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# 4. Technical Process

## 4.1 Methods, Tools, and Techniques

For this project we have used Agile Scrum Methodology. In short, Scrum is a framework within which people can address complex adaptive problems, while productively and creatively delivering products of the highest possible value. In scrum, events are time-boxed in sprint. Sprint consists of Sprint planning, Scrum Meeting, Development work, Sprint Review and Sprint Retrospective. Each sprint is a subdivision for the entire project.

We have consistently been working in this framework. Our Sprint planning is in the start of every sprint. Our scrum meeting and development work goes hand by hand. We have our meetings every once in a week. After the completion of our development work we reviewed our work with the client. We also noted down any feedbacks regarding this sprint from the client. Lastly, we documented this entire process along with our retrospective on the current sprint and what can be done to improve in our next sprint.

Likewise, we have used **MSTeams** as our main source of communication. We have organized all of our meetings in this application and we will still be using this in the future.

We have modeled our software designs using **draw.io and LucidChart**. Our business models were also designed using the same tools. Both of the applications are user friendly and are free online tools.

Our document and code management systems are **MSTeams and Github**. Prior to our understanding of Github, our document management systems used to be MSTeams but now we have shifted our document management and code management to GitHub.

## 4.2 Software Documentation

The main goal of the software is to sign up a student in the database and allow them to apply for credit transfer with required documents. Since our application is user friendly and minimalistic, modern computer users would not find any difficulty in using our application. Users can easily access the download link for application through ATMC website. So, making a tutorial video on how to use the application and how to download it seems unnecessary.

Other than that, we have planned on documenting our programming code with an updated class diagram that is shared into GitHub. We have also planned on creating a doc file for the software so that other programmers can easily understand it. Likewise, we have also used comment section on our code to further explain the use of any methods, class, objects or variables. We have also decided on not using any style guide since it is a small application.

Documentation is reviewed and tested using Junit test cases. Along with it, our testing and implementation team will check for every possible bugs or error in the software and we would try to update our program accordingly.

# 5. Non-functional Requirements

## 5.1 Platform

This application must be feasible to students who wants to apply for credit transfer. Since, the program requires the involvement of broad audience there is no specific hardware or software requirement for this application. Being said that, our application is mostly targeted for Android users but we might make a web version for our application that is accessible to other users.

## 5.2 Communication

Since our application is an online platform, users need a better internet connection while uploading their documents. Other than that, there would not be any problem with the program or database.

## 5.3 Performance

## 5.4 Security and Privacy

We have developed signup page for user authentication. We have planned on using Spring Boot Security for securing the user data. There are not any security options at the moment.

## 5.5 Audience, Usability and Accessibility

Students pursuing university course are the audience for this application. Specifically, those students who would want to transfer their credit. Since students are comfortable with digital technology and trends, there are no further requirements for students before using this application. This application would be written in English for students to easily understand.

## 5.6 Reliability

Application can be reliable for a specific number of students who has signed up on it. Since, we are using MySQL we are not sure if huge amount of data can be used for this. Other than that, the application can be reliable.

## 5.7Modifiability

Programming changes are committed in GitHub by the developers. So, if modification needs to be done, one can easily pull the code and commit any changes to it.

## 5.8Economic

Till now we have been using free online resources for the development of our project. So, there are not any economic constraints to be considered till this point.

## 5.9Legal

No legal requirements are required for the application.

## 5.10Standards

No specific standards are discussed until now.