The Modern Micropreneur: App Design

In the span of just five years, a non-existent marketplace has exploded into an ecosystem of more than 70 online app stores, 300 thousand developers and over 1 billion apps. By 2015 it is estimated that the app market will surpass $35 billion in annual revenue. The smart phone revolution has changed the face of consumer software development in exciting ways, providing huge overnight success stories and allure that continues to drive people of all ages to develop for these platforms.

The reality of this market is quite different than what we typically hear about. Newly minted success stories like Angry Birds are very rare – 59% of developers never break even on costs and 80% don’t generate enough revenue to support a standalone business. While the “cool” factor continues to attract optimistic coders of all backgrounds, many are woefully unprepared for the many hats they will have to wear.

This course provides an overview of the many facets of micropreneurship in the app world. It focuses around a project in which teams of 1-2 students work through the various areas of planning, design, development and marketing of their idea. Students have the opportunity to develop for Google’s Android platform. Before development begins however, they develop and refine their ideas, research market size and competition and evaluate appropriate technologies.

Students develop a marketing strategy that includes product launch and ongoing exposure under a given budget. Topics include effective use of advertising, brand development and social media to increase exposure and maintain customer loyalty.

Projects are presented at the end of the term along with insights into the experience, plans to launch the app and potential rewards for the winning project.

This course is about the practical issues of building and launching apps. This world is very much in its infancy and as such is continuing to evolve at a rapid pace. Maintaining an open dialog for discussion of new trends and technologies is a theme in this course. Students are encouraged to ask questions and perform their own research into how to best achieve their goals.
Syllabus

Week 1
- Course presentation and overview
- Developer initiation: Platforms, tools, developer account subscriptions, initial costs
- Model Controller View (MVC) paradigm

Week 2
- Design esthetics vs feature set
- Mobile technologies (pros and cons)
- Android API & design patterns
- Team formation and idea brainstorming

Week 3
- Android design patterns cont’d
  - Project idea refinement and technology selection

Week 4
- Android view widgets
- Market analysis: competitors, feature differentiation
- Market summary and projections

Week 5
- Customizing Android widgets
  - Project app feature specification and interface mockups

Week 6
- Task management: asynchronous tasks, threading, queues
  - Project development

Week 7
- Branding and presence (web / social)
- Marketing strategies: press releases, in-app advertising, print, paid review
  - Develop marketing plan

Week 8
- Discussion of project topic areas and current events
  - Project development

Week 9
- Quality assurance and customer support: beta groups, app distribution, documentation, feedback and loyalty
  - Develop support and feedback plans

Week 10
- Discussion of project topic areas and current events
  - Project development

Week 11
- Final Presentations

Prerequisites

- Java
- Data Structures and Algorithms
- Networking (preferred)
- Operating Systems (preferred)

Course Equipment Requirements

Android development requires Eclipse and the Android SDK, both of which are freely available and run on Windows, Mac and Linux platforms. Android devices are required for development and evaluation of student projects and exercises.
Greg Hoover, PhD  
Bare Reef LLC, President

Greg Hoover earned Bachelors (2004), Masters (2005) and PhD (2008) degrees in Electrical & Computer Engineering from the University of California, Santa Barbara. His research areas included novel control architectures, hardware synthesis technologies, multi-threaded embedded processor architectures and circuit-level fault tolerance. He was involved in a wide range of hardware and software projects from 0.5-µm CMOS to complete embedded systems.

In 2006, Greg founded Bare Reef LLC after licensing myStock, a software application targeted at stock investors, to JoeSoft (San Francisco Bay Area). The application was rebranded and sold in retail stores, including the Apple Store, and international online distributors. Bare Reef LLC continues to develop stock market tools for investors of all backgrounds. Its flagship software, Portfolio mobile, is available on Android, iOS and Mac platforms.

Greg manages several other brands and continues to launch new applications on a number of mobile and desktop platforms, in various software categories. He handles ongoing development, marketing, analysis and support of these products.

In addition, Greg consults for a variety of individuals and companies on technology issues including app design, web technologies and IT. His expertise is drawn on for technology evaluation, company direction and marketing as well as design and development.