Individual Reflective Essay

Brandon Dooley - Group 13 (Cryptocurrency Donation Calculator)

Introduction

As part of the CS2013 course I was a member of Group 13. We were tasked with the project of designing a *Cryptocurrency Donation Calculator* for our client Joeran Beel. After discussing our clients desires as a group we realised what he wanted us to design was an in-browser Cryptocurrency miner. This miner would serve the purpose of offering an alternative form of revenue for websites from the current norm which is advertisements. Over the course of the development I learned many things in various different areas which I will discuss throughout this report.

Experience of Working in a Collaborative Project Team

Overall I personally found the experience of working in a collaborative project team highly rewarding. It was the first time I had been part of a structured collaborative project team which was divided into individual areas e.g front-end developers, back-end developers, project managers etc. I found this to be highly beneficial as it allowed the project to be split up and run fairly. I feel this team structure was of benefit to the project as it allowed for efficient communication to flow across all sectors of our team and also allowed the project managers to comfortably oversee the project and monitor progress within the individual sectors respectively.

However, there were some cons of working in a collaborative project team. For example there were occurrences when some deadlines/goals were not being met within the individual sectors - beit through negligence or difficulty. This resulted in members from other sectors having to step in and accommodate for this. While this may be a benefit of working within a collaborative project team I found that it lead to certain members having to put in twice the amount of work to accommodate for the slack of others, which put a strain on individual members.

Individual Instances of Issues or Dillemas

Originally I was designated the role of acting as Front-End Developer within the team. Initially I set out designing and setting up a website in which to host/test our project on. However, as I needed the miner to be set up first which was the responsibility of the back-end developers I found myself with a lot of time to spare. I decided to lend a hand to the back-end developers and assist them in setting up the miner.

Throughout assisting the back-end developers I feel that I ended up fully replacing them in their roles and fulfilling a large majority of the tasks that were originally designated to them. While I did not mind doing this and in the end found it extremely rewarding, I also feel I did not receive enough assistance as I would have liked. This was verbalised to other project members when we came around to the front-end design and I asked for their assistance, which they did assist me with minorly. However, overall I feel it was unfair as I personally ended up developing every working aspect of our project.

Contributions

Back-End Development

Throughout the course of the project I gained a large amount of experience working with back-end technologies that I had previously never worked with before. The first of which was renting an Ubuntu 16.04 server through DigitalOcean. While I had previously worked with Ubuntu I had never worked with Apache/Nginx web servers before. This server hosted both our actual miner (which used the *CryptoNoter* public library) and also our website. The miner itself uses technologies such as NodeJS, Javascript, WebASM while the server is a combination of nginx and apache. It was quite rewarding once both the server and the website were fully setup and ready to be interacted with by the outside world.

Front-End Development

What was originally my primary role, consisted of designing and developing a website through which we would host our project. This would give potential users a friendly and clean interface through which they would be given instructions on how to install and make use of our service. The website itself was mainly designed using HTML, CSS and Javascript with the assistance of Bootsrap to make it look particularly nice and friendly. The part of the website I am most proud of is the *Mining Code Generator* and the *Opt-In Popup Modal*. I feel these cleanly and efficiently serve their purpose while also being extremely user-friendly and easy to use. The most rewarding moment of the project was seeing the miner being run on several computers individually at the same time and seeing the hash contributions coming in as a result.

Realisations About my Working & Learning Styles

Over the course of the project I learned many things about my working and learning styles. I learned that while I can comfortably work in a team-environment I become extremely frustrated when other members aren't pulling their weight. I also learned that I work well under guided and focused management as was the case in our team. Learning wise I feel I learn extremely well through putting things into practice and through trial and error, as was the case throughout all of the development stages.

Overall, I feel the course was extremely rewarding and I enjoyed being given the opportunity to work within such an industry relative environment. Getting the opportunity to work and deal with an external client was both enjoyable and informative. I am very much looking forward to next year where I will be given the opportunity to work within the project management side of a project.

-Brandon Dooley

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