CS 646 Android Mobile Application Development
Spring Semester, 2015
Doc 1 Introduction
Jan 22, 2015

Meta

Lecture Goals

Cover how course will be run

Blackboard

Upcoming Tasks

Jan 27

    Read Chapters 1-2

    Install Eclipse & Android or Android Studio

    Install & Play with API demo

    Generate Hello World Example

    Run Button count Example (source code in lecture doc 2)

Jan 29

    Read Chapters 3

Lecture

5

Goal of Course

Learn how to create Android apps

Course Mechanics

http://blackboard.sdsu.edu/

Crashing

Screencasts & Lecture videos
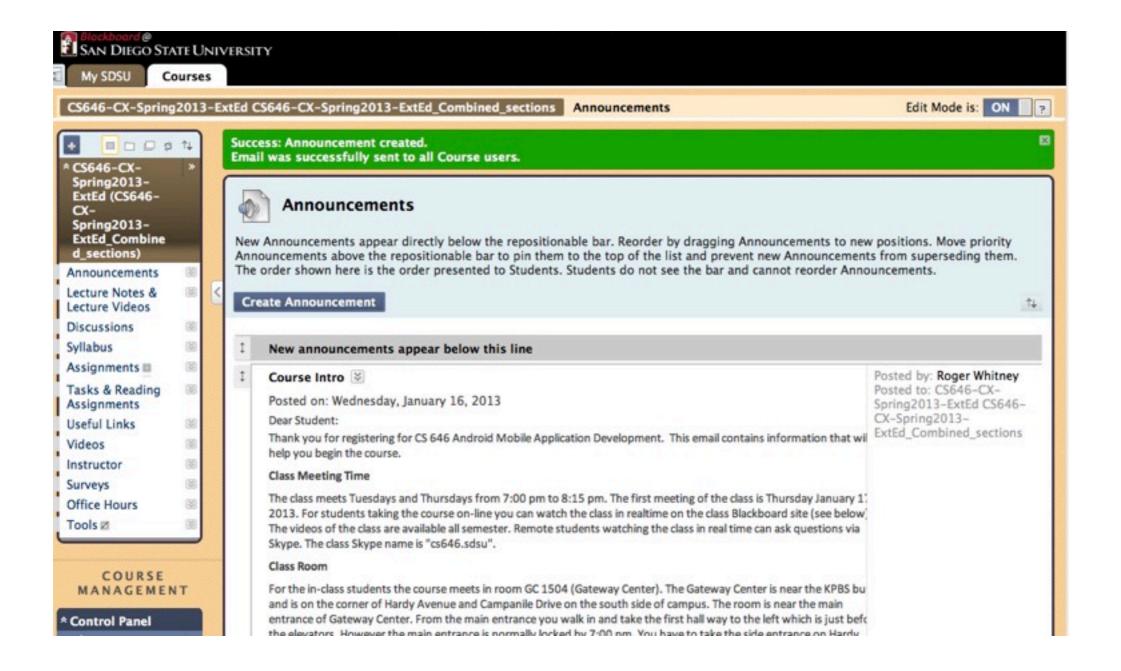
Prerequisites

Blackboard

In-class verses on-line course

Grading

Project

Android

7

Blackboard Demo

Prerequisites

CS 560
  Not important

Java
  Really Important

Need to be able to
  Program
  Deal with APIs
  Learn fast

Java & Android

Syntax is the same as normal Java

Fewer classes in Android's java

Javascript is not Java

Web development and App development are very different things

11

How to ask questions on-line

Use Backboard Discussion Board

Only send email if personal in nature

Do you need an Android Device

Strictly speaking no

You can use the emulator

But you will be better off with one

Emulator is slow

Emulator can not do everything (no sensors)

Usability of app different on Emulator and device

13

Qualcomm Donation

Qualcomm generously donated to SDSU money to purchase Android phones

Three of the phones run Android 4.x, none run 5.x

Details to be worked out

14

Android Versions

Version	Name	API Level	% of Devices	Release Date	Notes
2.2.x	Froyo	8	0.4%	May 2010	
2.3.x	Gingerbread	9-10	7.8%	Dec 2010	Kindle Fire
3.x	Honeycomb	11-13		Feb 2011	Tablets only
4.0	Ice Cream Sandwich	14-15	6.7%	Oct 2011	Kindle Fire HD
4.1	Jelly Bean	16	19.2%	Summer 2012	
4.2		17	20.3%	Oct 2012	Kindle Fire HD 2nd Gen
4.3		18	6.5%	July 2013	
4.4	KitKat	19-20	39.1%	Oct 2013	
5.0	Lollipop	21		Nov 2014	

% devices that accessed Android Market for 7 day period ending January 8, 2014

Reference: http://en.wikipedia.org/wiki/Android_(operating_system), referenced 1/19/12. http://developer.android.com/resources/dashboard/platform-versions.html, referenced 1/20/15. http://en.wikipedia.org/wiki/Android_version_history referenced 1/20/15

Devices Screen Sizes - Screen Density

	ldpi	mdpi	tvdpi	hdpi	xhdpi	xxhdpi	Total
Small	4.8%						4.8%
Normal		8.8%	0.1%	37.5%	18.4%	16.3%	81.1%
Large	0.6%	5.4%	2.3%	0.6%	0.6%		9.5%
XLarge		3.7%		0.3%	0.6%		4.6%
Total	5.4%	17.9	2.4%	38.4%	19.6%	16.3%	

Android OS Fragmentation, Devices, Play Store

To deal with Fragmentation Google is making API available through Google Play Store

Android forks (Kindle Fire) do not have Google Play Store

17

In-Class verses On-line version

Same course but

In-Class verses On-line version

Same course but

In class provides visible social context

19

In-Class verses On-line version

Same course but

In class give access to other students

In-Class verses On-line version

Same course but

In class makes it easy to ask questions

In-Class verses On-line version

Same course but

on-line course requires more discipline and work

On-line Students attending Class

On-line students are welcome to attend class

Class Videos

Mediasite videos

    Instructor and Lecture Slides

    Can watch in real time

    Archived for later viewing

Video of Lecture Slides

    Slides only

    Done only for students with low bandwidth connections

    Let me know if you have problems with the Mediasite videos

My Dad

I will be helping care for my Dad

Parts of the semester I will be out of town

When out of town will
- Record lectures and post them
- Be available via Blackboard discussions
- On-line office hours in the works

Grading

Course has 1000 points

5 assignments
See syllabus for due dates

1 exam (150 points)

Semester project (200 points)

Exam & On-line students

If SDSU student

    Contact me to arrange exam time

Off Campus students

    Need to find someone to proctor the exam

Exam - March 10

    Need proctor information by Feb 19

Semester Project

Teams of 1 or 2

Start thinking about project ideas

Due May 14

Android Books & Documentation

At least once a year
   New version of Android
   New version of Android tools

So books don't ways have lasted information

Googles tutorials on using Android are often out of date

29

Eclipse for Android & Android Studio

Eclipse for Android
>   No longer under development
>   Orginal IDE for Android
>   Covered in all book
>   Emulator really slow

Android Studio
>   Version 1 released in Demeber
>   Future of Android development
>   No books cover it use
>   Emulator reasonable speed
>   Not supported on Intel Core-duo chips
>   Based on Intellij
>   On-line Documentaton

http://developer.android.com/tools/studio/index.html

Android 5 & Android 4

Android 5
   Released late last year
   New interface look
   Not many devices running Android 5

Most basics are the same in both version 4 & 5

Need to support both in apps