

## Reflection #1 – Pre-Project

Instructions:

1. Replace the descriptions in the brackets below with your own thoughts and detailed answers. These are just thought-provoking points to help you think through your project; not every question will be applicable to you. Remove the bracketed comments.
2. Completely answer each section's questions and write at least one paragraph to explain.
3. Submit completed paper to your instructor/supervisor and keep a copy for submission with your Engineering+ approval form

## Activity Summary

My team and I are partnering with Tabor College for our capstone project. For the first time in Senior Design, our team is collaborating with a different university. Our sponsors wanted us to create a one-stop application for both Android and IOS devices that will help students get their information about Tabor college quicker. During our first few meetings, we discussed what the app should have. Sign-in system, notification features, campus café, canvas, jay shop, sports are some of the things that they would like to get implemented. Once the app is done, it will get hosted on Google play store and App store.

## Limitations and Goals

Communication is a bit lagging, so our team must work on different tasks while waiting for our sponsors to respond. We wanted to have a meeting with their IT guys, but they are always busy. We decided to just send an email with a bunch of questions about the backend.

Unfortunately, Tabor college does not have any APIs for us to fetch information. This has been a challenge for us since we want to make the app to be dynamic. A solution to this is to use a web

scraper to gather the information from the tabor college website. This means that we would need to learn Python and utilize a popular library called “beautiful soup” or “Selenium”.

We wanted to have an authentication system using Firebase to allow administrators to sign-in. However, the IT guys told us that they do not feel comfortable letting the app to authorize the users. Thus, we need to come up with a different solution to simulate the authentication. I gave the idea of letting the faculty to manual add themselves to Firebase Auth for admin access.

Our sponsors want the app to be cross-platform. Thus, we will need to look for a framework that help us with this. Fortunately, I have experience in app development. We will be using React Native to accomplish that. This framework has a decent learning curve, so my team members will need to have a strong understanding of JavaScript.

## Perspective-Taking

My team is a little bit skeptical about using the backend for the development. They believe that the frontend is enough for the app because learning React will be a big challenge. However, the issue is that we have 5 people on our team. If everyone is working on the frontend, then it would be too easy, especially if the app is just static. I reassured them that we will be using Firebase to handle the backend components, making it easier to do backend development. I also told them that I have a lot of experience in full stack development, so I could assist them whenever they are stuck.

We spoke to our peers about our project and asked them what they thought about it. They said that they like the idea and that it is needed for every college to have a one-stop app. They provided some features that they wished Wichita State University had. We used that information to come up with some ideas for the mobile app. For example, maps and contacts.

## Teamwork

My team members are all CS majors, so we are familiar with creating software. As a tech lead of the team, I think it is important that I give my team a sense of direction and clarification. They have never created a mobile app before, so I must assign them tasks and explain in great details how to accomplish them. Everyone now and then, I would let my sponsors know about our progress so that we get to hear their feedback and make any adjustments based on them. Sometimes, some of the team members cannot make it to the meetings with the sponsors due to time conflicts. As the leader of the group, I make sure that I attend the meetings and have them recorded for my team members to listen to later.

## Measures of Success

My activities will be successful if we could deliver our tasks in a timely manner. As long we are communicating and clarifying any confusions that my team and sponsors have, then we can get the project tasks done quickly. Our sponsors always tell us how much they appreciate the work that we are putting in. They wanted to have a solution that can bring all the relevant information into a single place, but they just did not have the technicality to do so. Tabor college does not have a CS department, so they need us to solve their technical problem.