CS 4120-Professional Field Experience Report, Mercent Corp.

Seattle is home to Mercent, a company whose many manufacturers choose to sell and advertise online with. At Mercent, I was responsible for a few small yet crucial things. Interns at Mercent are treated as Junior Development Engineers, which means I wasn’t responsible for coffee runs. I’ve been fortunate enough to build things that people will use. As of writing this, I’ve worked and completed 3 projects. I’ve got 2 weeks left – just enough time to get project 4 well under way. In order of complexity and time, the projects are: Tooltips, Amazon Taxonomy, Mockups for a product grouping tool, and prototyping the front end for that grouping tool.

Before I go into more detail about my projects, I thought I should describe the development process at Mercent. Mercent uses a one-week release cycle, allowing the online SaaS platform to evolve week after week. Along with one-week release cycles, Mercent employs two-week sprints. Rapid release is key to good, simple, and quick development. The release cycle includes four steps. The first is local development. Once that’s complete, the developer commits the changes to Git. After a code review, the developer merges their changes to a development test server everyone uses. From there, the Quality Assurance team tests to make sure everything works as expected. After passing QA, the work is merged into the release-staging branch, where the deployment of the changes can be tested before they are deployed to production. If everything goes well, the staging branch is released to production once a week. Mercent has optimized this flow for the fastest releases with the most testing possible.

I’ve never been challenged by a project like I was challenged by my Tooltips project. I’ve spent 3 months on the project, throughout which I’ve had to work in depth with customer-facing JavaScript including jQuery and Yahoo!’s YUI, as well as Mercent’s in-house JavaScript libraries. The JavaScript makes Ajax calls to the web services that I had to modify for my project to succeed. The backend, including the web services, were all C#.Net, while the database used Microsoft’s T-SQL. The second part to the project was to modify the Mercent-only in-house Tooltip editing tool to work with the major changes I made. A majority of that work was ASP.NET and C#, with minor work in CSS3 and JavaScript. Mercent already had an existing Tooltip solution, but it wasn’t capable of the features that my project required. I worked on an extension to the system to allow developers to dynamically create groups of Tooltip placeholders that could later be filled by the knowledge base editor. The goal was to make the system dynamic, scalable, and automatic while reducing the developers work from a few minutes per Tooltip to a few minutes per groups of Tooltips (potentially thousands per group). This reduction required the joining of the developer tool with the knowledge base editor tool into one tool that does all the parts required.

The second project I worked on while my Tooltips project went through QA passing/failing cycles was Amazon Taxonomy. At Mercent, I am a member of the Mint (Mercent Integration) team, which is responsible data exchanges and augmentation between the customers and Mercent. The data is then used to communicate with shopping channels. My job was to take Amazon’s XSDs, create SQL tables and views, and manually fill them with appropriate data. The project was slated to last 3 weeks due to the manual labor part. After spending 4 hours one day doing a single XSD (there are more than 30), I decided to write a quick console program to make it easier. I spent 2 hours making the C# program, 2 hours further finishing the rest of the XSDs, and then 4 hours going through and fixing single cases that went wrong. All in all, I saved more than 2 weeks of time. This project has already been released into production.

Most recently, I worked on Mockups for a product grouping tool. The tool is used for managing product relationships before the product feed is sent to channels. I used Balsamiq to create the Mockups, which were then converted to images for presentation during the review meetings. The Mockups went through 2-3 meetings during which they were discussed and optimized further. As of this morning, they are complete and will go through a final presentation to the Project Management team, after which they will be made into a real tool for customers to use.

My last project to work on in my final two weeks is prototyping the Mockups I made into html and JavaScript. That way, when the developers get to work on it, they’ve got a working front end that just needs data to be plugged in to it. I think this project will be increasingly difficult as I have to make the tool myself, rather than modifying somebody else’s ground-work into a more polished and usable tool.

During the summer, I’ve learned quite a bit. All of the things I’ve learned I will be able to apply to future classes and jobs. I’ve learned about real-world release cycles, programming in the real work, the life of a project, styles of programming, and a few programming languages as well. I’m very happy with my summer as I think I’ve grown quite a bit as a Computer Scientist and strive to continue to do so in the future.