Bi-Weekly Report 4

2nd December 2016

Team 1: Microsoft Capita Data Visualisation Project

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OVERVIEW

Over the past two weeks, we were told that the other Capita team will be joining us on the same data visualization project instead of working on the data mining part, which was to be handed to the Msc students instead. We later met up with Harry Strange who explained the change to us and followed it up with a meeting with James Randall who gave us more details of the backend of the project and some of the key programming features that will be needed for the webapp. Then we proceeded to use the information to build prototypes and an experiment log for our project and finished the project website which was to be made.

MEETINGS

22nd November

We met with Harry Strange along with the Capita Team 2 who previously was working on the data mining part for the project. We were told that Msc students would be to take over the data mining part of the project and Capita Teams 1 and 2 are to work together on the data visualization part together. We agreed that we would contact and meet with our clients to confirm how to move forward with the project.

24th November

We met with James Randall from Capita with hopes that he could answer a list of questions that we had prepared for him and discussed the inclusion of two teams on this project. We decided to split the project into two parts that would still be connected to each other. Team 2 is to work on the backend of the app and Team 1 is to work on the front end. James gave us enough necessary information on the key programs and aspects of the SIMS Discover app to be able to start experimenting with prototypes for the web app to be built. What we ascertained was that while there may be services and tools provided by companies such as Microsoft that would be very relevant and useful to the team working on the backend, we were likely to have to combine

libraries or use slightly non-conventional methods to achieve our goals as there was no one tried-and-tested method or resource that we could use to complete the frontend of the web app. James also told us that what Capita were expecting of us is to complete the research stage of the wider project to create and deploy Discover as a web app on a large scale, i.e. to pave the way for developers at Capita so that they know how it would be done and what tools would be used. Finally, we were given a schema for the data and James assured us that in the coming weeks we were to be given access to a data warehouse where we could test our prototype using data collected by SIMS.

25th November

We had one more meeting with Harry Strange so that he could see how we were getting on and answer any further questions we might have of him. We updated him on our progress and relayed the information James Randall had given us. We were told that it would be good to confirm a more concrete and detailed list of requirements with James, and to send him a document that included MoSCoW requirements for both the frontend and backend of the app.

TASKS COMPLETED

- Combined Teams 1 & 2 list of requirements
- Research into languages and libraries to be used
- Website (as much as can be completed with our current progress in the project)

PROBLEMS

- Have not confirmed MoSCoW requirements with client

FUTURE PLAN

- Make a prototype to show the TA and the client.
- Confirm the MoSCoW together with Team 2 with the client.
- Write the Project Reports and make the project video.

INDIVIDUAL REPORTS

Carlota Ortega Vega

During the past two weeks, I have mainly focused on finishing building our project website. In order to do this, I had to do some research into learning HTML, as I have not developed a

website before. After receiving feedback during the last lab session, I have continued working on the website, currently looking at what would be the best way to include all our bi weekly reports and meeting minutes. Other than this, I have been doing research into possible libraries we could use for data visualisation in our app, such as chart.js and D3.js, to see which would be the most suitable to meet our requirements. I have also started working on my research experiment, which is finding the best way to implement a toolbar for our application.

Bethany Graves

Since we were presented many different potential avenues that we could take in order to complete our task, I decided to methodically work through each one over the past two weeks and see which one was the best option. I started using Power BI to display dummy data that I created in the form of a .csv file, as Power BI had been recommended to us from the outset. However, I soon discovered that although Power BI was very effective in visualising data in novel and interesting ways, we needed Discover to be able to allow teachers, headteachers etc to be able to manipulate data themselves, and to be able to take one section of data from dataset and be able to combine it with that of a different dataset easily and intuitively; functionality that I could not find in Power BI. Once I had concluded that we would most likely not be using Power BI, I turned my attention to Phaser.io, a game library that uses javascript. I created a simple program that allows the user to drag and drop objects that would snap into a 32x32 pixel grid. I am now convinced that Phaser.io is the way to go, and since it uses javascript it should be easy enough to add to it in order for it to support the features that will be used in Discover. I am now learning html5 and acquainting myself with JSON and REST in order to implement a way for our frontend to communicate with Group 2's backend.

Fasbeer Eskander

Over the past two weeks, as the research lead i looked up the technologies available to work on the frontend of the project. After looking up a few available resources, i made a list of the ones that i thought can be used with the project and discussed with the other members to distribute them and try it out. After the last lab session, i have looked into angularjs and d3.js and charts.js and started to try to implement them to show a graph or a chart or any sort of visual representation from an array of variables available to make a prototype for our application.