**Documentation**

This is the documentation for our POS software for a grocery store.  
We have separate java files for our software which manage different things. I will explain them in detail.

1. We have controller.java has certain methods which control the working of screens of POS system. It makes use of fxml to operate windows for POS system.  
It has method handleLoginExit which is used to close the entire POS system.   
Followed by this method, we have handleLogin method which basically logs a user into the system and asks for username and password. This is the first attempt for a salesperson to get into the POS. This method will also check if the user(salesperson) has entered the correct username or not.  
The next method that we have in this file is handleScan which handles the process involving scanning of items. It gets the prices, product name and calculates the sub total.  If there is no code for the product in the system, it would let user know that. The other methods in this java file are:  
VoidAll method would void the entire sale and start from the beginning.  
handleMainScreenExit method will close the main screen.  
handleSaleScreen method will handle the transition from the main screen to the sale screen.   
handleToMain method will handle transition from the sale screen to the main screen   
handleFinish method will handle everything involved in calculating amount owing, change and amount paid.

quitError method will control closure of the error form.   
quitBadCode method will handle closure of the bad PLU form   
quitBadLogin method handle closure of the bad login form   
launchLookup method will handle transition from MainScreen to PLU lookup   
handleLookupExit method will handle closure of the PLU lookup window and the last method of this file handleQuery method will handle everything involved in the PLU look query.   
  
  
2. The second java file is SystemLogic.java   
It has fields which hold monetary amounts and product names. We have some getters method here. It starts with a method called getLookname() which will return product name for PLU look the item. The next one is getLookPrice(), it will return you the price of the item which is being lookup. The getTotal() method will return the total amount owed getSubTotal() will return the subtotal. The getName() and getItemPrice() will return the item name and price for the sale mode. After this, we have login method for logic which makes account if user can login or not. This method will make a connection with the SQLitedatabase and see if a user is entering correct username and password. We have enclosed this in a try catch block to make sure we are handling our errors.   
Next to this, we have a method called scan which is like the last one which scans for valid codes for the product. It makes a connection with the product base  from SQLitedatabase and scans for that particular item.  
Apart from these methods, we also have methods for calculating the tax, subtotal and calculating the total.   
At the end we have two more methods. One is for the payment which is done by the customer at the end. The last one is for lookup for the item where a product code needs to match for the entered product code.   
  
3. Main.java will create a stage for login and provide entry into the program.  
4. StartBadCode.java sets the stage for badlogin. The method loads the fxml file and creates a stage and shows it. And then it also includes the method which hides the stage.

5. StartError.java creates the stage for displaying the error window and includes the method which hides the stage.   
6. StartLookup.java  create stage for looking up PLU of items and includes the method which hides the stage.   
7.StartMain.java creates the stage for Main screen for POS and includes the method which hides the stage.   
8. StartScale.java will create a stage for sale screen and includes the method which hides the stage.   
  
Now explaining our fxml files:  
BadLogin.fxml displays invalid username and password   
ErrorWindow.fxml is for displaying error message   
InvalidCode.fxml is for invalid code of product items  
Login.fxml is for login screen for POS  
PLULookup.fxml is for PLU lookup for items  
MainScreen.fxml is for the main screen POS from which you enter into the system.  
SaleScreen.fxml is for doing the same operations by scanning items.   
  
Basically, how you can get to work this software is simple, login with your username and password. If it is correct, you can get into the system and if it is incorrect, it will let you know. After  you have entered the username and password and logged in, you can start scanning items by entered their product code, if the product code is right then the item will get scanned. And at the end of scanning all the items, it will calculate total for you and tell you about taxes and how much amount needs to be paid.   
\* you can find employee username and passwords from employeeBase and productBase from the SQLite database.

\* By scanning we mean entering their product code

When you run the Jar file, please ensure the databases are in the same directory as the Jar file. When opening in the IDE, you may need to add the JDBC as a library. You will find it in the src directory as a Jar.