Mobile Application Projects

CSE40333 - 01
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Spring 2013

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University of Notre Dame
Department of Computer Science and Engineering

When: M, W, F
Where: Fitzpatrick 356A
Time: 11:45A - 12:35P

Syllabus

Instructors:	Nikhil Yadav and Salvador Aguinaga
Office Hours:	Sal Tue/Thu 12p-1p, Nikhil Mon/Wed 2p-3p, and by appointment
	Location: Fitzpatrick Hall 212
Lecture Location:	Fitzpatrick Hall 356A
Lecture Date/Time:	M W F 11:45A - 12:35P
Websites:	Course website: http://www.nd.edu/~cse/2013sp/60333/
	Wiki: http://darts.cse.nd.edu:8080/Plone/mobile-app-course/mobile-app-projects/

Course Description:

This course will provide comprehensive project experience in development of mobile applications on two software platforms: iPhone OS and Android. Students will receive intensive tutorial introductions to each platform, covering hardware capabilities and limitations, the development environment, and the communications infrastructure available on campus to support networking. A few programming exercises will be assigned so that students can demonstrate basic development proficiency. The remainder of the course will be devoted to project work. Students will then develop project concepts. These concepts, along with others supplied by the instructors and other interested parties, will be assessed by teams of three students and one concept per team will be chosen for development. Development activity will include generation of design documentation, including specifications, UI mockups, state diagrams for execution and communications, presentations, and reports at various stages. During the development phase, teams will meet at least weekly with the instructors and with stakeholders acting as simulated "venture capitalists" funding the work. These meetings will involve a briefing of project status as well as demonstrations, interactions,etc. Each of these interactions will be graded. At the end of the semester, student projects will be evaluated by a jury and a suitable prize will be awarded to the project judged best in quality.

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Pre-requisites:	Department Approval Required; Must be enrolled in one of the following Major(s): Computer Engineering (CPEG) , Computer Science (CS) , Computer Science & Engineering (CSE) , Electrical Engineering (EE); Must have the following Classifications: Junior (03) , Senior (04)
Course Outline:	A detailed outline will be posted on the course website. Topics to be covered include: ■ Computing platforms and SDKs ■ Review of Java and ObjectiveC programming ■ Persistance: preferences, sqlite/CoreData, Parse, etc. ■ Media: audio, video, images, plotting for data visualization ■ Animation ■ Multi-threading, responsiveness ■ Location services ■ Sensors ■ Touch, gestures, views (table-views, image-views, etc.)
Grading:	The course grade will be based on: ■ Student topic presentation 10% ■ Mini-project/homework 20% ■ Project - functionality and design, midterm progress update, and submission working source code 30% ■ Final project presentation and working source code 40% Class participation is encouraged: Contribute to the course by providing coding tips, coding screenshots, source code snippets, and mobile coding best practices examples via blog entries. This type of student participation will be considered for extra credit.

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Mini-projects	Mini projects consist of programing and submitting a working app of limited scope. For example: an app that reads, parses and displays an RSS feed.
Attendance Policy	Attendance is expected. Absences due to travel to conferences, job interviews, or due to a life-event must be communicated in person or via email prior to the expected absence
Academic Code of Honor	honorcode.nd.edu/the-honor-code/

Important Dates

First day of class	Jan 16
Student topic presentations	Starting Feb 25th
Project Proposal	Feb 08
Midterm project report	Mar 08
Mid-Term break	Mar 9 - Mar 17
Final Project In-class Presentation	To be completed by May 1st
Finalists Project Presentation	On the scheduled final exam time-slot (TBD)