CS 360 - Mobile Architect & Programming

2-3 Milestone: Goals and Users

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I have chosen to work on the Inventory Application the primary goal of which is to effectively and efficiently track items in a warehouse. This app will rely on a database with at least two tables, with one of the tables dedicated to logins and passwords and the other table dedicated to the inventory item data. The first primary requirement is a login screen, and we can handle that with a pair of TextViews prompting the user for their username and password and then a button for logging in. The second primary requirement is a screen which displays the inventory item data in a grid. We can use RecyclerView and the LinearLayoutManager or GridLayoutManager to not only provide the user with a useful visual arrangement of data but also to improve the performance of data retrieval and display to the user (*Create Dynamic Lists With RecyclerView*, n.d.). As for the data model itself, depending on the amount of data and additional requirements, we might be able to use the Room persistence library (*Save Data in a Local Database Using Room*, n.d.). We can also create buttons or other interactable widgets for adding new items to the inventory and for removing items from the inventory. We would also need a button or comparable widget to update the quantity of items in the inventory. Then we could use a Toast message to notify the user when the quantity of any item is reduced to zero. Efficient access to the inventory data and an effective implementation of the required functions as proposed above should meet the user’s needs quite well, thus meeting the goals of the development project.

There are two comparable apps which I have investigated in preparation for this project: *Stock and Inventory Simple* by Chester Software and *Mobile Inventory Pro* by FotonApps. It looks like both of these apps provide inventory lists as a primary for users to interact with the inventory data with plus-sign buttons clearly visible, likely to add new items to the inventory. They both offer the ability to import and export data from Microsoft Excel files, which is likely outside the scope of the proposed app for this project, but it is a noteworthy point of comparison. Both apps also include images in the views which would be a powerful addition to future implementations of this project’s app. Based on the requirements listed for this project, the app’s functionality will be more basic than the apps I investigated, but the functionality listed in the requirements seem like a reasonable place to start for the users’ needs.

Three likely user types for this app would be a Sales Representative, an Inventory Control Specialist, and a Purchasing / Replenishment Specialist, and each user type would have different needs. A Sales Representative would need to know which items are currently in stock in order to focus on available products. They would likely need to view, filter, sort, and search the data grid to see which items were in stock. An Inventory Control Specialist would likely need to be able to view, filter, sort, and search the data grid, but they would also need to add new items, remove items, and update item quantities. This would allow them to effectively update the inventory data to match the actual items in stock. A Purchasing / Replenishment Specialist would need to view, filter, sort, and search the data grid, but they would be especially concerned with the zero quantity notifications since it is their responsibility to purchase the items which are stored in the warehouse which are sold by the sales reps. Since the app is targeting specific business needs, users would decide to use this app because of its functionality. Since it would be used in the workplace, considering the lifestyle of the user is different from considering the lifestyle of an entertainment app user, but the fact that this is a mobile app brings a high-level of convenience especially for Inventory Control Specialists who would likely need access to the app’s functionality when on the move in the warehouse itself. And as for the time a user would have available to use the app, since this is a workplace app, the different users would likely have a significant amount of time available for its use with Inventory Control Specialists and Purchasing / Replenishment Specialists probably spending a large portion of their work day using the app while the Sales Representatives probably spending a smaller portion of their day using it. But regardless of the user type, the app would need to be available virtually all day every day in order to meet anticipated business needs of warehouse, purchasing, and sales activities.

References

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*Mobile Inventory PRO - Apps on Google Play*. (n.d.). Retrieved November 6, 2022, from <https://play.google.com/store/apps/details?id=com.foton.MobileInventory>