CS Capstone Design

Technical Demo Grading Sheet (100 pts)

TEAM: Dendro-Dawgz

Overview: The main purpose of the "Technical Demos" is to very clearly communicate the extent to which the team has identified key challenges in the project, and has proven solutions to those challenges. Grading is based on how complete/accurate the list of challenges is, , and how convincingly and completely the given demos cover the given challenges.

This template is fleshed out by the team, approved by CS mentor, and brought to demo as a grading sheet.

Risky technical challenges

Based on our requirements acquisition work and current understanding of the problem and envisioned solution, the following are the key technical challenges that we will need to overcome in implementing our solution:

C1: Reading in data from a dendrometer. One challenge we will face when implementing the mobile application is reading in data from the dendrometer using the app. This is the most important component of the application, because without it users will have no reason to use the application.

C2: Creating a frontend for a mobile application. A second challenge we must face when developing this application is creating a functional frontend on the Android platform. This is required for users to be able to initiate data downloads, and view existing graphs.

C3: Exporting and sharing data using the cloud. A third challenge we must figure out is how to export and share data using the cloud. This is required for users to be able to send and share data with others.

C4: Computing and displaying statistical analysis. The final challenge is to compute and display statistical analyses of the data. This is required for users to be able to view the data that they download from the dendrometer.

Challenges covered by demos:

In this section, we outline the demonstrations we have prepared, and exactly which of the challenge(s) each one of them proves a solution to.

Demonstration 1: Dendrometer Communication

Challenges addressed: **Reading in data from a dendrometer.**

Flight Plan:

1. Obtain dendrometer and functioning TMD adapter
2. Plug the adapter into the Android mobile device
3. Open the simple application
4. Connect the dendrometer to the TMD adapter
5. The application will read in the data and display that it is reading in the data
6. Once downloaded, the data will be stored and viewable as a CSV file on the user's device
7. View the newly created file to additionally showcase that information was successfully read in from the dendrometer

Evaluation:

- ✔ Convincingly demo'd each of listed challenges?
- ✔ Other evaluative comments:

Demonstration 2: Frontend

Challenges addressed: Creating a frontend for a mobile application

Flight Plan:

1. Open DendroDoggie application on Tablet
2. Click File Viewer button to navigate to main data selection page
3. Click Options button to navigate to the settings page
4. Click on Create Bookmark button
5. Click Home button to navigate back to home page

Evaluation:

- ✔ Convincingly demo'd each of listed challenges?
- ✔ Other evaluative comments:

Demonstration 3: Cloud Export

Challenges addressed: **Exporting and sharing data using the cloud.**

Flight Plan: Step by step overview of demo

A database will already be created with some sample data in there.

1. Open the application
2. Click on the File Viewer button on the home screen
3. Application will then display the sample data from the database using a list view

Evaluation:

✔ Convincingly demo'd each of listed challenges?

✔ Other evaluative comments:

Demonstration 4: Statistical Analyses

Challenges addressed: Computing and displaying statistical analysis

Flight Plan:

Tablet must already hold a dataset inside the database of the application. We want this set to be extensively large to prove feasibility with edge case

1. Open DendroDoggie application on Tablet
2. Select File Viewer button on application's home screen
3. Select desired file to view
4. Application will create graphical representation of data

Evaluation:

✔ Convincingly demo'd each of listed challenges?

✔ Other evaluative comments:

Other challenges recognized by not addressed by demo:

If there were challenges you listed earlier that were *not* covered by a demo, list here. This will hopefully be a short list…but better to be clear about where you are. If you have items here, you could list (if applicable) any pending plans to reduce these risks.