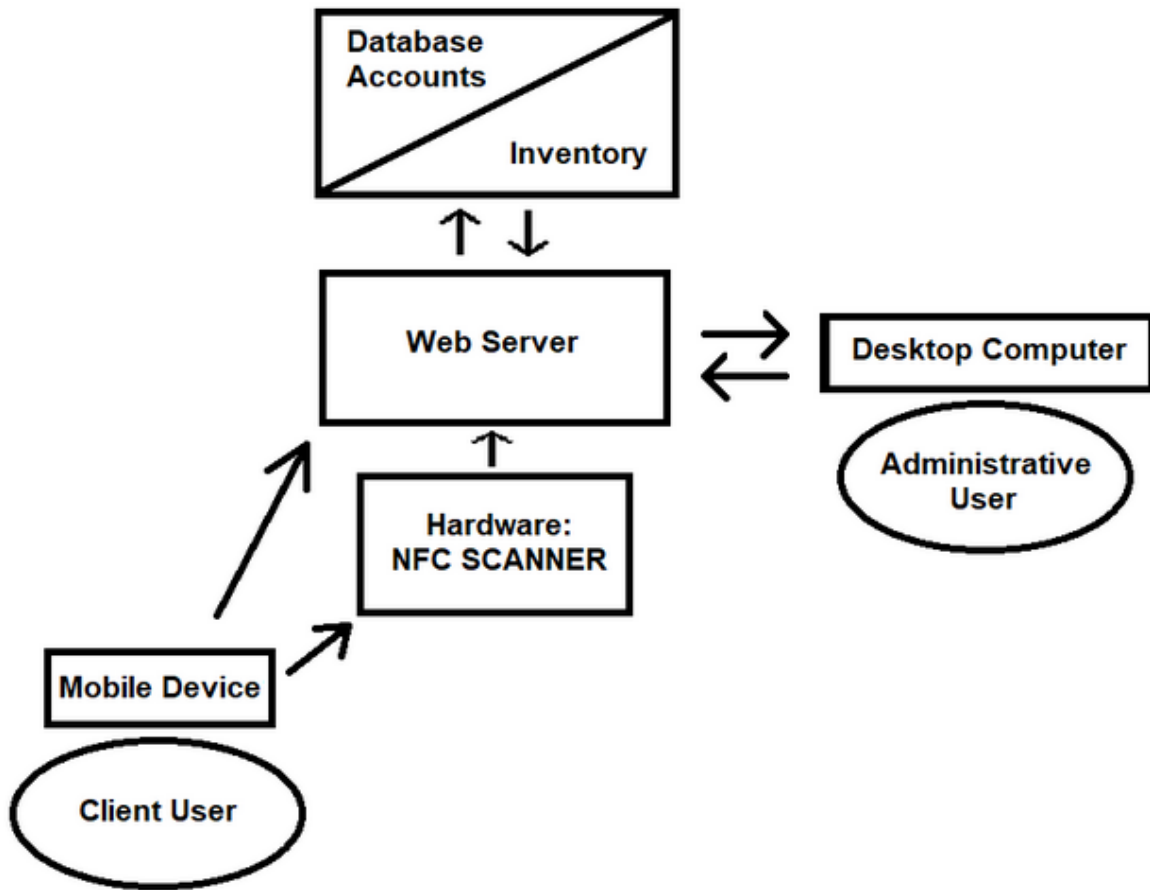**NFC Inventory Management Mobile Application**

The login activity of the application works as intended and communicates with the database. The login activity requires the user to enter a student number and a password in order to login to the application. The app checks if the information entered is valid as it compares what the user enters with data in the database. If the password and student number match, then the user will gain access to the app and their past orders. If the information is incorrect, then a message will appear alerting the user that the information is invalid. This is done in the AttemptLogin class. The login also can save the users information on the device with the prevalent class. The data goes from the user to the database back to the user. The data visualization activity is the orders activity which displays the order that the user made and the current status of the order. The status can be either ready, received, or returned. The user must scan their phone to change the status of the order. The status of an order can also be seen from the web application since it communicates with the same database. The action control activity uses data from the user to determine the output. For example, the user can control the status of their order by scanning their phone at the NFC reader.

```
            Database
            Accounts
                            Inventory

                      ↑  ↓

            Web Server              ⇄    Desktop Computer

                      ↑

            Hardware:                    Administrative
            NFC SCANNER                      User

Mobile Device

    Client User
```

In order to create the mobile application easy to use and follow. We have implemented better connectivity with the database for the orders that users make. The floating action button located at the bottom of the screen will allow the user to view their current order. From the web application, you can also see the current order of the user as well.

We have also implemented a search function that should make it easier for users to find what they are looking for. The search function uses the SearchView class and creates a new array based on what the user inputs. The function compares what the user inputs to the entries in the database and will create a new array of the matches.
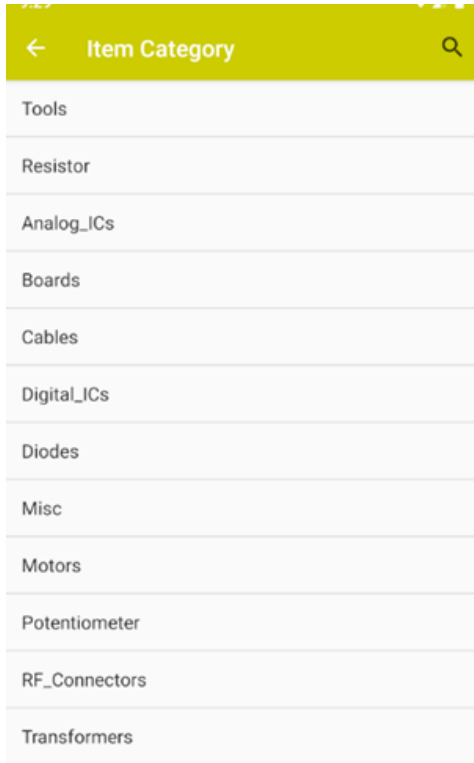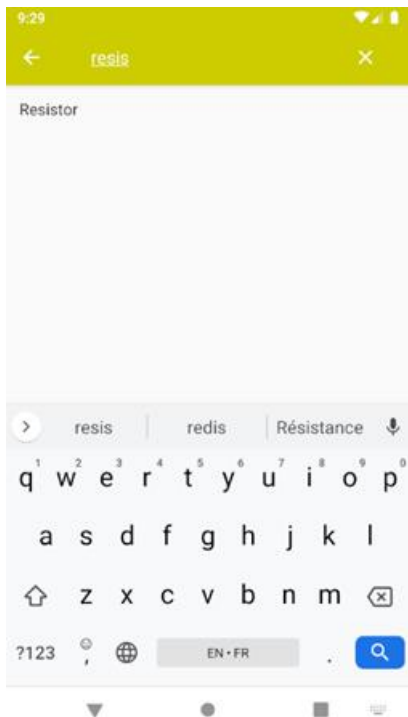
Image before searchView is pressed

Image after searchView is pressed

The search will only show what it matches and will also display what is close to the phrase entered. In the above image "resis" is entered but it will still display resistors. Moving forward, we wish to add images to the item's activity. We tried to implement this but was unsuccessful. We will continue to work on that function to ensure that it works as intended.

Since the majority of app was developed in the previous semester, please refer to page 28 of the Technical Report found

at: https://github.com/RDinh/CENG355NFCSystemsProject/tree/master/Documentation.

Mobile Application Repository Link:

https://github.com/RDinh/CENG355NFCSystemsProject/tree/master/Software/AndroidApp/partsCrib319