



## **CST1510 Final Coursework Report**

**2021 Oct Intake**

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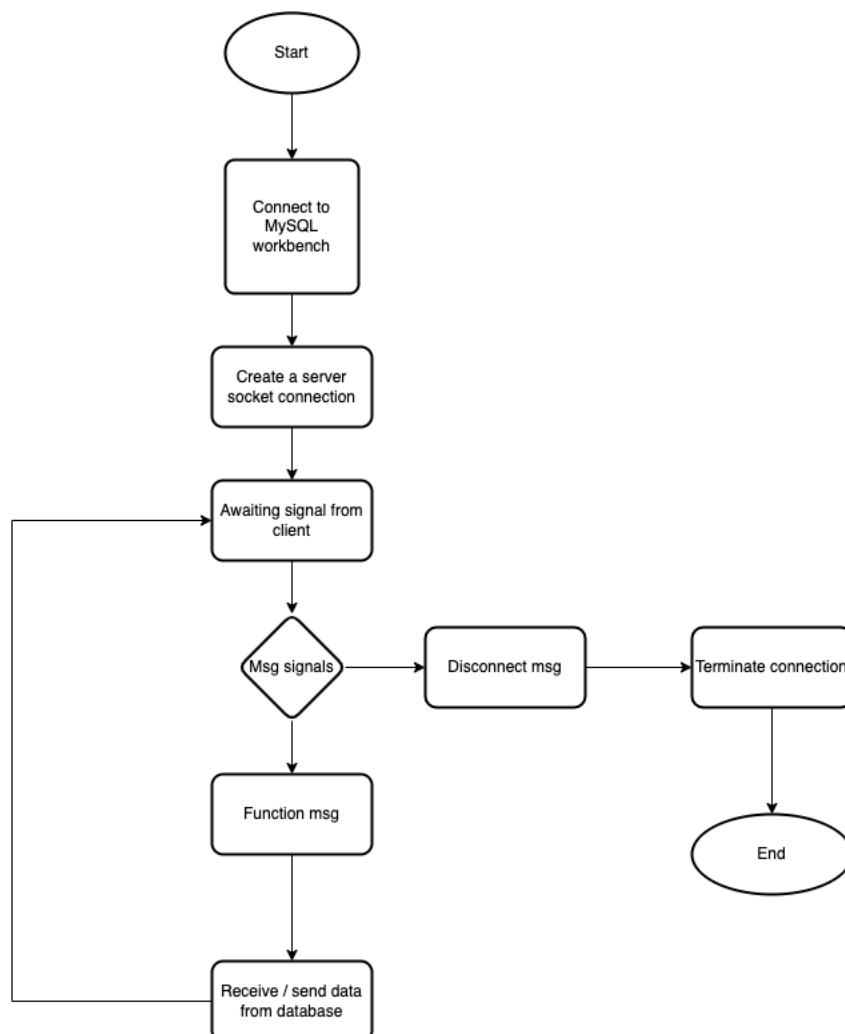
## Introduction

A client and server system were used to create a store management system in Python.

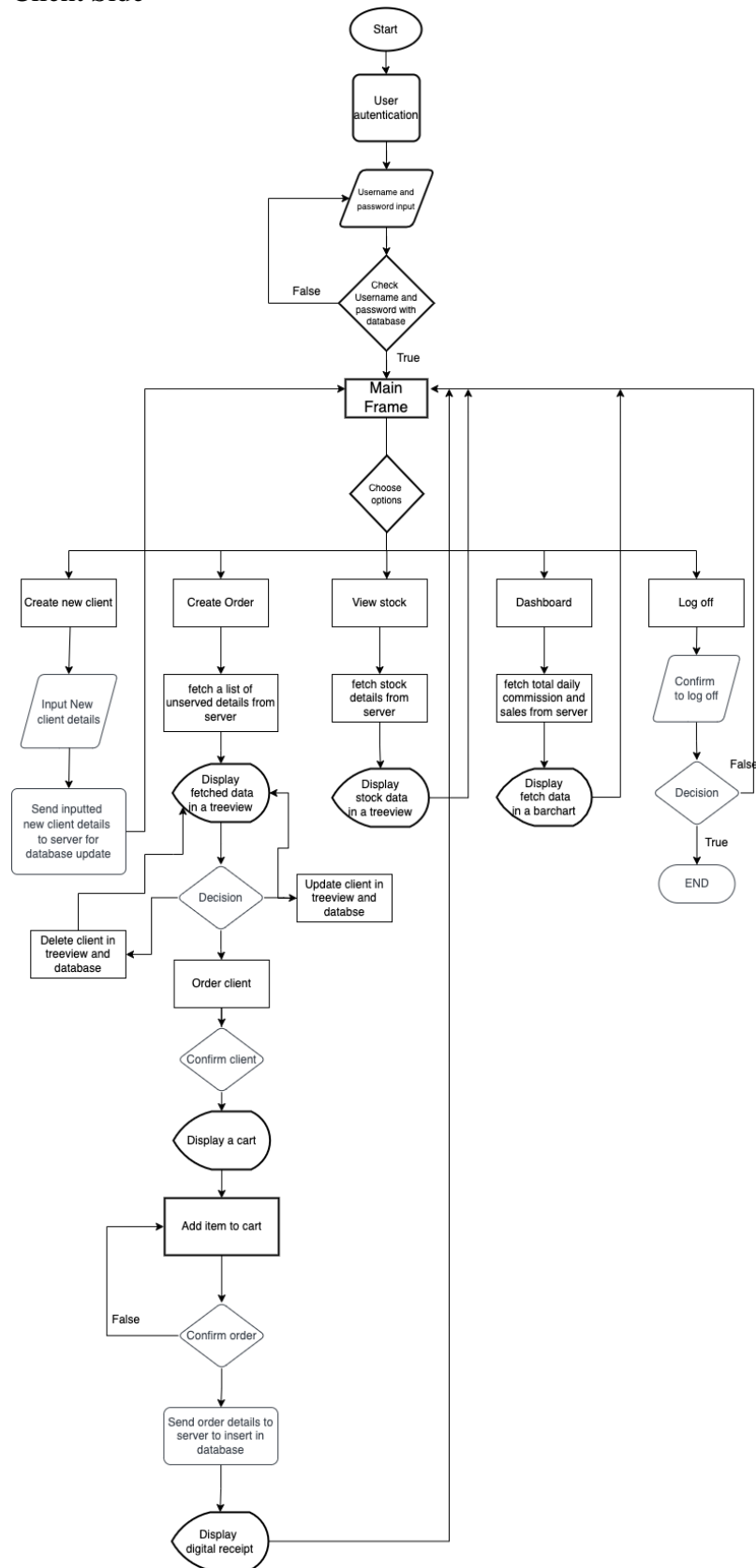
The store management system is fully functional and is made up of a Graphical User Interface (tkinter) to allow a user to intuitively interact with the system. Users (shopkeeper) can start a client request, view available items and prices, create order, manage order and payment, close the request and view the user record of the day. The server program will interact with one client only.

## Flow Charts

Server side

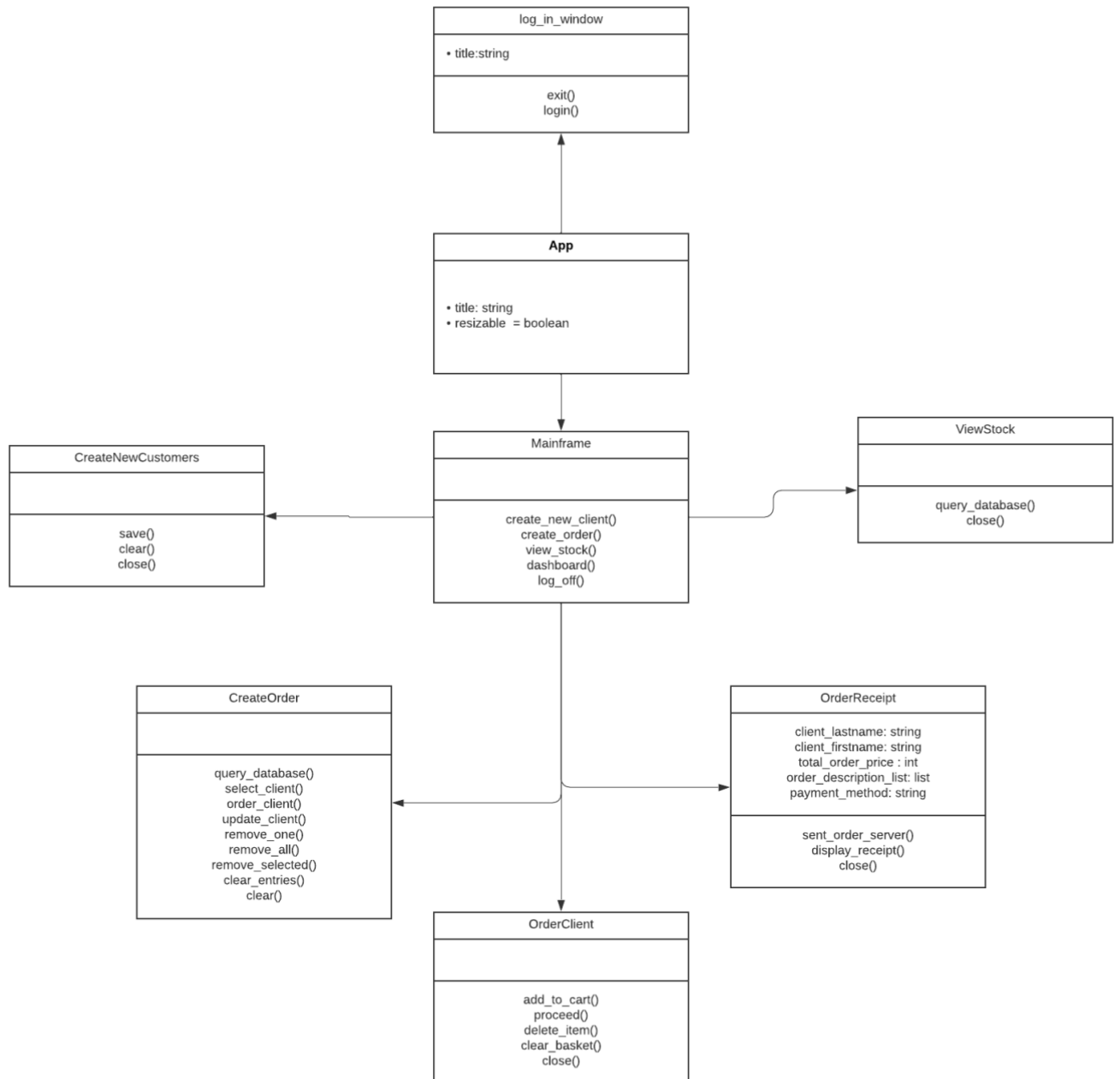


## Client Side



# UML Diagram

## Client Side



## How to use

1. First amend host, user and password in the database.py (line 8 and 18) and the server.py (line 17 and 26) as per your MySQL workbench connection.

```
my_db = mysql.connector.connect(  
    host="localhost",  
    user="root",  
    password="Dragon4698",  
    database=db_name  
)
```

2. Run database.py to create the database schema.
3. Run database.py again to create the tables and insert their respective records.
4. Run server.py
5. Run client.py

## Concepts used

Implementation of most topics covered in CST1510:

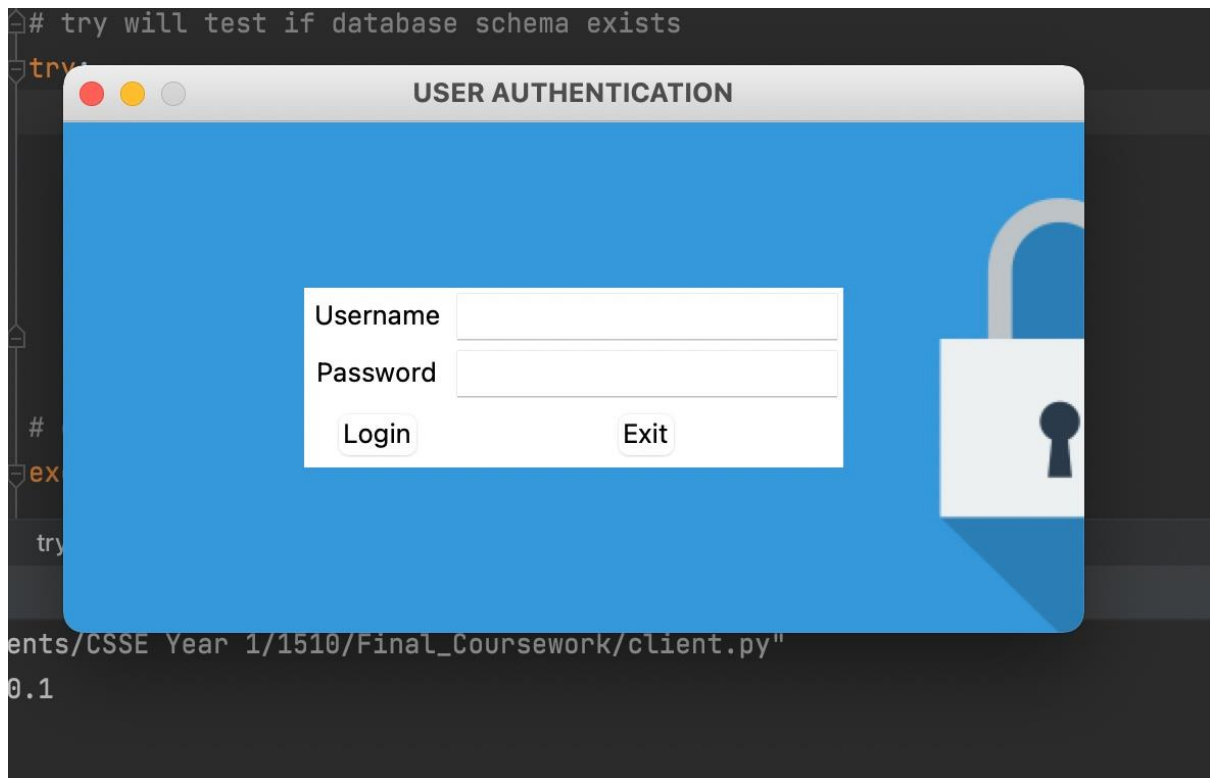
- Data structure (lists, dictionaries)
- Functions
- Object Oriented Programming
- Loops & List Comprehension
- Libraries (pickle, socket, datetime, tkinter)

Additional Technologies implemented:

- MySQL connector to create link with Database and server
- Matplotlib to create interactive visualisations in python

## Features

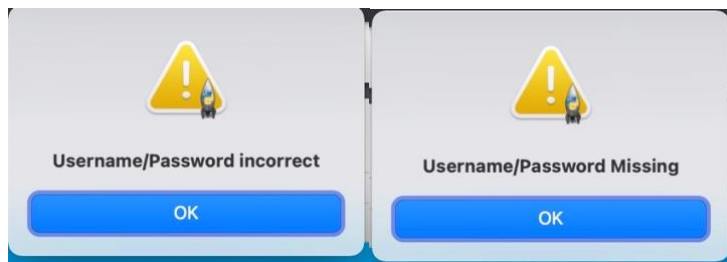
## 1. Log-in Interface



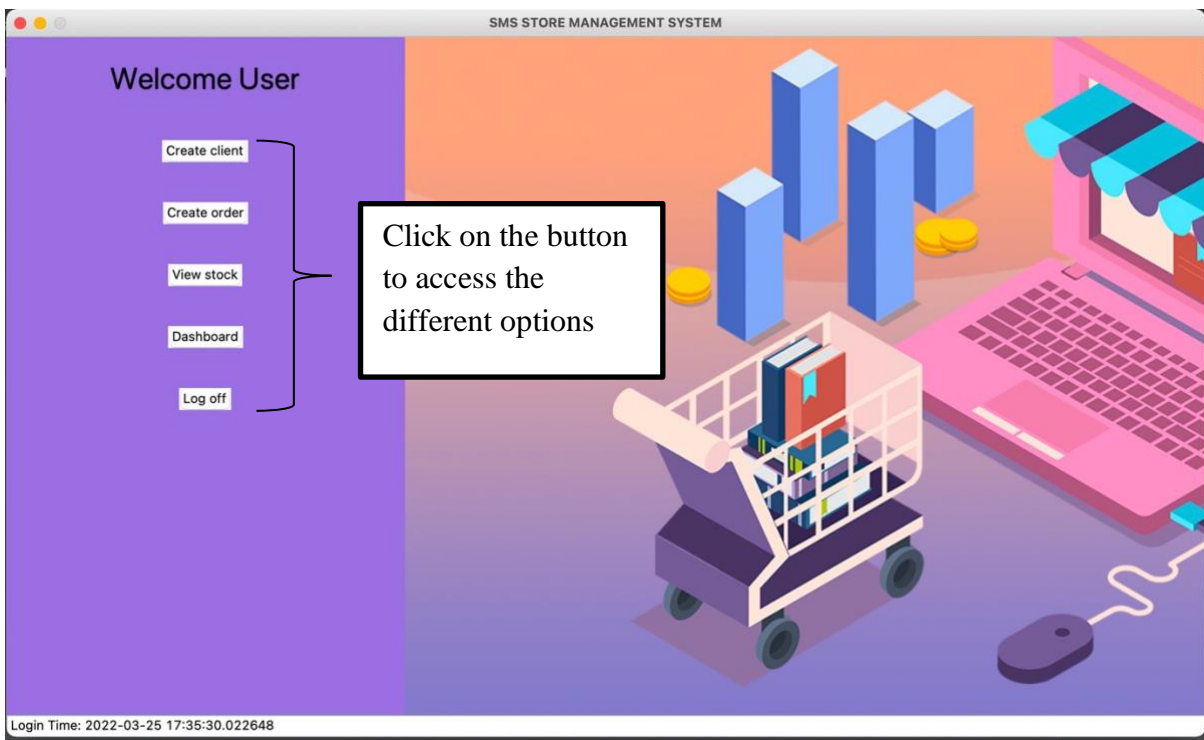
a) Use these login credentials to login successfully

[illegible]

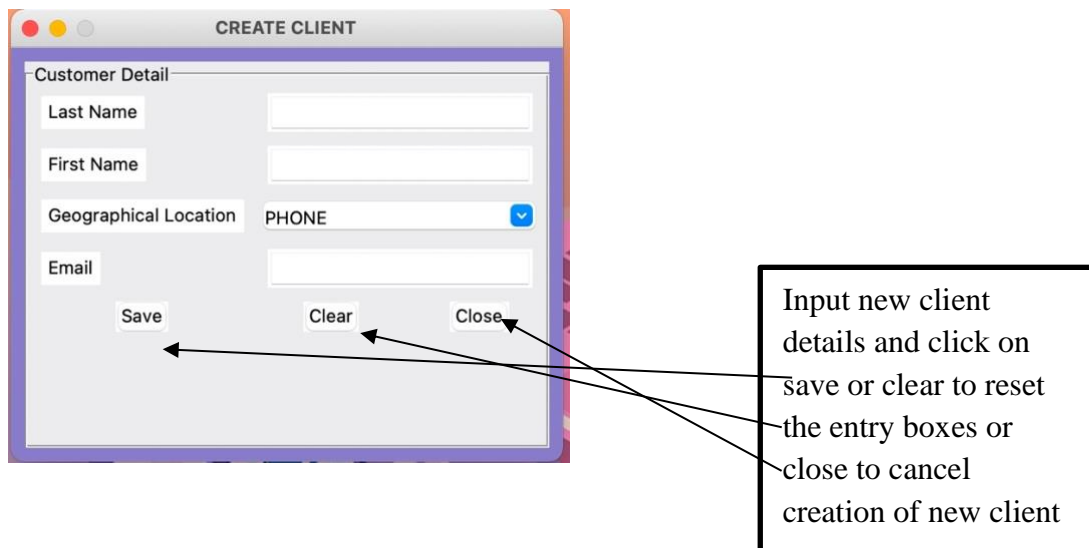
b) Error handling in login



2. Main Frame Interface



a) Create Client Option



b) New Order Option – click on a client to select

The screenshot shows a web application window titled "CUSTOMERS DATABASE". It contains a table of 19 clients, a form for client details, and a set of function buttons. Annotations point to specific elements:

- An arrow points from the text "A treeview of any unserved client in the database" to the table of clients.
- An arrow points from the text "To execute to order process" to the "Order Client" button.
- An arrow points from the text "To update existing client details" to the "Update Client" button.
- An arrow points from the text "To delete an existing client" to the "Remove One Client" button.

Customer ID	Last Name	First Name	Location	Email
10	Sofia	Rollins	PHONE	SR@hotmail.com
11	Anabel	Ryder	ACCESSORIES	AR@hotmail.com
12	Kasey	Senior	LAPTOP	KS@hotmail.com
13	Arooj	Fuller	TV	AF@hotmail.com
14	Emeli	Conner	LAPTOP	EC@hotmail.com
15	Jess	Steadman	ACCESSORIES	JS@hotmail.com
16	Octavia	Caldwell	PHONE	PC@hotmail.com
17	Mica	Shepard	TV	MS@hotmail.com
18	Daniel	Walter	ACCESSORIES	SW@hotmail.com
19	Sharma	Lakshit	TV	SL@gmail.com

Client

Customer ID  Last Name  First Name

Location  Email

Functions

Order Client Update Client Remove All Clients Remove One Client Remove Selected Clients Clear Details Close

c) Add item to cart Interface

The screenshot shows a web application window titled "CREATE ORDER". It features a list of products on the left, a large empty listbox on the right, and a "MOBILE ORDER" sign. Annotations point to specific elements:

- An arrow points from the text "Click to add to cart" to the "Add to cart" button next to the "Huawei Matebook".
- An arrow points from the text "Items added will be displayed in listbox" to the large empty listbox on the right.

CREATE ORDER

Samsung Galaxy A03 Add to cart

Xiaomi 11T Add to cart

Apple Iphone SE Add to cart

Oppo A54 Add to cart

ASUS Zen Book Add to cart

HP Victus Add to cart

Lenovo Chromebook Add to cart

Huawei Matebook Add to cart

Mi LED Smart TV Add to cart

Samsung Smart TV Add to cart

Westpoint Smart TV Add to cart

TCL Television Add to cart

Razer Rogue Backpack Add to cart

Moshi Pluma Add to cart

Belkin True Privacy Add to cart

Microsoft surface dial Add to cart

MOBILE ORDER

Cash

Proceed Delete item Clear cart Close

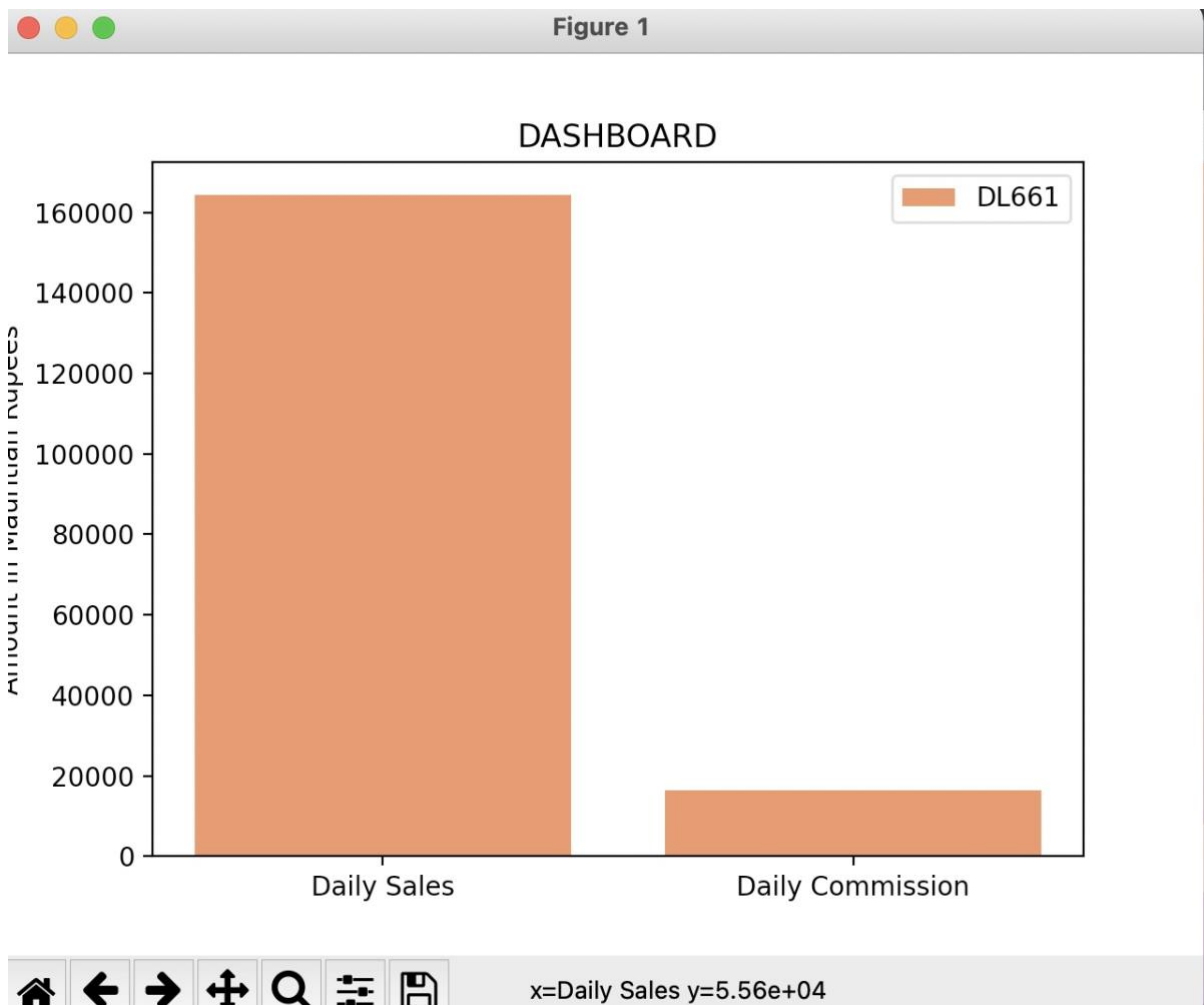


d) View Stock Interface

Product ID	Product Name	Price	Quantity	Geographical Location
1	Samsung Galaxy A	8100	19	PHONE
2	Xiaomi 11T	28150	19	PHONE
3	Apple Iphone SE	26900	20	PHONE
4	Oppo A54	9690	20	PHONE
5	ASUS Zen Book	53975	16	LAPTOP
6	HP Victus	52275	20	LAPTOP
7	Lenovo Chromebo	19000	20	LAPTOP
8	Huawei Matebook	53000	19	LAPTOP
9	Mi LED Smart TV	32500	18	TV
10	Samsung Smart T\	18990	18	TV

Close

e) Dashboard Interface



## Future Implementation

- Add an interface to view a detailed summary of orders
- Add admin user to manage the stock items and quantity
- Complete some functionalities in “Create Order” options