**Project 3**

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***Inventory App***

*The purpose of the app will be to focus all the current efforts of warehouse inventory management and bring it all into one centralized tool. This app will be used to simplify the current process and have a standardized way to view current inventory and make adjustments that also sends notifications out when an items inventory falls below a set minimum on hand quantity.*

**Before Admin Created**

A screenshot of a login screen

Description automatically generated with medium confidence

***After Admin Created***

A screenshot of a login screen

Description automatically generated with medium confidence

**I feel that this app has turned out great. I have provided a way to add and remove items from inventory. I have created a way to view all current inventory along with an easy way to search out inventory that is searchable by the item number, location, or the last change date of the data. This app also provides a screen to show inventory totals by item. Which will be used to send out SMS to all users when any item falls below the minimum on hand quantity level set by an app admin.**

***Goals***

*The main goal for this app is that it will be reliable and easy to use from start to finish. The app will provide inventory levels in real time and that it will be accessible only to people who have an account to log in.*

**From what I can tell this app seems to be very reliable. I have met this goal and, in my opinion, have made it easy to use. I think that my app has one downfall and that is that it is currently only using on device storage on the device that it is installed on. If it were connected to a server to store the databases where multiple users could interact with the app and make changes that would reflect in real time on everyone’s device this app would be really great. In its current state it would only be useful if everyone who used the app used it on the same device one person at a time. For this reason, I feel that the SMS notification is not as beneficial as it could be if it were to send a message to every user of the app. Since we can store items in more than one location it will be helpful for the user to be notified when the total quantity of an item falls below the threshold.**

**Users**

*The app will be used by many different people. The main users will include:*

* ***Warehouse management*** *– Warehouse management will monitor the app and use information from the help to help determine inventory needs and be able to track current inventory trends. Warehouse Management will also control who has an account to log into the app and what each accounts current access level will be.*
* ***Warehouse Workers*** *– Warehouse workers will use this app when they are adding/removing items from inventory and when they need to update the current inventory level of different items. After all inventory has been added into the app and everyone is using it to update current inventory there will be reliable information on all inventory in the warehouse.*
* ***Customers*** *– It may be found that there is a need for the warehouse customers. They may need to have access to the app so they know what inventory is available for ordering purposes. These users would have the base level access and only be able to view and search inventory but not able to make any adjustments.*

*All these users will need some type of basic training or an overview of the app that will teach them how to use it and what functionality it will provide to help them in their current job or task.*

**I think I have done a great job of limiting the accessibility of the app to different types of users. This has been done by providing 3 different access levels that any user could have.**

**0 for a read only view access user. This type of user would only have access to log in and view current inventory levels of all inventories and have the ability to use the search inventory activity.**

**Next would be access level 1 which has all the functionality of any user with access level 0 but they have additional buttons on the all inventory screen and search inventory screen that take them to the AddRemoveItem activity screen that allows them to remove inventory or add/update inventory.**

**The last access level would include any users with an access level of 2 or higher. These users will have all the functionally of the add/remove/update items but also gives them the ability to add other users.**

**This app might still require minimal training as all the screens functions seem to be very self-explainable to me.**

***App Features***

*When opening the app, the user will be taken to a log in screen. Once logged in the user will be directed to the main menu screen of the app.*

*Below is a description of the apps different screens:*

**This is working properly where when the user is logged in, they are directed to the main menu screen of the app apart from being prompted to allow necessary permissions on the first use of the app. Once the user has given permission, they will not see this screen again unless they manually remove the apps permissions. If the user denies permissions from the app this screen is all the further, they will make it into the app until they manually allow the necessary permissions the app needs it will not prompt them again with a pop-up window to allow or not allow the permissions.**

***Main Menu***

*This will be the main screen of the app that will have a menu consisting of 4 buttons that will direct the user to different screens in the app. The buttons will be labeled with the name of the screen it will take you to.*

**Access Level <= 1**

**A screenshot of a phone

Description automatically generated with medium confidence**

**Access Level >= 2**

**A screenshot of a phone

Description automatically generated with medium confidence**

**Depending on the user’s access level they will either have only the All-Inventory and Search Inventory and an additionally added item Quantities buttons or their main menu will show all buttons with only the admins having visibility to the admin button.**

* ***All-Inventory*** *– This button would take the user into the All-Inventory screen. The All-inventory screen will be used to display a grid view of all current inventory and will allow for adding or removing items from inventory. In this screen the user will be able to select an item or location and will be taken to the items screen where adjustments can be made if the user has the correct access level. To exit this screen the user will use the back button and be directed back to the main menu.*

**Access Level 0**

**A screenshot of a cell phone

Description automatically generated with low confidence**

**Access Level >= 1**

**A screenshot of a cell phone

Description automatically generated with medium confidence**

**Access Level >= 1**

**A screenshot of a computer screen

Description automatically generated with low confidence**

**All Access Levels**

**A picture containing text, screenshot

Description automatically generated**

**I have made changes from this plan to only show the table will all inventory and depending on user’s access level they may have an additional button which will take the user to a new screen where changes to any inventory item can be made. It is important to note that I have made the choice to allow same item inventory to be stored in more than one location, but each location can only store one item at a time. So, if a user puts a different item into a used location, it will overwrite that location and the location will be updated with the current entered information. Also, if an item is moved in inventory to be stored in a new location the item entry will need to be removed from its original location, then added as a new entry to the new location.**

* ***Search*** *– This button would take the user into the search screen and will be used to look up any location or item and display the inventory details of what is being searched. In this screen you will be able to adjust current inventory level if the user has the correct access level. To exit this screen the user will use the back button and be directed back to the main menu.*

**Access Level 0**

*A screenshot of a search box

Description automatically generated with low confidence*

**Access Level >= 1**

A screenshot of a search results

Description automatically generated with low confidence

**This screen displays any inventory that matches what is input into the search criteria which now includes the last change date. The only other change I have made is the same as the all-inventory screen in which an additional button will take the user to a new screen where changes to any inventory item can be made and this button will only be visible if the user has a high enough access level.**

* ***Admin*** *– This button would take the user into an admin screen if the current account logged in has admin access. In the admin screen the user will be able to add and remove other users and update the account information for each user. To exit this screen the user will use the back button and be directed back to the main menu.*

**Before Admin Created**

**A screenshot of a login screen

Description automatically generated with low confidence**

**After Admin Created**

A screenshot of a login screen

Description automatically generated with medium confidence

**This admin screen is only accessible in the app two ways. Either there has not been an admin created yet and a button is displayed right on the log in screen to create users if no admin has been created yet. Or if an admin has been created and the admin button will be available on the main menu for any admin users. The user can use the back button or the main menu button to navigate to the main menu. The main menu button on this screen is invisible until at least one user has been created. So, if a user is in this admin screen and not logged in, they will only be able to navigate out by using the back button which will take them back to the log in screen to log in. When an admin has been created the main menu button will appear at the bottom of this screen and the only way back into the admin screen will be when an admin is logged in and uses the admin button from the main menu.**

* ***Log Out*** *– This button will log the use out of the app and the app will return to the log in screen.*

**Each screen of the app has a button that navigates the user back to the main menu. The log out button functions as it should and is only shown on the main menu screen. As the user navigates throughout the app all screens after log in have a main menu button except for the permissions screen. When the user logs out, they will be taken back to the log in screen.**

**Functional Requirements**

*From the start up screen the user will need to log in. This will take input form the user to match a userid and password to the database table storing all accounts. If there is a match it will allow the user to access the main menu.*

*In the code there will be a call to the account database table and if there is a match it will advance the app to the menu screen if there is not a match it will prompt the user to try again.*

**This functional requirement has been met as planned.**

*In the menu screen when the All-Inventory button is pressed it will make a call to the inventory database table and return all inventory items and quantities and display them on the screen. This will likely be more than the screen will be able to display and the user will be able to scroll down to see all items listed in numerical or alphabetical order by warehouse location. If a new item is being added or an item is being removed there will be an option from this screen to add or remove it.*

**This functional requirement has been met. I have added enough items to test the scroll ability of this view, and it works as planned. - I have added an additional screen to add/remove/update the inventory and it is accessible through a button on this screen if the access level of the user permits which takes the user to the add/remove/update item screen.**

*The search screen will function like a combination of the log in screen and All-Inventory screen. The search screen will take a user input and do a search of the inventory database to return all matching records into a grid view like the all-inventory screen. If the user has the correct access level the user can make an update to the inventory adjusting the quantity. When the inventory changes below a set number a notification will be sent out to users of the app.*

**This functional requirement has been met. - I have added an additional screen to add/remove/update the inventory and it is accessible through a button on this screen if the access level of the user permits which takes the user to the add/remove/update item screen.**

*The admin button will function by taking the logged in users access level and if it is high enough it will take the user to the admin screen if not it will not function at all. In this screen it will be set up to take inputs from the user and add a record to the accounts database table. Once an account is set up it can be used to gain access into the app.*

**This functional requirement has been met.**

*Logging out of the app will clear out the user account currently logged in and direct the app back to the startup screen where any user can log in.*

**This functional requirement has been met.**

**Conclusion**

Creating this app has been a great learning experience and I enjoyed making all the screens function the way I wanted them to. The project really came together into what I had pictured in my head with all the planning and work put in before creation.