

CMPSC 591
Principles of Mobile Applications
Fall 2013

Homework Assignment Six: Components and Blocks in AppInventor

Introduction

In this homework assignment we will use the Component Designer and the Blocks Editor to create a simple mobile app that can play sounds and perform actions when you either touch or shake the tablet. As in the previous homework assignment, you should take time to learn more about AppInventor and get ready to program your app by visiting the Web site <http://appinventor.mit.edu/>. Students who want to learn more about the AppInventor system or download a PDF of today's printed chapter should also visit <http://www.appinventor.org/>.

Using the Component Designer and the Blocks Editor

Following the tutorial in the handout provided by the instructor, use the Component Designer and the Blocks Editor to create an app that displays an image and reacts when the user manipulates the tablet. You should use the Component Designer when you want to add both visible (e.g., buttons and labels) and non-visible (e.g., sounds and sensors) components to your mobile app. Using the Component Designer involves dragging components from the list of those available to the canvas of your mobile app. You can use the Blocks Editor when you want to program the logic that describes how the user interface components will behave when subject to interaction. Using the blocks editor involves the assembly of “puzzle pieces” that describe your mobile app's behavior.

After you have reviewed the printed version of Chapter 1 in the AppInventor text book, you should implement the described application, adding your own extensions in several areas. For instance, instead of adding the picture of a cat, you should pick a different picture. Then, you should select sounds that will work well with your chosen picture. Finally, you should implement one or two additional features by adding components and blocks that are not specifically mentioned in Chapter 1 of the AppInventor book. Once you have completed your app, you should package it for download to the Nexus 7 tablet. Before packaging the app, please make sure that you have designed a high-resolution icon that will be associated with your app when it is run on the tablet.

Does your app work correctly when your tablet is not connected to the development workstation by a USB cable? Now that you have finished implementing your first app in AppInventor, please take some time to reflect on your experiences. What are the strengths and weaknesses associated with using AppInventor? What are three apps that you could implement in AppInventor?

To complete the assignment, you should turn in one copy of the following signed printouts:

1. A screenshot of the Component Designer with all of the components in the completed app
2. A screenshot of the Blocks Editor with all of the logic blocks in the completed app
3. Screenshots showing both the app's icon and the main screen when it runs stand-alone
4. A discussion of the strengths and weaknesses associated with app development in AppInventor
5. A description of three Android apps that you could feasibly implement in AppInventor