Individual Capstone Essay

Sam Jansen – Team Mom

For my senior project, I have joined with two other classmates, Ben LaFene and Spencer Snider, in order to create a habit tracking app for mobile devices. From an academic perspective, this will be a totally new venture for me. I have not had any experience thus far with mobile app development. However, it has always interested me, and I am more than happy to learn as much as I can. In particular, I am excited to learn about the programming language dart, as it apparently allows you to program an app for ios and android devices simultaneously. I am very curious about how this might work as in my experience those two platforms function very differently.

Not much of what I have learned in my University of Cincinnati curriculum will be useful to me on this project. In our curriculum we mostly focus on making small windows applications to better understand academic concepts like algorithms (CS4071 Design and Analysis of Algorithms) and discrete mathematics (CS2071 Discrete Computational Structures). This application will mostly be focusing on project-oriented problem solving, mobile application development, and building an app which has communication features to allow collaboration between users. While nothing will be directly applicable, some classes will aid me indirectly in my efforts for this project. I did take a networking class (CS4065 Computer Networks and Networked Computing) which may be helpful in getting the social aspect of our app to function. Additionally, as the team writer I feel that my English composition class (ENGL2089 Intermediate Composition) will help me in deciding what language best communicates our ideas and mission as a group.

While I didn't do any mobile application development at either of my co op companies, I do feel that the knowledge I gained in those experiences will help me in the development of this project. For one thing, both of the companies I worked for, London Computer Systems (LCS) and Medpace, used the same scheduling structure: weekly sprints. Weekly sprints involve dividing the work required to complete a larger project into smaller chunks which can (ideally) be completed in the span of a week. At the beginning of each week, the team gets together and

discusses what they were able to accomplish in the past week and decides what needs to be accomplished in the coming week. Additionally, while at LCS I led the development of one particular feature for a larger application. This gave me a lot of good insight into how to design one piece of a larger whole and focus on its development while ensuring that the work being done is going to contribute meaningfully to the whole of the product. I also learned to not be too upset when things need to change part of the way through development. These soft skills and many others will be useful while working on this project. However, I am unsure how many of the hard skills I acquired will be able to help me. During my co op rotations I learned how to program in the .Net and Angular frameworks. However, mobile application development uses an entirely different framework, which will be both frighting and exciting to work with.

   I have a lot of hopes and expectations surrounding this project. For one thing, I really want to learn a lot about developing mobile applications. Mobile applications are a huge focus of a lot of software development in the modern era and a lot of creative developers are using the technology within peoples' phones to give them new, exciting, and enriching experiences. In order to use this power however, I need to learn a lot about the languages and frameworks mobile apps are written for. Additionally, I would love to be somewhat involved in the networking aspect of this project. I feel that connecting users provides a whole new dimension of interactivity to software, and though some of the products we made at LCS used some very light networking features, I was never involved in them and they were not to the scale we are aiming for in our project. The ultimate goal for the project however, is to actually be able to use it to improve my own habits. I have never been good at setting aside the correct amount of time for sleep and mindfulness, and I would love if there was an app that helped me fix those issues.

   There are a number of interesting approaches we are looking to take for our application. One thing which we are focusing on a lot is scope. People's lives are endlessly complicated, and a lot of existing apps in the market are pretty good at helping them track one thing. For example, some people use one app to track their sleep, another to track their calories, and a third to track their exercise. We would like to help users track all of these fields as well as some which no app on the market currently allows users to track, such as time devoted to family or time spent doing

more productive hobbies like reading and practicing music. We are also looking to incentivize the user in some new and fun ways. I already mentioned the networking side of our application and I believe that this feature will lend some great accountability to our users. I am also interested in how we might use a virtual pet, in the style of a NintenDog or a Pokemon, to motivate users. We could provide little images of the animal mirroring the human user's scheduled behavior and have the animal provide encouragement when users report their tasks as completed. It is also my secret hope that having the animal commend the users for completing tasks will inspire guilt in those who only marked their tasks as complete without actually doing so. However, much more time and development will be necessary before I know how well those ideas may work.