Professional Self-Assessment

Allan Gibbons

April 14, 2022

Until the introduction of the professional self-assessment in my final weeks of my computer science degree program, I had never considered myself a professional at anything. I have always been good at things that I set my mind to, but professional was not something I would consider myself to be in any of my prior jobs, or education. That quickly changed as I became aware of the steps that I was taking to create a deployable artifact in for my final project to earn my degree. I removed myself from a place that was dedicated to completing an assignment and placed myself in the shoes of a customer, or user. I asked myself questions that only the user could answer. One of those questions was “Is this application something that I need?”. Although the artifact that I chose to complete was not necessarily going to be the next big application, it taught me lessons during its creation and enhancement that promotes my skills and puts me more in the environment that employers would be looking for. This altered my thinking from what I would be providing to the customer, and helped me focus on what an employer would look for to help develop applications that could be the next “hot” application. This also humbled me to a place that helped me realize that I can still make an impact in the world, even without being on the ground floor of a million-dollar application. I realized that what I really wanted to do was to help people. I wanted to be in the professional career of computer science that helps others. By this I mean, bridging the gap between knowledge and ease of use.

My experience, currently, is working in the IT field as a help desk support team member. What’s more is, I work in the healthcare field. It is a fast-paced environment that has deep roots in application uses and many different types of software. For me, and co-workers, it is essential that we have the knowledge about each software that we use, and how to troubleshoot any issues that come about. However, the process doesn’t stop there. Help Desk support inherently has customer service as it’s major title. This is the reason that I found a path to take as a focus of my career. There is a gap in knowledge and use for generations on either side of mine. Older people typically aren’t familiar with the way that technology is used. Which makes it difficult to walk them through processes, such as resetting a password. The other side of that coin is the younger generation. Since the popularity of the handheld device, such as a smartphone, it has become incredibly easy for people to use devices with very limited knowledge of how they function.

In my professional career, I want to be dedicated to being the bridge that closes the gaps between the generations so that frustrations and stress over technological errors can be reduced. A centralized way to help both parties have the same level of use as everyone else. One of the largest contributing factors with this is the security issue. Remembering several different passwords is not easy. Many applications have been working on trying to limit the need to remember passwords by offering web browsers to save this data at the browser level. I say that there is a better way than using the save feature in a browser. For one thing, the security of this feature has many flaws, such as saving a password that isn’t the right one. Without knowing that it has happened, a wrong password could mean hours of frustration for some that may not understand how to gain access to their personal information. Even at my current employment, we advise highly against saving passwords to a browser. Some smart phones afford the user the ability to use biometrics, such as fingerprints, to keep personal data safe. It can be a daunting task to set up and doesn’t always function the way that someone may want it to. With so many different places to need a password, I feel that it is about time that something other than passwords, or biometrics be used so that everyone can access their information with ease.

It may seem that my professional self-assessment, and artifact do not correlate with one another. I believe that they do. Not because the application is something new or spectacular, but it demonstrates my dedication to completing tasks. I set out on a journey to create an application that was functional and served a purpose. That is where the professional portion of the application came into play. I have a dedication that I am very proud of. I have the willingness to pursue the most difficult problems in a program. I dedicate the time to figuring out what needs improvement and what needs to be fixed. That is the whole reason that I chose this artifact for my final course in my degree program. I had developed it in a previous course, but found that I fell just shy of its completion and it’s design, algorithms, security, and structure. Instead of forgetting about this program, I decided that I would prove to myself that I can complete it and to produce a professional level application that would display my talents in the computer science field. Not only did I complete the application, I found multiple new strategies for getting it to be something that I can be proud of. Every step of the way, even through my own frustrations, I found that I loved being able to produce something that works. Navigating through my own application became a joyful occasion, and it proves to myself, and hopefully my future employer that I have the dedication and love of the craft. The whole point of putting myself out to the professional world is to stand out amongst my peers. I feel that my dedication and commitment to a project is essential, and just what the professional world looks for, but often doesn’t find. I focused many hours of making sure that I was able to incorporate new ideas and activities into my application. Although I may still have some areas to improve upon, I am always learning. I learn very fast, especially when I love what I am doing. I want to not only succeed at what I put my effort into, but to excel past expectations. Because I can work on my own, with a team, or in a customer service environment, I become an asset to employers. I take ownership of projects, which allows me to see them as something that I am dedicated to.

The dedication and commitment that I have has driven me through my education to earn my bachelor’s degree in computer science. Although life has had it’s ups and downs, I have put in the effort to be successful. For me, my degree, much like my career, wasn’t gained just by going through courses, but by actual work and fortitude. I have never been the type of person to “cash it in” and move on. I took the work seriously, and made sure that I was proud of my accomplishments. This doesn’t just stop at my education. In my current employment, I took on possibly the hardest task there is. I have always had a hard time speaking to people on the phone. I am what could be considered, an introvert. I don’t like talking to people very often and become increasingly more uncomfortable ass time goes on in a conversation. So, it was a wild idea that I would be considering doing Help Desk Support at a major medical facility. The results are fascinating. I dedicated myself to doing a job that takes me far away from my comfort zone. However, the most fascinating part is, I actually enjoy it. I dedicated myself to doing the absolute best job that I could do, and I pushed through my apprehensions. I can now be considered an asset to the team. Because of my education, I think that the greatest thing that I learned about myself is that I have the skills, knowledge, and talent to be a productive member to any technology company.

My artifact puts all of my commitment and dedication on display. I is a tool that I can use to demonstrate that I can bring a level of completion to a project. That I don’t accept defeat as an option. It shows that I can admit the flaws in my own work, but moreover, I am willing to fix them, or educate myself further to make it functional. The Whoa Weight App may not be the software of the future. It may just be an application lost in time as I hold it close as my first real software achievement. However, I will see every future project, application, or team effort as the Whoa Weight App. In my professional career, I will put the same level of dedication into everything I do as if I was trying to complete this application. The Whoa Weight Application becomes my own personal opus, and it is an extension of my professionalism and the basis for every milestone in my career moving forward. In my Computer Science program with Southern New Hampshire University, I have learned that everything in life can be broken down into a series of milestones. Much like I dedicated myself to completing each one in every course, I commit myself to each milestone in any environment that I find myself in, personally or professionally.

Narrative of my process in The Whoa Weight App development. This document and the application can be found this Github page.

When I started this Android application project from a previous computer science course, I knew that I had many things to change, update, and alter to provide a good working artifact that displayed my talent in software engineering. In this narrative, I explain the path that I took, and the overall outcome that I set out to achieve.

The artifact is an application that allows a user to keep track of their weight and to set a goal weight to reach. I did not want an application that would be simply for weight loss. I intended on making an application that could be used for keeping track of weight, and even gain it is that was something the audience needed. It was not intended to advertise weight loss programs, as many applications do these days. Simply put, this app was just to keep a user informed about their weight in a soft and safe environment.

My first step was the hardest of all. I was not satisfied with the artifact when I reviewed it for the first time after the course that I created it during. So, I essentially started from scratch. However, this time, I had the added privilege of knowing what not to do while creating the artifact. Keeping up with best practices, I knew that I needed to keep annotations, throughout the project, as a center point for my own understanding of the code, and for anyone who may someday want to improve on the application. First, I started off by drawing up a pseudocode for what direction I would like to take and the functionality of the screens that would be interactive in the application. The design of the artifact was not entirely planned, in the way that I put the elements together until I was satisfied with the look of it. In a collaborative environment, this may be frowned upon as there was no way for others to see my designs before they were implemented. However, I knew that the design was my own, and I decided as I progressed on what the overall look of the application would be.

I worked through some trial and error when it came to the database implementation in the app. I was familiar with the use of databases to hold information in a “key” system. So, I worked on implementing a database through SQLite for Android. Although I was able to make this work functionally, I felt that there were some missing components, such as well-placed security features. With SQLite, there is a major security flaw that makes it harder to implement in an android system. As long as someone knows where to find the database file on the system, they would be able to access this file easily and even get login credentials from it. So, I included a web-based database platform, Firebase. This afforded the security of the application to be almost unreachable outside of my “administrative” role.

Writing an application for the Android platform has elements that are not as native to programming as other programs. It certainly has it’s “behind the scenes” processes. However, for the most part, all the application processes are in the foreground and can be seen by the user. It is a more visual experience that programs that run on PC’s. With that in mind, I had to create activities that were low profile and quickly processed for the overall user experience. Behind the activity’s screens, I used algorithms that ran at particular times depending on the interaction from the user. Considering the code was in Java, I used methods to dictate flow. Through the main portion of the application, on each functional screen, methods were called to perform tasks. Some of them were the confirmation of the user’s credentials. This proved to be the most difficult portion of the project. Finally, I was able to incorporate the necessary, and almost standard practices that any application may use. Registration, Login, and forgotten credentials was much easier to work with using a web-based database than I had previously expected. Although, this came with a difficulty of its own.

The difficulty of using a database for holding credentials wasn’t the difficulty exactly. The difficulty lies with the way that the application runs. Often, when a program runs on a computer, if an error occurs, there is usually some indicator as to what the problem is. Certainly, Android applications are no different. However, what sets them apart from traditional programs is the front-end crash. Loading an application all at once makes it harder to determine where a fatal error occurs. One element out of place, such as a bracket being one too many, can cause the application to crash upon initiation. Typically, when a program crashes, there is a file missing, or something along those lines. When an Android application crashes, it is a usually a coding problem. At one point, my entire application crashed simply because there was a string name out of place. There were two ways for me to figure out the problem. One of those was to review the entire code. Each activity page, and each design page, known as “.xml” files. Luckily the development environment makes it easier to locate a missed step by highlighting “errors” in red. The other option was to run the application in step-by-step debugging. That also proves to be difficult at times. Even though it can point the programmer in the right direction, some of the dependencies on that particular portion of code are also included in the error. This portion took some time getting used to and figuring out what went wrong.

I approached things a little different with this work on my artifact. This time I decided to do a much better job in the way of security and by using a database that is better suited for today’s environment. This allowed me the option to store user’s remotely and to keep their profiles attached to the application through the use of the online database. This eliminated the need for a larger application file system. At the same time, it reduces the footprint of the application on a device. Although SQLite is suited for android, it seems that it is better to keep the databases smaller by using the web-based database. This didn’t come as an easy task either. Using Firebase as the database, I had to work on making sure everything was configured to accept the input/output. This meant going into the applications Gradle file and altering it with the appropriate versions, matching the core, database, and authentications together.

During the implementation of the database, and subsequently the authentication of credentials, I found that it was much easier to validate an individual by way of email. This made the process much smoother. While I was working through the code for the database implementation, I found that even the smallest issue will create large impacts. Although I knew this before, I saw this first hand this week. Through extensive trial and error, I was able to locate issues that were causing the artifact to break. Debugging through the Android Studio was a life saver. I followed the step by step debugging and was able to pinpoint where I had gone wrong. Up to this point, the application runs as expected.

I still have one more hurdle to overcome until the completion of the artifact, and that is the import of data that is stored to the user’s profile. Now that the “Forgot Password” link is completed and sends an email to change it if clicked on, I am more comfortable with the process. Another aspect that I am particularly proud of is the ability to keep the user logged in if they have logged in from the same device before. With that, I included a logout button that will allow the user to manually log out and prompt them for a log in at their next instance of the application.

At the end of the creation and enhancement of my artifact, I truly believe that I have actually achieved a major milestone in my education. The end result is an application that I created and wasn’t something that I downloaded, or copied from another source. I had help along the way, by researching and figuring out different ways to implement all of the important fragments that make a successful application.