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

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<tbody>
<tr>
<td>Weekly work</td>
<td>30</td>
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<tr>
<td>Semester project</td>
<td>30</td>
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<tr>
<td>Midterm exam</td>
<td>20</td>
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<tr>
<td>Final exam</td>
<td>20</td>
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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!