IP Project

Name-

Class & section-

Roll no.-

Teacher- Mr. Rajendra Joshi

Date of submission-

Teacher’s Signature

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Introduction

Python is an interpreted, high-level, general-purpose programming language. Created by Guido van Rossum and first released in 1991,Python's design philosophy emphasizes code readability with its notable use of significant whitespace. Its language constructs and object-oriented approach aim to help programmers write clear, logical code for small and large scale objects.

Departmental Store

This project is done using python programming language. This is a project containing details of products available in "Rajasthan Store" and their price comparison graphs, this project also contains income and profit details of the store in past 5 years and also their comparison graphs along with them.

The program can be modified and can be used for other companies. The work interface is very simple and suits any type of users. It's data can be modified and viewed as per the user's convenience.

Source Code

```
#!/usr/bin/env python
# coding: utf-8

# In[17]:

from tkinter import *
from tkinter import ttk
import numpy as np
import matplotlib.pyplot as plt
from matplotlib.figure import Figure
from matplotlib.backends.backend_tkagg import (FigureCanvasTkAgg, NavigationToolbar2Tk)

HEIGHT = 700
WIDTH = 600
root = Tk()

canvas = Canvas(root, height=HEIGHT, width=WIDTH, bg="black")
canvas.pack()

def homewindow():
    l1 = Label(text="Rajasthan Store", fg="white", bg="black", bd=10,font=('Courier', 18))
    l1.place(relx=0.5, rely=0, anchor='n', )
    frame = Frame(root, bg='#7788dc', bd=5)
    frame.place(relx=0.5, rely=0.1,relwidth=1, relheight=1, anchor='n')
    button1 = Button(frame, text="Products List",font=('Courier', 17), command= plist)
    button1.place(x=170,y=30,relwidth=0.4)
    salesbutton = Button(frame, text="Sales",font=('Courier', 17), command=sales)
    salesbutton.place(x=170,y=80,relwidth=0.4)
    l2 = Label(frame, text='''About: \n Rajasthan stores, since 2005.
                                \nWe have been a succesfull business
                                \nsince 17 years, with
                                \ncontinuosly growing profits day by
                                \nday. We are known for our products
                                \nquality and cutomer loyalty.''',font=('Courier', 14))
    l2.place(x=100,y=130,relwidth=0.7,relheight=0.4)
    l3 = Label(frame, text='''Project by:-
-Naman Singhal-(36)
-Tanika Goyal-(53)
-Rishita Bohra-(46)
-Kriti Bhatnagar-(30)
-Jiya Gupta-(27)
-Abhinav Singh Chauhan-(3)''',font=('Courier', 14))
```

```
    l3.place(x=0,y=520,relwidth=0.5,relheight=0.3,anchor='w')
    button4 = Button(frame, text="Exit",font=('Courier', 17), command=root.destroy )
    button4.place(x=300,y=500,relwidth=0.4)

def plist(): #products list window
    win2 = Toplevel(root)
    win2.geometry("700x500")
    win2.title("Products List")
    canvas = Canvas(win2, height=500, width=700, bg="black")
    canvas.pack()
    l2 = Label(win2,text="Products list",fg="white", bg="black", bd=10,font=('Courier', 18))
    l2.place(relx=0.4,rely=0)
```

```
def drinks():
    win3 = Toplevel(root)
    win3.geometry("700x550")
    win3.title("drinks")
    exit = Button(win3, text="Exit",font=('Courier', 17), command=root.destroy )
    exit.place(x=600,y=400)
    back = Button(win3, text="back",font=('Courier', 17),  command = win3.destroy)
    back.place(x=0, y=400)

    tree = ttk.Treeview(win3, column=("name", "price", "availability"), show='headings', height=5)
    tree.column("# 1", anchor=CENTER)
    tree.heading("# 1", text="name")
    tree.column("# 2", anchor=CENTER)
    tree.heading("# 2", text="price")
    tree.column("# 3", anchor=CENTER)
    tree.heading("# 3", text="avalability")
    tree.insert('', 'end', text="1", values=("coca-cola   ","150" , "1 in stock"))
    tree.insert('', 'end', text="1", values=('sprite', '160', '5 in stock'))
    tree.insert('', 'end', text="1", values=('limca', '200', '10 in stock'))
    tree.insert('', 'end', text="1", values=('mountain dew', '180', 'out of stock'))
    tree.pack()


    headphones={'coca-cola':150,'sprite':160, 'limca':200, 'mountain dew':180}
    x_axis = list(headphones.keys())
    y_axis = list(headphones.values())
    fig = plt.figure(figsize = (5, 4))
    plt.bar(x_axis, y_axis, color ='powderblue',width = 0.3)
    plt.xlabel("Drink name")
    plt.ylabel("Price")
    plt.title("Price Comparison Of Drinks")
    figure_canvas = FigureCanvasTkAgg(fig, win3)
    toolbar = NavigationToolbar2Tk(figure_canvas, win3)
    figure_canvas.get_tk_widget().pack( )
    toolbar.update()


headphones = Button(win2, text="drinks",font=('Courier', 17), command=drinks)
headphones.place(x=300,y=100)
```

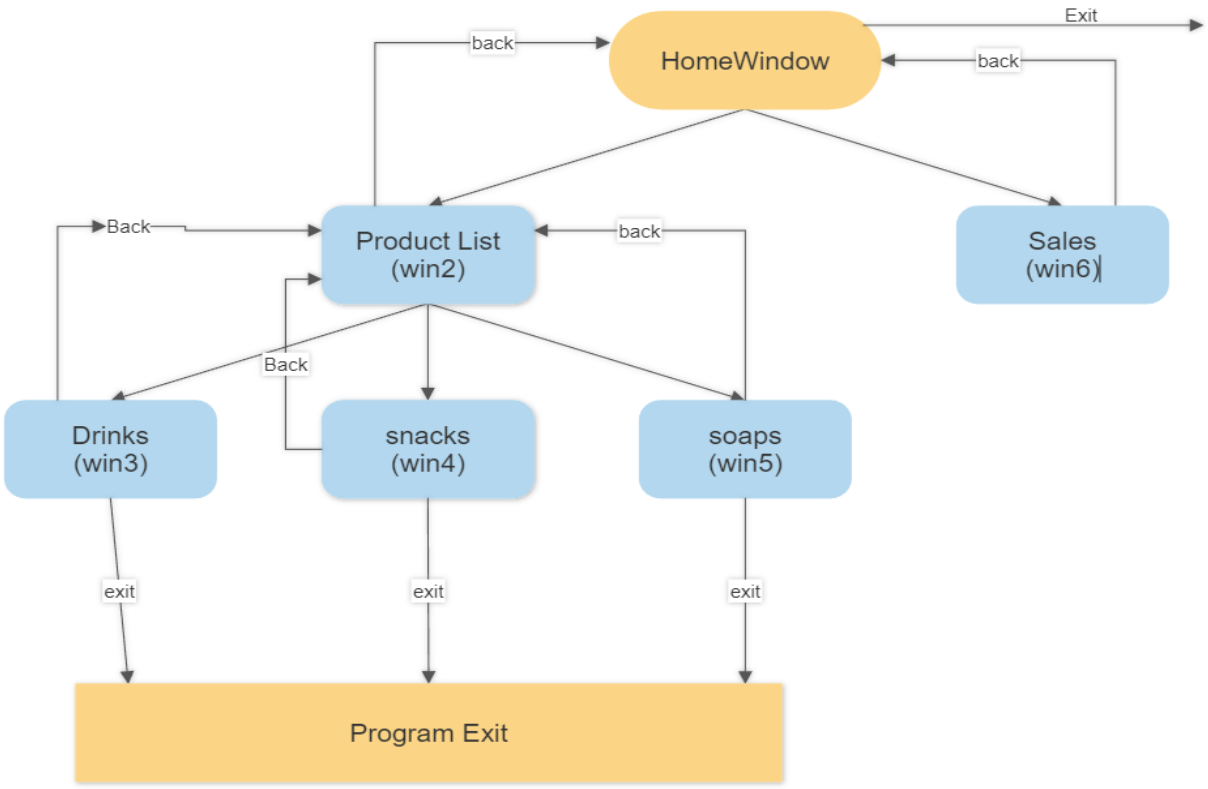
```
def snacks():
    win4 = Toplevel(root)
    win4.geometry("700x550")
    win4.title("snacks")
    exit = Button(win4, text="Exit",font=('Courier', 17), command=root.destroy )
    exit.place(x=600,y=400)
    back = Button(win4, text="back",font=('Courier', 17),  command = win4.destroy)
    back.place(x=0, y=400)

    tree = ttk.Treeview(win4, column=("name", "price", "availability"), show='headings', height=5)
    tree.column("# 1", anchor=CENTER)
    tree.heading("# 1", text="name")
    tree.column("# 2", anchor=CENTER)
    tree.heading("# 2", text="price")
    tree.column("# 3", anchor=CENTER)
    tree.heading("# 3", text="avalability")
    tree.insert('', 'end', text="1", values=("chips   ","70" , "150 in stock"))
    tree.insert('', 'end', text="1", values=('biscuits', '30', '5000 in stock'))
    tree.insert('', 'end', text="1", values=('chocolates', '100', '2000 in stock'))
    tree.insert('', 'end', text="1", values=('pastry', '500', '100 in stock'))
    tree.pack()

    snacks={'chips':70,'biscuits':30,'chocolates':100,'pastry':500,}
    x_axis = list(snacks.keys())
    y_axis = list(snacks.values())
    fig = plt.figure(figsize = (5, 4))
    plt.plot(x_axis,y_axis,color='purple')
    plt.xlabel("Snacks Name")
    plt.ylabel("Price")
    plt.title("Price Comparison Of snacks")
    figure_canvas = FigureCanvasTkAgg(fig, win4)
    toolbar = NavigationToolbar2Tk(figure_canvas, win4)
    figure_canvas.get_tk_widget().pack( )
    toolbar.update()

snacks = Button(win2, text="snacks",font=('Courier', 17), command=snacks)
snacks.place(x=300,y=150)
```

```
    def soaps():
        win5 = Toplevel(root)
        win5.geometry("700x500")
        win5.title("soaps")
        exit = Button(win5, text="Exit",font=('Courier', 17), command=root.destroy )
        exit.place(x=600,y=400)
        back = Button(win5, text="back",font=('Courier', 17),  command = win5.destroy)
        back.place(x=0, y=400)

        tree = ttk.Treeview(win5, column=("name", "price", "availability"), show='headings', height=5)
        tree.column("# 1", anchor=CENTER)
        tree.heading("# 1", text="name")
        tree.column("# 2", anchor=CENTER)
        tree.heading("# 2", text="price")
        tree.column("# 3", anchor=CENTER)
        tree.heading("# 3", text="avalability")
        tree.insert('', 'end', text="1", values=("lux   ","70" , "15 in stock"))
        tree.insert('', 'end', text="1", values=('lifebuoy', '30', '500 in stock'))
        tree.insert('', 'end', text="1", values=('medimix', '100', '100 in stock'))
        tree.insert('', 'end', text="1", values=('pearls', '500', '10 in stock'))
        tree.pack()

        soaps={'lux':70,'lifebuoy':30,'medimix':100,'pearls':500,}
        x_axis = list(soaps.keys())
        y_axis = list(soaps.values())
        fig = plt.figure(figsize = (5, 5))
        plt.pie(y_axis,labels=x_axis)
        plt.title("Price Comparison Of soaps")
        figure_canvas = FigureCanvasTkAgg(fig, win5)
        toolbar = NavigationToolbar2Tk(figure_canvas, win5)
        figure_canvas.get_tk_widget().pack( )
        toolbar.update()

    soaps = Button(win2, text="soaps",font=('Courier', 17), command=soaps)
    soaps.place(x=300,y=200)

    exit = Button(win2, text="Exit",font=('Courier', 17), command=root.destroy )
    exit.place(x=600,y=400)
    back = Button(win2, text="back",font=('Courier', 17),  command = win2.destroy)
    back.place(x=0, y=400)
```

```
def sales():
    win6 = Toplevel(root)
    win6.geometry("700x900")
    win6.title("sales")
    exit = Button(win6, text="Exit",font=('Courier', 17), command=root.destroy )
    exit.place(x=600,y=400)
    back = Button(win6, text="back",font=('Courier', 17),  command = win6.destroy)
    back.place(x=0, y=400)

    tree = ttk.Treeview(win6, column=("year", "income", "profit"), show='headings', height=5)
    tree.column("# 1", anchor=CENTER)
    tree.heading("# 1", text="year")
    tree.column("# 2", anchor=CENTER)
    tree.heading("# 2", text="income")
    tree.column("# 3", anchor=CENTER)
    tree.heading("# 3", text="profit")
    tree.insert('', 'end', text="1", values=('2017',"345680" , "456700"))
    tree.insert('', 'end', text="1", values=('2018', '368910', '324500'))
    tree.insert('', 'end', text="1", values=('2019', '213450', '678900'))
    tree.insert('', 'end', text="1", values=('2020', '324560', '125600'))
    tree.insert('', 'end', text="1", values=('2021', '234560', '154600'))
    tree.pack()

    sales={'2017':345680,'2018':368910,'2019':213450,'2020':324560,'2021':234560}
    x_axis = list(sales.keys())
    y_axis = list(sales.values())
    fig = plt.figure(figsize = (5, 3))
    plt.bar(x_axis, y_axis, color ='DarkOliveGreen',width = 0.3)
    plt.xlabel("Year")
    plt.ylabel("Income")
    plt.title("Year Vs Income")
    figure_canvas = FigureCanvasTkAgg(fig, win6)
    toolbar = NavigationToolbar2Tk(figure_canvas, win6)
    figure_canvas.get_tk_widget().pack( )
    toolbar.update()


    years=[2017,2018,2019,2020,2021]
    income=[345680,368910,213450,324560,234560]
    profit=[45670,32450,67890,125600,154600]
    y=np.arange(len(years))
```

```
    fig = plt.figure(figsize = (5, 3))
    plt.bar(y - 0.2,income,0.4,label="Income")
    plt.bar(y + 0.2,profit,0.4,label="Profit")
    width=0.25
    plt.xticks(y + width/2,['2017','2018','2019','2020','2021'])
    plt.xlabel("Year")
    plt.ylabel("Income and Profit")
    plt.title("Income and Profit through Years")
    plt.legend()
    figure_canvas = FigureCanvasTkAgg(fig, win6)
    toolbar = NavigationToolbar2Tk(figure_canvas, win6)
    figure_canvas.get_tk_widget().pack( )
    toolbar.update()

homewindow()
root.mainloop()


# In[ ]:
```

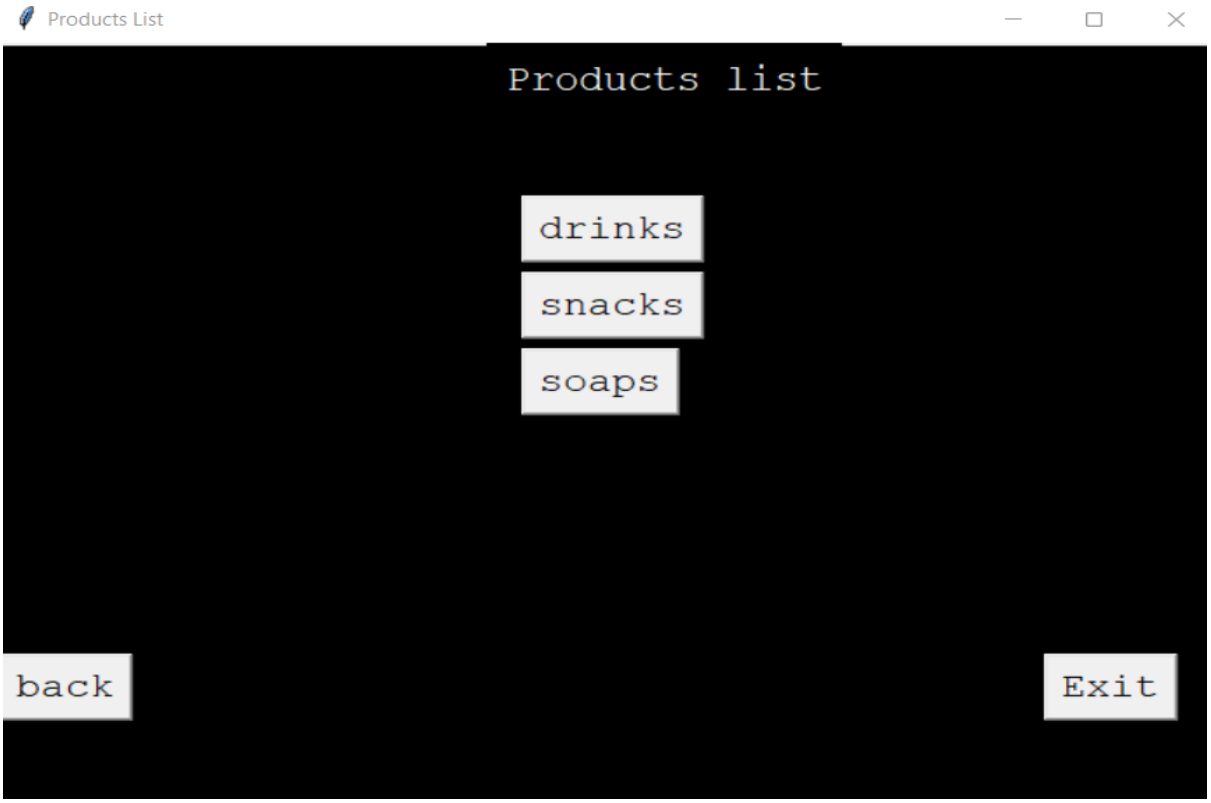
Software Mapping



Outputs

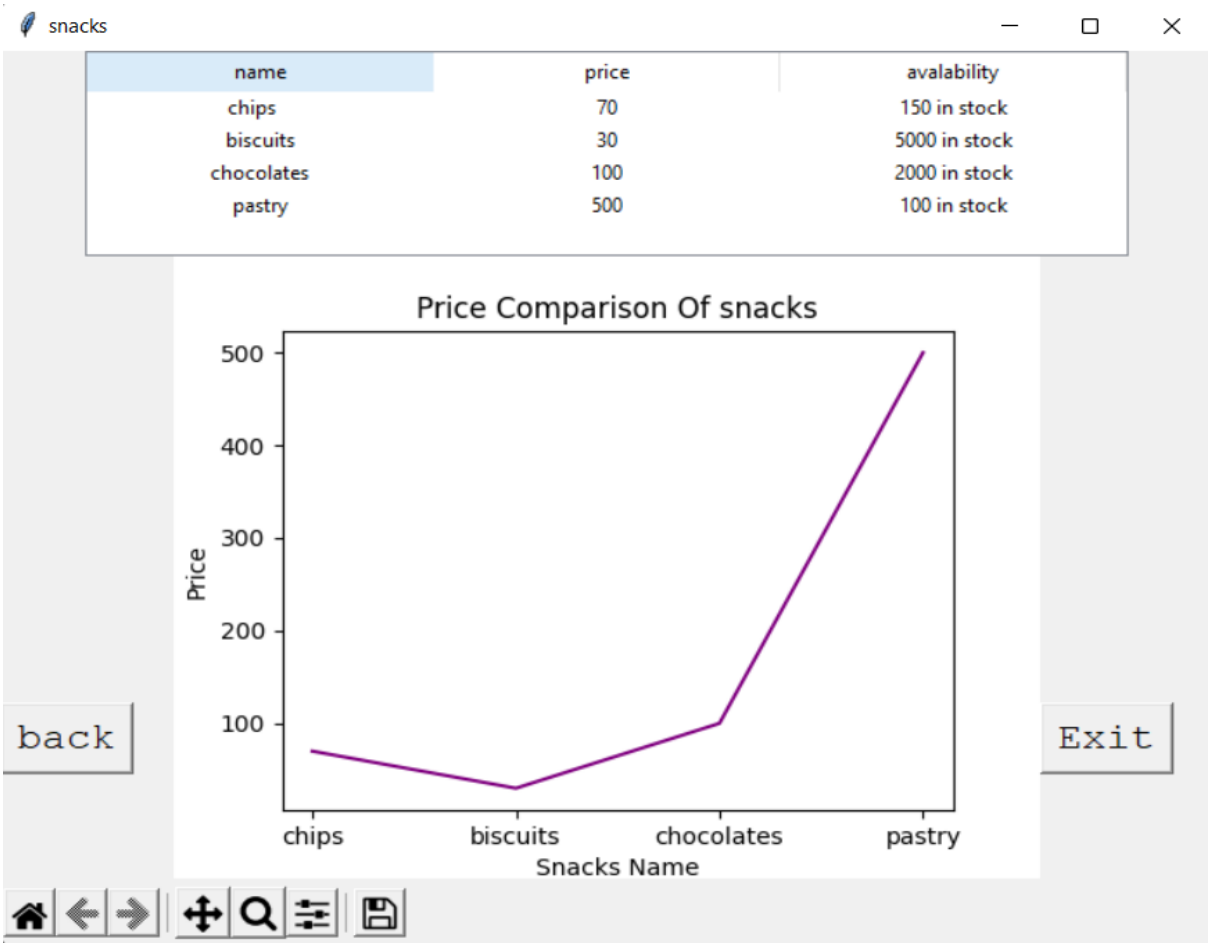
1) Homewindow

2)Products List (win2)

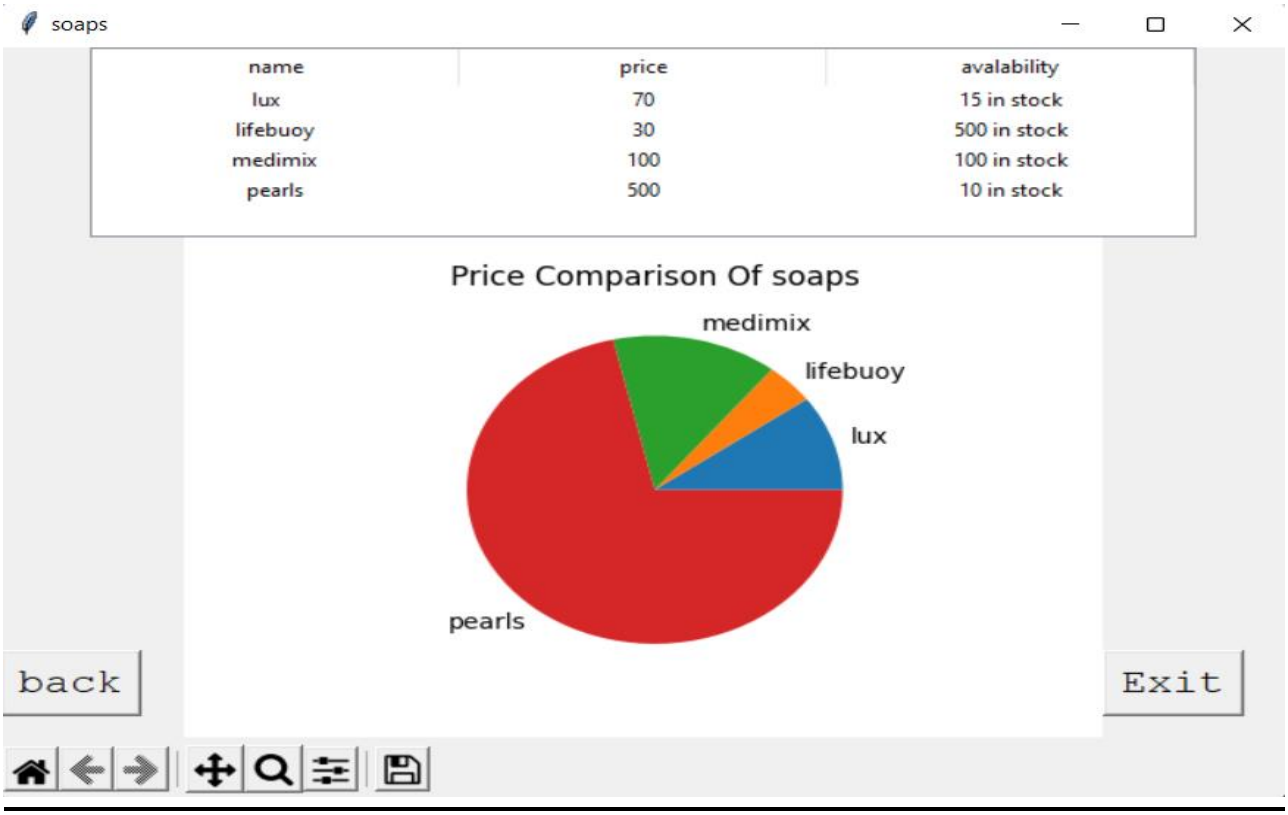


3) Drinks (win3)

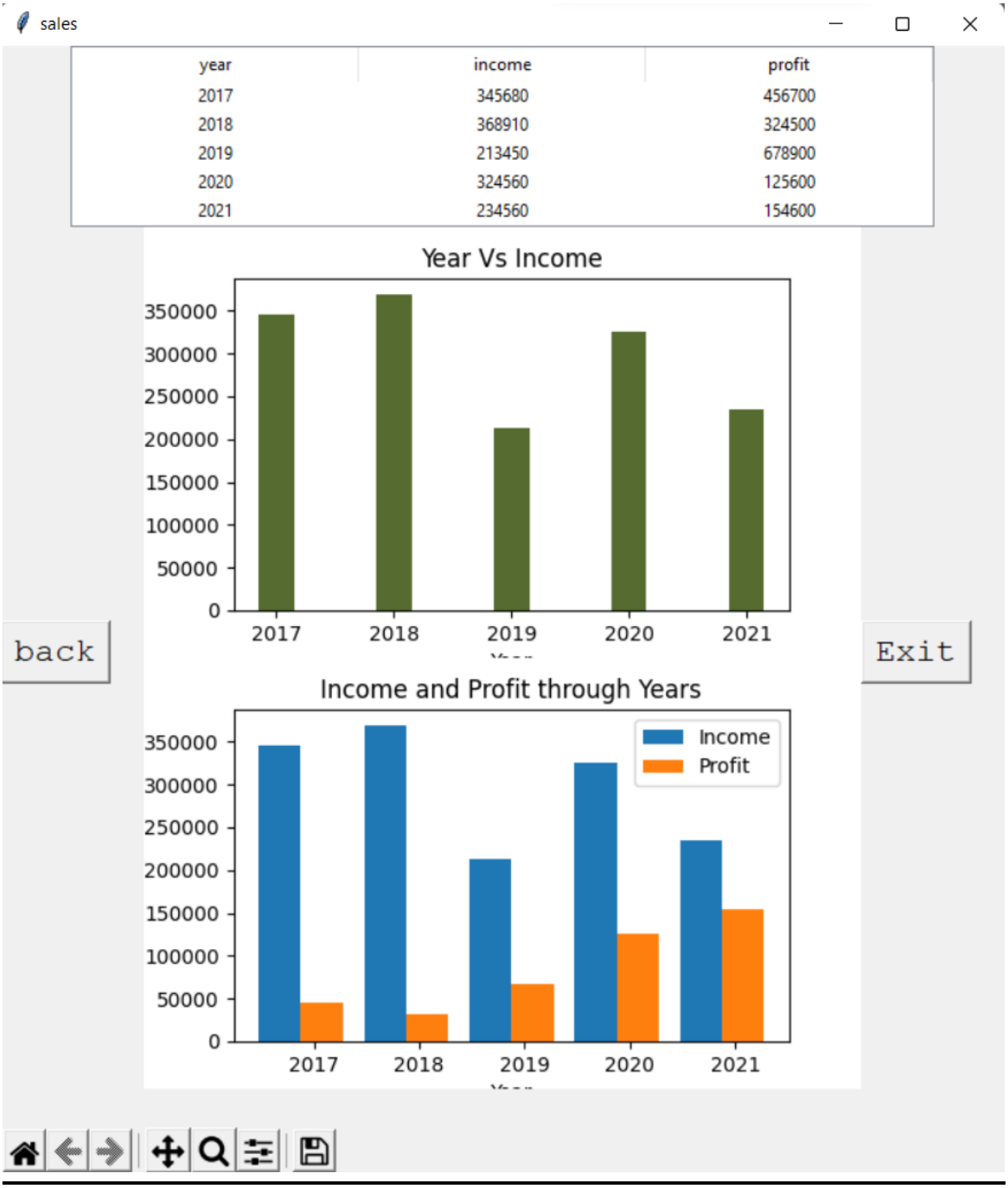
4) Snacks (win4)



5) Soaps (win5)



6) Sales (win6)


sales
year
income
profit
2017
345680
456700
2018
368910
324500
2019
213450
678900
2020
324560
125600
2021
234560
154600
Year Vs Income
350000
300000
250000
200000
150000
100000
50000
0
2017
2018
2019
2020
2021
back
Exit
Income and Profit through Years
Income
Profit

Bibliography

Different sources and websites have been used in making of this project. I would like to thank their contributions by mentioning them here. Sources used are:-

- https://stackoverflow.com/
- https://github.com/
- https://www.geeksforgeeks.org/
- https://docs.python.org/3/

In making of this project python language is used and Sublime Text 3 and Jupyter Notebook have been used as text editors for code.

Team members –

1) Naman Singhal (36)
2) Tanika Goyal-(53)
3) Rishita Bohra-(46)
4) Kriti Bhatnagar-(30)
5) Jiya Gupta-(27)
6) Abhinav Singh Chauhan-(3)