

CS 499 - Milestone 2 - Appointment Now Enhancement

Conor Steward

conor.steward@snhu.edu

9/22/24

The artifact that underwent enhancement is called Appointment Now, a scheduling application for healthcare facilities. It was created in June of 2024 for CS 360. This is one of my finest creations, but it lacked certain functionality that makes it viable for public consumption. I wanted to enhance it to make it more viable for the public. The artifact and its enhancements showcase my software logic prowess, project organization capabilities, proper resource management, android library knowledge, database functionality abilities, and UI design intelligence. This culmination of showcased skills adequately displays my prowess as a software developer.

The artifact needed to be able to display only the events that a particular login created, instead of the entirety of all events created within the application. I added functionality for this feature by displaying events based on `user_id`. The application also did not have a logout button, and this was added so that users can retain HIPPA compliance and exit the app at their wish. The events also did not have a historical lookup function, but this was added with a top bar button so that care workers can look at patient historical data. Many clinics also need the ability to export their visits as PDF's for sending to other clinics or to print for the patients. I added an export to PDF capability so that users can utilize this as they need.

In module 1, the course outcome that was targeted with this enhancement was “Completing the above will address employing strategies for building collaborative environments that enable diverse audiences to support organizational decision making in the field of computer science and will demonstrate an ability to use well-founded and innovative techniques, skills, and tools in computing practices for the purpose of implementing computer solutions that deliver value and accomplish industry- specific goals.”. These goals have been met in this enhancement!

There are updates to the coverage-plan. Firstly, the ability of customers to see their own events and not others events had a different implementation than originally planned. Instead of creating a clinics table and referencing that, I used user_id to pull in events. This was a simpler and arguably more elegant solution but it does mean that each clinic would want only a single login instead of having one for each individual employee. After my experience in a hospitals front scheduling staff was wrought with 8 different logins to various software systems this is the better solution. This way a whole staff can have only a single sign on instead of each employee needing their own instance. In addition, the logout button was not originally planned. The need for a logout button is obvious and I am embarrassed that there was not one in the original artifact.

Enhancing this artifact was a massive learning experience. Adding more layers/files to the folder structure became more natural after some time but each addition took time to get used to seeing and navigating. Using additional android libraries was also a learning experience, as certain methods have been deprecated. Thankfully the IDE typically has useful suggestions for alterations for the deprecated code. Creating the historical view required that I filter events by a particular status, which I have not had to utilize before now. Logging out users was also a learning curve as I did not want to close the app fully and needed to end the users sessions without crashing the application. This is not something I have had to implement before. Exporting to PDF was one of the hardest updates as I had to alter file permissions that allowed me to read and write to the device directly and I had to work with a new android library that automated the process to a large degree. Implementing these changes was difficult as I had to change a multitude of files for a single alteration. I am still chasing a bug that duplicates events after they are altered. Only the most recently added or edited event duplicates and it only

duplicates if the user logs out then logs back in. It also only duplicates a single time even with multiple login/outs. I plan to continue enhancing this artifact for my database portion of this course so I will run this bug down and squash it before that milestone.