AERO CHIQUE

AIRLINES

Computer science

Project Report

NAME :Sarthak Kumar

BOARD ROLL NO. –

DPS INDIRAPURAM

2020-2021

CERTIFICATE

This is to certify that SARTHAK KUMAR of class XII-D has prepared the project on "AERO CHIQUE AIRLINES MANAGEMENT". The project is result of his efforts and endeavors. This project is found worthy of acceptance as the final project report for the subject computer science of class XII.

He has prepared this project under my guidance.

Ms. Rinkoo Gupta

(Computer science Teacher)

(DPS Indirapuram)

ACKNOWLEDGEMENT

I would like to express a deep sense of gratitude towards my computer science teacher Ms. Rinkoo Gupta ma'am for guiding me though the course of my project. She always evinced keen interest in my work and her constructive advice and constant motivation have been responsible for the successful completion of this project.

My sincere thanks go to Ms. Sangeeta Hajela, our school principal for her coordination in extending every possible support possible in the success of this project.

I would like to thank all those who have helped directly or indirectly in the completion of the project.

SARTHAK KUMAR

XII -D

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1. INTRODUCTION TO THE PROJECT

Modules Used -:

PIL -: For displaying images in file.

smptlib -: For connecting gmail server to Python

server.

matplotlib -: For making graphs.

mysqlconnector -: For connecting mysql with python

.

tkinter -: For making the pop up window in project.

WORKING DESCRIPTION -:

This program consists of five options -:

1. Create an Account for New Customers-:

The program lets the user make their own unique id and password for their customer account which they can access in the main menu. This is achieved by taking inputs from the user and then storing the values in a mysql table. The username is your email and is always unique so if it repeats it generates and error. Giving valid email id is important for generating a correct invoice .

2. Login for Old Customers-:

After the user has made their id ,they can now login to their account. This menu contains many features:

2.1 Book/Check Flight Availability-:

This lets the user book a flight from all the flights available. This feature also lets you choose if you want to use your flyer miles points or not. All this information is stored in mysql and can be accessed by the used using option 6. In the end an invoice is generated using tkinter and this invoice is also sent to the email id. Here a unique id is generated to access your flyer miles points.

2.2 Check Current status of Booked Flight-:

This displays all the current files using tkinter.

2.3 Check Flyer Miles Rewarded (If a Member of Frequent Flyer Programme)-:

So in this option the user gets 2.5% of the price of their booking as flyer miles points which can be redeemed when booking another flights. In this option the user can check how many points they have stored up .

2.4 Check out our most popular destinations voted by people -:

A pie graph is generated .using matplotlib of some of the most popular destinations.

2.5 Change Password -:

This lets the user change their password which is stored in MySQL. A unique OTP is also generated on email to confirm this process.

2.6 See flight history -:

This lets user check their booking history which was also stored in MySQL.

2.7. Logout -:

This lets user exit the submenu.

3. Login for Staff -:

A unique userid and password is generated which lets the staff make changes to flights etc. the password and userid is also stored in mysql.

This includes options like-:

3.1 Graph of Income vs Time -:

Displays a graph of income generated each year using matplotlib.

3.2 Change Password -:

This lets the staff to change the password of their account. A unique OTP is also generated on email to confirm this process.

3.3 Change departuring flights -:

This lets user change the flights which are currently there. All the flights are stored in a binary file. So when this option is selected user can change the flights that are departuring from the airport.

3.4 Change arriving flights -:

This lets user change the flights which are arriving on the airport.

3.5 Remove/add/edit for existing departing flight -:

The user can modify changes in a particular departing flight like time,status,price etc.

3.6 Remove/add/edit for existing arriving flight -:

The user can modify changes in a particular arriving flight like time,status,price etc

3.7 Logout -:

Helps user to go back to the main menu.

4. Show Logo for AeroChique Airlines -:

Displays official logo for the airport.

5. Exit

SOFTWARE AND HARDWARE REQUIREMENTS

HARDWARE - Intel® Core™ 2 Duo processor or Intel® Xeon® processor or higher

SOFTWARE – One of the following operating systems:

- Microsoft* Windows* 8, 8.1
- Microsoft* Windows* 7 SP1
- Microsoft* Windows* Server 2012
- Microsoft* Windows* Server 2008 SP2 (IA-32 only)
- Microsoft* Windows* Server 2008 R2 SP1
- Microsoft* Windows* HPC Server 2008

- One of the following compilers:
  - Intel(R) C++ Compiler 13.1 (Intel(R) Parallel Studio XE 2013 SP1) and higher

Microsoft* Visual C++ 10.0 (Microsoft* Visual Studio* 2010, Windows* OS only) and higher

- **Recommended-** Intel(R) Parallel Studio XE 2013 SP1

Intel(R) Parallel Studio XE 2015 Professional Edition

Minimum Requirements- One of the following processors

- Intel® Pentium® 4 processor family and higher
- Intel(R) Xeon Phi(TM) coprocessor
- Non Intel® processors compatible with the above processors

CODING

```
import PIL
import smtplib
import mysql.connector as mycon
import pickle
from tkinter import *
import json
import matplotlib.pyplot as plt
from random import *
import getpass
from email.mime.multipart import MIMEMultipart
from email.mime.text import MIMEText
from email.mime.base import MIMEBase
from email import encoders
import pyautogui
con=mycon.connect(host="localhost",user="root",passwd="3110",database="airlines")
cur=con.cursor()
cur.execute("create table if not exists login_customers ( username varchar(60) not null primary key,
password varchar(60) not null,id varchar(20),flyer int)")
cur.execute("create table if not exists login_staff ( username varchar(60) not null primary key,
password varchar(60) not null)")
def airplane():
    f=open("notes.dat","wb")
    d={1:{"route":"New Delhi to London","price":"Rs 10000","date":"15 July
2020","departure":"14:30","status":"ON TIME"},
       2:{"route":"New Delhi to Dubai","price":"Rs 8900","date":"14 July
2020","departure":"17:00","status":"ON TIME"},
       3:{"route":"New Delhi to New York","price":"Rs 12600","date":"19 July
2020","departure":"19:45","status":"DELAYED"},
       4:{"route":"New Delhi to Kolkata","price":"Rs 8000","date":"16 July
2020","departure":"18:45","status":"ON TIME"},
       5:{"route":"New Delhi to Kolkata","price":"Rs 9300","date":"13 July
2020","departure":"00:30","status":"DELAYED"}}
    pickle.dump(d,f)
    f.close()
    l=open("student.dat","wb")
    m={1:{"route":"Los Angeles to New Delhi","date":"15 July
2020","arriving":"11\:30","status":"ON TIME"},
       2:{"route":"Las Vegas to New Delhi","date":"18 July
2020","arriving":"09\:50","status":"delayed"},
       3:{"route":"Sydney to New Delhi","date":"14 July 2020","arriving":"04\:15","status":"ON
TIME"},
       4:{"route":"Norway to New Delhi","date":"18 July 2020","arriving":"00\:30","status":"ON
TIME"},
       5:{"route":"Goa to New Delhi","date":"15 July 2020","arriving":"12\:30","status":"ON
TIME"}}
    pickle.dump(m,l)
    l.close()
def dashboard_customers():
    while(True):
        h=0
        print("="*125)
        print("\n1. Book/Check Flight Availability")
        print("2. Check Current status of Booked Flight")
        print("3. Check Flyer Miles Rewarded (If a Member of Frequent Flyer Programme)")
        print("4. Check out our most popular destinations voted by people")
        print("5. Change Password")
        print("6. See Flight history")
        print("0. Logout\n")
        choice = int(input("Enter Choice: "))
        if choice==1:
            cur=con.cursor()
            cur.execute("select flyer from login_customers where username='{}' and
password='{}'".format(uname_test2,passw))
            data2=cur.fetchall()
            global flyer
            for i in data2:
                for j in i:
                    flyer=j
            cur=con.commit()
            print("\nChoose the flight you want to book:\n")
            g=open("notes.dat","rb")
            w=pickle.load(g)
            v=0
            for i in w.keys():
                v+=1
            for i in range(1,v+1):
                print(w[i]["route"],"Flight Number",i)
            j=int(input("Enter Flight Number to be booked"))
            print("\nDetails of the flight :")
            print(json.dumps(w[j],indent=5))
            d=w[j]["price"][3:]
            l1=int(d)
            f=2.5/100*(l1)
            f2=int(f)
            flyer+=int(f)
            x3=w[j]["price"]
            b=str(input("Proceed to booking(Y/N)?: "))
            if b.lower()=="n":
                  print("\nYour ticket for this flight is not booked!\n")
            elif b.lower()=="y":
                y=input("Do you want to use your flyer miles wallet(Y/N)?: ")
                if y.lower()=="y":
                    cur=con.cursor()
                    query="select flyer from login_customers where username='{}'".format(uname_test2)
                    cur.execute(query)
                    for j6 in cur:
                        for k98 in j6:
                            y=k98
                    x3=str(l1-y)
                    flyer-=y
                    cur=con.cursor()
                    cur.execute("update login_customers set flyer={} where id='{}' and
                    username='{}'".format(flyer,ID,uname_test2))
                    con.commit()
                elif y.lower()=="n":
                    x3=w[j]["price"]
                    print(x3)
                    cur=con.cursor()
                    cur.execute("update login_customers set flyer={} where id='{}' and
                    username='{}'".format(flyer,ID,uname_test2))
                    con.commit()
                else:
                    print("\nInvalid Input, enter (Y/N)!\n")
                window2=Tk()
                window2.title("Invoice")
                P1=Label(window2,text="Invoice",font=("Comic Sans MS",15),fg="black")
                P1.grid(column=1,row=0)
                P0=Label(window2,text="Username",font=("Comic Sans MS",10),fg="black")
                P0.grid(column=0,row=1)
                m=uname_test2
                Po=Label(window2,text=m,font=("Comic Sans MS",10),fg="black")
                Po.grid(column=1,row=1)
                P2=Label(window2,text="Destination",font=("Comic Sans MS",10),fg="black")
                P2.grid(column=0,row=2)
                x2=w[j]["route"]
                a1=Label(window2,text=x2,font=("Comic Sans MS",10),fg="black")
                a1.grid(column=1,row=2)
                P3=Label(window2,text="Price",font=("Comic Sans MS",10),fg="black")
                P3.grid(column=0,row=3)
                a2=Label(window2,text=x3,font=("Comic Sans MS",10),fg="black")
                a2.grid(column=1,row=3)
                P3=Label(window2,text="Unique ID",font=("Comic Sans MS",10),fg="green")
                P3.grid(column=0,row=4)

                a2=Label(window2,text=ID,font=("Comic Sans MS",10),fg="black")
                a2.grid(column=1,row=4)

                P4=Label(window2,text="Time of Flight",font=("Comic Sans MS",10),fg="black")
                P4.grid(column=0,row=5)
                x4=w[j]["departure"]
                a3=Label(window2,text=x4,font=("Comic Sans MS",10),fg="black")
                a3.grid(column=1,row=5)
                P5=Label(window2,text="date",font=("Comic Sans MS",10),fg="black")
                P5.grid(column=0,row=6)
                x5=w[j]["date"]
                a4=Label(window2,text=x5,font=("Comic Sans MS",10),fg="black")
                a4.grid(column=1,row=6)
                n1=Label(window2,text="NOTE",font=("Comic Sans MS",15),fg="black")
                n1.grid(column=1,row=8)
                n2=Label(window2,text="Above Invoice has been sent to your registered email
                address.",font=("Comic Sans MS",10),fg="black")
                n2.grid(column=0,row=9)
                n3=Label(window2,text="Please click on the link sent in the e-mail on the invoice to be re-directed to the payments page..",font=("Comic Sans MS",10),fg="black")
                n3.grid(column=0,row=10)
                k="You have been awarded "+str(f2)+" flyer member points!"
                n4=Label(window2,text=k,font=("Comic Sans MS",15),fg="red")
                n4.grid(column=0,row=11)
                n5=Label(window2,text="You can use them in your next Flight booking",font=("Comic Sans MS",15),fg="black")
                n5.grid(column=0,row=12)
                n6=Label(window2,text="Please Open The Invoice Window in Full Screen Before Clicking Exit..",font=("Comic Sans MS",10),fg="black")
                n6.grid(column=0,row=13)
                def quit():
                    image = pyautogui.screenshot('sshot.png')
                    fromaddr = "projectscorpion21@gmail.com"
                    toaddr = uname_test2
                    msg = MIMEMultipart()
                    msg['From'] = fromaddr
                    msg['To'] = toaddr
                    msg['Subject'] = "Invoice for Flight Booking"
                    body = "\nHey there Flyer!\n\nWe have received a transaction request from your AeroChique Account. Attached with this communication is the invoice for the same.\n\nIf you did not request this booking, please contact our support team as soon as possible.\n\n\nCheers!\nThe Aerochique Team\n\nThis is a computer generated message."
                    msg.attach(MIMEText(body, 'plain'))
                    filename = "Invoice.png"
                    attachment = open(r"C:\Users\ajayb\Desktop\Python\PROJECT Airlines\sshot.png", "rb")
                    p = MIMEBase('application', 'octet-stream')
                    p.set_payload((attachment).read())
                    encoders.encode_base64(p)
                    p.add_header('Content-Disposition', "attachment; filename= %s" % filename)
                    msg.attach(p)
                    s = smtplib.SMTP('smtp.gmail.com', 587)
                    s.starttls()
                    s.login(fromaddr, "csprojectnewnew")
                    text = msg.as_string()
                    s.sendmail(fromaddr, toaddr, text)
                    s.quit()
                    window2.destroy()
                a131=Button(window2,text="exit",fg='green',font=("arial bold",20),command=quit)
                a131.grid(column=1,row=14)
                window2.lift()
                window2.attributes('-topmost',True)
                window2.after_idle(window2.attributes,'-topmost',False)
                window2.mainloop()
                h90=open("history.dat","rb")
                p90=pickle.load(h90)
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```
        h90.close()
        f90=open("history.dat","wb")
        for i in p90:
            if i[0]==uname_test2 and i[1]==passw and i[2]==ID:
                t=[x2,x5,x4,x3]
                i.append(t)
                break
        else:
            t=[uname_test2,passw,ID,[x2,x5,x4,x3]]
            p90.append(t)
        pickle.dump(p90,f90)
        f90.close()
        continue

    else:
        print("\nInvalid Input!\n")
    continue



if choice==5 :
    uname=str(input("Enter username"))
    current_pwd=getpass.getpass("Enter current password: ")
    new_pwd=getpass.getpass("Enter new password: ")
    new_pwd_confirm=getpass.getpass("Reenter new password: ")
    cur=con.cursor()
    cur.execute("select * from login_customers")
    data=cur.fetchall()
    data1=[]
    for i in data:
        data1+=[[i[0],i[1]]]
    if [uname,current_pwd] in data1:
        if new_pwd==new_pwd_confirm:
            cur.execute("update login_customers set password = '{}' where Username =
            '{}'".format(new_pwd,uname))
            con.commit()
        elif new_pwd != new_pwd_confirm:
            print("\nNew Password Fields don't match!\n")
    else:
        print("\nWrong Credentials Entered!\n")

if choice==0:
    print("="*125)
    menu()
    break
elif choice==2:

    f=open("notes.dat","rb")
    try:
        k=pickle.load(f)
        v=0
        for i in k.keys():
            v+=1
        window=Tk()

        window.title("Flight Pattern")
        P=Label(window,text="Departure",font=("Comic Sans MS",20),fg="black")
        P.grid(column=0,row=0)
        for i in range(1,v+1):
            a=Label(window,text="Route:",font=("Comic sans MS ",15),fg="black")
            a.grid(column=0,row=i)
            x1=k[i]["route"]
            a2=Label(window,text=x1,font=("Comic Sans MS",10),fg="red")
            a2.grid(column=1,row=i)
            a3=Label(window,text="Price",font=("Comic sans MS ",15),fg="black")
            a3.grid(column=3,row=i)
            x2=k[i]["price"]
            a4=Label(window,text=x2,font=("Comic Sans MS",10),fg="blue")
            a4.grid(column=4,row=i)
            a5=Label(window,text="Date",font=("Comic sans MS ",15),fg="black")
            a5.grid(column=5,row=i)
            x3=k[i]["date"]
            a6=Label(window,text=x3,font=("Comic Sans MS",10),fg="orange")
            a6.grid(column=6,row=i)
            a7=Label(window,text="Departure",font=("Comic sans MS ",15),fg="black")
            a7.grid(column=7,row=i)
            x4=k[i]["departure"]
            a8=Label(window,text=x4,font=("Comic Sans MS",10),fg="green")
            a8.grid(column=8,row=i)
            a9=Label(window,text="Status",font=("Comic sans MS ",15),fg="black")
            a9.grid(column=9,row=i)
            x5=k[i]["status"]
            a10=Label(window,text=x5,font=("Comic Sans MS",10),fg="purple")
            a10.grid(column=10,row=i)

    except EOFError:
            break
    f343=open("student.dat","rb")
    try:
        k2=pickle.load(f343)
        P1=Label(window,text="ARRIVAL",font=("Comic Sans MS",20),fg="black")
        P1.grid(column=0,row=v+1)
        v2=0
        for i in k2.keys():
            v2+=1

        for i in range(1,v2+1):
            a11=Label(window,text="Route:",font=("Comic sans MS ",15),fg="black")
            a11.grid(column=0,row=i+v+2)
            x6=k2[i]["route"]
            a12=Label(window,text=x6,font=("Comic Sans MS",10),fg="red")
            a12.grid(column=1,row=i+v+2)
```

```
            a13=Label(window,text="Date",font=("Comic sans MS ",15),fg="black")
            a13.grid(column=3,row=i+v+2)
            x7=k2[i]["date"]
            a14=Label(window,text=x7,font=("Comic Sans MS",10),fg="orange")
            a14.grid(column=4,row=i+v+2)
            a15=Label(window,text="arriving",font=("Comic sans MS ",15),fg="black")
            a15.grid(column=5,row=i+v+2)
            x8=k2[i]["arriving"]
            a16=Label(window,text=x8,font=("Comic Sans MS",10),fg="green")
            a16.grid(column=6,row=i+v+2)
            a17=Label(window,text="status",font=("Comic sans MS ",15),fg="black")
            a17.grid(column=7,row=i+v+2)
            x9=k2[i]["status"]
            a18=Label(window,text=x9,font=("Comic Sans MS",10),fg="purple")
            a18.grid(column=8,row=i+v+2)
    except EOFError:
            break
    def getout():
                window.destroy()
    a130=Button(window,text="exit",fg='green',font=("arial bold",20),command=getout)
    a130.grid(column=4,row=15)
    window.lift()
    window.attributes('-topmost',True)
    window.after_idle(window.attributes,'-topmost',False)
    window.mainloop()

if choice==3:
   t3=input("Enter Username: ")
   t4=input("Enter the Unique ID: ")
   if t3==uname_test2 and t4==ID:
       cur=con.cursor()
       cur.execute("update login_customers set flyer={} where id='{}' and
       username='{}'".format(flyer,ID,uname_test2))
       con.commit()
       cur=con.cursor()
       cur.execute("select flyer from login_customers where id='{}' and
       username='{}'".format(ID,uname_test2))
       for i in cur:
           for x in i:
               print("\nYour Flyer Miles Points are ",x)
   else:
       print("\nInvalid Name or UID!\n")
if choice==4:
    labels='DUBAI','PARIS','GOA','NEW YORK','LONDON','OTHERS'
    votes=[1554,2304,432,1782,2982,302]
    size=votes
    colors=['orange','green','red','yellow','skyblue','pink']
    explode=(0,0,0,0,0.1,0)
    plt.pie(size,explode=explode,labels=labels,colors=colors,autopct='%1.1f%%',shadow=True,
    startangle=30)
```

```
            plt.show()
            continue
        if choice==6:
            print("\n\nYour flight history is as follows: ")
            g104=open("history.dat","rb")
            l104=pickle.load(g104)
            for i in l104:
                if i[0]==uname_test2 and i[1]==passw and i[2]==ID:
                    print("Username :",i[0])
                    print("ID :",i[2])
                    n=len(i)
                    for l in range(3,n):
                        k=i[l]
                        print(l-2)
                        print("Route:",k[0])
                        print("Date:",k[1])
                        print("Time:",k[2])
                        print("Price:",k[3])

def dashboard_staff():
    while(True):
        h=0
        print("\n1. Graph of Income vs Time")
        print("2. Change Password")
        print("3. Change departuring flights")
        print("4. Change arriving flights ")
        print("5. Remove/add/edit for existing departuring flight ")
        print("6. Remove/add/edit for existing arriving flight ")
        print("0. Logout\n")
        choice = int(input("Enter Choice: "))
        if choice==0:
            print("="*125)
            menu()
            break
        if choice==2 :
            uname=str(input("Enter username: "))
            current_pwd=getpass.getpass("Enter current password: ")
            new_pwd=getpass.getpass("Enter new password: ")
            new_pwd_confirm=getpass.getpass("Reenter new password: ")
            cur=con.cursor()
            cur.execute("select * from login_staff")
            data=cur.fetchall()
            if (uname,current_pwd) in data:
                if new_pwd==new_pwd_confirm:
                    cur.execute("update login_staff set password = '{}' where Username =
                    '{}'".format(new_pwd,uname))
                    con.commit()
                    print("\nPassword changed successfully!\n")
                elif new_pwd != new_pwd_confirm:
                    print("\nNew Password Fields don't match!\n")
            else:
```

```
            print("\nWrong Credentials Entered!\n")
        print("="*125)
    if choice==1:
        year=[2014,2015,2016,2017,2018,2019]
        income=[38.2,43.5,57.93,52.97,60,86.043]
        plt.plot(year,income,color='red')
        plt.xlabel('Year')
        plt.ylabel('Income generated(in millions) per fiscal quarter')
        plt.title('Comparative study of Income earned vs Time')
        plt.show()
        print("="*125)
    if choice==6:
        print("="*125)
        print("1. Remove Existing Flight")
        print("2. Add a New Flight")
        print("3. Edit an Existing Flight")
        print("0. Back")
        l10=int(input("Enter your choice: "))
        if l10==0:
            continue
        elif l10==1:
            remove2()
        elif l10==2:
            adding2()
        elif l10==3:
            editing2()
        else:
            print("\nInvalid Input!\n")
        print("="*125)
    if choice==5:
        print("="*125)
        print("1. Remove Existing Flight")
        print("2. Add a New Flight")
        print("3. Edit an Existing Flight")
        print("0. Back")
        l09=int(input("Enter your choice: "))
        if l09==0:
            continue
        elif l09==1:
            remove()
        elif l09==2:
            adding()
        elif l09==3:
            editing()
        else:
            print("\nInvalid Input!\n")
        print("="*125)
    if choice==3:
        print("="*125)
        t=input("Are you sure you want to change the flights(Y/N)?: ")
        if t.lower()=="y":
                manual1()
                print("="*125)
            elif t.lower()=="n":
                print("="*125)
                continue
            else:
                print("Wrong Credentials!")
                print("="*125)
                continue
            print("="*125)
        if choice==4:
            print("="*125)
            t2=input("Are you sure you want to change the flights(Y/N)?: ")
            if t2.lower()=="y":
                manual2()
                print("="*125)
            elif t2.lower()=="n":
                print("="*125)
                continue
            else:
                print("\nWrong Credentials!\n")
                print("="*125)
                continue
            print("="*125)
        continue

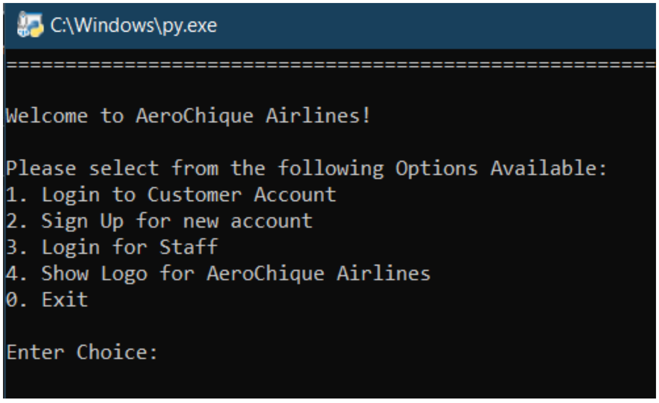



def menu():
    while(True):
        print("="*125)
        print("\nWelcome to AeroChique Airlines!")
        print("\nPlease select from the following Options Available:")
        print("1. Login to Customer Account")
        print("2. Sign Up for new account")
        print("3. Login for Staff")
        print("4. Show Logo for AeroChique Airlines")
        print("0. Exit\n")
        choice=int(input("Enter Choice: "))
        if choice==1:
            uname=str(input("Enter Username: "))
            pwd=getpass.getpass("Enter Password: ")
            cur=con.cursor()
            cur.execute("select username,password from login_customers")
            data=cur.fetchall()
            if (uname,pwd) in data:
                print("\nYou have successfully logged in!\n")
                global uname_test2
                uname_test2=uname
                cur=con.cursor()
            cur.execute("select id from login_customers where username='{}' and
            password='{}'".format(uname,pwd))
            data3=cur.fetchall()
            global ID
            for i in data3:
                for j in i:
                    ID=j
            global passw
            passw=''
            passw=pwd
            print("="*125)
            dashboard_customers()
            break
        else:
            print("\nWrong Credentials")
            print("Forgot Password? Want to Reset it?\n")
            reset_pwd=str(input("Enter Yes(Y) or No(N)"))
            if reset_pwd.lower()=="y":
                sender='projectscorpion21@gmail.com'
                receiver=[uname]
                password="csprojectnewnew"
                rand_pwd=""
                string1="abcdefghijklmnopqrstruvwxyz1234567890"
                for i in range(0,10):
                    j=randint(0,36)
                    rand_pwd+=string1[j]
                msg="Hey there Flyer!\nWe just received a request to change your password. Your
                new Password is "+rand_pwd+".\n\nYou can use this Password to change it to a new
                one from your Dashboard.\nIf you did not request a password change, you can safely
                ignore this e-mail.\n\nCheers!\nThe Aerochique Team\n\n\nThis is a computer
                generated message."
                server=smtplib.SMTP('smtp.gmail.com',587)
                server.starttls()
                server.login(sender,password)
                server.sendmail(sender, receiver, msg)
                cur.execute("update login_customers set password = '{}' where Username =
                '{}'".format(rand_pwd,uname))
                con.commit()
                print("\nA Mail has been successfully sent to your Registered Mail ID, if it exists.\n")
            elif reset_pwd.lower()=="n":
                continue
            else:
                print("Wrong Input!")
    elif choice==2:
        uname=str(input("Enter Mail ID with which you want to make the account: "))
        pwd=getpass.getpass("Enter Password: ")
        global uname_test
        uname_test=uname
        pwd_confirm=getpass.getpass("Reenter Password: ")
        if pwd==pwd_confirm:
            print("\nYour Username will be",uname,"and your password will be",pwd,". Are you
                sure you want to continue?")
                cur=con.cursor()
                confirm=str(input("Enter Yes(Y) or No(N): "))
                cur.execute("select * from login_customers")
                data=cur.fetchall()
                n71=randint(10000,99999)
                r=uname[0:4]+str(n71)
                f=0
                if confirm.lower()=="y":
                    if (uname,pwd) in data:
                        print("\nAccount already exists!\n")
                    else:
                        print("\nThis is your Unique ID for your flyer miles reward.",r)
                        cur.execute("insert into login_customers
                        values('{}','{}','{}',{})".format(uname,pwd,r,f))
                        con.commit()
                        print("\nYour Account has been successfully created. You may now login to view
                        your Dashboard.\n")
                elif confirm.lower()=="n":
                    continue
                else:
                    print("\nInvalid Input!\n")
        elif choice ==3:
            uname = str(input("Enter Username: "))
            pwd = getpass.getpass("Enter Password: ")
            cur=con.cursor()
            cur.execute("select * from login_staff")
            data = cur.fetchall()
            if (uname,pwd) in data:
                print("\nYou have successfully logged in!\n")
                print("="*125)
                dashboard_staff()
                break
            else:
                print("\nWrong Credentials!")
                print("Forgot Password? Please contact Administrator.\n")
        elif choice==4:
            im = PIL.Image.open(r"C:\Users\ajayb\Desktop\Python\PROJECT Airlines\aero
chique.png")
            im.show()
        elif choice==0:
            print("="*125)
            break
        else:
            print("\nInvalid Choice Entered.\n")
def manual1():
    n=int(input("Enter the number of flights to be entered: "))
    j=open("notes.dat","wb")
    d={}
    u={}
    for l in range(1,n+1):
        r=input("Enter route: ")
        p=input("Enter price(ex Rs 13000): ")
        da=input("Enter date: ")
        de=input("Enter departure time: ")
        s=input("Enter status of flight: ")
        d={"route":r,"price":p,"date":da,"departure":de,"status":s}
        print("\nRecord stored!\n")
        u[l]=d
    pickle.dump(u,j)
    j.close()
def manual2():
    n2=int(input("Enter the number of flights to be entered: "))
    j2=open("student.dat","wb")
    d2={}
    u2={}
    for l in range(1,n2+1):
        r=input("Enter route: ")
        da=input("Enter date OF arrival: ")
        de=input("Enter time of arrival: ")
        s=input("Enter status of flight: ")
        d2={"route":r,"date":da,"arriving":de,"status":s}
        u2[l]=d2
        print("\nRecord stored!\n")
    pickle.dump(u2,j2)
    j2.close()

def remove():
    l=open("notes.dat","rb")
    d=pickle.load(l)
    for i in d.keys():
        print(i,"route",d[i]["route"],"date",d[i]["date"])
    n=int(input("Enter the number of the flight to be removed: "))
    d.pop(n,"Please enter the correct Flight Number.")
    r={}
    r2=0
    for i in d.values():
        r2+=1
    ri=[]
    for i in d.values():
        ri.append(i)
    for i in range(0,r2):
        r[i+1]=ri[i]
    l.close()
    y=open("notes.dat","wb")
    pickle.dump(r,y)
    y.close()
    if d==r:
        print("\nPlease enter the correct Flight Number.\n")
    else:
        print("\nRecord deleted!\n")
def adding():
    l=open("notes.dat","rb")
    d=pickle.load(l)
    r2=0
    for i in d.values():
        r2+=1
    n=int(input("Enter the number of records to be entered: "))
    for i in range(1,n+1):
        r=input("Enter route: ")
        p=input("Enter price(ex Rs 13000): ")
        da=input("Enter date: ")
        de=input("Enter departure time: ")
        s=input("Enter status of flight: ")
        king={"route":r,"price":p,"date":da,"departure":de,"status":s}
        d[r2+i]=king
        print("\nRecord stored!\n")
    l.close()
    y=open("notes.dat","wb")
    pickle.dump(d,y)
    y.close()
def editing():
    l=open("notes.dat","rb")
    d=pickle.load(l)
    for i in d.keys():
        print(i,"route",d[i]["route"],"date",d[i]["date"])
    n=int(input("Enter the number of the flight to be edited: "))
    r=input("Enter route: ")
    p=input("Enter price(ex Rs 13000): ")
    da=input("Enter date: ")
    de=input("Enter departure time: ")
    s=input("Enter status of flight: ")
    king={"route":r,"price":p,"date":da,"departure":de,"status":s}
    d[n]=king
    l.close()
    y=open("notes.dat","wb")
    pickle.dump(d,y)
    y.close()
def remove2():
    l=open("student.dat","rb")
    d=pickle.load(l)
    for i in d.keys():
        print(i,"route",d[i]["route"],"date",d[i]["date"])
    n=int(input("Enter the number of the flight to be removed: "))
    d.pop(n,"Please enter the correct Flight Number.")
    r={}
    r2=0
    for i in d.values():
        r2+=1
    ri=[]
    for i in d.values():
        ri.append(i)
    for i in range(0,r2):
        r[i+1]=ri[i]
    l.close()
    y=open("student.dat","wb")
    pickle.dump(r,y)
    y.close()
    if d==r:
        print("\nPlease enter the correct Flight Number.\n")
    else:
        print("\nRecord deleted!\n")
def adding2():
    l=open("student.dat","rb")
    d=pickle.load(l)
    r2=0
    for i in d.values():
        r2+=1
    n=int(input("Enter the number of records to be entered: "))
    for i in range(1,n+1):
        r=input("Enter route: ")
        da=input("Enter date: ")
        de=input("Enter arriving time: ")
        s=input("Enter status of flight: ")
        king={"route":r,"date":da,"departure":de,"status":s}
        d[r2+i]=king
        print("\nRecord stored!\n")
    l.close()
    y=open("student.dat","wb")
    pickle.dump(d,y)
    y.close()
def editing2():
    l=open("student.dat","rb")
    d=pickle.load(l)
    for i in d.keys():
        print(i,"route",d[i]["route"],"date",d[i]["date"])
    n=int(input("Enter the number corresponding to the flight to be deleted: "))
    r=input("Enter route: ")
    da=input("Enter date: ")
    de=input("Enter arriving time: ")
    s=input("Enter status of flight: ")
    king={"route":r,"date":da,"departure":de,"status":s}
    d[n]=king
    l.close()
    y=open("notes.dat","wb")
    pickle.dump(d,y)
    y.close()
def history():
    h=open("history.dat","wb")
    d=[["test1","test2","test1233",["New Delhi to Jaipur","14 August 2020","12:34","Rs 1233"]]]
    pickle.dump(d,h)
    h.close()
menu()
```

OUTPUT SCREEN

MENU -:



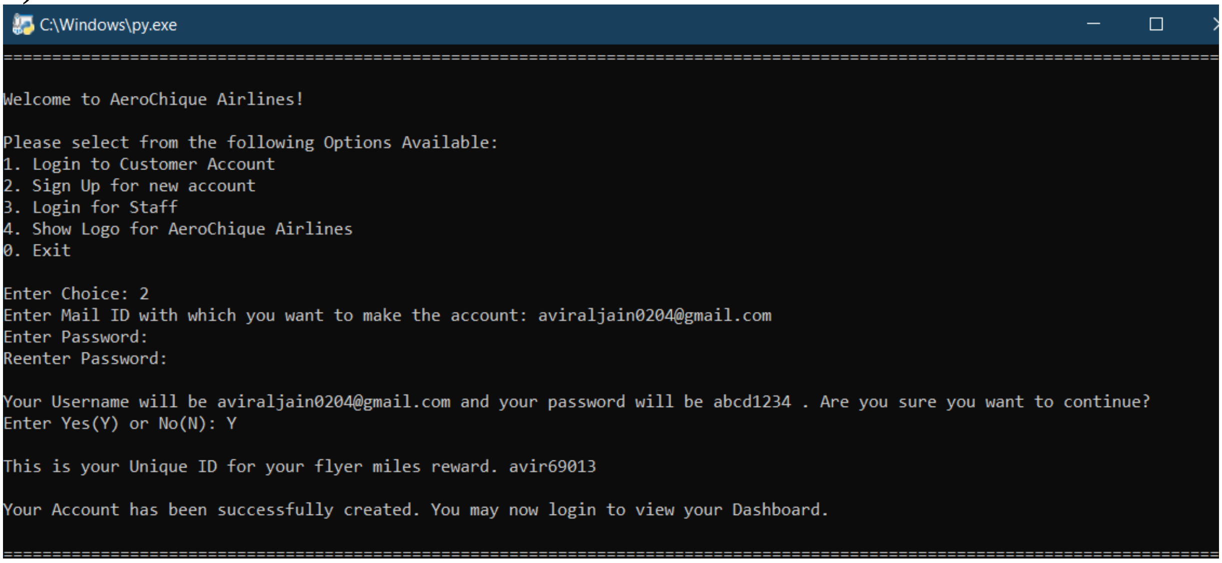
```
============================================================

Welcome to AeroChique Airlines!

Please select from the following Options Available:
1. Login to Customer Account
2. Sign Up for new account
3. Login for Staff
4. Show Logo for AeroChique Airlines
0. Exit

Enter Choice:
```

1)SIGN UP -:



```
=====================================================================================================================

Welcome to AeroChique Airlines!

Please select from the following Options Available:
1. Login to Customer Account
2. Sign Up for new account
3. Login for Staff
4. Show Logo for AeroChique Airlines
0. Exit

Enter Choice: 2
Enter Mail ID with which you want to make the account: aviraljain0204@gmail.com
Enter Password:
Reenter Password:

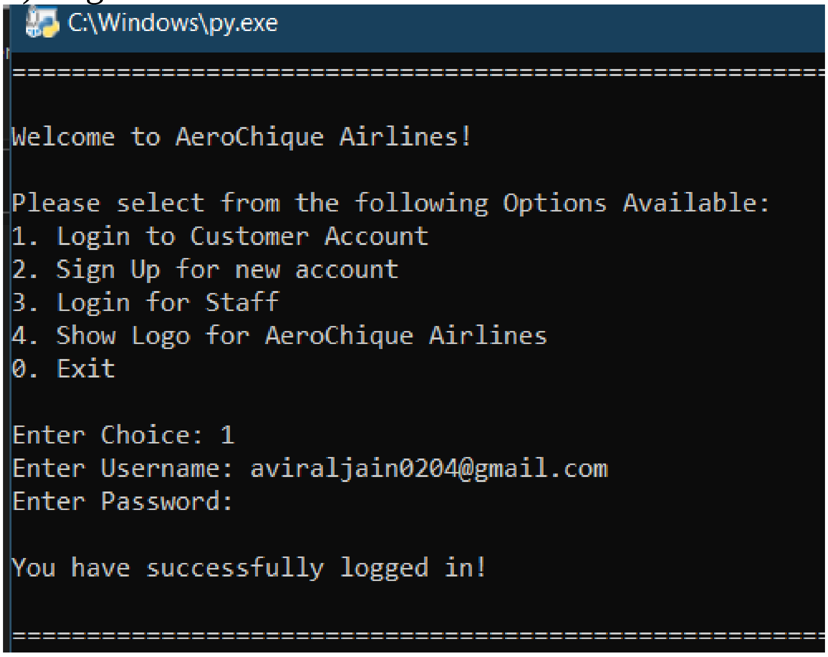
Your Username will be aviraljain0204@gmail.com and your password will be abcd1234 . Are you sure you want to continue?
Enter Yes(Y) or No(N): Y

This is your Unique ID for your flyer miles reward. avir69013

Your Account has been successfully created. You may now login to view your Dashboard.

=====================================================================================================================
```

2) Login -:



```
============================================================

Welcome to AeroChique Airlines!

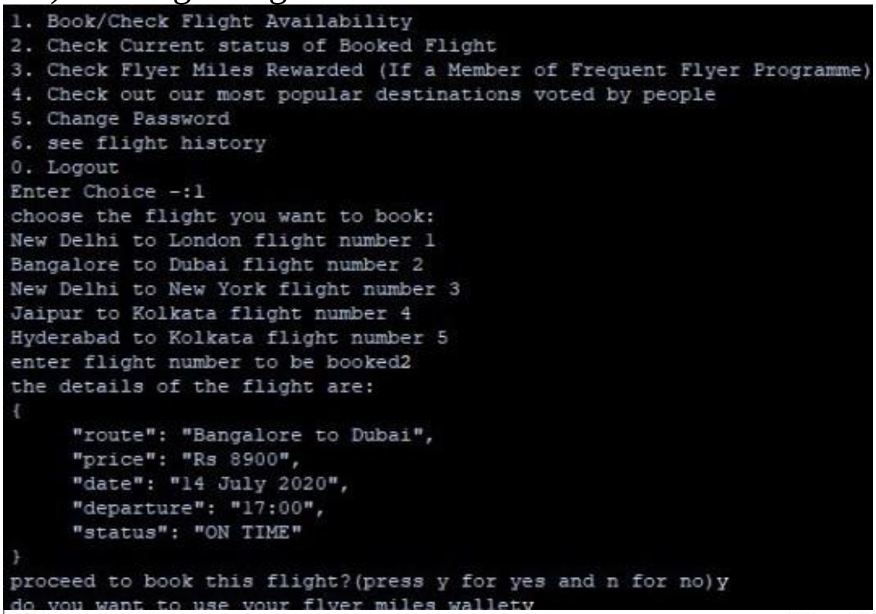
Please select from the following Options Available:
1. Login to Customer Account
2. Sign Up for new account
3. Login for Staff
4. Show Logo for AeroChique Airlines
0. Exit

Enter Choice: 1
Enter Username: aviraljain0204@gmail.com
Enter Password:

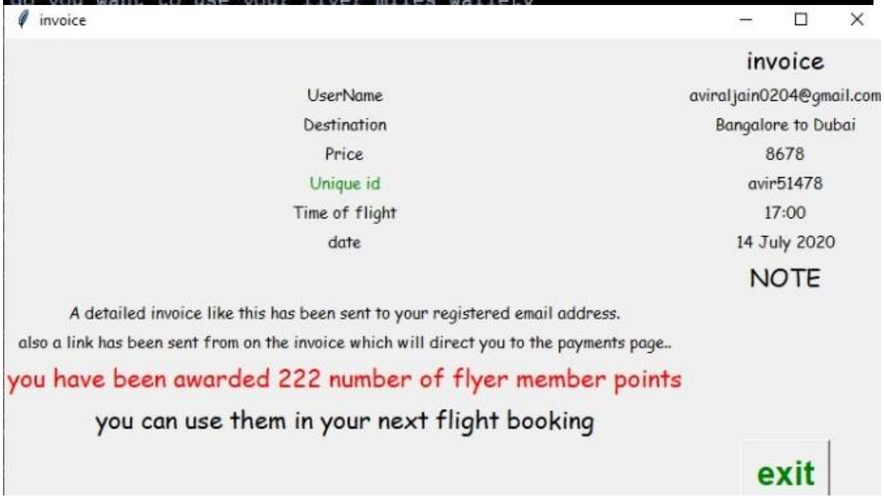
You have successfully logged in!

============================================================
```

2.1)Booking a Flight -:



```
1. Book/Check Flight Availability
2. Check Current status of Booked Flight
3. Check Flyer Miles Rewarded (If a Member of Frequent Flyer Programme)
4. Check out our most popular destinations voted by people
5. Change Password
6. see flight history
0. Logout
Enter Choice -:1
choose the flight you want to book:
New Delhi to London flight number 1
Bangalore to Dubai flight number 2
New Delhi to New York flight number 3
Jaipur to Kolkata flight number 4
Hyderabad to Kolkata flight number 5
enter flight number to be booked2
the details of the flight are:
{
    "route": "Bangalore to Dubai",
    "price": "Rs 8900",
    "date": "14 July 2020",
    "departure": "17:00",
    "status": "ON TIME"
}
proceed to book this flight?(press y for yes and n for no)y
do you want to use your flyer miles wallety
```



invoice

UserName	aviraljain0204@gmail.com
Destination	Bangalore to Dubai
Price	8678
Unique id	avir51478
Time of flight	17:00
date	14 July 2020

NOTE

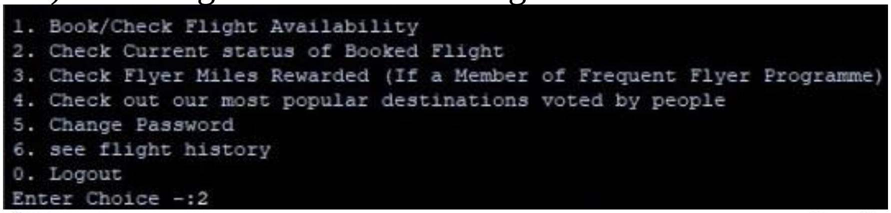
A detailed invoice like this has been sent to your registered email address.

also a link has been sent from on the invoice which will direct you to the payments page..

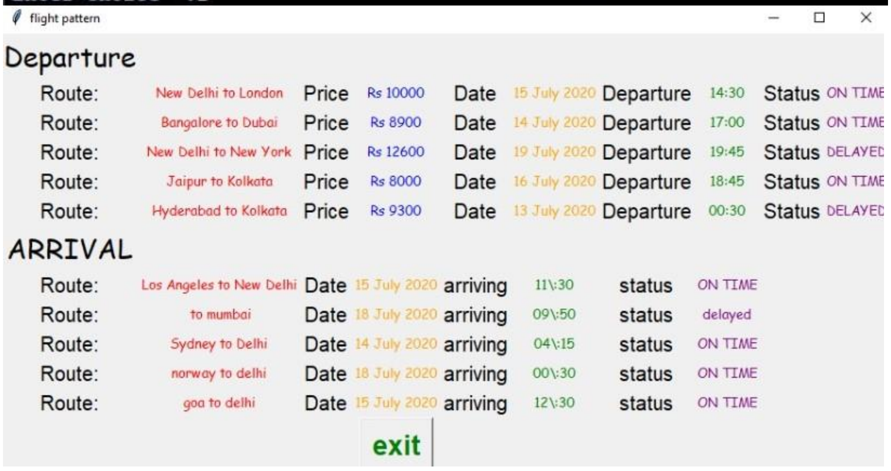
you have been awarded 222 number of flyer member points

you can use them in your next flight booking

2.2) Checking current status of flights -:



```
1. Book/Check Flight Availability
2. Check Current status of Booked Flight
3. Check Flyer Miles Rewarded (If a Member of Frequent Flyer Programme)
4. Check out our most popular destinations voted by people
5. Change Password
6. see flight history
0. Logout
Enter Choice -:2
```



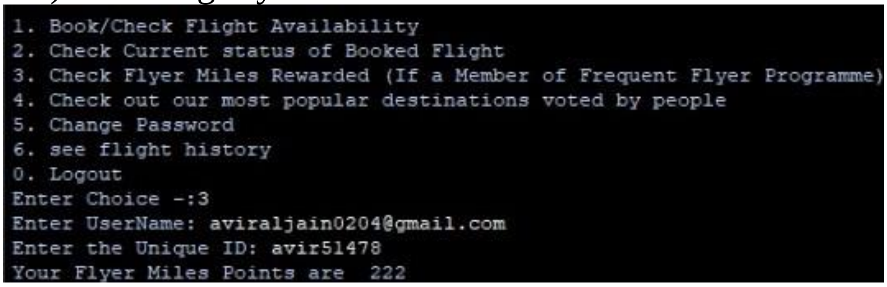
Departure

Route:	New Delhi to London	Price	Rs 10000	Date	15 July 2020	Departure	14:30	Status	ON TIME
Route:	Bangalore to Dubai	Price	Rs 8900	Date	14 July 2020	Departure	17:00	Status	ON TIME
Route:	New Delhi to New York	Price	Rs 12600	Date	19 July 2020	Departure	19:45	Status	DELAYED
Route:	Jaipur to Kolkata	Price	Rs 8000	Date	16 July 2020	Departure	18:45	Status	ON TIME
Route:	Hyderabad to Kolkata	Price	Rs 9300	Date	13 July 2020	Departure	00:30	Status	DELAYED

ARRIVAL

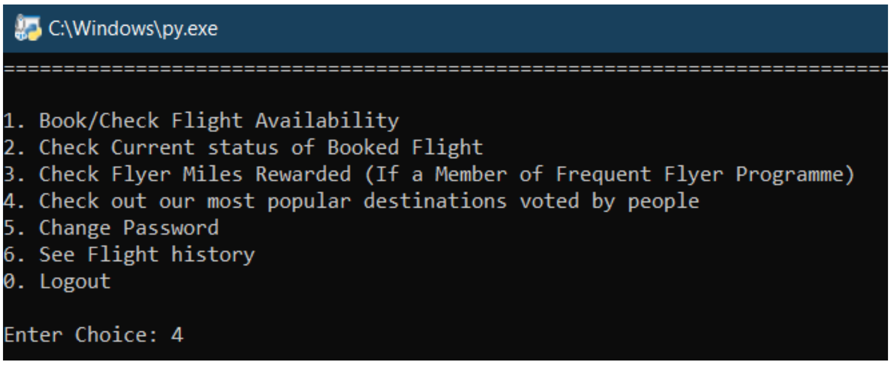
Route:	Los Angeles to New Delhi	Date	15 July 2020	arriving	11\:30	status	ON TIME
Route:	to mumbai	Date	18 July 2020	arriving	09\:50	status	delayed
Route:	Sydney to Delhi	Date	14 July 2020	arriving	04\:15	status	ON TIME
Route:	norway to delhi	Date	18 July 2020	arriving	00\:30	status	ON TIME
Route:	goa to delhi	Date	15 July 2020	arriving	12\:30	status	ON TIME

2.3) Checking Flyer Miles rewarded in transaction -:



```
1. Book/Check Flight Availability
2. Check Current status of Booked Flight
3. Check Flyer Miles Rewarded (If a Member of Frequent Flyer Programme)
4. Check out our most popular destinations voted by people
5. Change Password
6. see flight history
0. Logout
Enter Choice -:3
Enter UserName: aviraljain0204@gmail.com
Enter the Unique ID: avir51478
Your Flyer Miles Points are  222
```

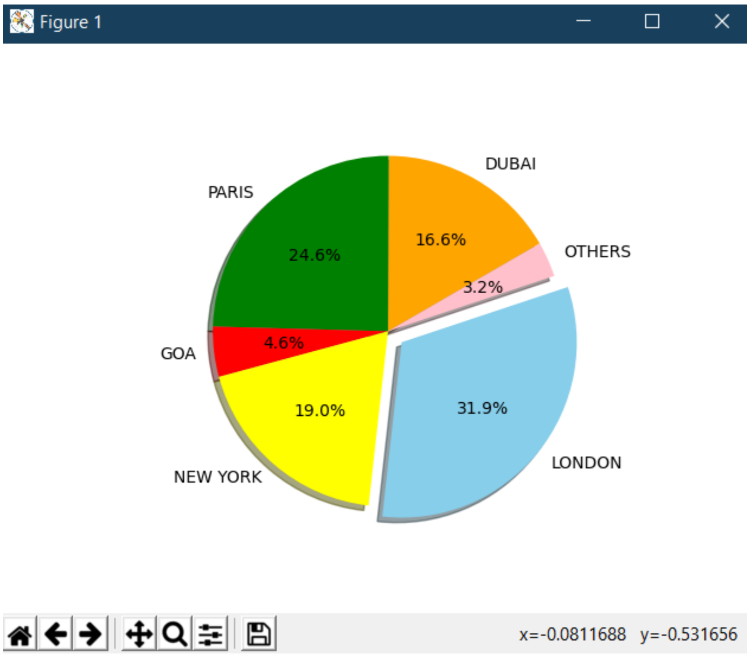
2.4)Most Popular Destinations -:



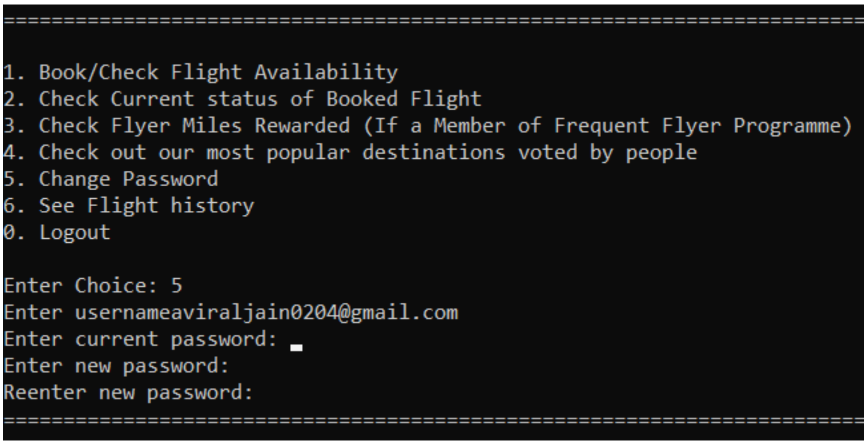
```
==========================================================================

1. Book/Check Flight Availability
2. Check Current status of Booked Flight
3. Check Flyer Miles Rewarded (If a Member of Frequent Flyer Programme)
4. Check out our most popular destinations voted by people
5. Change Password
6. See Flight history
0. Logout

Enter Choice: 4
```



2.5) Changing Password -:

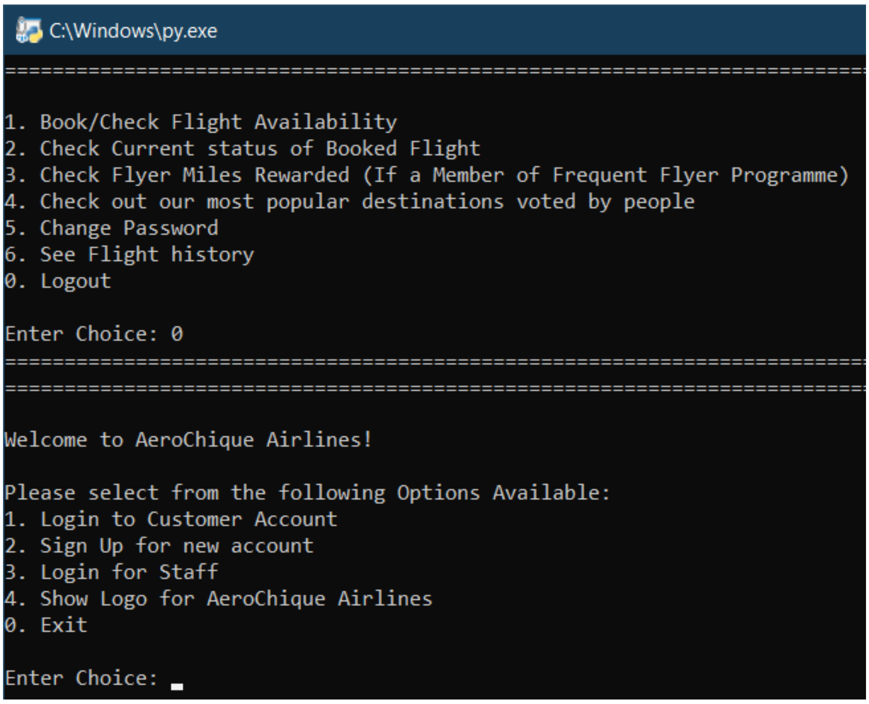


```
========================================================================

1. Book/Check Flight Availability
2. Check Current status of Booked Flight
3. Check Flyer Miles Rewarded (If a Member of Frequent Flyer Programme)
4. Check out our most popular destinations voted by people
5. Change Password
6. See Flight history
0. Logout

Enter Choice: 5
Enter usernameaviraljain0204@gmail.com
Enter current password:
Enter new password:
Reenter new password:
========================================================================
```

2.7) Logging Out -:



```
========================================================================

1. Book/Check Flight Availability
2. Check Current status of Booked Flight
3. Check Flyer Miles Rewarded (If a Member of Frequent Flyer Programme)
4. Check out our most popular destinations voted by people
5. Change Password
6. See Flight history
0. Logout

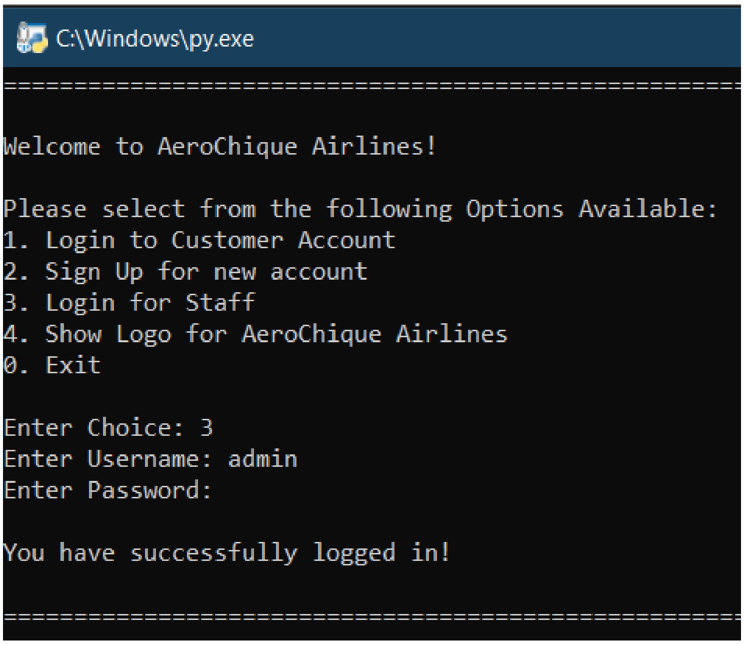
Enter Choice: 0
========================================================================
========================================================================

Welcome to AeroChique Airlines!

Please select from the following Options Available:
1. Login to Customer Account
2. Sign Up for new account
3. Login for Staff
4. Show Logo for AeroChique Airlines
0. Exit

Enter Choice: _
```

3) Staff Login -:



```
=====================================================

Welcome to AeroChique Airlines!

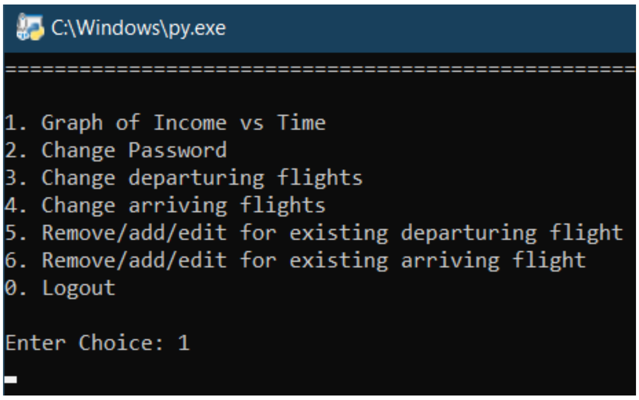
Please select from the following Options Available:
1. Login to Customer Account
2. Sign Up for new account
3. Login for Staff
4. Show Logo for AeroChique Airlines
0. Exit

Enter Choice: 3
Enter Username: admin
Enter Password:

You have successfully logged in!

=====================================================
```

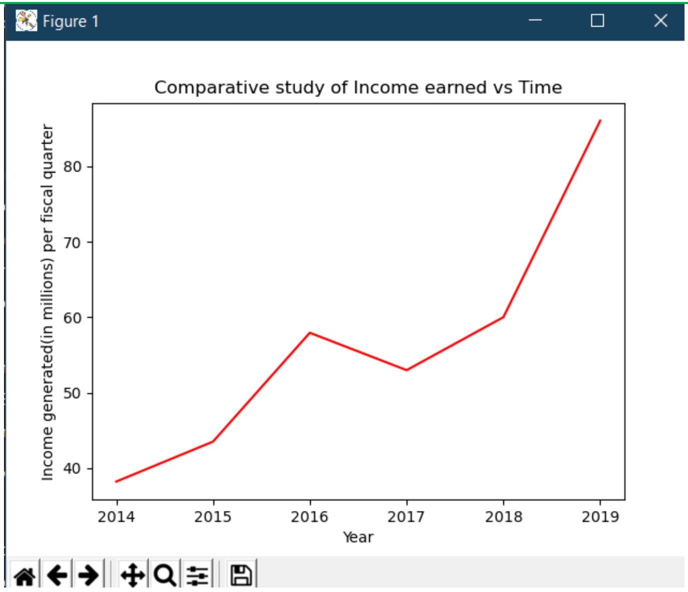
3.1) Income v/s Time Graph -:



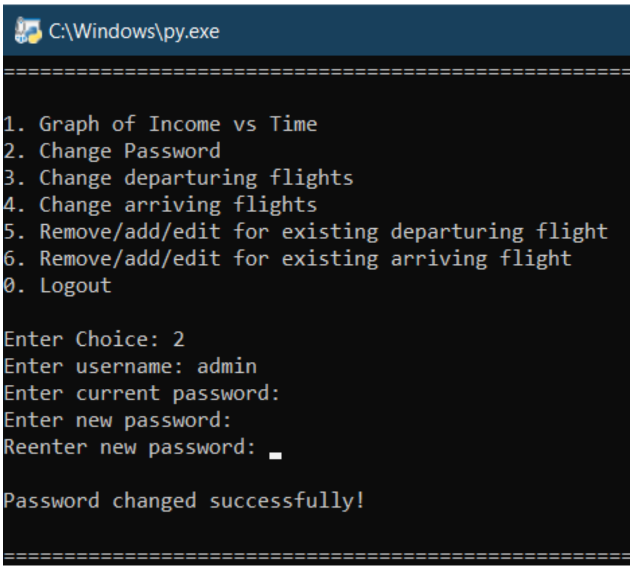
```
====================================================

1. Graph of Income vs Time
2. Change Password
3. Change departuring flights
4. Change arriving flights
5. Remove/add/edit for existing departuring flight
6. Remove/add/edit for existing arriving flight
0. Logout

Enter Choice: 1
_
```



3.2) Change Password for staff -:



```
==================================================

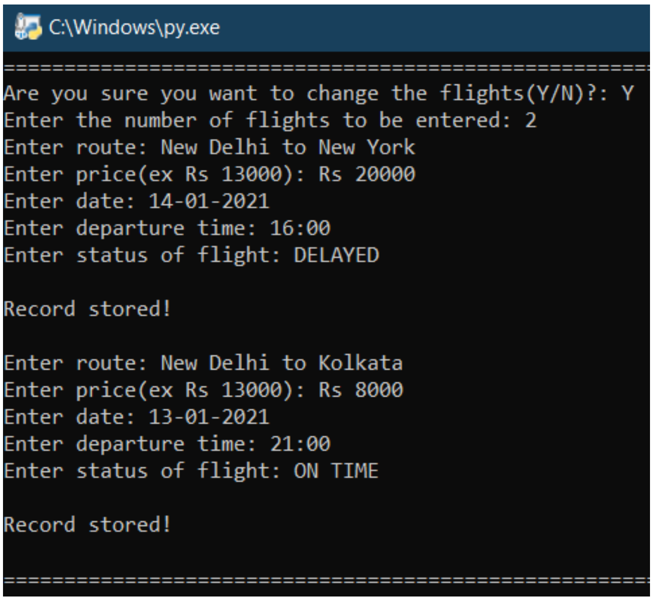
1. Graph of Income vs Time
2. Change Password
3. Change departuring flights
4. Change arriving flights
5. Remove/add/edit for existing departuring flight
6. Remove/add/edit for existing arriving flight
0. Logout

Enter Choice: 2
Enter username: admin
Enter current password:
Enter new password:
Reenter new password: _

Password changed successfully!

==================================================
```

3.3) Changing all Departing flights -:



```
====================================================
Are you sure you want to change the flights(Y/N)?: Y
Enter the number of flights to be entered: 2
Enter route: New Delhi to New York
Enter price(ex Rs 13000): Rs 20000
Enter date: 14-01-2021
Enter departure time: 16:00
Enter status of flight: DELAYED

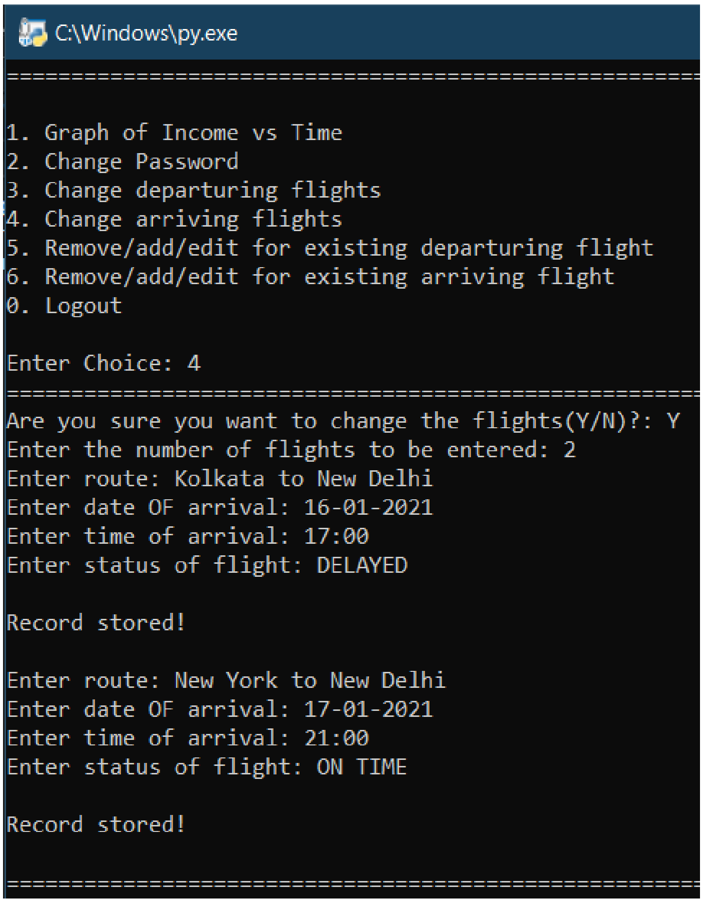
Record stored!

Enter route: New Delhi to Kolkata
Enter price(ex Rs 13000): Rs 8000
Enter date: 13-01-2021
Enter departure time: 21:00
Enter status of flight: ON TIME

Record stored!

====================================================
```

3.4) Changing all Arriving Flights -:



```
==========================================================

1. Graph of Income vs Time
2. Change Password
3. Change departuring flights
4. Change arriving flights
5. Remove/add/edit for existing departuring flight
6. Remove/add/edit for existing arriving flight
0. Logout

Enter Choice: 4
==========================================================
Are you sure you want to change the flights(Y/N)?: Y
Enter the number of flights to be entered: 2
Enter route: Kolkata to New Delhi
Enter date OF arrival: 16-01-2021
Enter time of arrival: 17:00
Enter status of flight: DELAYED

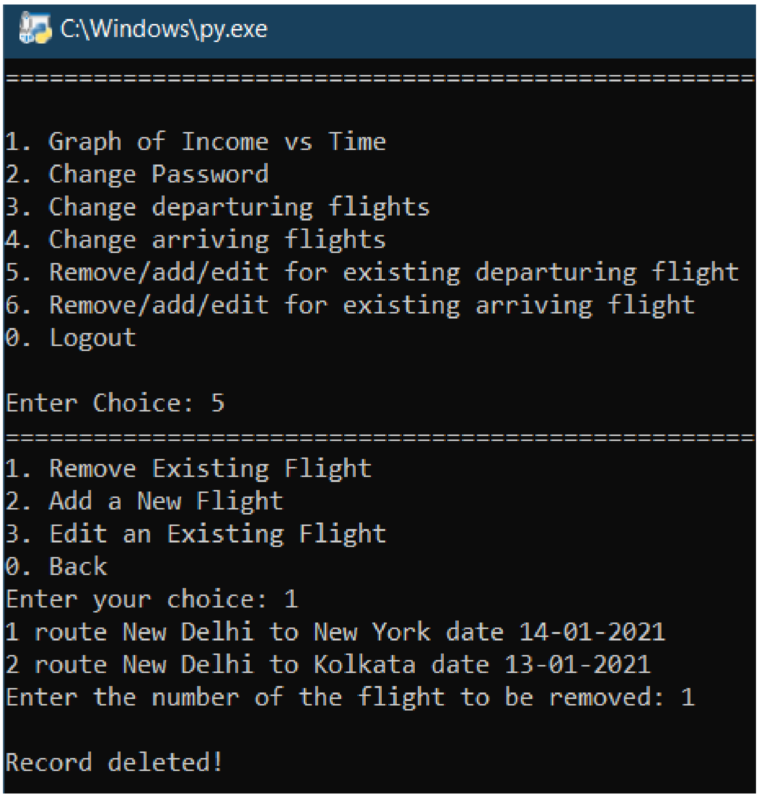
Record stored!

Enter route: New York to New Delhi
Enter date OF arrival: 17-01-2021
Enter time of arrival: 21:00
Enter status of flight: ON TIME

Record stored!

==========================================================
```

3.5.1) Removing Departing Flights -:



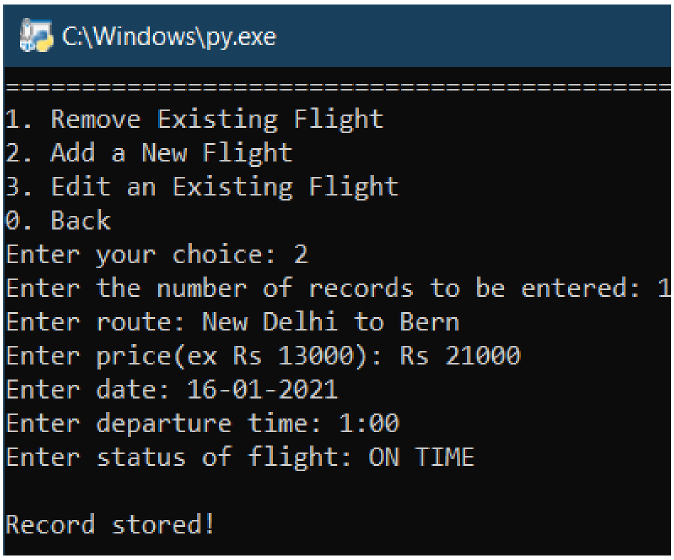
```
====================================================

1. Graph of Income vs Time
2. Change Password
3. Change departuring flights
4. Change arriving flights
5. Remove/add/edit for existing departuring flight
6. Remove/add/edit for existing arriving flight
0. Logout

Enter Choice: 5
====================================================
1. Remove Existing Flight
2. Add a New Flight
3. Edit an Existing Flight
0. Back
Enter your choice: 1
1 route New Delhi to New York date 14-01-2021
2 route New Delhi to Kolkata date 13-01-2021
Enter the number of the flight to be removed: 1

Record deleted!
```

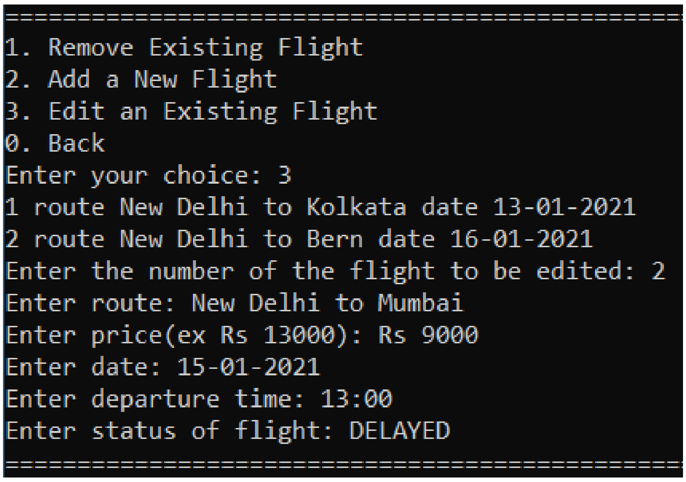
3.5.2) Adding a Departing Flight -:



```
============================================
1. Remove Existing Flight
2. Add a New Flight
3. Edit an Existing Flight
0. Back
Enter your choice: 2
Enter the number of records to be entered: 1
Enter route: New Delhi to Bern
Enter price(ex Rs 13000): Rs 21000
Enter date: 16-01-2021
Enter departure time: 1:00
Enter status of flight: ON TIME

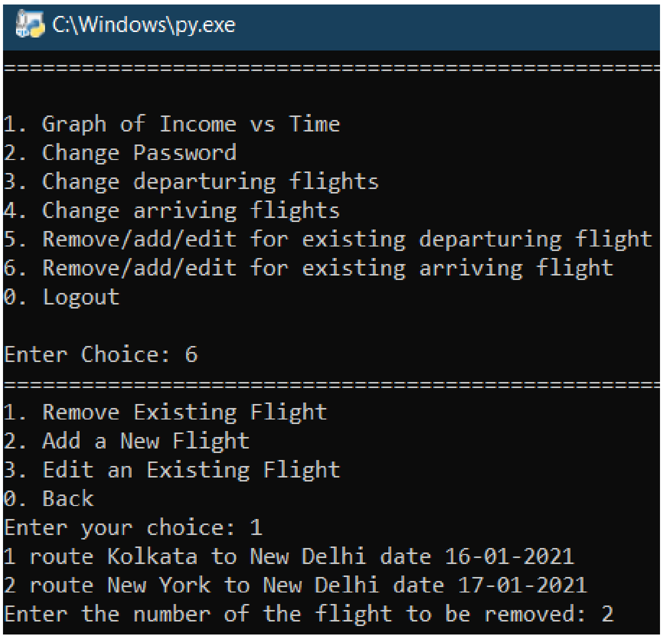
Record stored!
```

3.5.3) Editing a Departing Flight -:



```
================================================
1. Remove Existing Flight
2. Add a New Flight
3. Edit an Existing Flight
0. Back
Enter your choice: 3
1 route New Delhi to Kolkata date 13-01-2021
2 route New Delhi to Bern date 16-01-2021
Enter the number of the flight to be edited: 2
Enter route: New Delhi to Mumbai
Enter price(ex Rs 13000): Rs 9000
Enter date: 15-01-2021
Enter departure time: 13:00
Enter status of flight: DELAYED
================================================
```

3.6.1) Removing a Arriving Flight -:

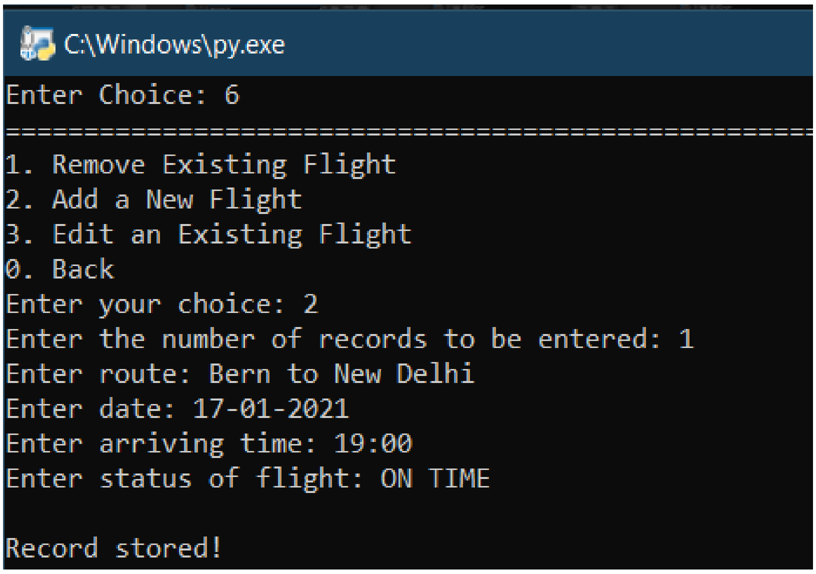


```
==================================================


1. Graph of Income vs Time
2. Change Password
3. Change departuring flights
4. Change arriving flights
5. Remove/add/edit for existing departuring flight
6. Remove/add/edit for existing arriving flight
0. Logout

Enter Choice: 6
==================================================
1. Remove Existing Flight
2. Add a New Flight
3. Edit an Existing Flight
0. Back
Enter your choice: 1
1 route Kolkata to New Delhi date 16-01-2021
2 route New York to New Delhi date 17-01-2021
Enter the number of the flight to be removed: 2
```

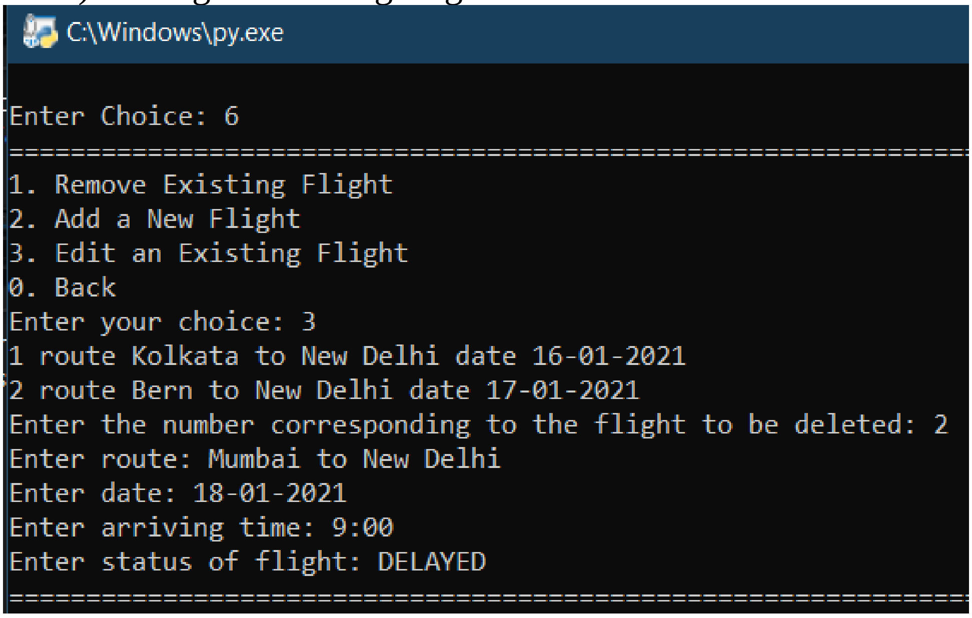
3.6.2) Adding an Arriving Flight -:



```
Enter Choice: 6
====================================================
1. Remove Existing Flight
2. Add a New Flight
3. Edit an Existing Flight
0. Back
Enter your choice: 2
Enter the number of records to be entered: 1
Enter route: Bern to New Delhi
Enter date: 17-01-2021
Enter arriving time: 19:00
Enter status of flight: ON TIME

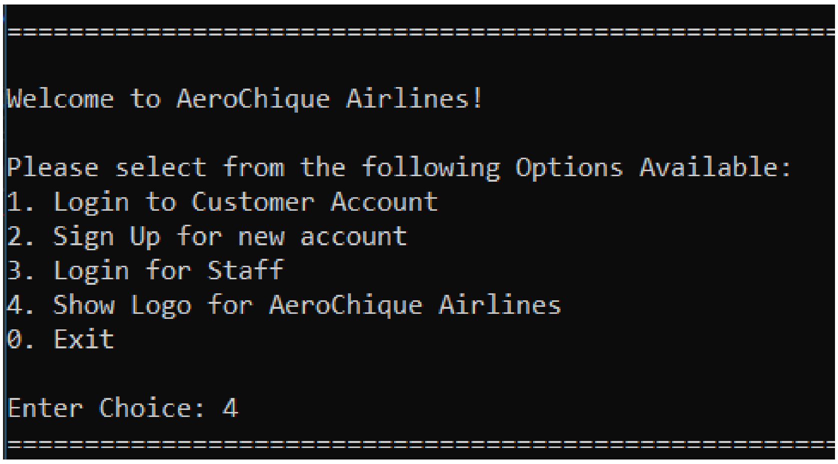
Record stored!
```

3.6.3) Editing an Arriving Flight



```
Enter Choice: 6
==============================================================
1. Remove Existing Flight
2. Add a New Flight
3. Edit an Existing Flight
0. Back
Enter your choice: 3
1 route Kolkata to New Delhi date 16-01-2021
2 route Bern to New Delhi date 17-01-2021
Enter the number corresponding to the flight to be deleted: 2
Enter route: Mumbai to New Delhi
Enter date: 18-01-2021
Enter arriving time: 9:00
Enter status of flight: DELAYED
==============================================================
```

4) Showing Logo

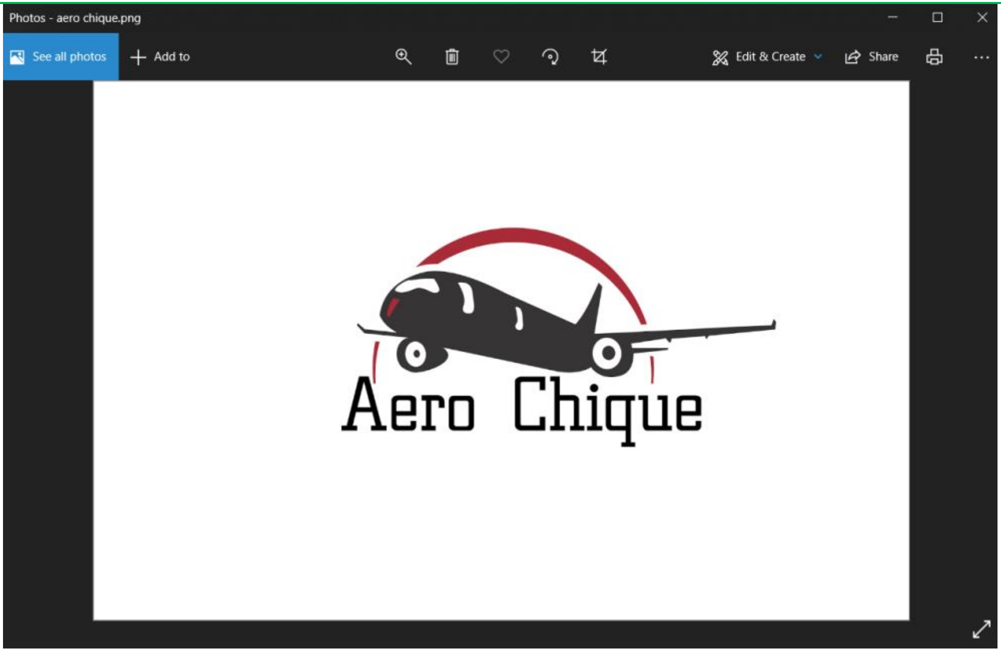


```
=====================================================

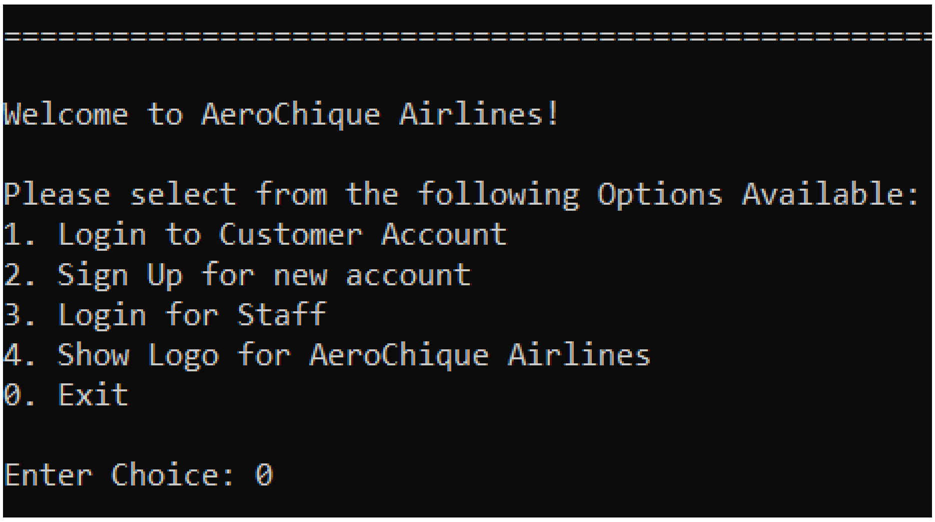

Welcome to AeroChique Airlines!

Please select from the following Options Available:
1. Login to Customer Account
2. Sign Up for new account
3. Login for Staff
4. Show Logo for AeroChique Airlines
0. Exit

Enter Choice: 4
=====================================================
```



5) Exiting



```
=============================================================

Welcome to AeroChique Airlines!

Please select from the following Options Available:
1. Login to Customer Account
2. Sign Up for new account
3. Login for Staff
4. Show Logo for AeroChique Airlines
0. Exit

Enter Choice: 0
```

CONCLUSION

In this project, we have successfully created a working interface for a travel interface and database, which can be easily used by customer and staff.

Using this interface, a user can sign up for a new account on the interface, securely login to dashboard, check availabilities of flights, check Reward points obtained as part of the Flyer Miles programme(detailed in code), and check general statistics compiled according to interface use.

Furthermore, customers can also book flights to and fro various destinations, generate invoices which can be shared to the customer via E-Mail, and can even earn Reward points as part of the Flyer Miles programme(detailed in code). They can also view their history on the history, comprising of information on all the flights they have booked, all cancellations etc.

Also, the staff can furthermore edit information regarding availability of flights, their arrival and departure timings and can see their own salaries graphically.

Also, in case a customer forgets his password, he/she can easily change it manually by verifying themselves through their registered Email-Ids, and can securely login again using a custom randomly-generated password by the central interface, upon which they will be immediately required to change their password to their own preference. In case a staff member forgets their password, he/she would have to contact administration to reset their password.

FUTURE ENHANCEMENTS

Like all , this project also has a scope for improvement.

We can redesign the interface for the complete interface to make it GUI using tkinter module.

We can also remove redundant pieces of code to make it more efficient.

We can also provide a customer care service using automated replies from a custom-written bot, for instant communication with customers in case of issues and discrepancies.

We can further expand this concept to write similar interfaces for other businesses and establishments, which require a similar system to effectively interact with and store information of customers, like startups, internet service, insurance, finance. Etc

We can also provide integration with features like HTML and CSS for better functionality as a tool to be used via the internet.

Using modern security services like Firewalls, custom-written software and even secure Password vaults, we can provide greater encryption and safety for the customers, making our system more dependable and reliable for frequent use.

We can also introduce instant verification for all users of the interface via OTP using text services (SMS) and E-mails from secure servers and terminal.

We can also create secure backups of databases and cached data to minimise the risk of data loss due to physical/technical errors and failures.

We can also integrate other features like Web Check-In, Group Bookings for large organisations, As well as a page for all FAQs for customer assistance.

We can also introduce more offers and reward programs so as to attract more users and increase traffic on the interface.

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