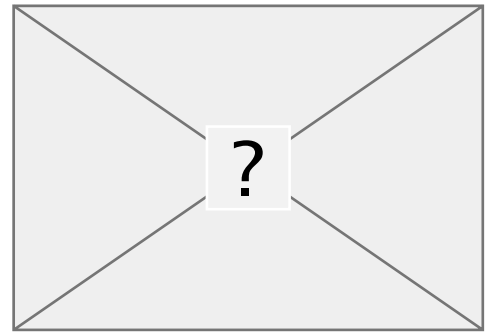


CS 402: Mobile App Development - Spring 2020



Course Description

A project intensive course on mobile development using Android or iOS platforms. Overview of mobile platforms and their characteristics, mobile interface design and best practices using such technologies as GPS, camera, persistence, and more.

Objectives

1. Become proficient in the major technologies and paradigms of mobile application development, specifically for Android.
2. Develop experience creating real world mobile applications.

Requirements

The following items are required for this class:

- Android Studio: <http://developer.android.com/sdk/index.html>
 - Or, as part of the JetBrains Toolbox (free for students): jetbrains.com/student/
- Github Account: <http://www.github.com>

Recommendations

The following are not required but will help in developing mobile applications:

- [Free lynda.com Account](#) - Free Boise Public Library card needed (Need Boise mailing address)
- Broad Topic Guide: [Android Programming Concepts](#)
- A physical Android tablet or smartphone
- [Android Developer Account](#) (\$25)

Schedule

Section	Date	Description	Assignment Due
	Jan. 14	Introduction to the Android platform, Android Studio and Kotlin.	
	Jan. 16	Android platform architecture: Overview, Manifest, Intents and Activities Lifecycle, Strings, Interface layouts	
Kotlin Basics	Jan. 21	Intro to Kotlin	
	Jan. 23	Kotlin	HW #1
	Jan. 28	Intents and Second Activity	
Android Basics	Jan. 30	First Real Android App	
	Feb. 4	Architecture, Singletons, Factories	
	Feb. 6	Interface Design, UX, HCI	
	Feb. 11	App Store Marketing and Revenue	HW #2
	Feb. 13	Web Services	
Mobile Features	Feb. 18	Observer Pattern, EventBus	Project 1
	Feb. 20	Fragments	Project 1
	Feb. 25	Permissions, Camera	
	Feb. 27	Maps, Locations and GPS	
	Mar. 3	Databases on Android	
	Mar. 5	Databases on Android	

Section	Date	Description	Assignment Due
Optionals	Mar. 10	Servers	
	Mar. 12	2D Mobile Game Development	
	Mar. 17	3D Mobile Game Development	
	Mar. 19	Project 2 Workshop	
	Mar. 24	Spring Break	
	Mar. 26	Spring Break	
Android Extras	Mar. 31	Recycler Views	
	Apr. 2	Topics in Android	
	Apr. 7	Polish and Google Play Store Prep	
	Apr. 9	Android Interview Review (Things you should know to get an Android job or any programming job)	HW # 3
Final Stretch	Apr. 14	Google Play Store (Releasing an App and other App Store information)	
	Apr. 16	Starting an LLC, making money with clients or side work (requested topic)	
	Apr. 21	Android Native Development Kit (NDK) - Use C++ libraries in your Android App (OpenCV) Working remotely (requested topic)	
	Apr. 23	Let's build an app (Review)	
	Apr. 28	Let's build an app (Review)	

Section	Date	Description	Assignment Due
	Apr. 30	Project Video Presentations (Record 5 minute presentation of your final app)	Project 2 - Databases, Web Services, (Optional) Project 3 - Polish (Optional)
	May 5	No Class	Final Project (Project 4)

Homework (30%) 10% HW #1
10% HW #2
10% HW #3

Projects (70%) 10% Project 1
25% Project 2
10% Project 3
25% Final Project

Suggested Readings

Android Programming Getting Started

<http://developer.android.com/training/index.html>

Links

Class Git Repository

Class repository with all assignments, class notes, example code, etc.