CS378 - Mobile Computing

App Project Overview
App Project

• Teams of 2 or 3 students
• Develop an Android application of your choosing subject to instructor approval
• Application must run on class dev phones, API Level 16
App Milestones

• App Proposals
  – written 9/23
  – posters 9/23, 9/25, or 9/27 depending on assigned poster day
• Teams and app choice, 10/4
• Paper prototypes, 10/14
• Alpha Release, 11/6
• Alpha Evals, 11/18 (Individual)
• How to, 11/27 (Individual)
• Beta Release, 12/2, DEMOS 12/2, 12/4, 12/6
• Web ad, 12/4
• Beta Evals, 12/6 (Individual)
App Proposals

• individual assignment
• every student proposes two applications
• one service oriented, one profit oriented
• written due in class on 9/23
• posters due day of assigned session
  – 9/23, 9/25, 9/27
  – compelling reason for a given day, email me ASAP
• Posters - polished, not hand drawn
Team and App Choice

- By 10/4 via email to Mike
- App requires instructor approval
- teams of 2 or 3 people
- solo students will be grouped together at random or assigned to a team
Alpha Release

- 11/6
- Focus on Basic UI and *Functionality*
- turn in APK and readme file
Evals

• For Alpha and Beta releases each student reviews 3 other apps
• feedback provided to team
• good, bad, ugly, suggestions, ERRORS
Beta Release

• 12/2
• Fully Functional
• **Polished**
  – UI polished
  – icon
  – graphics if necessary
  – menu options / action bar
  – sound / feedback
  – persistence
  – responsiveness
Beta Demos

• 12/2, 12/4, 12/6
• Assigned randomly
• roughly 10 minutes per presentation
• describe and demo app to class
Description

Plan an event with your friends by searching for a place and customizing event name, time, and description.

Major Features

- Functional use of Google Map
- Creation of an event (name, description, time, location)
- Ability to search for nearby places (restaurants, coffee, etc.)
- Ability to physically type in address of meeting
- Ability to place pin on map to find meeting place
- Ability to send out event to multiple people (via SMS or email)

Screenshots
Recommendations

- Based on my own experience (and bias)
- Pick something you are interested in
- ... but that is reasonable!
- Better to have simple idea / app that can be improved and extended
- .. than a non functioning pile of garbage
Recommendations

• Games are okay
• Apps designed for kids are okay
• Okay to use APIs / libraries
  – but no silver bullet
  – integration is hard and time consuming
• Don't try to learn new technologies
  – if you need your own web server and to interact with a large database, but don't know how to set one up, now is NOT the time to learn
Recommendations

• Avoid plain graphics
• Avoid social media
  – probably my bias, but kind of boring and high barriers to entry
  – sharing stuff to social media okay, but should not be focus of app
• Avoid apps with lots of initial data entry
• Avoid apps that are essentially a static web page
Recommendations

• Use features of the mobile device such as:
• Location / Maps
• Sensors
• Gestures / Touch Screen
• Contacts
• Camera
• Network
• Available applications / services
• Speech-to-text
• microphone
• audio output
• Check schedule - class material
PAST PROJECTS
UTCS Lab Map

• Spring 2012
• What Linux machines are available (no one sitting there) in each CS lab?
Past Projects

• Moonstocks, Fall 2012
• Stock market game
• Stock price moves in response to music playing
• buy low, sell high
Dress for the Weather

• Spring 2012
• Take pictures of your clothes
• Classify and tag for weather
• Checks weather and recommends an outfit
Austin Pets Alive

• Fall 2012
• Show dogs and cats available for adoption
Android Design Guidelines

• Create Vision!
• Enchant Me!
• Simplify My Life!
• Make ME Amazing!

Create Vision

• Delight me in surprising ways
• Real objects are more fun than buttons and menus
• Let me make it mine
• Get to know me
Simplify My Life

• Keep it brief
• Pictures are faster than words
• Decide for me but let me have the final say
• Only show what I need when I need it
• I should always know where I am
• Never lose my stuff
• If it looks the same, it should act the same
• Only interrupt me if it's important
Make Me Amazing

• Give me tricks that work everywhere
• It's not my fault
• Sprinkle encouragement
• Do the heavy lifting for me
• Make important things fast
Apple App Guidelines

• The Display Is Paramount, Regardless of Its Size
• Device Orientation Can Change
• Apps Respond to Gestures, Not Clicks
• People Interact with One App at a Time
• Preferences Are Available in Settings
• Onscreen User Help Is Minimal
• Most iOS Apps Have a Single Window

http://tinyurl.com/3yj7b5y
Apple Human Interface Principles

• Aesthetic Integrity
• Consistency
• Direct Manipulation
• Feedback
• Metaphors
• User Control
User Experience Guidelines

• Focus on the Primary Task
• Elevate the Content that People Care About
• Think Top Down
• Give People a Logical Path to Follow
• Make Usage Easy and Obvious
• Use User-Centric Terminology
• Minimize the Effort Required for User Input
• Downplay File-Handling Operations
• Enable Collaboration and Connectedness
• De-emphasize Settings
User Experience Guidelines

- Make Search Quick and Rewarding
- Entice and Inform with a Well-Written Description
- Be Succinct
- Use UI Elements Consistently
- Consider Adding Physicality and Realism
- Delight People with Stunning Graphics