Milestone 2 Narrative

## Briefly describe the artifact. What is it? When was it created?

The artifact I chose to work on is an Inventory application from our mobile architecture course in Spring 2025. For this week’s enhancement I chose to focus on improving the software design and engineering of this application by incorporating the ability for users to scan and search via barcode. \*\*See *SearchItemActivity*.java in project\*\*

## Justify the inclusion of the artifact in your ePortfolio. Why did you select this item? What specific components of the artifact showcase your skills and abilities in software development? How was the artifact improved?

I chose this item because as someone who has worked in a retail environment and constantly used a barcode scanner, I felt it was only necessary to add this feature and make user’s job a lot easier. This eliminates the need to manually type the name of the item every time they are searching, making business workflows a lot more efficient. With that being said, I feel that incorporating this into my application also helped me, as a developer, showcase my skills to read documentation, adjust it to fit my needs, and effectively apply it to my own code. I used Android Studio’s documentation on adding a barcode scanner and my knowledge of my application to create this feature.

## Did you meet the course outcomes you planned to meet with this enhancement in Module One? Do you have any updates to your outcome-coverage plans?

In Module One I outlined my plan for changing the application and realized I was confused about the software design and engineering aspect of this project. When looking back at my plan I mistakenly described everything I was going to do in the entire project rather than in the first enhancement. Therefore, I broke down what I wanted to change and identified incorporating barcode scanning as the feature to add for this particular category, software design and engineering. Other than that, the rest of my plan still remains the same. Next week I will add a binary search function to align with our algorithm portion and the following week I will completely incorporate a relational database to align with our database aspect of the project.

## Reflect on the process of enhancing and modifying the artifact. What did you learn as you were creating it and improving it? What challenges did you face?

I felt that it was very straightforward by reading the code samples given by Android Studio on their website. I did have to change the UI to add a barcode scanning button and make sure that it was clickable and the scanning began and stopped at appropriate times. A challenge that I did keep running into was my concentration on the barcode scanning. I felt that I continued to stray away and try to work on my search functions as well as update my application to incorporate my SQL database. I think this is because all three of my enhancements really work together and don’t have solid divisions. For example, I wanted to make my application efficient by using one search function rather than several, so I felt like I needed to first create my binary search before finishing my barcode feature. However, as a developer with limited time it was only best to continue focusing on my task at hand and make notes for later. I feel that coding for too long or rushing the process can only make it worse.