Zachary England

Capstone Assessment

The project I am apart of is a meal planning mobile application. We hope to create something of greater interest than just a simple organizer. We want this app to allow the user easy creation of the perfect meal plan for their physical and taste needs. Based upon what science would consider a nutritionally satisfying diet, and user specific input about them, we want our app to be able to greatly assist the user in generating a meal plan to meet that. I see this project as a way to get introduced to new technologies and gain further experience with the full software cycle (Design-Implementation). As well as improving my full-stack skills. Working through a typical application architecture of a database, backend API, and frontend UI.

I would definitely have to give credit to almost all of the CS courses I have taken in the past four years for impacting my knowledge and way of thinking when it comes to computers and software. Specifically CS4065 Networks will be useful when designing and implementing our backend API(s). Understanding the basics of networks for prototyping and web protocols in general will be very helpful. EECE3093C Software Engineering and CS4092 Database Design will be helpful for pretty obvious reasons. Our entire project is software engineering and we plan to have a database, so the knowledge from that course should come in handy. All of the other courses that provided base understanding or formal theory may not directly be used in this project. But I can confidently say they have improved the way I approach software problems and formulate solutions.

I have completed all of my co-op terms at Total Quality Logistics working on a couple different teams. I would say during my first few semesters I learned a lot about how the industry works and differs from academics. Working with a team, following company guidelines, having to complete work in a very timely manner, have it tested, etc. Things that most people only learn on the job and that can change from company to company. The technical aspects of these semesters were me developing features for a winforms app. So I learned how to navigate a very large monolithic application, traverse a SQL Server database, and how to use a scrum tool like Azure DevOps. My final semester I worked on a smaller scrum team dedicated to one new application. Here is where I learned so much in such little time. I got to work on a new app that needed every part implemented. Database, backend API and UI. I was lucky enough to be able to spend a good amount of time learning about each one. The specific technologies were SQL Server, Dot NET Core, and Angular. Most, if not all, of this experience will be utilized in some way during this project. A lot of the technical experience I got will directly apply to our project. And developing from user stories while working with a team in the same code base will really come in handy.

To start off blunt, a part of my motivation for this project is the fact that it is a graded requirement to graduate. But to answer the question a little more appropriately, I am a person who enjoys creating things. I like brainstorming, designing, and then building all sort of things. I also love the activity of writing and implementing code. It can feel like an awesome brain stimulating puzzle a lot of the time. The specific details of the project do not affect my motivation too much. I could get

behind almost any idea given I have some adequate/significant amount of say in the project. And all of that applies to the project my partner and I have settled on.

I think our goal for the beginning of this project is to identify what we consider to be the bare bones of our application. Then implement that relatively quickly in a rough prototype. Simple database, basic API with fewest possible endpoints, and a UI that displays the retrieved data. Once we have that, we should be in a good spot to start iterating and adding or improving core features. To be a little more specific we would have a mobile application that could talk to a backend API, which communicates with the DB, to get recipes that the user could add to a custom meal plan. Those meal plans would be saved and could be edited/viewed at any point. Our expected results would be the basic meal planner that helps you customize for nutrition and taste. We would consider ourselves done when we have completed a satisfactory bare bones application. And if we decide on implementing any additional features, then that will depend on our time estimates to complete them compared to the project deadline.