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CS-499

11 February 2025

Enhancement 3

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 uses two separate databases, one for user information, and one for inventory items.

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 programming complexity, need for algorithms and design, and use of databases. For this enhancement, the artifact was improved by cleaning up the login page to make it more visually appealing, as well as adding input validation for email addresses entered in the username field and adding security to the passwords used by utilizing SHA-256 encryption.

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 I met the course outcomes I planned for this module. At the moment, I have no updates to my coverage plan.

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?

For this enhancement, I learned more about UI design for designing the login page, and more importantly how to hash passwords using encryption. I remember the theory behind it from a previous class, but couldn't quite remember how to implement it, especially in android studio. I struggled a bit at first incorporating it but got it working properly through trial and error. I also struggled thinking of a way to ensure an email address gets entered into the username line. I dug around online to find ways to handle this and found out about an external library through Apache commons, and how they have an email validator. After looking at how to implement it, it works great. I haven't tested fringe cases but out of the scenarios I have tried, I need to add the @ symbol, as well as a domain extension like .com to get the information to be stored in the user database, which works exactly as I want it to. Improvements to the login page weren't difficult, just time consuming as I adjusted constraints in the way I wanted them to look.