# CSc 317
# Mobile Application Programming
# Course Intro

Benjamin Dicken

# Welcome to CSc 317

- This course is an introduction to mobile application programming
- The course description doesn't mention whether or not iOS or Android is covered
- For this semester: Android

- What to learn to create android apps? You're in the right class.

# Who is your instructor?

- Benjamin Dicken (Instructor of record)
  - Email: bddicken@email.arizona.edu
  - Office Hours
    - See class site
    - Or by appointment

- Thomas Ruff (TA)
  - Will be grading PAs, Office hours
  - Use him as a resource! He took this class with me Fall 20

OA

# Get to know each-other

- Find your nearest neighbors
  - Name / year / major
  - Why you are taking this course? What do you hope to use these skills for in the future? etc.
  - Coolest / funnest thing you did this winter?

Keep in mind: there will be a group final project at the end of this course - good idea to get to know some classmates now!

# What is this class, anyways?

- In this class, you will learn how to create android applications
- From uaccess:

  *Students will learn how to develop applications for mobile devices. The course will cover the necessary programming language(s), development environment, and a number of platform-specific APIs commonly used in mobile applications such as maps, location services, notifications, camera, and local storage. Other mobile-specific software development topics will be considered such as programming with limited computational and battery resources, client/server architecture, and cloud synchronization.*

# Prerequisites

- CSc 210
- Or, with instructor permissions, sufficient programming background and/or willingness to learn Java quickly
- Basically, you should be a competent Java programmer ( and a competent programmer in-general)
- Not going to walk through the basics of Java like an intro course
- The course is Java-based

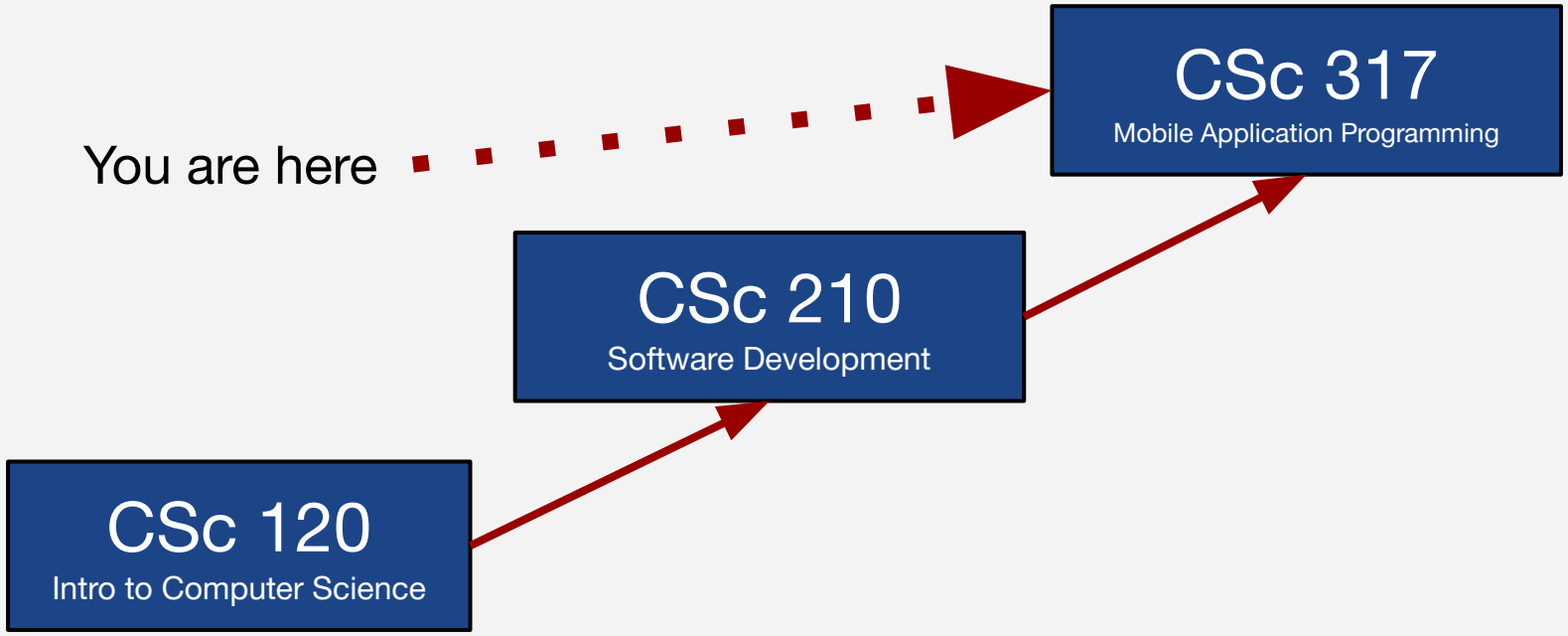
OA

# Below is a Java program - What does it do?

```java
import java.util.ArrayList;

public class Main {
    public static void main(String[] args) {
        ArrayList<Integer> numbers = new ArrayList<Integer>();
        for (Integer i=0; i < 30; i += 1) {
            if (i % 5 == 0) numbers.add(i);
        }
        for (Integer element : numbers) {
            System.out.println(element);
        }
    }
}
```

# The intro sequence



OA

# Answer the questions

1. How many apps on google play?

2. When was android 1.0 released?

3. What is the mobile phone market share of Android?

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   **Over 2 million**
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# Answer the questions

1. How many apps on google play?
   **Over 2 million**
2. When was android 1.0 released?
   **September 2008**
3. What is the mobile phone market share of Android?
   **70-75% (depends what specific stats youre looking at)**

# Meeting time

- M/W 9:30-10:45, Engineering 318
- 3 unit course
- Recorded (hopefully) and uploaded after
- Be ready to do some coding IN CLASS

# Reading Materials

- There will be reading assignments due before most classes
- Most readings will be from
  - https://developer.android.com

# Class Website

http://benjdd.com/courses/cs317/spring-2022/

# What contributes to your grade?

- Exams
- Programming Assignments (PAs)
- Final Project
- Quizzes

# How much is each component worth?

*Look it up in the syllabus on the class site*
http://benjdd.com/courses/cs317/spring-2022/

- Exams
- Programming Assignments (PAs)
- Final Project
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# How much is each component worth?

*Look it up in the syllabus on the class site*
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- Exams 40%
- Programming Assignments (PAs)
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# How much is each component worth?

*Look it up in the syllabus on the class site*
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- Exams 40%
- Programming Assignments (PAs) 30%
- Final Project
- Quizzes

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- Quizzes

# How much is each component worth?

- Exams 40%
- Programming Assignments (PAs) 30%
- Final Project 20%
- Quizzes 10%

# Exams

- **3 Total**
- Worth 10%, 10%, 20% respectively.
- See course schedule for dates

# Programming Assignments (PAs)

- There will be about 8-10 regular PAs
  - Typically due on Fridays (see schedule)
- http://benjdd.com/courses/cs317/spring-2022/pas/

# Preps and Quizzes

- The class schedule shows the prep for each class day
- They will primarily be links to somewhere on developer.android.com, or other websites
- Approximately one quiz per week on reading material
  - On gradescope
- Based on the readings and/or prep material
  - Worth 10% of your grade
- READ

# Weekly Workflow (not including exams)

| | |
|---|---|
| 1. Going over prep material | (roughly 20 mins per class) |
| 2. Class | (75 mins each) |
| 3. Work on the PA or final project, or | |
| 4. Study for exam | (5-7 hours per week) |
| Total: | 9-11 hours per week |

# Grading Policy

- We will do our best to return grades to you within 1 week of the due date (so long as you turn it in on time)
- ***If you don't like your grade . . .***
  - You have ??? days from the time your grade is returned to you on Gradescope/D2L/etc to request a regrade. After that, your grade is ***final***

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# How many days to request a regrade?

- Go to the class website, and try to find it in the syllabus!
- Class website: http://benjdd.com/courses/cs317/spring-2022/

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***5 days!***

# How to get help?

- ***Ask a question on the email lists (still need to create)***
- **Office hours**
  - In-person and online available
- **Ask questions in class!**

# Academic Integrity

- When you are working on a solo PA, you ***can . . .***
  - Talk about ideas and techniques for solving the problem
  - Discuss the spec
  - Talk about the programming at a high-level
- But you may ***not . . .***
  - Share code with each-other
  - Look at eachothers code
  - Work on the project together, submit same code

# Reading

- What prep material is due on Wednesday?
- Go to the **schedule** page on the class website to find out
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***Android docs intro*** and

***Build your first App (5 sections)***

# Sites and Tools

- Sites:
  - Course website - Schedule, Syllabus, Office hour info, PAs
  - Gradescope - PAs, Quizzes, Exams
  - D2L - Gradebook, video rewatch
- Tools/software/hardware:
  - Android Studio
  - Android Emulator
  - Android device (optional!)


# Things to download

- JDK - https://www.oracle.com/technetwork/java/javase/downloads/jdk8-downloads-2133151.html
- Android Studio - https://developer.android.com/studio/

# The first PA!

- See class website
- http://benjdd.com/courses/cs317/spring-2022/pas/