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Considering that I am not a major of the business school, much of my project will be new to me. That being said, I am excited to work through this project and learn as much as I can to push myself to learn about conducting a business plan. Much of what I learn will be through practicing and trial and error, but I am confident that I will be more than satisfied with my final product. My business plan will have many features, which will be discussed throughout this Journal of Progress, some of which I am familiar with, others not so much.

The business plan I am creating, JMU Dining to Go, would allow students of James Madison University to order food via a web application or a mobile application from nine on-campus dining halls. The food would then be delivered at the student's specified time and to the student's specified location, as indicated from his/her order submission. These two applications are the end products of a much more complicated process. Before the development of these applications can be completed, pre-requisite steps must be taken because after all, these applications are business driven. Therefore, proper documentation and precautions must be taken to ensure there will be few risks, business potential, and the overall accuracy of the project and its successful implementation. This documentation is listed in the following paragraph. I am writing this Journal of Progress in paragraph form rather than by date because this entire process is iterative – I will need to go back and modify different aspects of the business plan as more requirements are determined and as the plan develops.

The elements of this business plan are as follows and are finalized in this particular order: business proposal, system request, activity diagram, network diagram, class diagram, technical

feasibility, organizational feasibility, interface mockups, web application prototype, and mobile application prototype.

The first component of my business plan was the business proposal. I have never created a business proposal in my academic career or otherwise, so I needed to research the proper way to format a business proposal as well as the more difficult, what the content of a business proposal should include. I discovered that there are three main aspects every business proposal should include, and those are problem, solution, and price. The problem at hand is actually two-fold; students may have too hectic of a schedule to eat on campus (e.g. getting from one class to another on time, catching a bus, etc.) and dining halls losing the business of students who cannot find time to purchase meals from on-campus dining halls. While some may see the latter as irrelevant due to student's pre-paid meal plans, some students pay with cash, dining, or credit, and students who are able to eat more often on campus will increase the punches and/or dining dollars for their meal plan, thereby giving more money to the dining halls. Essentially, the solution of this problem, the applications, can increase convenience for students to use punches for on-campus dining, and increase the bottom line for dining halls.

Explaining the business need portion of the system request was one of the easier components because I explain a problem that I have already experienced as a JMU student. Explaining the business requirements was a little tougher because I needed to think ahead to what the system's mandatory functionality would be.

The third component of my business plan is the activity diagram. While I have completed activity diagrams in the past, this particular one took quite a few attempts. The activity diagram is crucial in providing guidance as to how the system will operate, so it should be accurate and detailed. After comparing a few of my activity diagrams and making key decisions, I am very happy with the finalized activity diagram.

Next is the network diagram – a low-level diagram depicting the architecture of the system. The biggest issue I had in completing the network diagram was determining whether or not I needed a database server. After researching this topic, I have concluded that a database server is needed to transfer data from the front-end, the web and mobile applications, to the back-end, the application program interface (API) set up for the dining halls. I met with one of my readers, Dr. Benton, who explained APIs to me, and I now know that a database is needed for these programs to connect to an API.

A class diagram is a structural model that shows the relationships between entities and this is a useful tool for database construction. After determining that a database would be needed, I needed to complete a class diagram. Initially, I created an entity relationship diagram (ERD), but this forces the construction of a relational database. In order to allow for the construction of any database without constraints, I constructed a class diagram. This serves the same purpose as an ERD, but does not create any unnecessary limits.

The first portion of my feasibility analysis is the technical feasibility. Researching the components of a technical feasibility allowed me to break up the different technical aspects of this project and measure each one individually in order to accurately assess the overall technical risk of the project.

The second portion of the feasibility analysis is the organizational feasibility. Similarly to the technical feasibility, the organizational feasibility breaks down the different organizational aspects of stakeholder opinions, time issues, and legal issues. I was unsure of time issues that could be prevalent in this project, and after researching examples, I concluded that downtime was a time related issue. Fortunately for this project, there is a lot of time for which downtime can occur for maintenance. Downtime to have maintenance performed on the applications could be any time that is not during

business hours or any time that school is not in session. This will save a lot of money because companies like Amazon that cannot have any downtime spend large amounts of money to keep their applications running non-stop.

Making interface mockups was completely new to me. In my courses at JMU, I have only made one other website, and I was designing it as I was coding it. I didn't know it at the time, but this made building a user-friendly website much more difficult than it needed to be. By creating interface mockups, I was able to design the screen layout for each page before actually coding it. This allowed me to create a user-friendly design before starting to code. I have used Microsoft Visio in the past, but never to create an interface mockup. After researching techniques and symbols, I created designs that made sense to me and that I feel look good to the viewer.

I created four interface mockups – one for the home page of the web application, one for the order form page of the web application, one for the home page of the mobile application, and one for the order form page of the mobile application. These corresponding mockups are somewhat similar in their appearance, but this was intentional as I want the applications to match.

Creating the web application took a large amount of my time in this project. I needed to research many things that I have never before incorporated into a website. Key features of this web application include hiding the password so that when the user enters their password in the field it displays as dots rather than characters, validating the form so that all mandatory fields must be filled in before submission and so that the data entered in the fields is in the correct format, and the carousel of transitioning images on the home page to add appeal to the application. I also designed all the buttons used in the web application, which I feel also add to the appeal.

As with the web application, I created the designs for the mobile application, which include backgrounds and buttons. But much more went into developing this mobile application, as I have never

before done so. In order to create a user-friendly mobile application that meets my business needs, I decided to use a platform to build the application. This is a common technique used in the business world called Platform as a Service (PaaS). By using this platform, I was able to develop a cross-mobile application, which is necessary to reach out to all JMU students who have smartphones, not just those with Androids, or iPhones, etc.