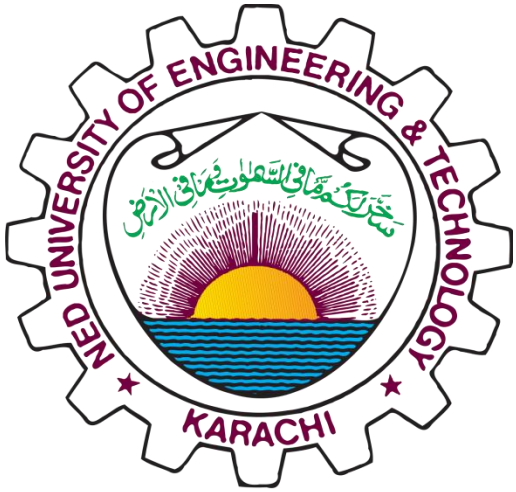
NED UNIVERSITY OF ENGINEERING AND TECHNOLOGY



COMPUTER AND INFORMATION SYSTEM ENGINEERING DEPARTMENT

Course Code : Cs-116

Course : Object Oriented Programming

PROJECT : CEP (Online Shopping Cart)

Submitted By:

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Submitted To : DR MARIA WAQAS

DATE : 14-09-2020

CEP Report

Problem Description:

Online shopping cart is a simple desktop application in which user can create or login account and then buy some products by adding quantity also we can add or remove the quantity. In this user account information and products information can be saved in file. It also displays Shopping history and bill and then Logout.

Distinguishing Features of Project:

Modules:

I have import some modules in my project

1. tkinter Module
2. import messagebox from tkinter
3. import random Module
4. import datetime Module
5. import Abstract Module

Classes:

My code is divided into 6 classes

1. **Abstract Class:**
   I made my user class abstract but it contains concrete methods also.

2. **User Class:**
   Basically this class is the implementation of Abstract class. This class is used to show the interface to user at start of the project. Through this a user can login or create account also it allows user to exit.

3. **Login Class:**
   This class allows the user to enter username and password for login and then purchase items.

4. **Create Account:**
   This class allows the user to create account by enter some personal information.

5. **Product Class:**
   This class shows the interface in which user can see the products and enter the quantity of products which he/she wants to buy. This class also generates bill and also updates quantity.

6. **Shopping History:**

This class saves the shopping history with username, date, time and also displays the shopping history to the user.

GUI (Graphical User Interface):

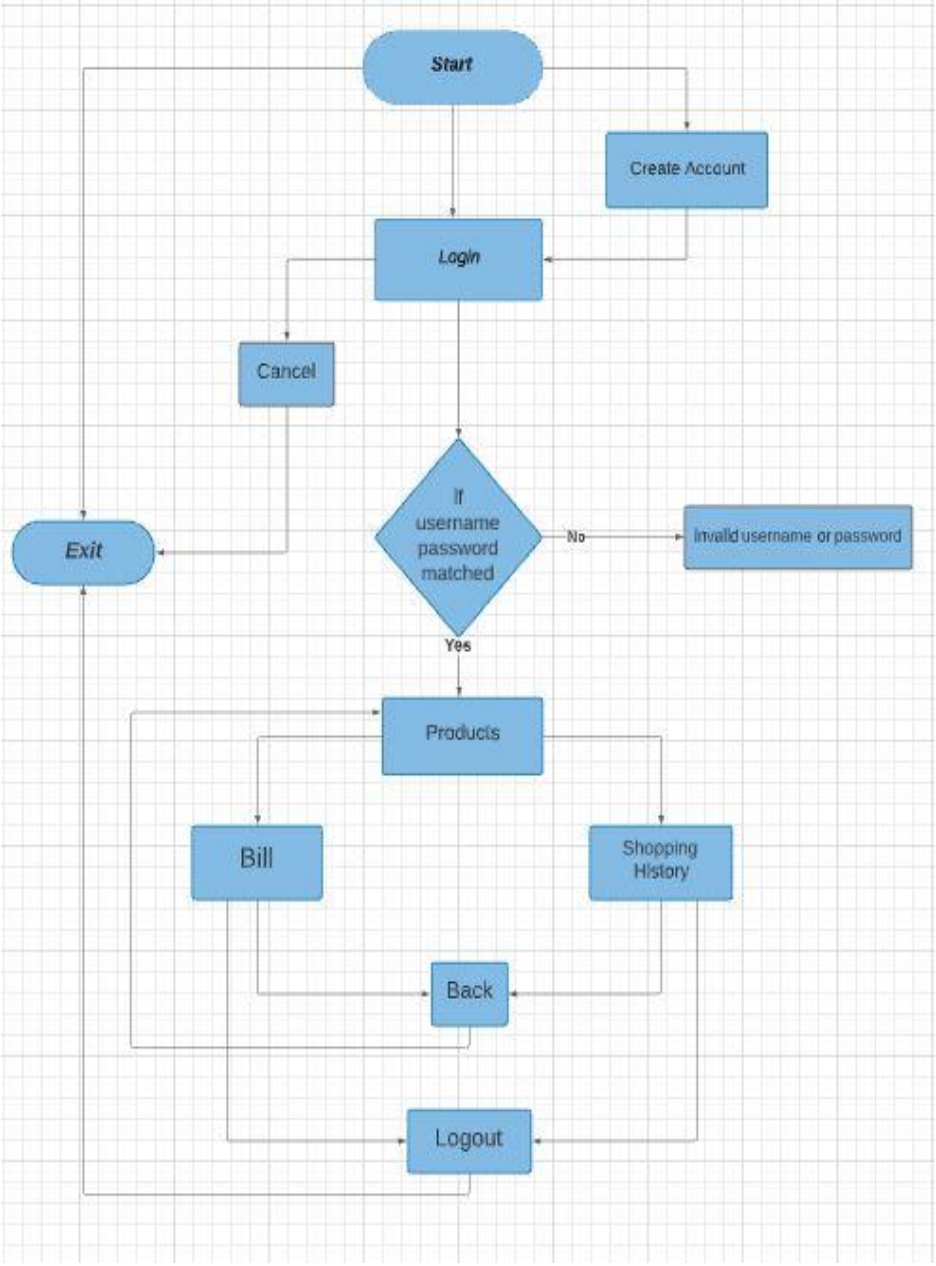
That's the main feature of my project that I used to show some interface to the user.

Requirements:

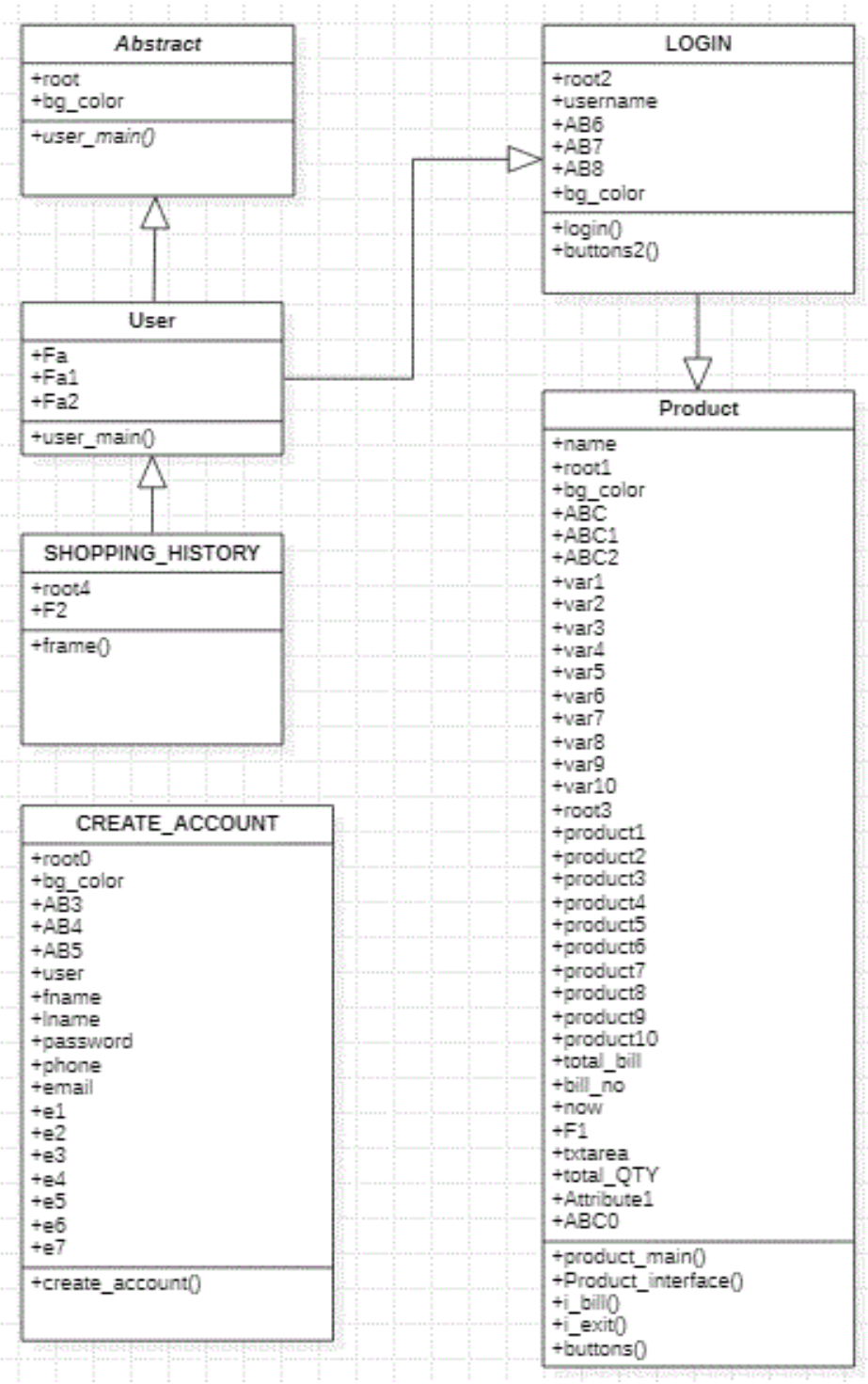
According to the requirement I have added four Object Oriented Features

1. Inheritance
2. Composition
3. Abstract Classes and Methods
4. Exception Handling

Flowchart:


Start
Create Account
Login
Cancel
Exit
If username password matched
No
Invalid username or password
Yes
Products
Bill
Shopping History
Back
Logout

UML Diagram:


Abstract
+root
+bg_color
+user_main()
LOGIN
+root2
+username
+AB6
+AB7
+AB8
+bg_color
+login()
+buttons2()
User
+Fa
+Fa1
+Fa2
+user_main()
Product
+name
+root1
+bg_color
+ABC
+ABC1
+ABC2
+var1
+var2
+var3
+var4
+var5
+var6
+var7
+var8
+var9
+var10
+root3
+product1
+product2
+product3
+product4
+product5
+product6
+product7
+product8
+product9
+product10
+total_bill
+bill_no
+now
+F1
+txtarea
+total_QTY
+Attribute1
+ABC0
+product_main()
+Product_interface()
+i_bill()
+i_exit()
+buttons()
SHOPPING_HISTORY
+root4
+F2
+frame()
CREATE_ACCOUNT
+root0
+bg_color
+AB3
+AB4
+AB5
+user
+fname
+lname
+password
+phone
+email
+e1
+e2
+e3
+e4
+e5
+e6
+e7
+create_account()

Challenging part:

The most challenging part for me in this project was to destroy current window and open the new window when clicked on Button and also fetching data from list saved in file,

New Thing Learnt in Python:

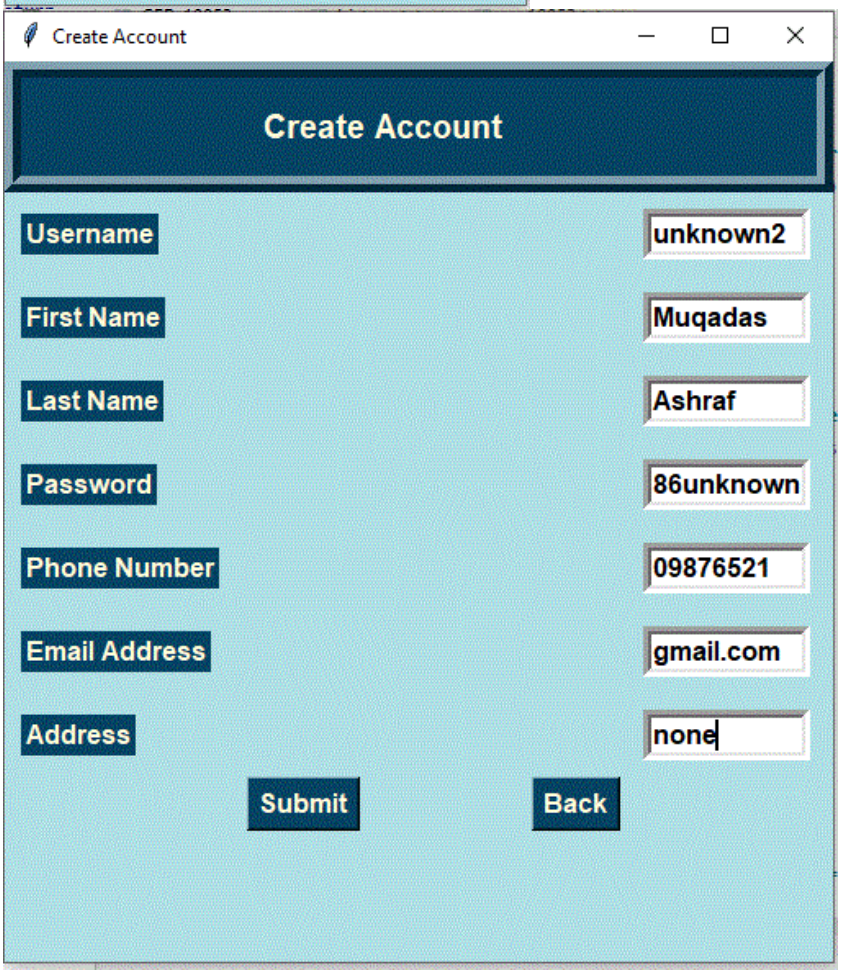
I have learnt many things. First thing that this project is the practical examples of all the OOP concepts we learnt in the semester, and the most interesting thing that I have learnt was GUI. I found that coding with GUI is quite more interesting. Also I found many things new in GUI.

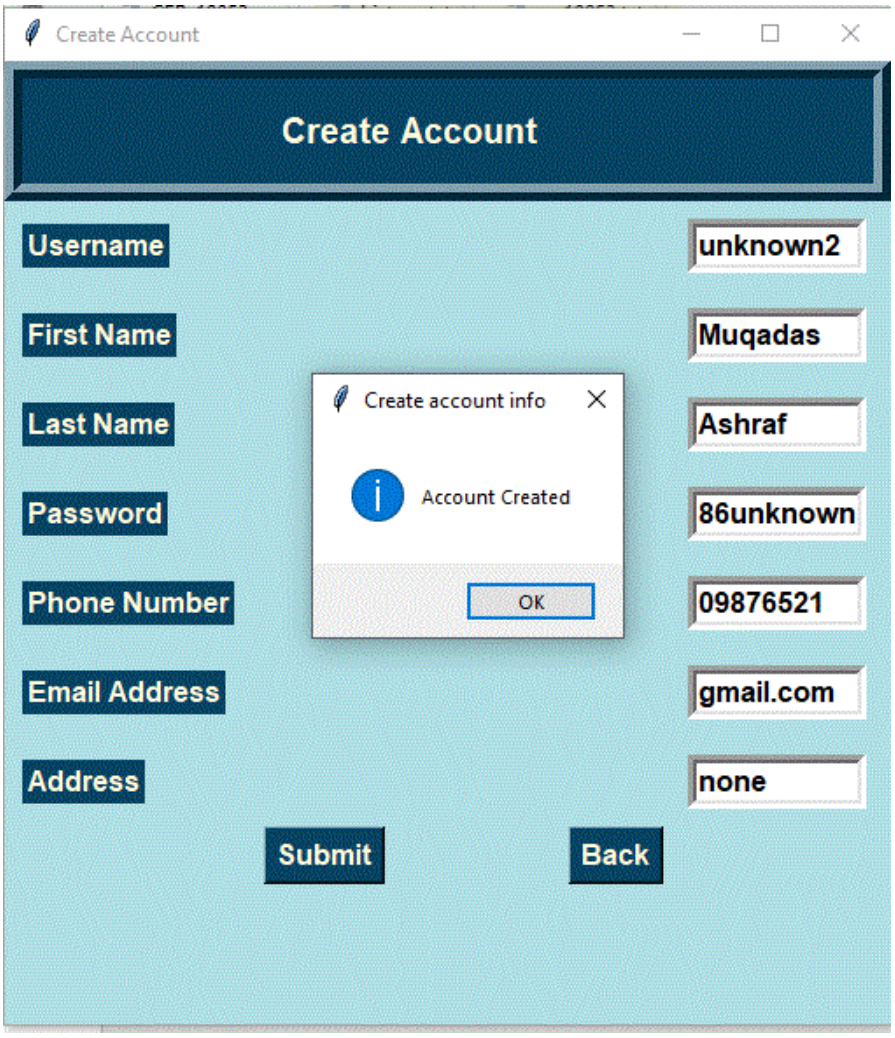
Future Expansion:

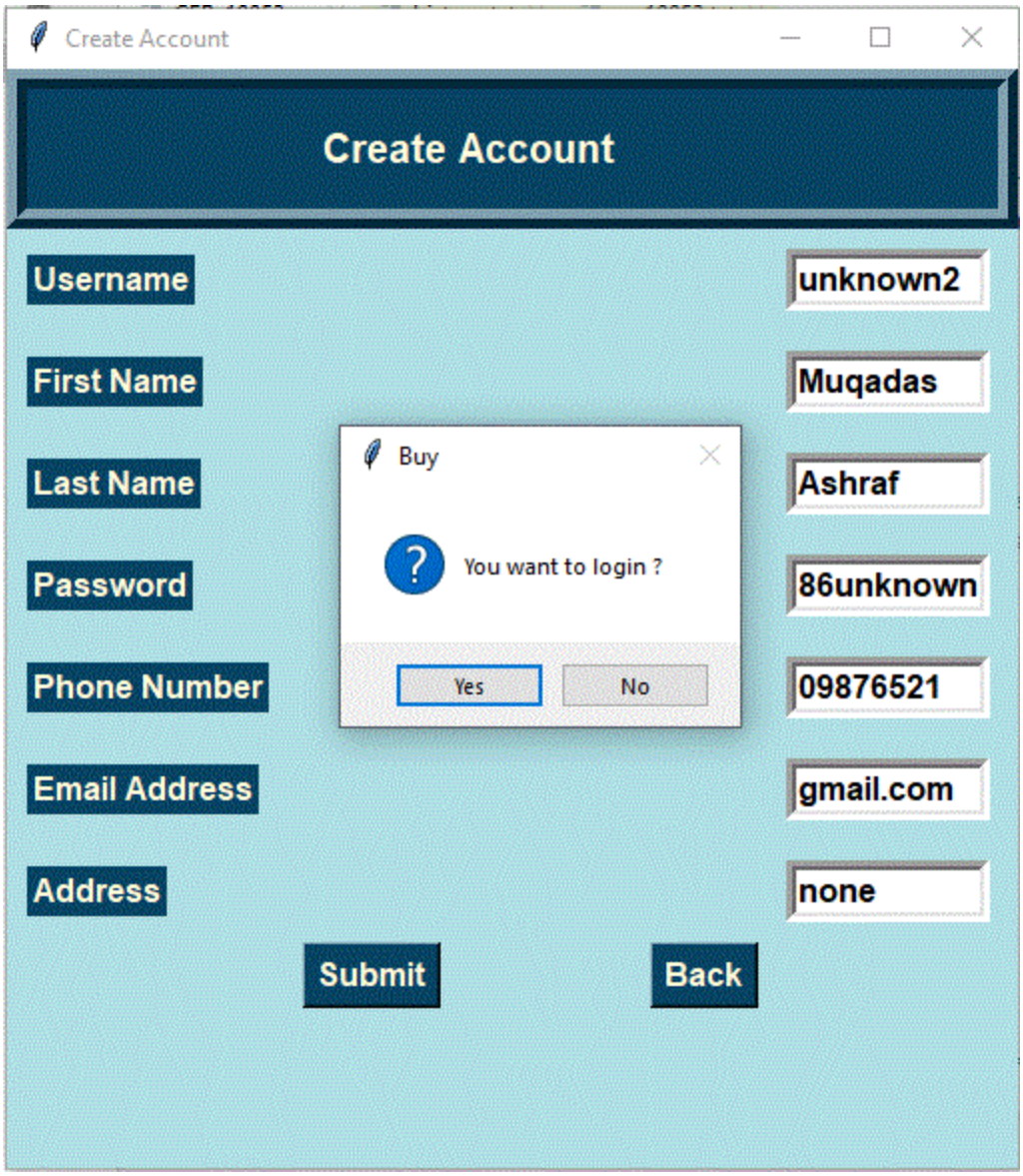
Extension version of this project will include pictures of items in store and admin class will be created which can update the stock or update the category of items. Feedback feature will also be introduced in this project. Customers can also search a product with alphabets

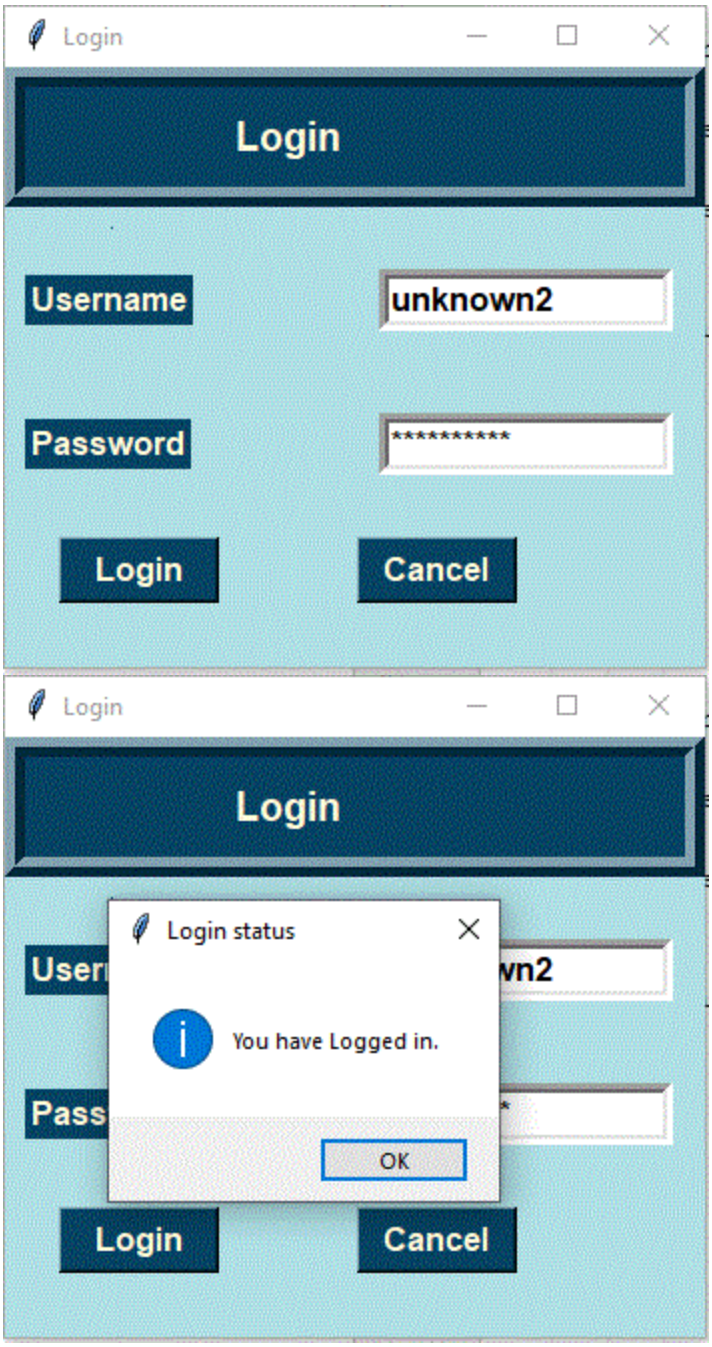
TEST CASE RUNS:

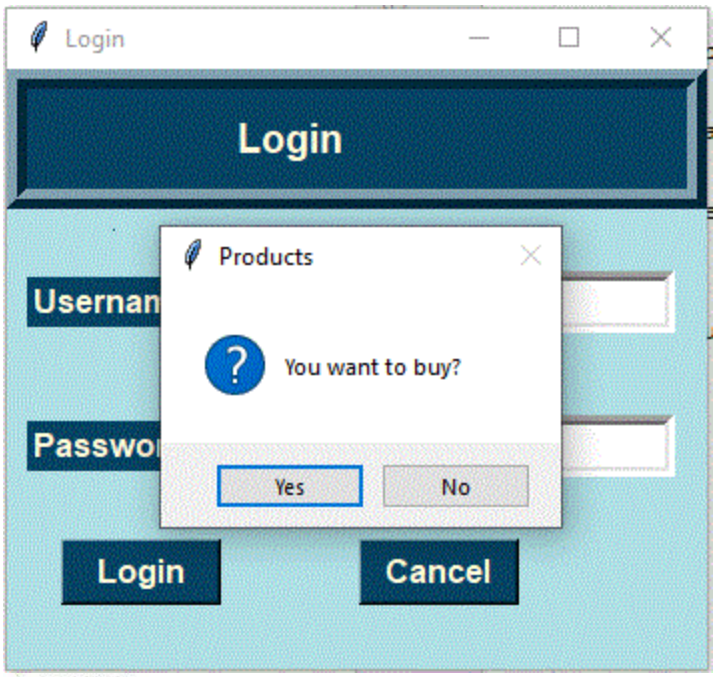
RUN 1:



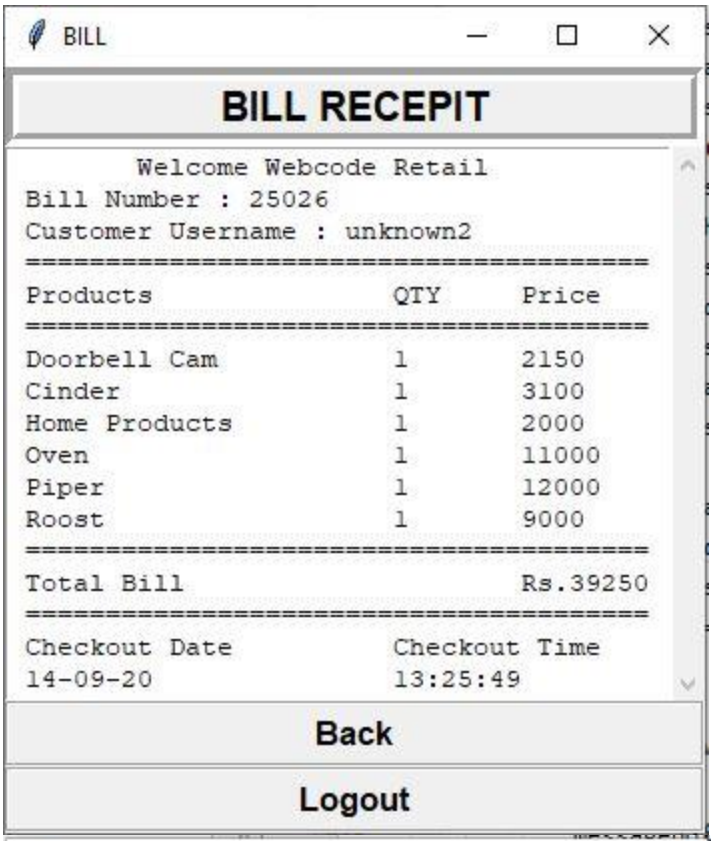

Create Account
Create Account
Username
unknown2
First Name
Muqadas
Last Name
Ashraf
Password
86unknown
Phone Number
09876521
Email Address
gmail.com
Address
none
Submit
Back
Create account info
Account Created
OK

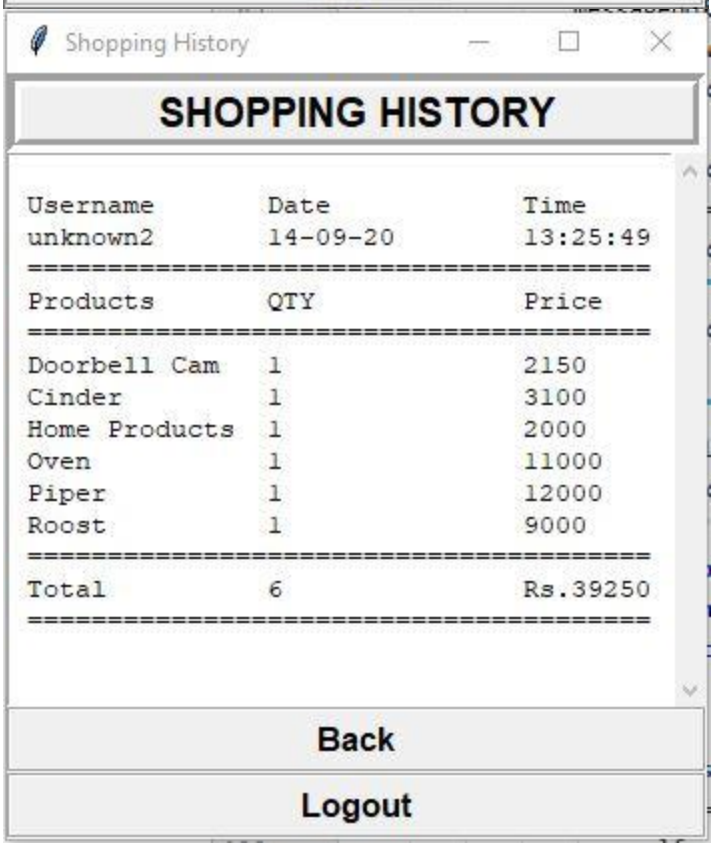

Create Account
Create Account
Username
unknown2
First Name
Muqadas
Last Name
Ashraf
Password
86unknown
Phone Number
09876521
Email Address
gmail.com
Address
none
Submit
Back
Buy
You want to login ?
Yes
No


Login
Login
Username
unknown2
Password
****
Login
Cancel
Login
Login
Login status
You have Logged in.
OK
Login
Cancel


Login
Login
Products
You want to buy?
Yes
No
Usernan
Passwo
Login
Cancel

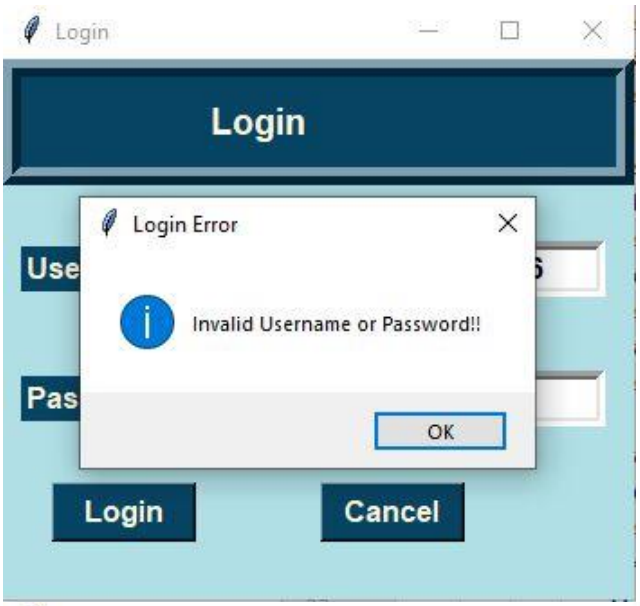
PRODUCTS
Products
Amazon Echo
Rs.2100
0
Doorbell Cam
Rs.2150
01
Cinder
Rs.3100
01
House Products
Rs.2000
01
Oven
Rs.11000
01
Piper
Rs.12000
01
Roost
Rs.9000
01
Samsung SmartThings
Rs.15000
0
ATrack trackers
Rs.11000
0
GridConnect
Rs.10000
0
BILL
Logout
HISTORY


BILL
BILL RECEPIT
Welcome Webcode Retail
Bill Number : 25026
Customer Username : unknown2
Products QTY Price
Doorbell Cam 1 2150
Cinder 1 3100
Home Products 1 2000
Oven 1 11000
Piper 1 12000
Roost 1 9000
Total Bill Rs.39250
Checkout Date Checkout Time
14-09-20 13:25:49
Back
Logout

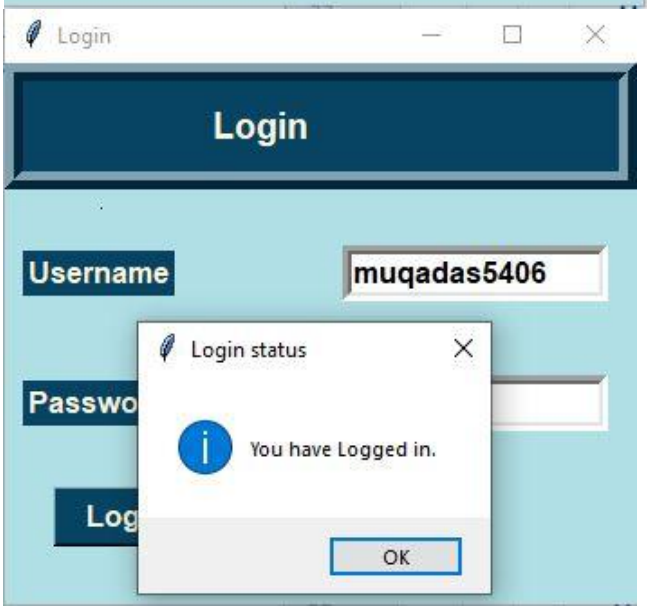

Shopping History
SHOPPING HISTORY
Username Date Time
unknown2 14-09-20 13:25:49
Products QTY Price
Doorbell Cam 1 2150
Cinder 1 3100
Home Products 1 2000
Oven 1 11000
Piper 1 12000
Roost 1 9000
Total 6 Rs.39250
Back
Logout

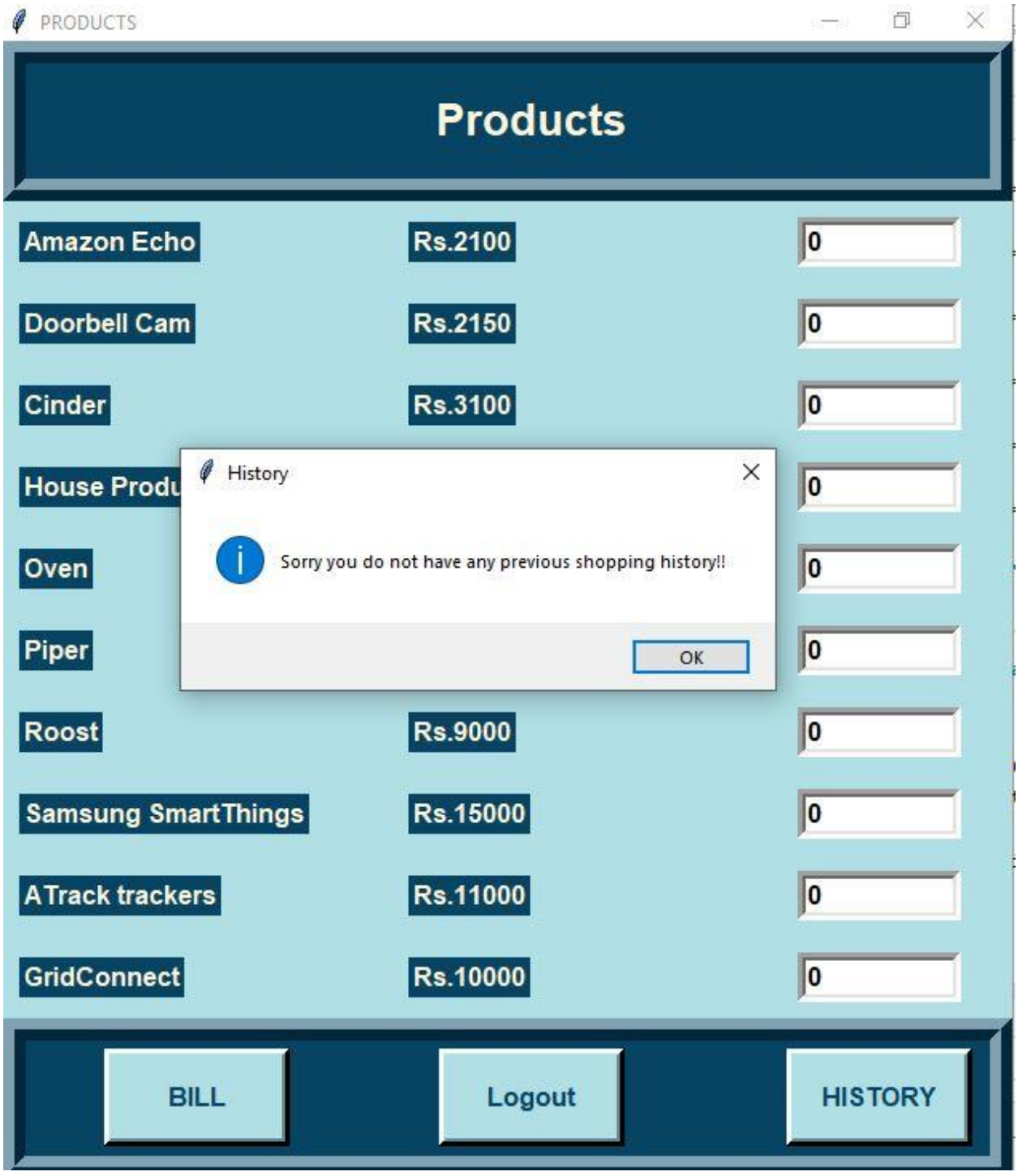
RUN 2:

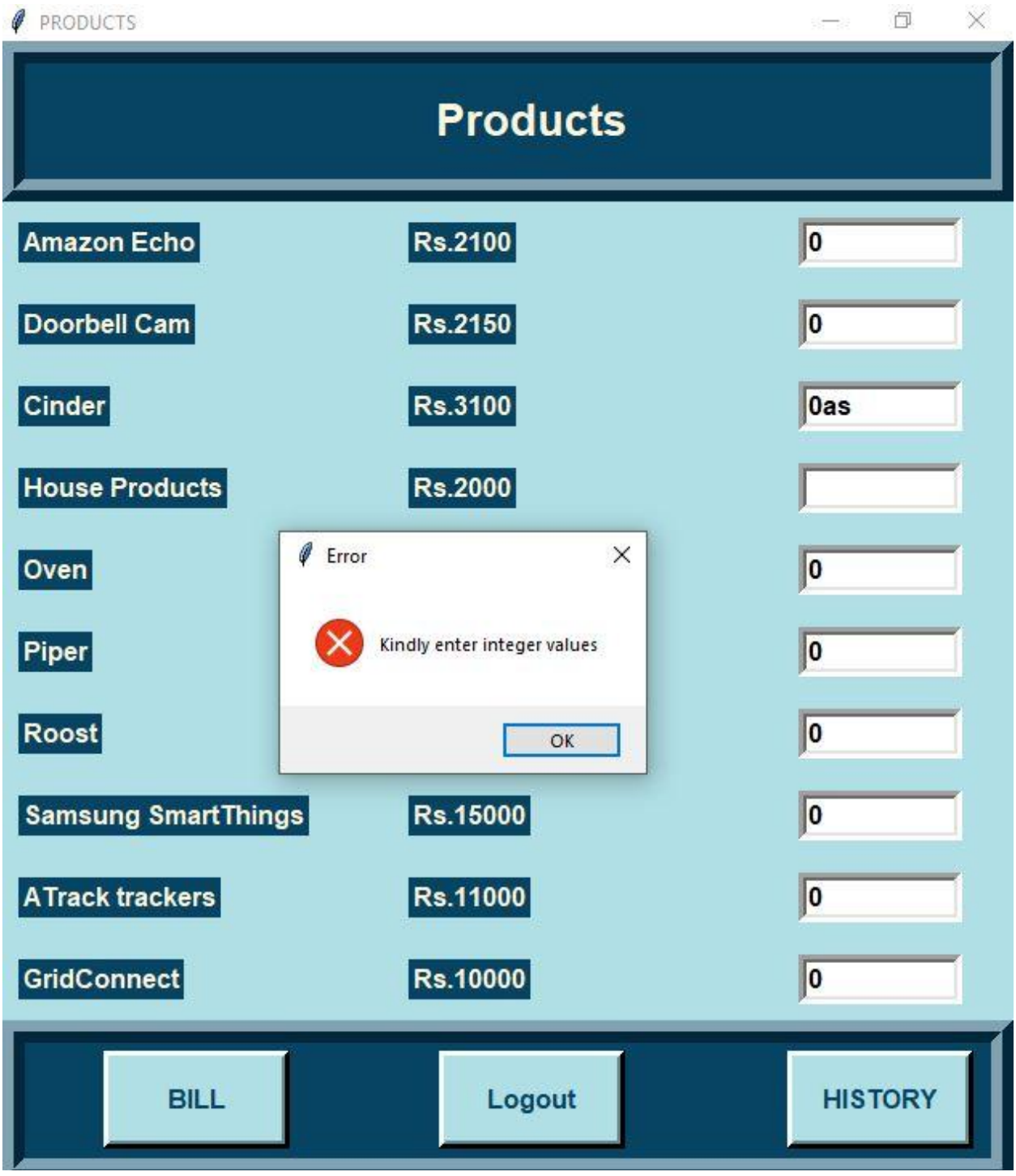
Online Shopping Cart
Online Shopping Cart
Create Account
Login
Exit
Login
Login
Username
muqadas5406
Password
***
Login
Cancel

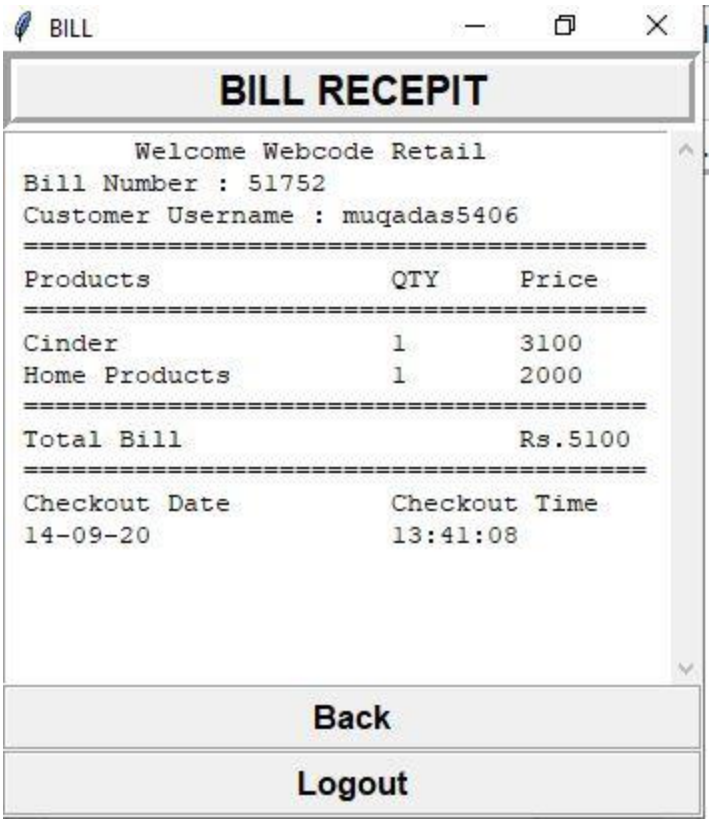

Login
Login
Login Error
Invalid Username or Password!!
OK
Login
Cancel

Login
Login
Products
You want to buy?
Yes
No
Login
Cancel

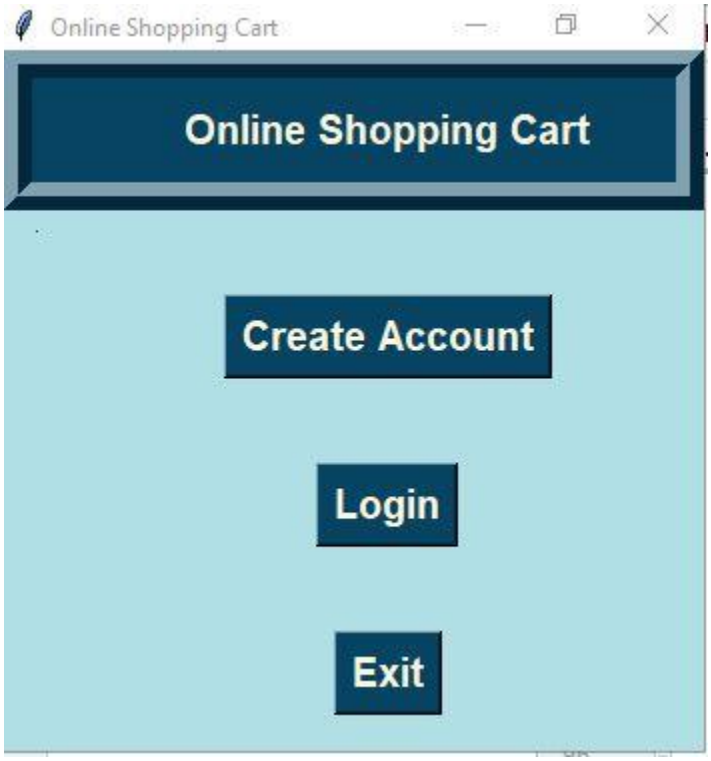

Login
Login
Username
muqadas5406
Login status
You have Logged in.
OK

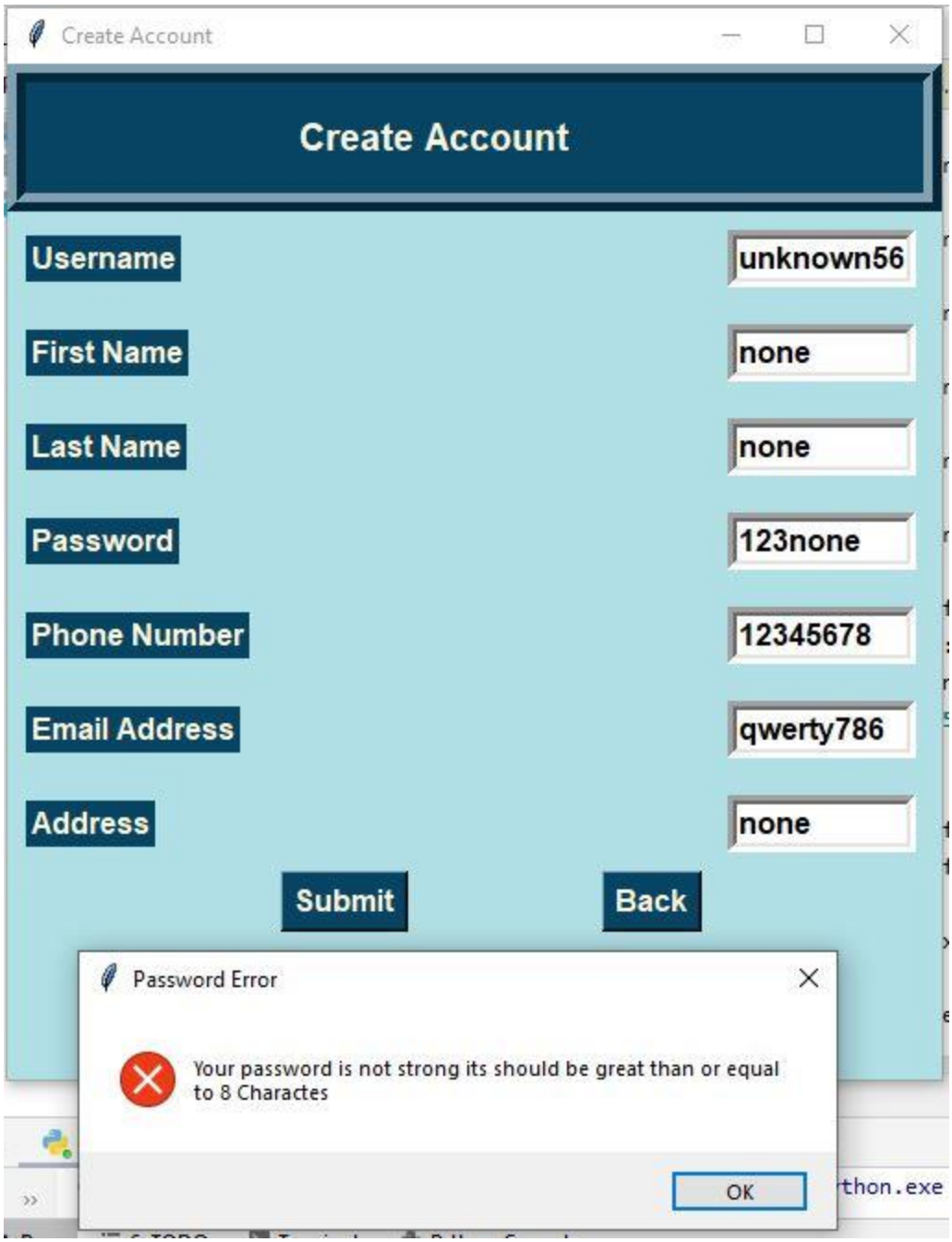

PRODUCTS
Products
Amazon Echo
Rs.2100
0
Doorbell Cam
Rs.2150
0
Cinder
Rs.3100
0
House Produ
0
Oven
0
Piper
0
Roost
Rs.9000
0
Samsung SmartThings
Rs.15000
0
ATrack trackers
Rs.11000
0
GridConnect
Rs.10000
0
BILL
Logout
HISTORY
History
Sorry you do not have any previous shopping history!!
OK

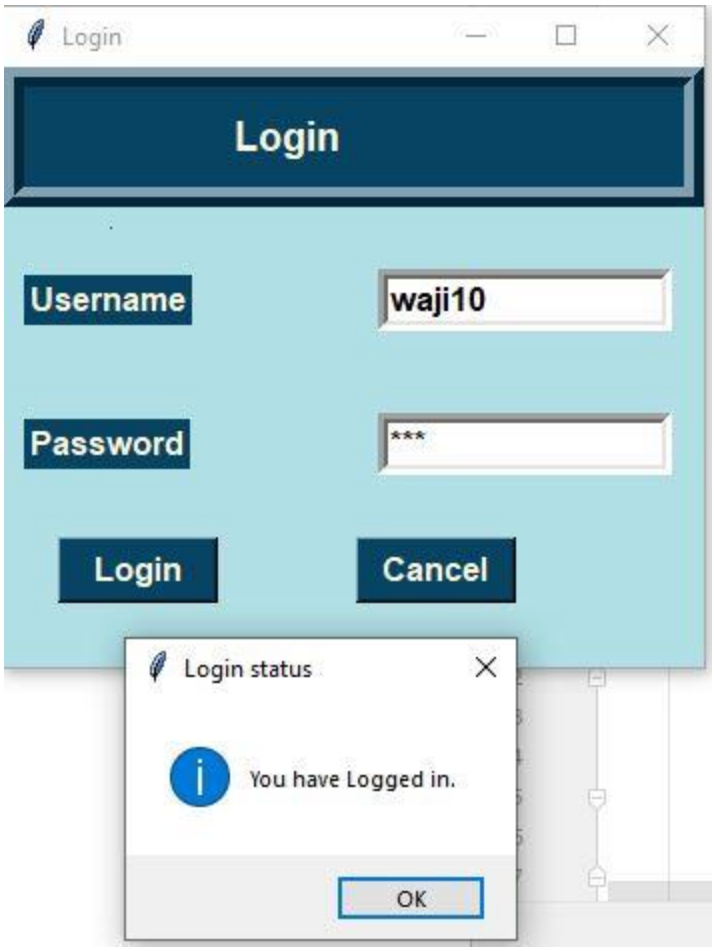

PRODUCTS
Products
Amazon Echo
Rs.2100
0
Doorbell Cam
Rs.2150
0
Cinder
Rs.3100
0as
House Products
Rs.2000
Oven
0
Piper
0
Roost
0
Error
Kindly enter integer values
OK
Samsung SmartThings
Rs.15000
0
ATrack trackers
Rs.11000
0
GridConnect
Rs.10000
0
BILL
Logout
HISTORY

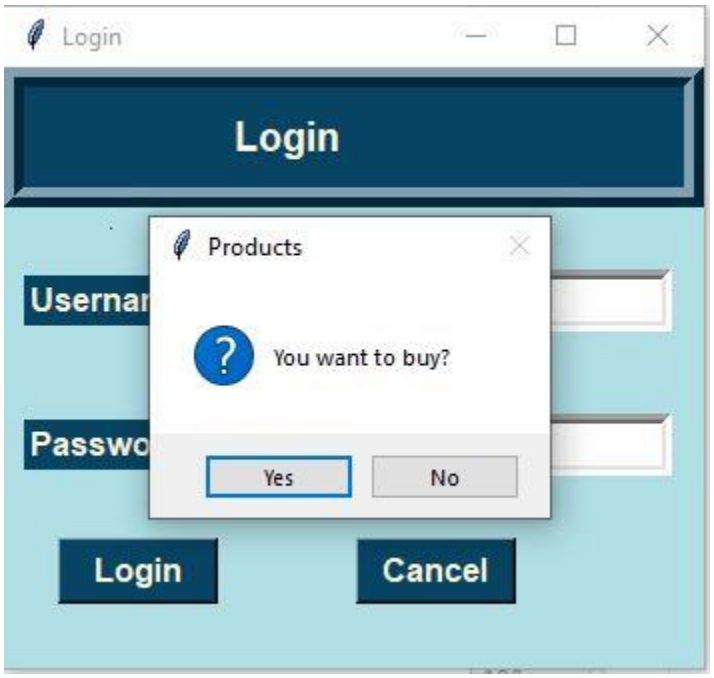

BILL
BILL RECEPIT
Welcome Webcode Retail
Bill Number : 51752
Customer Username : muqadas5406
Products QTY Price
Cinder 1 3100
Home Products 1 2000
Total Bill Rs.5100
Checkout Date Checkout Time
14-09-20 13:41:08
Back
Logout

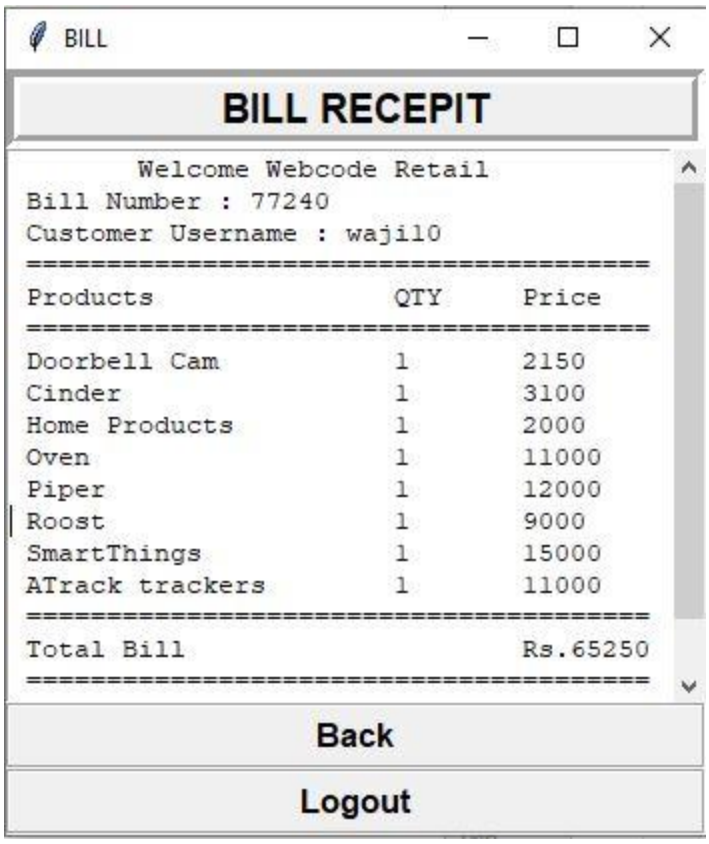
Run 3:

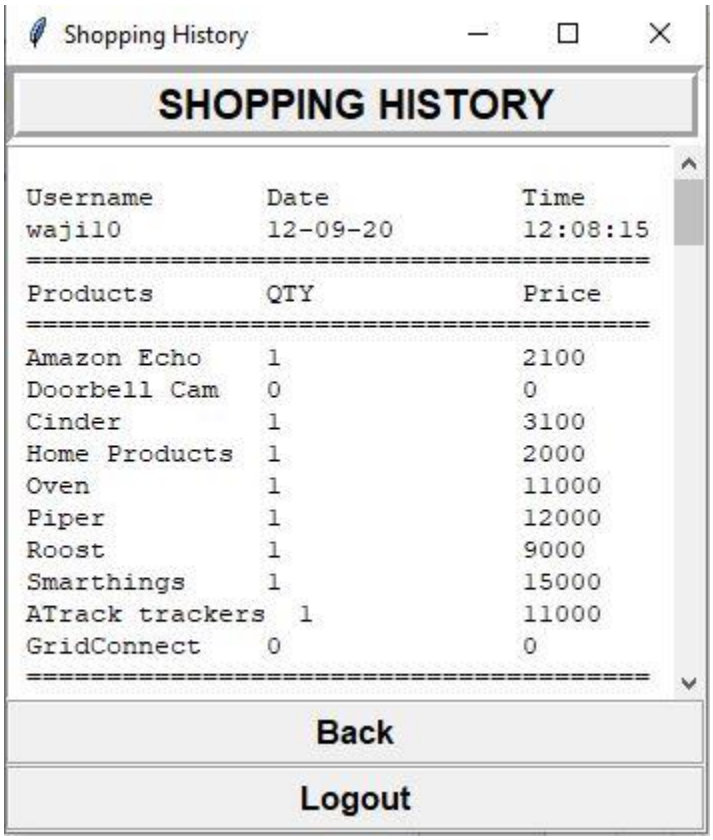

Online Shopping Cart
Online Shopping Cart
Create Account
Login
Exit


Create Account
Create Account
Username
unknown56
First Name
none
Last Name
none
Password
123none
Phone Number
12345678
Email Address
qwerty786
Address
none
Submit
Back
Password Error
Your password is not strong its should be great than or equal to 8 Charactes
OK


Login
Login
Username
waji10
Password
***
Login
Cancel
Login status
You have Logged in.
OK


Login
Login
Products
You want to buy?
Yes
No
Login
Cancel


BILL
BILL RECEPIT
Welcome Webcode Retail
Bill Number : 77240
Customer Username : wajil0
Products QTY Price
Doorbell Cam 1 2150
Cinder 1 3100
Home Products 1 2000
Oven 1 11000
Piper 1 12000
Roost 1 9000
SmartThings 1 15000
ATrack trackers 1 11000
Total Bill Rs.65250
Back
Logout


Shopping History
SHOPPING HISTORY
Username Date Time
wajil0 12-09-20 12:08:15
Products QTY Price
Amazon Echo 1 2100
Doorbell Cam 0 0
Cinder 1 3100
Home Products 1 2000
Oven 1 11000
Piper 1 12000
Roost 1 9000
Smarthings 1 15000
ATrack trackers 1 11000
GridConnect 0 0
Back
Logout

References:

1. Youtube
2. Stackoverflow
3. Many others

THANK YOU