

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

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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

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

Blackboard Demo

The screenshot displays the Blackboard interface for a course at San Diego State University. The top navigation bar includes 'My SDSU' and 'Courses'. The course title is 'CS646-CX-Spring2013-ExtEd CS646-CX-Spring2013-ExtEd_Combined_sections', and the 'Announcements' tab is selected. A green success message at the top states: 'Success: Announcement created. Email was successfully sent to all Course users.' The left sidebar shows a 'COURSE MANAGEMENT' section with a 'Control Panel' link and a list of course tools including Announcements, Lecture Notes & Lecture Videos, Discussions, Syllabus, Assignments, Tasks & Reading Assignments, Useful Links, Videos, Instructor, Surveys, Office Hours, and Tools. The main content area is titled 'Announcements' and includes instructions on how to manage them. Below this, a 'Create Announcement' button is visible. The announcement itself is titled 'Course Intro' and was posted on Wednesday, January 16, 2013, by Roger Whitney. The announcement text includes a welcome message, class meeting times (Tuesdays and Thursdays from 7:00 pm to 8:15 pm), and class room information (room GC 1504 at Gateway Center).

Blackboard@
SAN DIEGO STATE UNIVERSITY

My SDSU Courses

CS646-CX-Spring2013-ExtEd CS646-CX-Spring2013-ExtEd_Combined_sections Announcements Edit Mode is: ON ?

Success: Announcement created.
Email was successfully sent to all Course users.

Announcements

New Announcements appear directly below the repositionable bar. Reorder by dragging Announcements to new positions. Move priority Announcements above the repositionable bar to pin them to the top of the list and prevent new Announcements from superseding them. The order shown here is the order presented to Students. Students do not see the bar and cannot reorder Announcements.

Create Announcement

New announcements appear below this line

Course Intro

Posted on: Wednesday, January 16, 2013

Dear Student:

Thank you for registering for CS 646 Android Mobile Application Development. This email contains information that will help you begin the course.

Class Meeting Time

The class meets Tuesdays and Thursdays from 7:00 pm to 8:15 pm. The first meeting of the class is Thursday January 17, 2013. For students taking the course on-line you can watch the class in realtime on the class Blackboard site (see below). The videos of the class are available all semester. Remote students watching the class in real time can ask questions via Skype. The class Skype name is "cs646.sdsu".

Class Room

For the in-class students the course meets in room GC 1504 (Gateway Center). The Gateway Center is near the KPBS building and is on the corner of Hardy Avenue and Campanile Drive on the south side of campus. The room is near the main entrance of Gateway Center. From the main entrance you walk in and take the first hall way to the left which is just before the elevators. However the main entrance is normally locked by 7:00 pm. You have to take the side entrance on Hardy

Posted by: Roger Whitney
Posted to: CS646-CX-Spring2013-ExtEd CS646-CX-Spring2013-ExtEd_Combined_sections

COURSE MANAGEMENT
Control Panel

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

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

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

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

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

In-Class verses On-line version

Same course but

In-Class verses On-line version

Same course but

In class provides visible social context

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

Eclipse for Android & Android Studio

Eclipse for Android

- No longer under development
- Original IDE for Android
- Covered in all book
- Emulator really slow

Android Studio

- Version 1 released in December
- 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