

CS 436 Homework

Achievements

1 Overview

Homework in this class is open-ended. As your instructor, I want you to encounter the classic problems of mobile development and employ appropriate solutions. At the same time, I want you to be motivated about the apps you build. So, instead of completing prescribed homework tasks, you will write apps that you design and that meet one or more general achievements.

Before you can receive credit, an app must be of sufficient quality to be published. It does not need to be feature complete, but it should have icons, not crash under standard operation, and have a clean interface. You may claim multiple achievements with an app.

2 Achievements

Each achievement is worth 1 Blugold.

1. Integrate a list view with a custom adapter/presentation into an app.
2. Use a local database to persist relational data.
3. Use a remote database to persist relational data.
4. Persist data using preferences.
5. Employ a web service in an app. The exchange format must be grammatically-defined: XML, JSON, or similar. HTML scraping doesn't count.
6. Use threading to handle tasks off the UI thread.
7. Localize an app into at least three languages.
8. View spatial data using maps.
9. Acquire and use location information from GPS into an app.
10. Employ integrated sensors into an app.
11. Formally release an app to the public on an app store.
12. Exchange data between a mobile device and other device using Bluetooth.
13. Use PhoneGap/Cordova or some other app generator to build an app for multiple platforms.
14. Embed Google Analytics or other analytics services into an app.
15. Consider multiple touches or gestures in touch-driven interaction.
16. Use OpenGL or other drawing libraries to perform custom drawing.
17. Write an app that interacts with the camera.

18. Write an app that is accessibility-minded and works with Blue2, a two-button switch. Contact Dr. Carol Koroghlanian in the College of Education and Human Sciences to checkout the device.
19. Write an app that is activated by voice commands.
20. Is there an interesting achievement not listed here that fits the course objectives? Recommend it!

3 Getting Credit

To receive Blugolds for your achievements, you must do the following:

1. Publish on the course blog a *premortem*. Describe your preliminary intent to build an app. Include mockup of the interface – which should be drawn by hand or in a drawing program. Give the post categories `fall 2014`, `cs436`, and `postmortems`. Be exact.
2. Meet with me in class to discuss your ideas.
3. Complete the app and demo it during class to me.
4. Publish on the course blog a second post, a *postmortem*. Describe what interesting challenges you overcame, what insights you gained, and what changes you made since the *premortem*. Include screenshots. Identify in a clear sentence which achievements you are claiming for your app. Give the post categories `fall 2014`, `cs436`, and `postmortems`. Be exact.