Bryce Cooperrider

CS-499

28 January 2025

Enhancement One Writeup

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

The artifact is an Android Inventory App I made during my time taking CS360: Mobile Architecture and Programming. It is a basic inventory app that requires a login and currently has functionality to add and remove items from its internal database.

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 selected this artifact due to its potential to be expanded. It is able to showcase all skills required in the course outcomes due to the programing complexity, need for algorithms and design, and use of databases. One specific component that showcases my skills and abilities in software development is the logic for functionality and tying it together with use of buttons and fields. Creating buttons and fields for the user to use aren't the hardest but adding functionality to them is where I show my skills.

So far, the artifact has improved in a couple of ways. The first way is cleaning up the layout on the inventory screen. I removed a row from the top and bottom of the recycler view to allow room for the floating action button at the bottom, and future functionality at the top, which I plan to be sorting and filtering capabilities. The next improvement I made was adding optional item

descriptions that the user can provide information for. This can help them provide more details with an item if needed. In order to show the description, I added a popup whenever the user clicks on an item in the inventory. From here they can see the item name, the quantity, and the description if provided. I also added this popup because I wanted to add an easier way to delete items from the database. The old way was to click the floating action button, and type in the specific item name they would like to delete. The new way is to click on the delete item button that appears in the popup when clicking on an item. This should be much more intuitive for the user to use and doesn't require additional button or keyboard clicks.

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?

I believe that yes, I met the course outcomes planned with this enhancement. I don't have any updates to the coverage plan at the moment.

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?

The first big thing I learned was more functionality of XML files. I am not the best at UI design so I wasn't sure what I could modify in the files to make the layout look better. I have knowledge of more ways to modify these files now. I also learned how to incorporate popup views within an application. The biggest challenge I faced was getting the recycler view to update when an item was deleted from it. I knew the database was reflecting the change from the confirmation message, but it wasn't being visually reflected. Eventually I learned that it was due to the cursor not properly being updated, so I added additional code to have it work properly. At the moment I still have a warning for using notifyDataSetChanged() in my InventoryAdapter.java because

Android Studio warns I should only use it as a last resort, and I haven't figured out how I want to fix it yet.