CMPSC 591
Principles of Mobile Applications
Fall 2014

Laboratory Assignment Eight: Implementing and Evaluating an AppInventor 2 App

Introduction

In the last two laboratory assignments you have learned more about the Android operating system, with a particular focus on the AppInventor 2 development environment. Since we will continue to use AppInventor 2 in this laboratory assignment, you may want to continue to learn more about it by visiting `http://appinventor.org/`. For this laboratory assignment, you will work in teams of four or five students to describe, design, implement, test, and evaluate a complete mobile app in AppInventor 2. Over the next few weeks, you will be responsible for organizing a team and then working with your team members to complete an app that provides useful and exciting features.

Using AppInventor 2 to Create an Android App

After brainstorming ideas with your team members, you should identify your top three candidates for apps that you can create with AppInventor 2. Next, you should prepare a document that explains your motivation for implementing one of these apps. After completing this first part of the document, you should clearly specify the input(s), output(s), and behavior of your app. Now, fairly divide up the implementation and testing effort associated with finishing your app.

Once you have completed the implementation of your app in AppInventor 2, you should invite between five and ten Allegheny College students who are not members of this class to participate in a user study to evaluate your system. After an individual agrees to participate in your study, invite them to Alden Hall between 8:00 am and 4:00 pm so that they can try out your app on one of the Nexus 7 tablets. When your friends are using your app, you should observe their interactions and take notes. Once they are finished interacting with the tablet, you should ask them a series of prepared questions to learn more about what they liked and disliked about your mobile app.

Finally, you should prepare slides for a short presentation and demonstration that you will give in class on the date that this assignment is due. The presentation should give an overview of the content that is in your written document, briefly summarizing your motivation for implementing the app, explaining how the app was implemented, stating the inputs, outputs, and behavior of the app, and highlighting the most important points from the feedback given by the users.

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

1. Description of at least three apps that your team could create with AppInventor 2.

2. Complete documentation that describes the following aspects of your chosen mobile app:

   (a) Motivation for implementing the chosen app.
   (b) Inputs, outputs, and behavior of the app.
   (c) Implementation and testing choices for the app.

3. Report on the results from the user study that you performed to evaluate your app.

4. Presentation slides for the in-class talk and demonstration that you will give on the due date.