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Southern New Hampshire University

CS 499 – Computer Science​ Capstone

3-2 Milestone Two: Enhancement One: Software Design and Engineering

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09/20/2025

**Artifact Description**

The artifact I chose to enhance is my mobile weight-tracking app that I originally built in CS‑360: Mobile Architecture and Programming. The app lets users log their weight, set a goal, and view their progress. It includes login and registration, a grid display of entries, and basic SMS functionality. The original version worked, but it had serious gaps in structure, security, and data handling.

**Why I Included This Artifact**

I chose this project because it gave me a chance to fix what wasn’t working. The app looked fine on the surface, but the logic was weak. The edit button didn’t update the database. The login system stored passwords in plain text, and the UI wasn’t connected to real data.

I rebuilt the edit logic, so it targets entries by ID and refreshes the screen. I rewrote the login and registration to hash passwords and use safe queries. Additionally, I added input checks and made sure the database and UI stay in sync. I fixed the weak spots and made it stable.

**Course Outcomes and Coverage**

I do believe I met the outcomes I planned. I focused on improving the structure, security, and reliability of the app, and every change I made supports that. I don’t need to update my coverage plan, the work lines up with what I set out to do.

**Enhancement Process and What I Learned**

The process took time because the original code was hectic, and the edit function took a lot of time and effort to fix. I had to go through each part and figure out what was actually happening before I could fix anything. The edit button didn’t connect to the database properly, so I rebuilt that flow to use IDs and refresh the screen when changes are made. The login system was storing plain text passwords, so I rewrote it to hash them and use safer queries. I added input checks to block bad data and made sure the UI and database stay in sync. The biggest thing I learned was how to stay in control and not panic. I slowed down, isolated each issue, and fixed it properly.