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# CS-360 Project One – Option One, Inventory App

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**Project Goals**

The goal for this project is to create a mobile application to manage a company’s warehouse inventory. The application will include a grid layout with a soon-to-be-determined number of rows and columns. Each row will represent a shelf inside the warehouse. If there are five shelves, there will be five rows. Each column will represent an item on the shelf. For example, in the grid, the item in the third column on the fifth row represents the fifth item on the third shelf in the warehouse.

**Users**

The application will need to have a user authentication system so warehouse workers, managers, and the store owner can access the application. Each account will have different permissions based on the users “role.” Some of these permissions include, but are not limited to, adding, or removing items, checking item prices, and rearranging item locations based on what’s in the warehouse. User logins and passwords will need to be stored in a user management table. This information can be accessed on a user management screen by appropriate roles.

**Screens and Functions**

When the application opens, users are met with a log in screen. If users do not have accounts, they are given an option to create this account. If users already have an account, they can simply input their login and password to access the inventory. After logging in, users are met with the second screen, which displays all the items within the inventory via a grid-based system. If no item exists on a specific spot in the grid, users tap on the empty space to add a new item. When they tap on an existing item, they are brought to the third screen, which is dedicated to the specific item. There, they have the option to increase or decrease the number of that item.

On the management side of the application, users with the specific roles can access the administrator screen, which displays all user accounts and their roles, pricing of inventory items, and possibly, if necessary, user activity. When a specific item has decreased to zero, users with administrative permissions are alerted so accountability can be maintained. If necessary, this feature can be unlocked for all users, not just administrators.

**Functional Requirements**

The application will rely heavily on a database connected to it. Each grid in the table will correspond to a particular item within a table. The items in the database are all items the store has and must include item description, an image if necessary, price, quantity, and location in the warehouse, if applicable.

Buttons should control the function to add or remove items in the inventory. When users press a respective button, the database is updated by removing or adding one to the quantity of that particular item.

I imagine two search functions for adding items to the shelf: by name, or by ID. Users can search items by a keyword, for example “radios,” which brings up options based off of the database with the term “radio” in the item name. Additionally, if users know the ID of the item, they can add new items to the shelf by searching that way. These will most likely be TextViews so users can input their desired text.

Names, prices, quantities, and IDs should not be hard coded into the system, but rather come from a key directly from the database. For example, “item.name,” “item.price,” “item.quantity,” etc. This information is pulled from the “item” table within the database. Below are a few roughly created screenshots of what the application could possibly look like.



