3-2 Milestone 2

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Submitted to Neil Kalinowski

The artifact that I chose to enhance was from CS 360. The goal of the original was to create an android application that could allow the user to create an account and use that account to monitor their weight goals. This was created around a year ago for the final of the course. During the creation of the artifact, it was something that I had wished I had more time on to polish the original design and show more of my skills. So, it was the first artifact that I thought of when choosing a previous project. Because of the limited time on the project, I thought that it was the perfect option to showcase my improvements in software design and engineering. The general layout and function of the design is how I chose to enhance the design. To do this I applied the concept of separation of concerns to the project. I moved the business logic out of the UI logic by creating an additional viewModel class. In this class, I moved the logic for sms permissions and functions. This allowed the UI to be separated and created a way that the sms functions could be tested without having to run the program on an android. Other areas I looked to clean up were the overall commenting by making them more clear and addressing the parameters that each function used. This helps show my better understanding of documentation and standardized designs. Other enhancements I chose to use where to add input validation. This can be seen in the password and username fields. I chose to limit what usernames could be used and require a password length. Both of these also ensure that the field is not left blank. I also

chose to enforce data type input into the user input fields for weight management. This is to ensure that the user is correctly inputting numbers for weights and dates. Characters would not make sense to be used here.

As for meeting the outcomes that I wanted, I still have a lot of improvements that I plan on making to the design. One of those improvements was to add more toast indicators for the user to have feedback on their interactions. This will create a better user experience and enhance the overall design of the software. Another improvement that I want to make is to create a different system of labeling each input. Currently the items are displayed with a number that relates to which row input it was. This does not take into consideration if rows have been removes and I think that it would be more useful to know the total number of inputs that still exist than to know how many were created overall.

Looking back at the enhancement process, I learned that I should tackle one item at a time in the same manner I would do if I was creating it from scratch. I found myself going in circles making too many adjustments at once. My intention was for all of the business interactions to be handled in the viewModel and leaving the UI in the other classes. I even wanted to add additional helper classes. But, during the process of creating the viewModel, I kept finding other parts of the code not working. After coding in circles, I found myself starting from scratch and getting the sms system into the view model first as I intended. I then moved on to other improvements and believe it will be easier to finish off my goals now that I have the foundation of the changes implemented. These challenges led to methods I believe I will be able to implement in the future to be more efficient in making enhancements.