs.umd.edu/class/fall2022/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 always sufficient
Stay Up To Date

https://www.cs.umd.edu/class/fall2022/cmsc436

Class website contains:

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