Project: Alternative Vote

APCS Final Project Week 4 Status Report .

Date: May 12, 2017

To: Mr. Fulk

From: Andrew Lin, Vinay Senthil, Jeffrey Tao

**Subject:** Status Report Week 4

**Accomplishments:**

This week we decided to turn the desktop java application into a web app by deploying it into a web container on azure. It is currently being hosted on an Azure server at the url: rowac.azurewebsites.net/election/welcome.jsp. In order to make a web app, we had to make java server pages or .jsp. JSP files need to be run on a server such as Tomcat or Azure. For the purpose of this project, we used Tomcat 9.0 to test the project locally and whenever we wanted to push our app to the live url, we deployed it to Microsoft Azure.

Currently we have three JSP pages: a welcome screen which prompts the user with two options, vote or create, a voter screen to select candidates, and a results page. In the welcome screen we’ve made it so that when you click vote it asks you for the name of the election you would like to participate in. When the submit button is clicked it should redirect you to the voter page which then brings you to the results page. Vinay wrote a crawler loop which uses a Map<Candidate, voteCount> in order to cycle through each voter and determine the votes. In addition, Vinay figured out how to connect the Azure SQL database to the web app so it can work in real time. In order to make each election unique, we had to query metadata from the specific table to populate the graph. In order to display the results on a chart, we used the Plotly API. Wre figured out how to communicate between JSP pages using the Request library. Overall we learned a lot about the special syntax required to combine java and html.

In terms of the back-end code, we added a feature that compares the results of the alternative vote system and the first-past-the-post system.

**Problems/Risks**:

None of our members have ever run a java server such as Tomcat. This requires us to figure out how to convert our current project into a web app and create artifact files that have to be built and deployed. We attempted to install Tomcat on the school computer but were unable to do so. We must now bring personal computers to run the server locally. Also we spent two days getting Tomcat setup on Andrew’s laptop because Vinay set up his on Intellij. After a long time with no success, Andrew switched to Intellij and it worked.

**Next Steps:** We will be working on designing the voting GUI over the next few days, and rewriting some of our code to adapt it from receiving ballot inputs from the console to reading data from the GUI. We need to edit the welcome screen to help prompt the user to create an election. Andrew needs to convert the old gui into an applet that can be embedded into the voter.jsp file. In addition, the results charts needs to be updated in realtime.