Inventory App

For my project I have chosen the inventory app. The app will be used to track items in a warehouse. The landing page of the app will be a login screen for logging into the app based on the stored values of a table, which holds the username and passwords. After successful login the page will be a grid with all the items in the inventory data table. There should be a nav bar on the top of this main page with a search option, and an add button and a delete option. Each item in the grid should also have a button to increase the inventory and a button to decrease the inventory. Realistically the only pages required will be the login, the main page, the page to add a new item, and the page to delete an item.

I think an app that has a similar layout is the Offer Up app which has displayed all the items for sale in a given area in a grid layout. It also has a nav bar at the top with an option to search for items, however the process for adding items to the grid is a bit more involved than in the app I will make. Another app that has a few similar pages is the Steam mobile app, which has a page dedicated to the users’ inventory which is displayed as a grid. The steam inventory, however, is split into categories based on where each inventory item is from. This might be a decent idea to implement depending on how big the inventory grows.

An inventory app such as the one described will likely be useful for small warehouse operations that want to keep track of inventory. This would include companies that store items for other companies or people in a building. The app would help them keep track of what they should physically have and could use the app as a reference to make sure they aren’t missing any items. Another use could be for a drop shipper to keep track of how much inventory they have left to sell. A small business could also use this app when first getting set up to make sure they have everything they need and base their purchases off the inventory app. This app is oriented more to business needs than personal lifestyle. The app would likely be most successful as a use as required basis.

The app should have an appealing and intuitive design. Near the bottom of the page there should be a navigation bar for the app where there is a button to see the inventory, a button to go to the page to add an item, and the last button to go to the page to delete an item. The inventory page should have a search bar at the top and then be a grid with three columns and as many rows as needed. The grid should contain cards which represent the items in inventory. These cards should show a picture and a small description and have plus and minus buttons to be able to change the current inventory. They should also show the current inventory on the card. The search bar should simply search the inventory for matching names or descriptions. The login page should be a simple screen with an input box for username and one for password with a button to submit, and a button to register instead, which will simply register the username with the given password.

This app will require a database with two table including one for the inventory items, and one for the login verification. The inventory table should be structured to contain all the required data for a card. This way the cards can be dynamically rendered as the database changes. The main inventory page can then simply make one call to the database for all data it has, and create the cards for each unique item it has. The pages for adding an item would then be taking data from the user and putting it into the database. The buttons to add or subtract would only alter one data point from an existing item. The delete item page would take in a few data points and find a matching entry and delete it from the database. The login database will likely hold the username as a plain text and then store a hash of the given passwords. Then when verifying logins it would simply compare the given passwords hash to the stored one based on the username.

References

*Layout basics  :  mobile  :  android developers* (no date) *Android Developers*. Available at: https://developer.android.com/design/ui/mobile/guides/layout-and-content/layout-basics (Accessed: 10 July 2023).