**Successes**

The key metric of success for our team was to successfully create a functioning minimum viable product that contained all 3 of our core features. By this standard we would say that our prototype was a success. We created the mind tracking feature with the ability to view both the weekly and monthly inputs. The game section had actually exceeded our expectations as we initially looked to only have 1 game complete for the mvp, however, we created 2 as a result of listening to feedback from our UI’s. We also completed the third and final toolkit which showcases available mental health resources to the user.

To succeed we were required to divide up to tasks according to our strengths, in order to get the best results. Our computer science students had each been given roles to reflect their strengths. Emily was more creative so it only made sense that she worked on the mood tracker. Nik had experience with apps so he was in charge of creating the games. James had the idea for the project so the toolkit was made up of services and resources he had envisioned to be available to the user. Another reason attributed to our success was that our project was modular. It was separated into 3 distinct components which allowed us to work on each module simultaneously, rather than waiting for module 1 to finish in order to begin the next. We found that we were also crunched for time for this deliverable but the modular aspect of our design allowed for fast (agile) prototyping which enabled us to get our report done sooner and have enough time to collect feedback.

We also managed to keep the scope of our mvp within our allocated time frame. This meant that we kept it simple and straightforward. We did not go into any complex features that would have been beyond our capabilities. Our mvp was aligned with user feedback in that it was kept engaging to the user, while maintaining easy navigation (with the ability to toggle between features at the top of the app screen). Through the feedback we received from the UI’s, we were able to enhance our prototype with ideas provided by our consumer base. This included small things like making the interface more appealing to the eye, although this does not affect the functionality of the app, it aids in user engagement and overall appeal. Our success was mainly a result of taking in the constructive feedback we had gotten for our UI’s. Lastly, our team had a unified vision which made the process run smoothly as we had less human conflict to hurdle over.

Although we met the requirements of the deliverable it was possible for us to have been “more successful”. As outlined in the challenges section, we had wanted to do A/B testing which would have given us more feedback. With a better timeline we may have been able to create more iterations based on our initial prototype feedback. We would have liked to include some of the optional features we had brainstormed. However, we faced challenges in regards to limited knowledge, skills and time. Getting feedback on optional features would have been useful in identifying what our consumer base is looking for from an app like this. Being able to schedule meeting times with mental health professionals would also have been something that would have made our prototype more successful as we would have had more experience on our team and may have been able to integrate more human friendly features into the app, whereas we were going from scratch, using our own knowledge and information obtained from our surveys

**Challenges**

The most apparent challenge we faced was the time constraint. Although we were able to complete the prototype, thanks to the modular design and the diverse skill sets of our team, we were unable to include some of the optional features that would have enhanced the app. Another solution to a problem like this would be better time management in future projects. This is not only limited to project development itself, but rather aspects where we would have been able to collect information in order to enhance the mvp. For example, we wanted to speak to medical professionals and get their feedback on the app but it was difficult to schedule a time to meet as they required a longer notice, which once we realized this, it was too late as they were unavailable to meet before the due date of this deliverable.

Another challenge we had also had to do with the time constraint. Combined with this was flaw in our thinking; that we could handle more than we really could. Once we realized this flaw, we took a step back and scaled down. We had aimed to do A/B testing however that was too big for the scope of our project within the given time frame. Having multiple variations would have given us more useful feedback and a better idea of what our consumer segments are looking for. Ultimately, we had no choice and were required to settle for 1 prototype. We had also wanted to gain more feedback from a larger audience, however, it was difficult to reach more people within the time limit. Although, we came to a compromise and decided to interview the same people we had interviewed for the UI feedback. This gave us a consistent and reliable data set.

We had some formal challenges which presented themselves in the forms of leadership, a gap in skill set, and a lack of knowledge with the new software. The computer science half of the team took lead on the actual development of the app, however, we had not established a leader for this part of the deliverable. This meant that we did not initially have a unified direction in regards to the app development (for example, having a consistent color scheme throughout the modules, etc). None of our members specialized in creating images, so our solution to this was outsourcing some designs. We were also unfamiliar with the software, this meant that there was potential to minimize error and create it even faster had we taken the time to familiarize ourselves with it or ask for help early on before beginning the project.

The challenges we had faced ultimately dealt in regards to improving/enhancing the initial mvp. Despite the challenges we faced, our team was able to create a prototype with the 3 core features to ensure functionality and enough engagement to attain proper and usable feedback from our consumer base. Throughout the project we had identified challenges, of some we had overcome by finding solutions. Others were either more difficult or things we had not anticipated. We maintained a mindset of failing forward in order to quickly learn from our failures and improve upon them. For challenges that were unanticipated, we had attempted to create solutions but for those that we were unable to find solutions, we had come up with ways that we would better approach similar problems in future projects (this includes things like proper time management and aligning the scope of the project to our capabilities as well as the time constraint).

**Failures**

One of the failures we had with our software prototype was the fact that we were unable to realise all of the features that we had originally planned for, this includes many optional quality of life features. The primary reason that we were unable to implement more features, was a combination of time constraints as well as our development team having minimal knowledge on more complex feature implementation. In order to address this failure we could potentially spend more time on R&D to ensure we had the knowledge and capacity to implement these features. Another potential solution to this failure would be finding a developer to outsource to or collaborate with who may be more experienced with app development.

Another failure of our prototype is the fact that we have not been able to produce a fully featured prototype which is available on a mobile phone, and are instead using a prototyping software platform to present our prototype. Much like our first failure, the core cause is a time limitation as well as our development team’s limited experience with app development. We can address this failure by having our development team learn how to produce an app on a mobile platform and dedicating the required time to be able to do so.

One of the key failures of our software prototype with relates closely to all of our failures is the scope of our application outpacing the ability of our development team. The goals which were set out at the start of the project were quite ambitious and potentially too grand and difficult to achieve within the timeframe of this project. Our team continued to add aspects to the application because we believed these aspects would improve the value of the application to users and the potential clients we would hope to connect with to sell the app to. This failure can be best addressed by grounding our goals in reality by having an appointed manager who will set the scope and expectations for the project. An alternate solution could be having an external consultant advise our team in respect to what is realistic and which aspects of the application need to be pushed back as potential add-ons once the base version has been released.

Another failure of our software prototype was the fact that we were unable to implement direct integration with the University of Calgary’s mental health services. This is a key failure as it is one of the primary goals we set out to achieve when we initially came up with the idea for this project. This failure is the result of our team being unable to connect with the University’s mental health services to verify the possibility of implementing this component into our application. This failure would be best addressed if we had a more complete prototype which had every aspect finalized aside from the intermigration aspect, as it would be easiest to then approach the University with a nearly complete product.

In combination with our inability to connect with the University to verify the possibility of implementing direct integration between our application and mental health services at the University of Calgary another key failure was the fact that we were unable to connect with professionals who would be able to provide invaluable consultation and legitimacy to our application and verify our proof of concept and propel our application into a legitimate product which could be marketed to the University and create a potential partnership. This failure occurred as a result of the time constraints both on our end as well as the professionals with whom we wanted to connect who required upwards of two weeks’ notice before they could meet with us. This failure could be best addressed if we had planned ahead to schedule our appointments with these professionals at the very start of our project rather than waiting for our initial prototypes to be complete before attempting to contact them.

Overall the failures which we experienced with our software prototype are fundamentally grounded in poor time management and underestimating the complexity and challenge of the goals we set out for ourselves to achieve. Our team did their best to work around these challenges, however there are certainly improvements that could be made if we had planned out our timelines better and had an appointed leader to reel in some of our more ambitious goals to ensure that our project was more heavily grounded in reality.

**Feedback Evaluation**

To gather feedback, we chose to use two different methods to evaluate the prototype on the basis of its strengths and weaknesses. We used a quantitative method to gather what the overall impression of the app was, and qualitative data to get specific feedback. We chose to gather feedback from University students aged 18-24, who would be the most likely to use this app. We had eight students who responded, three of which are women. Most students were between second and third year. Every student we gathered feedback from reported feeling overwhelmed with stress within the last year. These are exactly the demographic we hope to target with our app.

**Quantitative Data**

We asked four different questions, each with a rating out of five. The first question was “how would you rate this app in terms of usefulness?”. We received mixed results, but mostly positive. The most common rating was 3, with more responses above 3 then below. This indicates to us that the basic design of the app is good, but has room for improvement. The second question was “how would you rate this app in terms of engagement?”. This question is important because one of our core objectives is to have individuals use our apps consistently. Again, the most common rating was 3, with more responses above than below that. Unlike question one, we received no 5 ratings for this aspect of our app, demonstrating that we are not effectively reaching our target demographic as efficiently as we could potentially. The next two questions were “are you likely to use this app in your everyday life?”, and “are you more likely to use mental health services available on campus as a result of this app?”. Both these responses were troubling because they both received mostly average or below average responses. While the app rated better on the engagement response, people did not see themselves using the app on a day-to-day basis. Our app is missing a link between engagement, and encouraging people to use it regularly. While some students indicated that they were not any more likely to use mental health services, this could be a result of the fact that many of the respondents were not currently in a crisis, and therefore it is difficult to picture needing the services immediately. What we learned from this part of the survey is that while our central idea and engagement were rating highly, we have some work to do to get more people to use the app on a day to day basis.

**Qualitative Data**

In this section, we gathered comments about the app. We asked what was liked and disliked about the app, how it compared to the app design that we created during the storyboard that our current design, and overall general feedback. The people surveyed agreed that this app was an improvement on the previous iteration. Some of the positives aspect of the game were taking from feedback from the storyboard. Responders liked the layout, and the fact that you could rate your day out of five for numerical feedback for the users. What was not liked were the graphs and some of the colours used. The graphs were not liked because people found them to be confusing, and not explained very well. What we can learn from this is set up the graphs in such a way to make it more intuitive why they are there, and how they give the user feedback. Finally, the additional comments showed that we needed to refine our demographic a bit, and target them more specifically. Although the students surveyed indicated that had felt stressed, some of them did not feel that this app would be as effective as other strategies. This means that more research on the types of demographics to prefer this app is needed.