BHARATH SENIOR SECONDARY SCHOOL

ADYAR, CHENNAI-600 020

PROJECT REPORT

(2021-2022)

INFORMATICS PRACTICES

CODE NUMBER: (065)

NAME : HARSHIT SHARMA

REGISTRATION NO : _____

STANDARD : XII

BATCH : _____

BHARATH SENIOR SECONDARY SCHOOL

ADYAR CHENNAI 600020

BONAFIDE CERTIFICATE

Certified to be the Bonafide record of the PROJECT WORK, done by Master / Miss Harshit Sharma of class XII in BHARATH SENIOR SECONDARY SCHOOL Adyar, Chennai – 600 020.

Year_____.

Submitted for ALL INDIA SENIOR SCHOOL CERTIFICATE EXAMINATION conducted by CBSE, New Delhi, held in _____month_____year at BHARATH SENIOR SECONDARY SCHOOL, CHENNAI- 600 020 by the Candidate bearing the Registration Number_____.

DATE:

SIGNATURE OF

1) **INTERNAL EXAMINER** _____

2) **EXTERNAL EXAMINER** _____

INFORMATICS PRACTICES

PYTHON AND MYSQL

BANK MANAGEMENT SYSTEM

DONE BY:
NAME: HARSHIT SHARMA
STANDARD: XII
REGISTRATION NUMBER:

INDEX

S.NO	CONTENTS	PAGE NUMBER
1.	ACKNOWLEDGEMENT	5
2.	SYNOPSIS	6
3.	CODING	8
4.	OUTPUT	44
5.	CONCLUSION	60
6.	BIBLIOGRAPHY	61

ACKNOWLEDGEMENT

I would like to take this opportunity to first and foremost thank the Almighty for being my strength and guide me in the making of this project.

I would like to express my profound gratitude to our Principal, Dr. K. Prem Shantha and my teachers Mrs. A.C.J. Vanitha and Mrs. Sobha Joseph for their guidance, monitoring and constant encouragement throughout the course of this project. The blessing, help and guidance given by them time to time shall carry me a long way in the journey of life on which I am about to embark.

I would also like to thank my parents who helped me a lot in finalizing this project.

Lastly, I would like to thank my teammate for giving creative ideas and helping me with the project throughout.

SYNOPSIS

Reason for choosing the topic:

This project is useful for the bank employees as well as customers to keep a track of account details. The emerging of digital system made information available on finger tips. By automating the transactions one can view the details as and when required in no time.

This **"Bank Management System"** project has been delineated and devised in synergism by the mentioned individuals. The complete blueprint was discussed between the members i.e. the coding and the testing were done by Harshit Sharma, the graphical and pictorial representation by Santhosh Shivan and the execution was performed by the collective effort of the members.

"**TREASURE BANK"** is an online bank management system dedicated to offer a simple interface to banking and to change any particulars of the customer if needed. The project entitled **"TREASURE BANK"** is an efficient and simple program which has been developed using PYTHON PANDAS as the front end and the MYSQL as the back end. It reduces manual workload and makes it convenient for the customers to access to their account according to their own convenience.

Limitations:

- It is a bit complicated due to lack of guidance of an expert and availability of various data.
- Security of transactions is a big issue. In rare cases account information might get hacked by unauthorized people over the internet.
- There is no provision for withdrawal of hard cash.

Future Scope:

- The project could have been vastly superior if there would have been availability of an expert for consultation which could not be provided due to lack of time.
- Print/copy of receipt could have been made available but we weren't able to explore a lot.

CODING

```
#IMPORTING LIBRARIES

import IPython.display as ipd

from IPython.display import Image

import getpass

import mysql.connector as sqltor

import pandas as pd

import numpy as np

import matplotlib.pyplot as plt

import time

import win32com.client as mouth

from termcolor import colored

import random

import smtplib

#PYTHON MYSQL CONNECTIVITY

mycon=sqltor.connect(host='localhost',user='root',passwd='harsh10',database
='project2022')

mycursor=mycon.cursor()
```

```
#WELCOMING USER
if mycon.is_connected():
    print("")
    display(Image(r'C:\Users\Uma\Desktop\IP_PROJECT\header_1.jpg'))
    print("")
    display(Image(r'C:\Users\Uma\Desktop\IP_PROJECT\welcome.jpg',
width='1000'))
    print("")
#VOICE ASSISTANT
speaker_number=1
voice=mouth.Dispatch("SAPI.SpVoice")
vcs=voice.GetVoices()
vcs.Item(speaker_number).GetAttribute("Name")
voice.Voice
voice.SetVoice(vcs.Item(speaker_number))
voice.Speak("WELCOME TO TREASURE BANK!!")
print(colored(("THIS IS YOUR DEFAULT VOICE ASSISTANT MIZO!!🙌 IF YOU
WISH TO CONTINUE WITH ME ENTER(F)"),"green",))
print("")
print(colored(("IF YOU WISH TO CONTINUE WITH DAVID, ENTER(M)"),"green"))
```

```
print("")
voice.speak("THIS IS YOUR DEFAULT VOICE ASSISTANT MIZO!!!! IF YOU WISH TO CONTINUE WITH ME ENTER(F)")
voice.speak("IF YOU WISH TO CONTINUE WITH DAVID, ENTER(M)")
cho=input(colored(("ENTER YOUR CHOICE:"),"blue"))
print("")
#MALE VOICE ASSISTANT
if cho=='M' or cho=='m':
    speaker_number=0
    voice=mouth.Dispatch("SAPI.SpVoice")
    vcs=voice.GetVoices()
    vcs.Item(speaker_number).GetAttribute("Name")
    voice.Voice
    voice.SetVoice(vcs.Item(speaker_number))
    voice.speak("HELLO THERE! THIS IS DAVID, YOUR VOICE ASSISTANT! GLAD TO MEET YOU!")
elif cho=="F" or cho=="f":
    speaker_number=1
    voice=mouth.Dispatch("SAPI.SpVoice")
    vcs=voice.GetVoices()
```

```
    vcs.Item(speaker_number).GetAttribute("Name")
    voice.Voice
    voice.SetVoice(vcs.Item(speaker_number))
    voice.Speak("GLAD THAT YOU DECIDED ME AS YOUR ASSISTANT! DELIGHTED TO MEET YOU!")
else:
    print("")
print(colored("New here? Create an account using SignUp!","blue"))
voice.speak("NEW HERE? CREATE AN ACCOUNT USING SIGNUP!")
j='y'
while j=='y' or j=='Y':
    voice.Speak("ENTER YOUR CHOICE")
    voice.Speak("1 to SignUP")
    voice.Speak("2 to LogIn")
    print("\n")
    b=int(input(colored("ENTER YOUR CHOICE(SignUP(1) or LogIn(2)): ",'blue',attrs=['bold'])))
    print(''*25)
    #ADDING DELAY
    time.sleep(0.5)
```

```
    x='y'
    while x=="y" or x=="Y":
        #SIGNUP FOR NEW CUSTOMERS
        if b==1:
            print(colored('YOU CHOSE TO SIGNUP!','blue',attrs=['bold']))
            voice.Speak("YOU CHOSE TO SIGNUP!")
            print(''*100)
            voice.Speak("ENTER YOUR FULLNAME")
            fname=input(colored(('ENTER YOUR FULLNAME: '),'blue'))
            print('\n')
            voice.Speak("ENTER YOUR DATE OF BIRTH")
            dob=input(colored(("ENTER YOUR DATE OF BIRTH (YYYY/MM/DD): "),'blue'))
            print('\n')

grdghtprint(colored('**','cyan'),colored('IMPORTANT','cyan',attrs=['bold','underline']))
            voice.Speak("IMPORTANT")
            print(colored("YOUR EMAIL ID IS NECESSARY FOR YOU TO RESET YOUR PASSWORD!!",'blue',attrs=['bold']))
```

```
        voice.Speak("YOUR EMAIL ID IS NECESSARY FOR YOU TO RESET YOUR
PASSWORD!!")
        em="y"
        voice.Speak("TIME FOR EMAIL VERIFICATION")
        print('\n')
        while em=="y" or em=="Y":
            voice.Speak("ENTER YOUR EMAIL ID")
            print('\n')
            email=input(colored(("ENTER YOUR EMAIL ID: "),'blue'))
            con1=random.randint(100000,999999)
            con=str(con1)
            mail=smtplib.SMTP('smtp.gmail.com',587)
            mail.ehlo()
            mail.starttls()
            mail.login('treasurebank6969@gmail.com','qtpiemee')
            mail.sendmail('treasurebank6969@gmail.com',email,con)
            mail.close()
            voice.Speak("ENTER THE O T P SENT TO YOUR MAIL.")
            print('\n')
            otp=int(input(colored(("Enter the OTP sent to your mail: "),"blue")))
```

```
    print('\n')
    #VERIFYING EMAIL ID WITH THE USE OF OTP
    if otp==con1:
        print(colored(("Your email id is verified!!"),'blue'))
        voice.Speak("Your email id is verified.")
        print('\n')
        em='n'
    elif otp!=con1:
        print(colored(("Incorrect OTP."),'blue'))
        voice.Speak('INCORRECT O T P.')
        print('\n')
        voice.Speak("WOULD YOU LIKE TO TRY AGAIN?")
        em=input(colored("WOULD YOU LIKE TO TRY AGAIN?(Y/N)"))
        print('\n')
    else:
        print(" ")
h='y'
while h=='y' or h=='Y':
    voice.Speak("ENTER YOUR MOBILE NUMBER:")
    phone_no=input(colored(('ENTER YOUR MOBILE NUMBER: '),'green'))
```

```
            print('\n')
            #TO CHECK LENGTH OF MOBILE NUMBER
            if len(phone_no)==10:
               print(colored(("Your mobile number is valid!"),'green'))
               voice.Speak("YOUR mobile NUMBER IS VALID!")
               print('\n')
               h='n'
               break
            elif len(phone_no)<10:
               print(colored(('Incorrect Mobile Number!'),'green'))
                voice.Speak("YOU HAVE ENTERED AN INCORRECT MOBILE
NUMBER!")
               print('\n')
               voice.Speak("Would you like to try again?")
               h=input(colored(("Would you like to try again?(Y/N): "),'green'))
            else:
               print(colored("ERROR OCCURRED"),'green')
               voice.Speak("ERROR OCCURRED!")
               print('\n')
               voice.Speak("WOULD YOU LIKE TO START FROM BEGINNING?")
```

```
            j=input(colored(('WOULD YOU LIKE TO START FROM BEGINNING?(Y/N): ')))
                break
        voice.Speak("ENTER YOUR PERMANENT ADDRESS")
        p_add=input(colored(("ENTER YOUR PERMANENT ADDRESS: "),'green'))
        print('\n')
        voice.Speak("Your Account Number is,")
        number= random.randint(1000,9999)
        acc_no=print("Your account number is: ",number)
        print('\n')
        voice.Speak("ENTER YOUR PASSWORD")
        pwd=getpass.getpass(colored(("ENTER YOUR PASSWORD(MAX 15 CHARACTERS): "),'green'))
        print('\n')
        voice.Speak("ENTER THE CREDIT AMOUNT!")
        cr_amt=input(colored(("Enter the credit amount(in rupees):"),'green'))
        print('\n')
        #TO VERIFY IF THE USER IS NOT A ROBOT
         print(colored('**','blue'),colored('Recaptcha','cyan',attrs=['bold', 'underline']))
```

```
        voice.Speak("RECAPTCHA")
        print('\n')
        display(Image(r'C:\Users\Uma\Desktop\IP_PROJECT\recaptcha_1.jpg'))
        print('\n')
        voice.Speak("WOULD YOU LIKE TO PROCEED?")
        j=input(colored(("WOULD YOU LIKE TO PROCEED?(Y/N): "),'blue'))
        if j=='y' or j=='Y':
            print("")
            display(Image(r'C:\Users\Uma\Desktop\IP_PROJECT\recaptch_2.jpg'))
            print('\n')
            voice.Speak("ENTER THE TEXT IN THE IMAGE!")
            text=input(colored(("ENTER THE TEXT IN THE IMAGE: "),'green'))
            print('\n')
            if text=='mwxe2':
                print(colored(("RECAPTCHA SUCCESSFUL"),'green'))
                voice.Speak("RECAPTCHA SUCCESSFUL")
                print('\n')
                display(Image(r'C:\Users\Uma\Desktop\IP_PROJECT\recapctha_
3.jpg'))
                print('\n')
```

```
            print("✈"*68)
            print('\n')
            print(colored(("YOU HAVE SUCCESSFULLY SIGNED UP"),'green'))
            voice.Speak("YOU HAVE SUCCESSFULLY SIGNED UP")
            print('\n')
            print("✈"*68)
            print("")
            #INSERTING INTO MYSQL TABLE
            mycursor=mycon.cursor()
            d="INSERT INTO account(FULL_NAME,DATE_OF_BIRTH,EMAIL_ID,
PHONE_NO,PERMANENT_ADDRESS,ACCOUNT_NO,PASSWORD,
CREDIT_AMOUNT)values(%s,%s,%s,%s,%s,%s,%s,%s)"
            val=(fname,dob,email,phone_no,p_add,number,pwd,cr_amt)
            mycursor.execute(d,val)
            mycon.commit()
            mycursor=mycon.cursor()
            d1='INSERT INTO amount(ACCOUNT_NO,FULL_NAME,PASSWORD,
BALANCE)values(%s,%s,%s,%s)'
            val=(number,fname,pwd,cr_amt)
            mycursor.execute(d1,val)
```

```
                mycon.commit()
                #RECAPTCHA
                x="n"
                j="n"
            elif text!='mwxe2':
                print(colored(("WRONG CAPTCHA ENTERED"),'green'))
                voice.Speak("WRONG CAPTCHA ENTERED")
                print(colored(("TRY AGAIN!"),"green"))
                voice.Speak("TRY AGAIN")
                display(Image(r'C:\Users\Uma\Desktop\IP_PROJECT\recaptcha_1
.jpg'))
                display(Image(r'C:\Users\Uma\Desktop\IP_PROJECT\captcha.jpg'))
                voice.Speak("ENTER THE TEXT IN THE IMAGE")
                text=input(colored(("ENTER THE TEXT IN THE IMAGE: "),'blue'))
                if text=='mwxe2':
                    print(colored(("RECAPTCHA SUCCESSFUL")))
                    voice.Speak("RECAPTCHA SUCCESSFUL")
                    display(Image(r'C:\Users\Uma\Desktop\IP_PROJECT
\recapctha_3.jpg'))
                    print("")
```

```
            x="n"
            j="n"
        elif text!='mwxe2':
            print(colored(("WRONG TEXT ENTERED"),'green'))
            voice.Speak('WRONG TEXT ENTERED')
            print(colored(("ERROR!!"),'green'))
            voice.Speak("ERROR!!")
            voice.Speak("DO YOU WISH TO START FROM BEGINNING?")
            j=input(colored(("DO YOU WISH TO START FROM BEGINNING?(Y/N)"),'blue'))
            break
        else:
            print(colored(("RECAPTCHA UNSUCCESSFUL"),'green'))
            voice.Speak("RECAPTCHA UNSUCCESSFUL")
            print(colored(("INVALID CHOICE"),"yellow"))
            voice.Speak("INVALID CHOICE")
            voice.Speak("DO YOU WISH TO START FROM BEGINNING?")
            j=input(colored(("DO YOU WISH TO START FROM BEGINNING?(Y/N)"),'blue'))
            break
```

```
    #LOGIN FOR EXISTING CUSTOMERS
    elif b==2:
        print(colored(('YOU CHOSE TO LOGIN!'),'blue'))
        voice.Speak('YOU CHOSE TO LOGIN!')
        print(''*100)
        voice.Speak("ENTER YOUR ACCOUNT NUMBER")
        account_no=input(colored(("ENTER YOUR ACCOUNT NUMBER: "),'blue'))
        voice.Speak('ENTER YOUR PASSWORD')
        password=getpass.getpass(colored(('ENTER YOUR PASSWORD: '),'blue'))
        print(''*100)
        mycursor.execute("select*from account where ACCOUNT_NO='"+account_no+"';")
        result=mycursor.fetchall()
        result_df=pd.DataFrame(result,columns=['fname','dob','email',
'phone_no','p_add','account_no','pwd','cr_amt'])
        acc_no_df=result_df[['account_no']]
        acc="','".join([str(i)for i in acc_no_df.account_no.tolist()])
        pwd_df=result_df[['pwd']]
```

```
        pwd="',"'.join([str(i)for i in pwd_df.pwd.tolist()])
        print(''*100)
        if account_no==acc:
            if password==pwd:
                x="n"
                j="n"
                print(colored(('YOU HAVE SUCCESSFULLY LOGGED IN'),'green'))
                voice.Speak("YOU HAVE SUCCESSFULLY LOGGED IN")
                break
            elif password!=pwd:
                print(colored(('YOUR PASSWORD IS INCORRECT'),'green'))
                voice.Speak("YOUR PASSWORD IS INCORRECT")
                voice.Speak("WOULD YOU LIKE TO RETRY?")
                x=input(colored(("WOULD YOU LIKE TO RETRY?(Y/N): "),'blue'))
                if x=='n' or x=='N':  #RESETTING PASSWORD
                    voice.Speak("WOULD YOU LIKE TO RESET YOUR PASSWORD?")
                    g=input(colored(('WOULD YOU LIKE TO RESET YOUR
PASSWORD?(Y/N): '),'blue'))
                    if g=='y' or g=='Y':
                        em='y'
```

```
                while em=='y' or em=='Y':
                    voice.Speak("ENTER YOU EMAIL ID")
                    emailid=input(colored(("ENTER YOUR EMAIL ID: ")))
                    email_df=result_df[['email']]
                    email1="',".join([str(i)for i in email_df.email.tolist()])
                    if emailid==email1:
                        con1=random.randint(100000,999999)
                        con=str(con1)
                        mail=smtplib.SMTP('smtp.gmail.com',587)
                        mail.ehlo()
                        mail.starttls()
                        mail.login('treasurebank6969@gmail.com',
'qtpiemee')
                        mail.sendmail('treasurebank6969@gmail.com',
emailid,con)
                        mail.close()
                        voice.Speak("ENTER O T P SENT TO YOUR MAIL!")
                        otp=int(input(colored(('ENTER THE OTP
SENT TO YOUR MAIL: '),'blue')))
                        #VERIFYING WITH OTP
```

```
                    if otp==con1:
                        f='y'
                        while f=='y' or f=='Y':
                            voice.Speak("ENTER YOUR NEW PASSWORD")
                            pwd1=getpass.getpass(colored(("ENTER YOUR NEW
PASSWORD: "),'blue'))
                            voice.Speak("RE ENTER YOUR PASSWORD")
                            pwd2=getpass.getpass(colored(('RE-ENTER YOUR
NEW PASSWORD:'),'blue'))
                            if pwd1==pwd2:
                                print(colored(('PASSWORD SUCCESSFULLY
CHANGED'),'green'))
                                voice.Speak("PASSWORD SUCCESSFULLY
CHANGED")
                                print(colored(("YOU HAVE SUCCESSFULLY LOGGED
IN!!"),'green'))
                                voice.Speak("YOU HAVE SUCCESSFULLY LOGGED
IN!!")
                            val1=(pwd2,emailid)
                            mycursor.execute("UPDATE account SET
PASSWORD=%s where EMAIL_ID=%s;",val1)
                            j='n'
```

```
                    break
                elif pwd1!=pwd2:
                    print(colored(("BOTH THE PASWORDS DO NOT MATCH!"),'red'))
                    voice.Speak("BOTH THE PASSWORDS DO NOT MATCH!")
                    voice.Speak("WOULD YOU LIKE TO TRY AGAIN?")
                    f=input(colored(("WOULD YOU LIKE TO TRY AGAIN?(Y/N: )"),'red'))
                else:
                    print("")
                    break
            elif otp!=con1:
                print(colored(("INCORRECT OTP. TRY AGAIN!"),'red'))
                voice.Speak("Incorrect O T P. TRY AGAIN!")
                voice.Speak("Would you like to reset your password?")
                g=input(colored(("Would you like to reset your password?(Y/N):"),'blue'))
            elif emailid!=email1:
                print(colored(("THE EMAIL ID ENTERED IS WRONG!"),'green'))
```

```
                    voice.Speak("THE EMAIL ID ENTERED IS WRONG!")
                    voice.Speak("WOULD YOU LIKE TO TRY AGAIN?")
                     em=input(colored(("WOULD YOU LIKE TO TRY AGAIN?(Y/N): "),'blue'))
                  else:
                    print("")
            elif g=='n' or g=='N':
                voice.Speak("DO YOU WISH TO START FROM THE BEGINNING?")
                j=input(colored(("DO YOU WISH TO START FROM THE BEGINNING?(Y/N): "),'blue'))
                break
            else:
                print("")
                break
        elif account_no!=acc:
            print(colored(("YOUR ACCOUNT NUMBER IS INCORRECT!"),'red'))
            voice.Speak("your account number is incorrect!")
            voice.Speak("Would you like to retry?")
            x=input(colored(("WOULD YOU LIKE TO RETRY?(Y/N): "),'blue'))
```

```
        else:
            print(colored(("YOUR CHOICE IS INVALID"),'green'))
            voice.Speak("YOUR CHOICE IS INVALID")
            voice.Speak("WOULD YOU LIKE TO START FROM BEGINNING?")
            j=input(colored(("WOULD YOU LIKE TO START FROM BEGINNING?(Y/N)"),'blue'))
            break
j='y'
while j=='y' or j=='Y':
    print("")
    display(Image(r'C:\Users\Uma\Desktop\pic.png'))
    print("")
    #GRAPH1
    x=['Treasure Bank','ABC Bank','SVI Bank','GK Bank','ICIQ Bank']
    y=[95,80,85,60,70]
    c=['b','g','r','y','pink']
    plt.bar(x,y,color=c)
    plt.title('GLOBAL BANK BENCHMARK RATING AS OF 2021')
    plt.xlabel('NAME OF FEW BANKS')
    plt.ylabel('RATING OUT OF 100')
```

```
    plt.show()
    print('\n')
    #GRAPH2
    x1=[2000,2004,2008,2012,2016,2020,2022]
    y1=['10%','25%','40%','55%','70%','85%','95%']
    plt.plot(x1,y1)
    plt.title('INCREASE IN RATING')
    plt.xlabel('Years')
    plt.ylabel('Increase in Rating over the years')
    plt.show()
    print('\n')
    #GRAPH3
    x2= ['Bank of America','Other Giant Banks','Large Banks and Credit Unions','Medium Banks and Credit Unions','Small Banks and Credit Unions','Citigroup','JP Morgan Chase','Wells Fargo']
    y2= [200,700,500,400,300,180,220,200]
    plt.title('BANK MARKET SHARE,2018')
    plt.pie(y2,labels=x2,autopct='%1.2f',startangle=90,explode=(0.1,0.2,0,
0,0.1,0.1,0.1,0.1))
    plt.show()
```

```
    print('\n')
    print('\n')
    display(Image(r'C:\Users\Uma\Desktop\IP_PROJECT\images.png'))
    print("\n")
    #DEPOSITING AMOUNT
    def depoAmo():
        print('\n')
        print(colored(('YOU CHOSE TO DEPOSIT AN AMOUNT!'),'blue'))
        voice.Speak('YOU CHOSE TO DEPOSIT AN AMOUNT!!')
        print(''*100)
        voice.Speak("ENTER YOUR ACCOUNT NUMBER")
        account_no=input(colored(("ENTER YOUR ACCOUNT NUMBER: "),'blue'))
        voice.Speak('ENTER YOUR PASSWORD')
        password=getpass.getpass(colored(('ENTER YOUR PASSWORD: '),'blue'))
        print(''*100)
        mycursor.execute("select*from account where ACCOUNT_NO=
'"+account_no+"';")
        result=mycursor.fetchall()
        result_df= pd.DataFrame(result,columns=['fname','dob','email',
'phone_no','p_add','account_no','pwd','cr_amt'])
```

```
acc_no_df=result_df[['account_no']]
acc="',".join([str(i)for i in acc_no_df.account_no.tolist()])
pwd_df=result_df[['pwd']]
pwd="',".join([str(i)for i in pwd_df.pwd.tolist()])
print(''*100)
if account_no==acc:
    if password==pwd:
        x="n"
        j="n"
    elif password!=pwd:
        print(colored(('YOUR PASSWORD IS INCORRECT!'),'green'))
        voice.Speak("YOUR PASSWORD IS INCORRECT")
        voice.Speak("WOULD YOU LIKE TO RETRY?")
        x=input(colored(("WOULD YOU LIKE TO RETRY?(Y/N): "),'blue'))
elif account_no!=acc:
    print(colored(("YOUR ACCOUNT NUMBER IS INCORRECT!"),'red'))
    voice.Speak("your account number is incorrect!")
    voice.Speak("Would you like to retry?")
    x=input(colored(("WOULD YOU LIKE TO RETRY?(Y/N): "),'blue'))
print('\n')
```

```
        voice.Speak("Enter amount to be deposited")
        amt=int(input('Enter amount to be deposited:'))
        mycursor.execute("UPDATE amount SET BALANCE=BALANCE+"+str(amt) +
"  where ACCOUNT_NO="+ str(account_no))
        mycon.commit()
        print(colored(('Account Updated Succesfully!!!!!'),'green',attrs=['bold']))
        voice.Speak("Account Updated Succesfully!!!!!")
        print('\n')
        main()
        print('\n')
    #AMOUNT TO BE WITHDRAWN
    def witham():
        print('\n')
        print(colored(('YOU CHOSE TO WITHDRAW AN AMOUNT!'),'blue'))
        voice.Speak('YOU CHOSE TO WITHDRAW AN AMOUNT!!')
        print(''*100)
        voice.Speak("ENTER YOUR ACCOUNT NUMBER")
        account_no=input(colored(("ENTER YOUR ACCOUNT NUMBER: "),'blue'))
        voice.Speak('ENTER YOUR PASSWORD')
        password=getpass.getpass(colored(('ENTER YOUR PASSWORD: '),'blue'))
```

```
        print(''*100)
        mycursor.execute("select*from account where ACCOUNT_NO=
'"+account_no+"';")
        result=mycursor.fetchall()
        result_df=pd.DataFrame(result,columns=['fname','dob','email',
'phone_no','p_add','account_no','pwd','cr_amt'])
        acc_no_df=result_df[['account_no']]
        acc="','".join([str(i)for i in acc_no_df.account_no.tolist()])
        pwd_df=result_df[['pwd']]
        pwd="','".join([str(i)for i in pwd_df.pwd.tolist()])
        print(''*100)
        if account_no==acc:
            if password==pwd:
                x="n"
                j="n"
            elif password!=pwd:
                print(colored(('YOUR PASSWORD IS INCORRECT!'),'green'))
                voice.Speak("YOUR PASSWORD IS INCORRECT")
                voice.Speak("WOULD YOU LIKE TO RETRY?")
                x=input(colored(("WOULD YOU LIKE TO RETRY?(Y/N): "),'blue'))
```

```
        elif account_no!=acc:
            print(colored(("YOUR ACCOUNT NUMBER IS INCORRECT!"),'red'))
            voice.Speak("your account number is incorrect!")
            voice.Speak("Would you like to retry?")
            x=input(colored(("WOULD YOU LIKE TO RETRY?(Y/N): "),'blue'))
        print('\n')
        voice.Speak("Enter amount to be withdrawn:")
        amt=int(input('Enter amount to be withdrawn:'))
        mycursor.execute("UPDATE amount SET BALANCE=BALANCE-"+str(amt) +
" where ACCOUNT_NO="+ str(account_no))
        mycon.commit()
        print(colored(('Account Updated Succesfully!!!!!'),'green',attrs=['bold']))
        voice.Speak('Account Updated Succesfully!!!!!')
        print('\n')
        main()
        print('\n')
    #ACCOUNT DETAILS
    def dispacc():
        print('\n')
        print(colored(('YOU CHOSE TO SEE YOUR ACCOUNT DETAILS!'),'blue'))
```

```
        voice.Speak('YOU CHOSE TO SEE YOUR ACCOUNT DETAILS!!')
        print(''*100)
        voice.Speak("ENTER YOUR ACCOUNT NUMBER")
        account_no=input(colored(("ENTER YOUR ACCOUNT NUMBER: "),'blue'))
        voice.Speak('ENTER YOUR PASSWORD')
        password=getpass.getpass(colored(('ENTER YOUR PASSWORD: '),'blue'))
        print(''*100)
        mycursor.execute("select*from account where ACCOUNT_NO=
'"+account_no+"';")
        result=mycursor.fetchall()
        result_df=pd.DataFrame(result,columns=['fname','dob','email',
'phone_no','p_add','account_no','pwd','cr_amt'])
        acc_no_df=result_df[['account_no']]
        acc="','".join([str(i)for i in acc_no_df.account_no.tolist()])
        pwd_df=result_df[['pwd']]
        pwd="','".join([str(i)for i in pwd_df.pwd.tolist()])
        print(''*100)
        if account_no==acc:
            if password==pwd:
                x="n"
```

```
        j="n"
    elif password!=pwd:
        print(colored(('YOUR PASSWORD IS INCORRECT!'),'green'))
        voice.Speak("YOUR PASSWORD IS INCORRECT")
        voice.Speak("WOULD YOU LIKE TO RETRY?")
        x=input(colored(("WOULD YOU LIKE TO RETRY?(Y/N): "),'blue'))
elif account_no!=acc:
    print(colored(("YOUR ACCOUNT NUMBER IS INCORRECT!"),'red'))
    voice.Speak("your account number is incorrect!")
    voice.Speak("Would you like to retry?")
    x=input(colored(("WOULD YOU LIKE TO RETRY?(Y/N): "),'blue'))
a='select * from account where ACCOUNT_NO = %s'
data=(account_no,)
mycursor.execute(a,data)
result=mycursor.fetchone()
for i in result:
    print(i,end=" ")
print('\n')
main()
print('\n')
```

```
    #BALANCE ENQUIRY
    def balance():
        print(colored(('YOU CHOSE TO SEE YOUR ACCOUNT BALANCE!'),'blue'))
        voice.Speak('YOU CHOSE TO SEE YOUR ACCOUNT BALANCE!!')
        print(''*100)
        voice.Speak("ENTER YOUR ACCOUNT NUMBER")
        account_no=input(colored(("ENTER YOUR ACCOUNT NUMBER: "),'blue'))
        voice.Speak('ENTER YOUR PASSWORD')
        password=getpass.getpass(colored(('ENTER YOUR PASSWORD: '),'blue'))
        print(''*100)
        mycursor.execute("select*from account where ACCOUNT_NO=
'"+account_no+"';")
        result=mycursor.fetchall()
        result_df=pd.DataFrame(result,columns=['fname','dob','email',
'phone_no','p_add','account_no','pwd','cr_amt'])
        acc_no_df=result_df[['account_no']]
        acc="','".join([str(i)for i in acc_no_df.account_no.tolist()])
        pwd_df=result_df[['pwd']]
        pwd="','".join([str(i)for i in pwd_df.pwd.tolist()])
        print(''*100)
```

```
if account_no==acc:
    if password==pwd:
        x="n"
        j="n"
    elif password!=pwd:
        print(colored(('YOUR PASSWORD IS INCORRECT!'),'green'))
        voice.Speak("YOUR PASSWORD IS INCORRECT")
        voice.Speak("WOULD YOU LIKE TO RETRY?")
        x=input(colored(("WOULD YOU LIKE TO RETRY?(Y/N): "),'blue'))
elif account_no!=acc:
    print(colored(("YOUR ACCOUNT NUMBER IS INCORRECT!"),'red'))
    voice.Speak("your account number is incorrect!")
    voice.Speak("Would you like to retry?")
    x=input(colored(("WOULD YOU LIKE TO RETRY?(Y/N): "),'blue'))
    print('\n')
a='select balance from amount where ACCOUNT_NO = %s'
data=(account_no,)
mycursor.execute(a,data)
result=mycursor.fetchone()
print(colored(("Balance of account",account_no,"is",result[0]),'green',
```

```
attrs=['bold']))
        print('\n')
        main()
        print('\n')


    #CLOSING AN ACCOUNT
    def closeac():
        print(colored(('YOU CHOSE TO CLOSE YOUR ACCOUNT!'),'blue'))
        voice.Speak('YOU CHOSE TO CLOSE YOUR ACCOUNT!!')
        print(''*100)
        voice.Speak("ENTER YOUR ACCOUNT NUMBER")
        account_no=input(colored(("ENTER YOUR ACCOUNT NUMBER: "),'blue'))
        voice.Speak('ENTER YOUR PASSWORD')
        password=getpass.getpass(colored(('ENTER YOUR PASSWORD: '),'blue'))
        print(''*100)
        mycursor.execute("select*from account where ACCOUNT_NO=
'"+account_no+"';")
        result=mycursor.fetchall()
        result_df=pd.DataFrame(result,columns=['fname','dob','email',
'phone_no','p_add','account_no','pwd','cr_amt'])
```

```
acc_no_df=result_df[['account_no']]
acc="','".join([str(i)for i in acc_no_df.account_no.tolist()])
pwd_df=result_df[['pwd']]
pwd="','".join([str(i)for i in pwd_df.pwd.tolist()])
print(''*100)
if account_no==acc:
    if password==pwd:
        x="n"
        j="n"
    elif password!=pwd:
        print(colored(('YOUR PASSWORD IS INCORRECT!'),'green'))
        voice.Speak("YOUR PASSWORD IS INCORRECT")
        voice.Speak("WOULD YOU LIKE TO RETRY?")
        x=input(colored(("WOULD YOU LIKE TO RETRY?(Y/N): "),'blue'))
elif account_no!=acc:
    print(colored(("YOUR ACCOUNT NUMBER IS INCORRECT!"),'red'))
    voice.Speak("your account number is incorrect!")
    voice.Speak("Would you like to retry?")
    x=input(colored(("WOULD YOU LIKE TO RETRY?(Y/N): "),'blue'))
sql1='delete from account where ACCOUNT_NO = %s'
```

```
        sql2='delete from amount where ACCOUNT_NO = %s'
        data=(account_no,)
        mycursor.execute(sql1,data)
        mycursor.execute(sql2,data)
        mycon.commit()
        print(colored(("Your Account has been closed!!"),'green'))
        voice.Speak("Your account has been closed!!")
        print('\n')
        main()
        print('\n')
    from tkinter import *
    from tkinter import ttk
    from tkinter import messagebox
    #FEEDBACK FORM
    def fb():
        root = Tk()
        frame_header = ttk.Frame(root)
        frame_header.pack()
        headerlabel = ttk.Label(frame_header, text='TREASURE BANK FEEDBACK',
foreground='orange',font=('Arial', 24))
```

```
headerlabel.grid(row=0, column=1)

messagelabel=ttk.Label(frame_header,text="Thanks for Exploring!\nWe're glad you chose Treasure Bank!\nPlease share your experience with us!",foreground='purple', font=('Arial', 10))

messagelabel.grid(row=1, column=1)

frame_content = ttk.Frame(root)

frame_content.pack()

myvar=StringVar()

var = StringVar()

namelabel = ttk.Label(frame_content, text='FULL NAME')

namelabel.grid(row=0, column=0, padx=5, sticky='sw')

entry_name = ttk.Entry(frame_content, width=18, font=('Arial', 14), textvariable=myvar)

entry_name.grid(row=1, column=0)

emaillabel = ttk.Label(frame_content, text='ACCOUNT NUMBER')

emaillabel.grid(row=0, column=1, sticky='sw')

entry_email = ttk.Entry(frame_content, width=18, font=('Arial', 14), textvariable=var)

entry_email.grid(row=1, column=1)

commentlabel = ttk.Label(frame_content, text='FEEDBACK', font=('Arial', 10))
```

```
        commentlabel.grid(row=2, column=0, sticky='sw')
        textcomment = Text(frame_content, width=55, height=10)
        textcomment.grid(row=3, column=0, columnspan=2)
        textcomment.config(wrap ='word')
        def submit():
            messagebox.showinfo(title='SUBMIT', message='THANK YOU FOR YOUR FEEDBACK!')
        submitbutton = ttk.Button(frame_content, text='SUBMIT', command=submit).grid(row=4, column=0, sticky='e')
        mainloop()
        print('\n')
        print(colored(("THANKYOU FOR YOUR FEEDBACK"),'green'))
        voice.Speak("THANKYOU FOR YOUR FEEDBACK!!")
        print('\n')
        main()
        print('\n')
    #MAIN MENU
    def main():
        print(colored(("**MAIN MENU**"),'red',attrs=['bold']))
        print(colored(("1. Deposit Amount"),'blue',attrs=['bold']))
```

```
print(colored(("2. Withdraw Amount"),'blue',attrs=['bold']))
print(colored(("3. Account Details"),'blue',attrs=['bold']))
print(colored(("4. Balance Enuiry"),'blue',attrs=['bold']))
print(colored(("5. Close An Account"),'blue',attrs=['bold']))
print(colored(("6. Feedback Form"),'blue',attrs=['bold']))
print(colored(("7. Quit"),'blue',attrs=['bold']))
voice.Speak("ENTER YOUR CHOICE")
voice.Speak("1 to Deposit amount")
voice.Speak('2 to Withdraw amount')
voice.Speak("3 for Account Details")
voice.Speak("4 for Balance Enquiry")
voice.Speak("5 to Close an account")
voice.Speak("6 for Feedback Form")
voice.Speak("7 to Quit")
n=int(input(colored("ENTER YOUR CHOICE: ",'blue',attrs=['bold'])))
while True:
   if(n == 1):
      depoAmo()
   elif(n == 2):
       witham()
```

```
        elif(n == 3):
            dispacc()
        elif(n == 4):
            balance()
        elif(n == 5):
            closeac()
        elif(n == 6):
            fb()
        elif(n == 7):
            quit()
        else:
            print(colored(("The choice entered is wrong!\n"),'green'))
            voice.Speak("The choice entered is wrong!")
            main()
    main()
mycon.close()
```

OUTPUT

THIS IS YOUR DEFAULT VOICE ASSISTANT MIZO !! IF YOU WISH TO C ONTINUE WITH ME ENTER(F)

IF YOU WISH TO CONTINUE WITH DAVID, ENTER(M)

ENTER YOUR CHOICE:F

New here? Create an account using SignUp!

ENTER YOUR CHOICE(SignUP(1) or LogIn(2)): 1

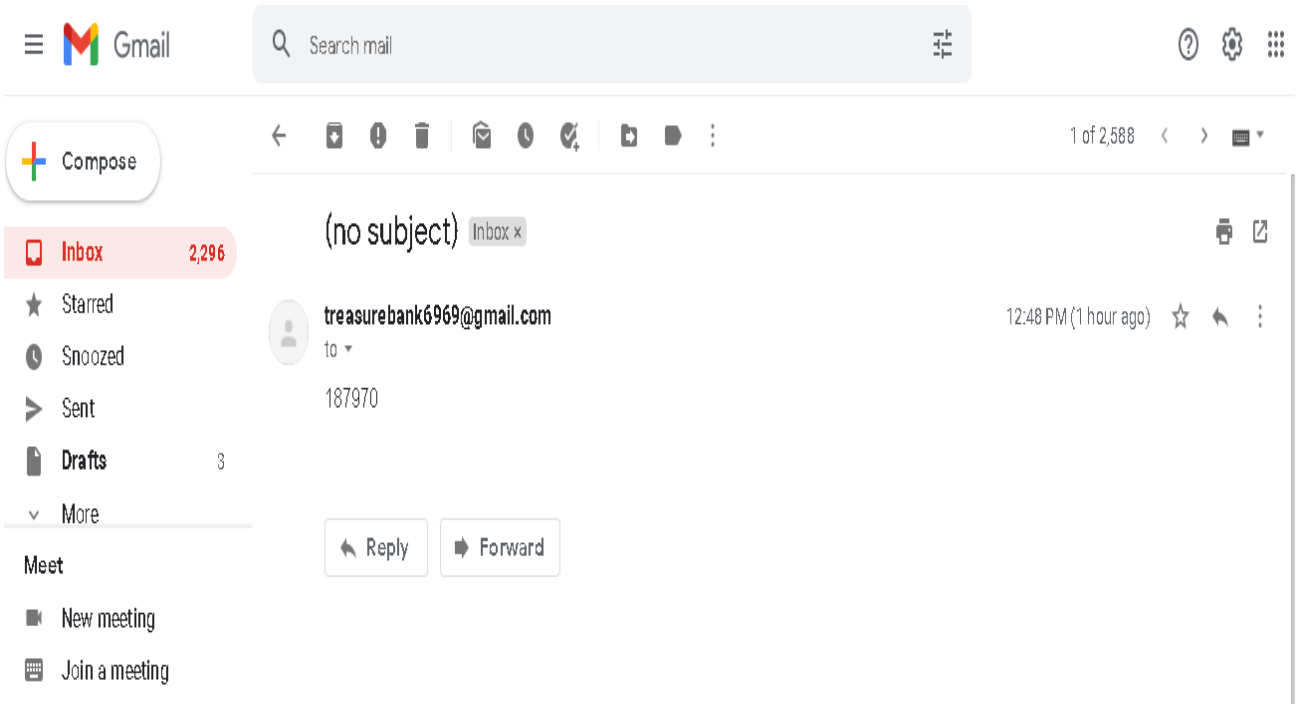
YOU CHOSE TO SIGNUP!

ENTER YOUR FULLNAME: Harshit Sharma

ENTER YOUR DATE OF BIRTH (YYYY/MM/DD): 2004/10/28

** **IMPORTANT**
YOUR EMAIL ID IS NECESSARY FOR YOU TO RESET YOUR PASSWORD!!

ENTER YOUR EMAIL ID: dimpu714@gmail.com



Enter the OTP sent to your mail: 187970

Your email id is verified!!

ENTER YOUR MOBILE NUMBER: 9876543210

Your mobile number is valid!

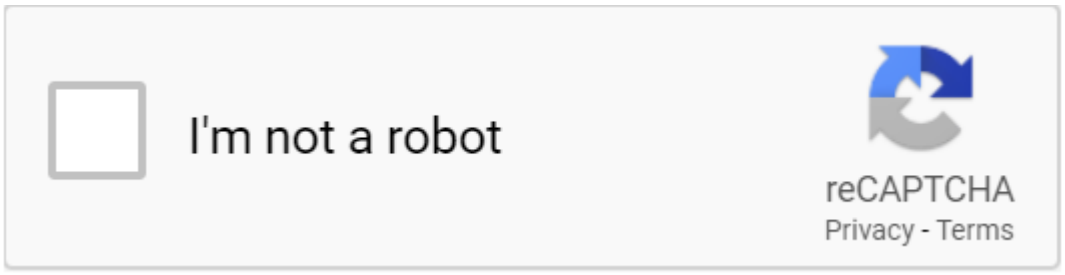
ENTER YOUR PERMANENT ADDRESS: Indira Nagar, Adyar, Chennai-20

Your account number is: 2877

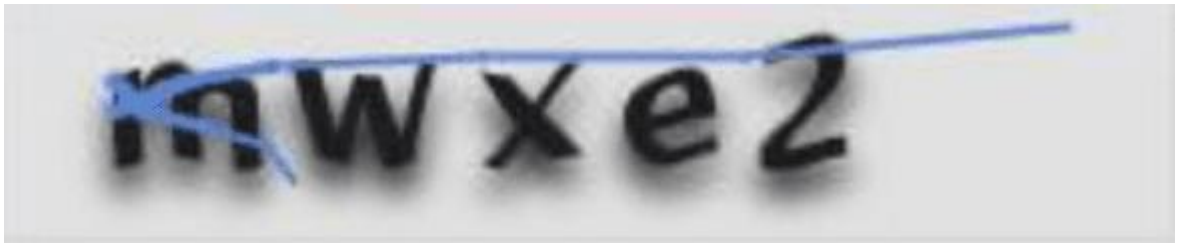
ENTER YOUR PASSWORD(MAX 15 CHARACTERS): ••••••••

Enter the credit amount(in rupees): 20000

** Recaptcha

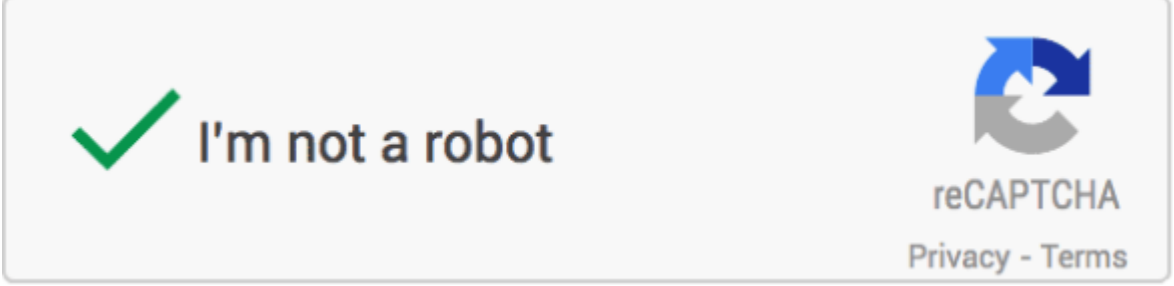


WOULD YOU LIKE TO PROCEED?(Y/N): Y

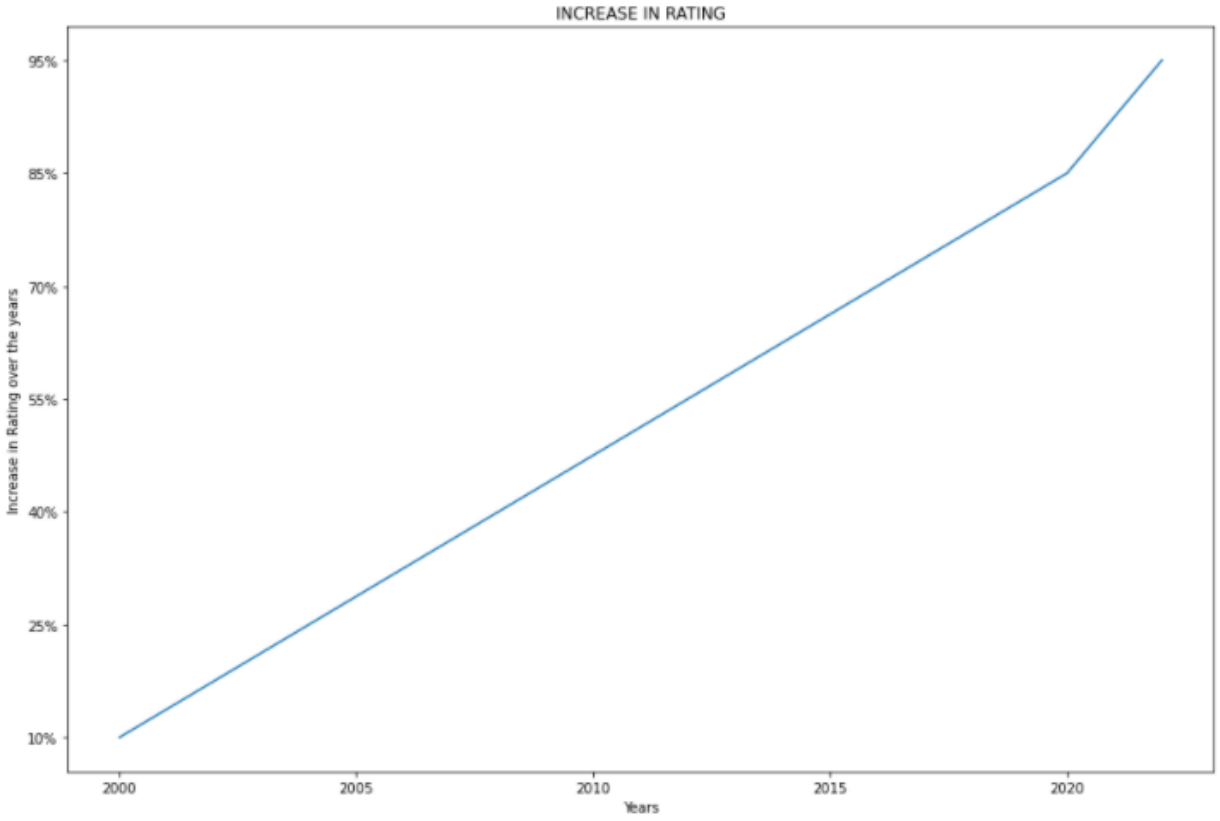


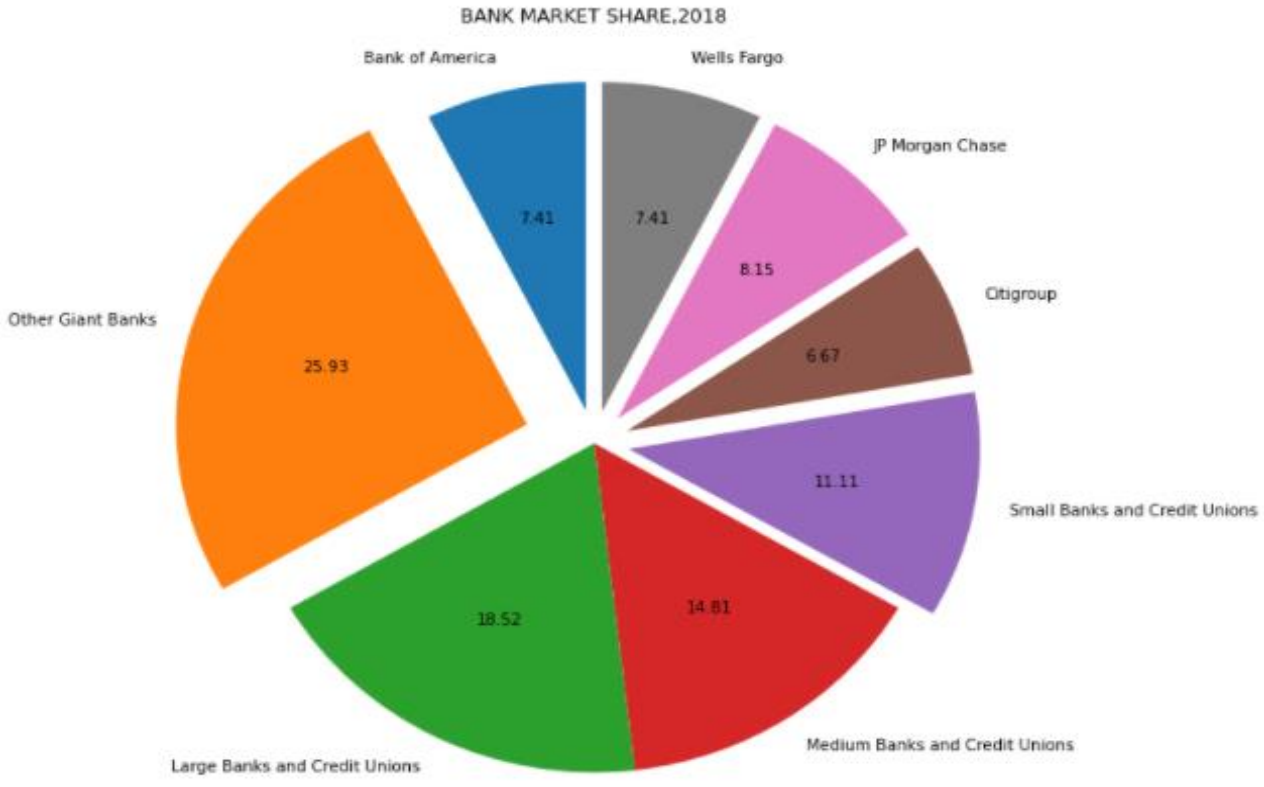
ENTER THE TEXT IN THE IMAGE: mwxe2

RECAPTCHA SUCCESSFUL



✈✈✈


INCREASE IN RATING
95%
85%
70%
55%
40%
25%
10%
Increase in Rating over the years
2000
2005
2010
2015
2020
Years


BANK MARKET SHARE,2018
Bank of America
Wells Fargo
JP Morgan Chase
Citigroup
Small Banks and Credit Unions
Medium Banks and Credit Unions
Large Banks and Credit Unions
Other Giant Banks
7.41
7.41
8.15
6.67
11.11
14.81
18.52
25.93

MAIN MENU

****MAIN MENU****
1. Deposit Amount
2. Withdraw Amount
3. Account Details
4. Balance Enuiry
5. Close An Account
6. Feedback Form
7. Quit
ENTER YOUR CHOICE: 1

YOU CHOSE TO DEPOSIT AN AMOUNT!

ENTER YOUR ACCOUNT NUMBER: 2877
ENTER YOUR PASSWORD: ••••••••

Enter amount to be deposited:2000
Account Updated Succesfully!!!!!

****MAIN MENU****
1. Deposit Amount
2. Withdraw Amount
3. Account Details
4. Balance Enuiry
5. Close An Account
6. Feedback Form
7. Quit
ENTER YOUR CHOICE: 2

YOU CHOSE TO WITHDRAW AN AMOUNT!

ENTER YOUR ACCOUNT NUMBER: 2877
ENTER YOUR PASSWORD: ·····

Enter amount to be withdrawn:2000
Account Updated Succesfully!!!!!

****MAIN MENU****
1. Deposit Amount
2. Withdraw Amount
3. Account Details
4. Balance Enuiry
5. Close An Account
6. Feedback Form
7. Quit
ENTER YOUR CHOICE: 3

YOU CHOSE TO SEE YOUR ACCOUNT DETAILS!

ENTER YOUR ACCOUNT NUMBER: 2877
ENTER YOUR PASSWORD: ·····

Harshit Sharma 2004-10-28 dimpu714@gmail.com 9876543210 Indira Nagar, Adyar, Ch ennai-20 2877 harshit123 20000.0

****MAIN MENU****
1. Deposit Amount
2. Withdraw Amount
3. Account Details
4. Balance Enuiry
5. Close An Account
6. Feedback Form
7. Quit
ENTER YOUR CHOICE: 4
YOU CHOSE TO SEE YOUR ACCOUNT BALANCE!

ENTER YOUR ACCOUNT NUMBER: 2877
ENTER YOUR PASSWORD: ·····

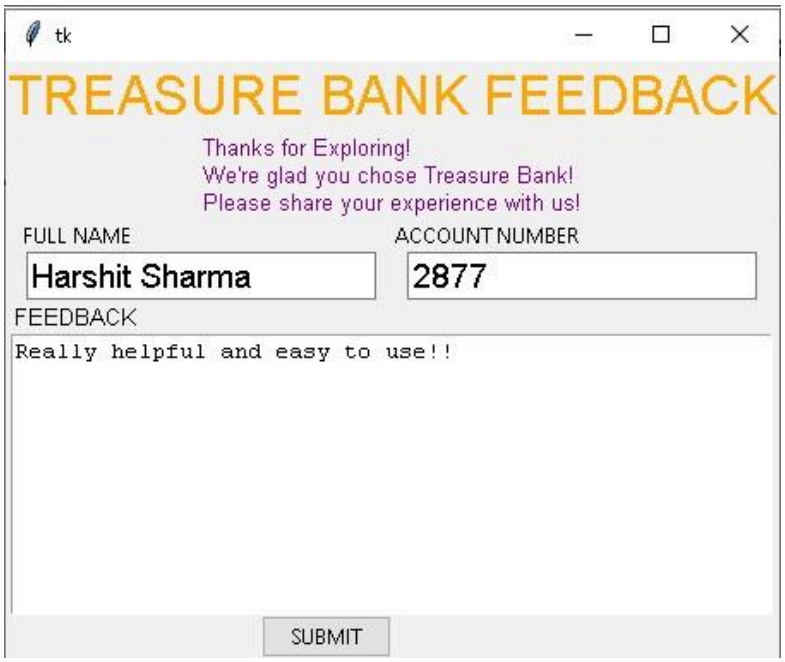
('Balance of account', '2877', 'is', 20000)

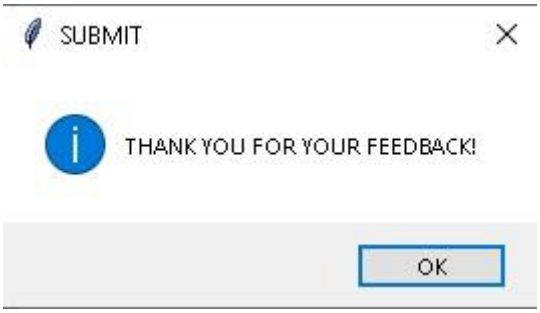
MAIN MENU
1. Deposit Amount
2. Withdraw Amount
3. Account Details
4. Balance Enuiry
5. Close An Account
6. Feedback Form
7. Quit
ENTER YOUR CHOICE: 5
YOU CHOSE TO CLOSE YOUR ACCOUNT!

ENTER YOUR ACCOUNT NUMBER: 2877
ENTER YOUR PASSWORD: ·····

Your Account has been closed!!

MAIN MENU
1. Deposit Amount
2. Withdraw Amount
3. Account Details
4. Balance Enuiry
5. Close An Account
6. Feedback Form
7. Quit
ENTER YOUR CHOICE: 6





THANKYOU FOR YOUR FEEDBACK

MAIN MENU
1. Deposit Amount
2. Withdraw Amount
3. Account Details
4. Balance Enuiry
5. Close An Account
6. Feedback Form
7. Quit
ENTER YOUR CHOICE: 7

TREASURE BANK
Since 2021

WELCOME TO TREASURE BANK

THIS IS YOUR DEFAULT VOICE ASSISTANT MIZO!!🤗 IF YOU WISH TO C ONTINUE WITH ME ENTER(F)

IF YOU WISH TO CONTINUE WITH DAVID, ENTER(M)

ENTER YOUR CHOICE:M

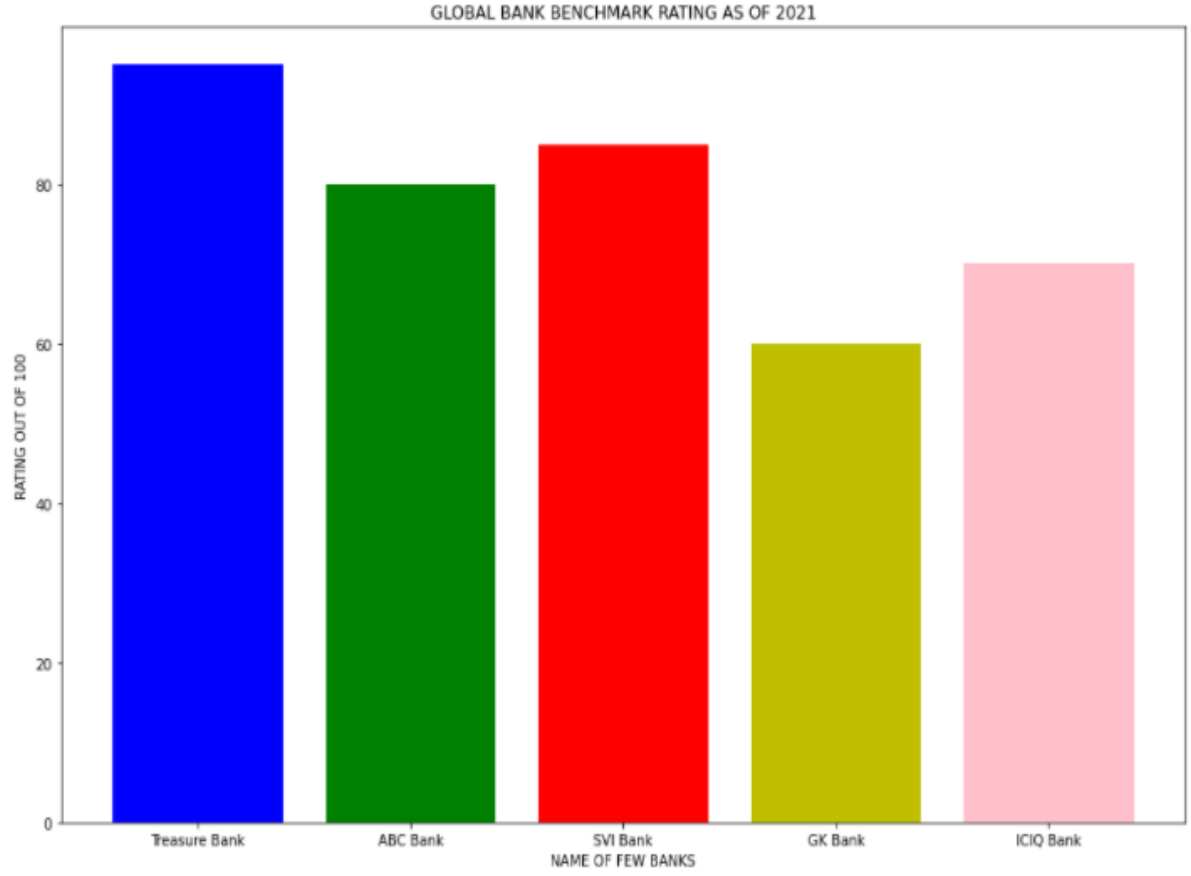
New here? Create an account using SignUp!

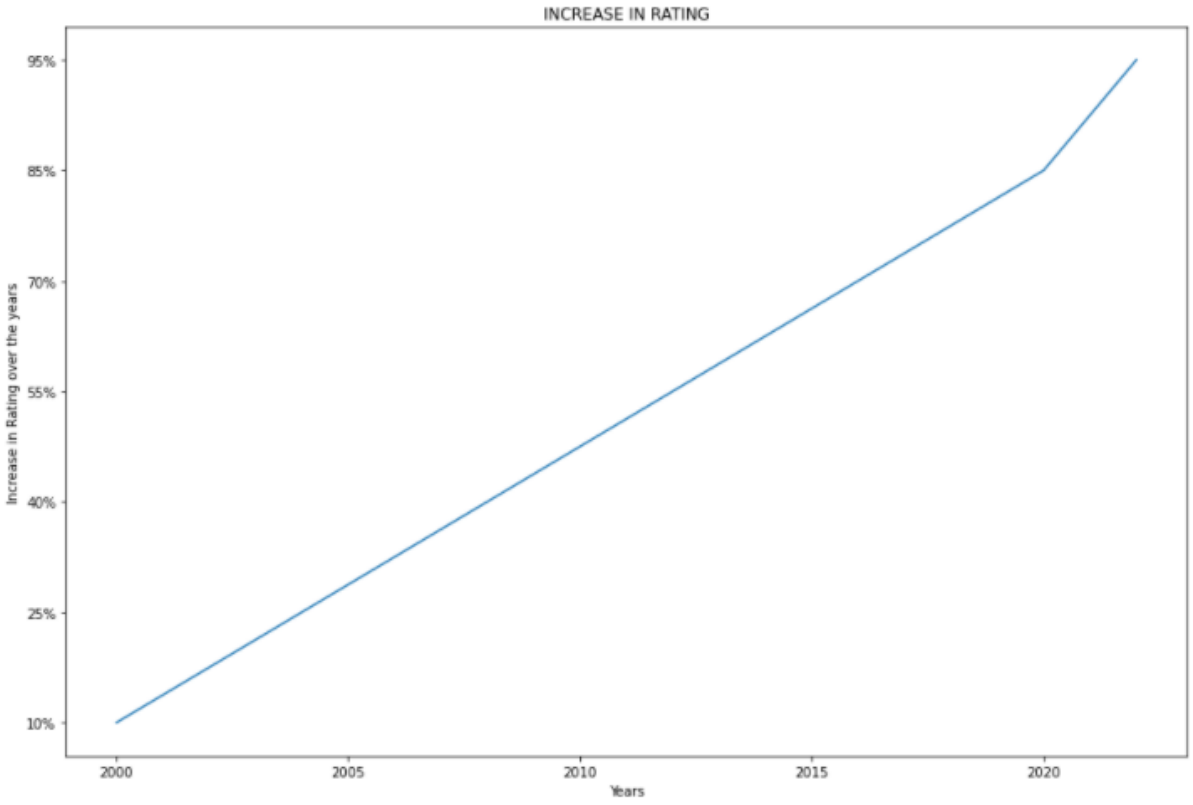
ENTER YOUR CHOICE(SignUP(1) or LogIn(2)): 2

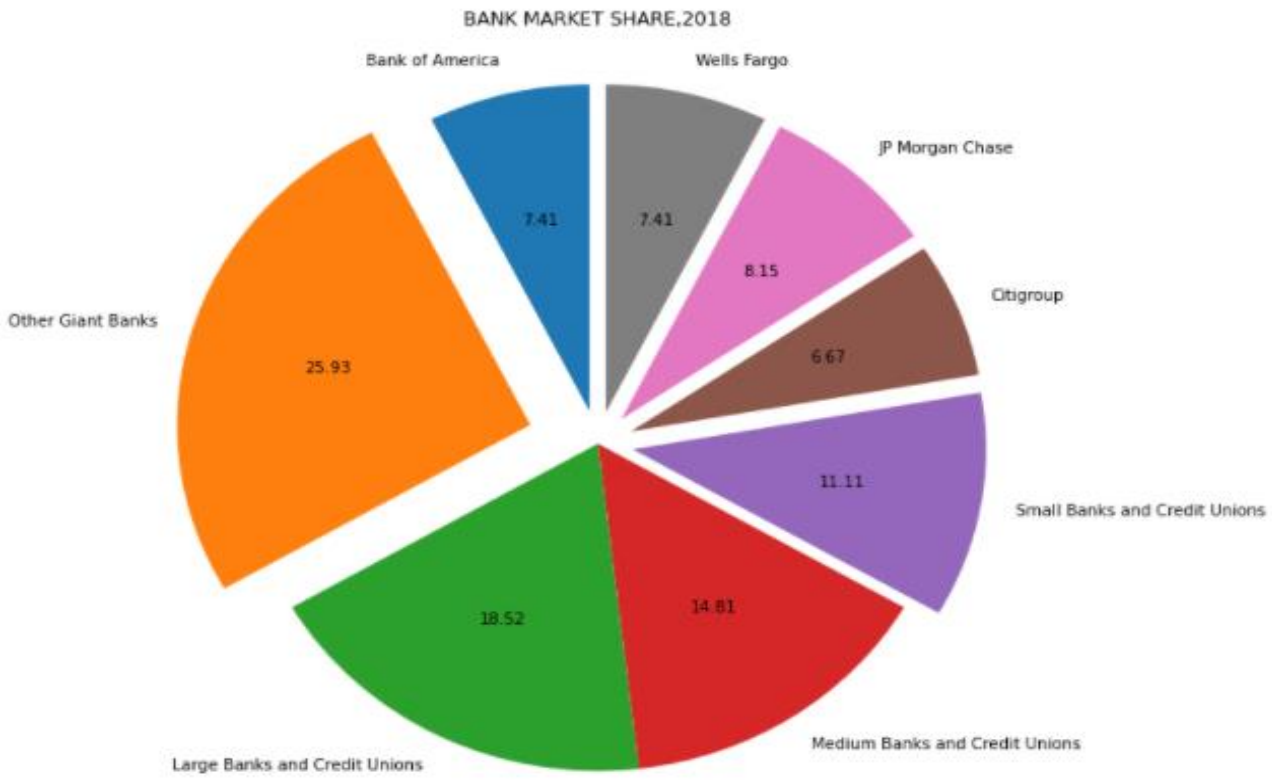
YOU CHOSE TO LOGIN!

ENTER YOUR ACCOUNT NUMBER: 2005
ENTER YOUR PASSWORD: ••••••••

YOU HAVE SUCCESSFULLY LOGGED IN


GLOBAL BANK BENCHMARK RATING AS OF 2021
RATING OUT OF 100
0
20
40
60
80
Treasure Bank
ABC Bank
SVI Bank
GK Bank
ICIQ Bank
NAME OF FEW BANKS


INCREASE IN RATING
Increase in Rating over the years
10%
25%
40%
55%
70%
85%
95%
2000
2005
2010
2015
2020
Years



MAIN MENU

****MAIN MENU****
1. Deposit Amount
2. Withdraw Amount
3. Account Details
4. Balance Enuiry
5. Close An Account
6. Feedback Form
7. Quit
ENTER YOUR CHOICE: 1

YOU CHOSE TO DEPOSIT AN AMOUNT!

ENTER YOUR ACCOUNT NUMBER: 2005
ENTER YOUR PASSWORD: ·····

Enter amount to be deposited:2000
Account Updated Succesfully!!!!!

****MAIN MENU****
1. Deposit Amount
2. Withdraw Amount
3. Account Details
4. Balance Enuiry
5. Close An Account
6. Feedback Form
7. Quit
ENTER YOUR CHOICE: 2

YOU CHOSE TO WITHDRAW AN AMOUNT!

ENTER YOUR ACCOUNT NUMBER: 2005
ENTER YOUR PASSWORD: ·····

Enter amount to be withdrawn:2000
Account Updated Succesfully!!!!!

****MAIN MENU****
1. Deposit Amount
2. Withdraw Amount
3. Account Details
4. Balance Enuiry
5. Close An Account
6. Feedback Form
7. Quit
ENTER YOUR CHOICE: 3

YOU CHOSE TO SEE YOUR ACCOUNT DETAILS!

ENTER YOUR ACCOUNT NUMBER: 2005
ENTER YOUR PASSWORD: ·····

Harsh 2004-10-28 dimpu714@gmail.com 0987654321 Adyar 2005 harsh 1000.0

MAIN MENU
1. Deposit Amount
2. Withdraw Amount
3. Account Details
4. Balance Enuiry
5. Close An Account
6. Feedback Form
7. Quit
ENTER YOUR CHOICE: 4
YOU CHOSE TO SEE YOUR ACCOUNT BALANCE!

ENTER YOUR ACCOUNT NUMBER: 2005
ENTER YOUR PASSWORD: ·····

('Balance of account', '2005', 'is', 1000)

MAIN MENU
1. Deposit Amount
2. Withdraw Amount
3. Account Details
4. Balance Enuiry
5. Close An Account
6. Feedback Form
7. Quit
ENTER YOUR CHOICE: 5
YOU CHOSE TO CLOSE YOUR ACCOUNT!

ENTER YOUR ACCOUNT NUMBER: 2005
ENTER YOUR PASSWORD: ·····

Your Account has been closed!!

MAIN MENU
1. Deposit Amount
2. Withdraw Amount
3. Account Details
4. Balance Enuiry
5. Close An Account
6. Feedback Form
7. Quit
ENTER YOUR CHOICE: 6

THANKYOU FOR YOUR FEEDBACK

****MAIN MENU****
1. Deposit Amount
2. Withdraw Amount
3. Account Details
4. Balance Enuiry
5. Close An Account
6. Feedback Form
7. Quit
ENTER YOUR CHOICE: 7

CONCLUSION

Our project is only a humble venture to satisfy the needs of a bank management system. Several user friendly codes were implemented in the project. Many data visualization graphs were included to make the website attractive. Making this project gave us the opportunity to learn about the various libraries of python and its various functions. Through the process, we also learnt a lot about connecting MySQL and python. We also learned a lot about making our presentation better.

BIBLIOGRAPHY

- Informatics Practices A Textbook For Class-11 By Sumita Arora
- Informatics Practices A Textbook For Class-12 By Sumita Arora
- Google
- Web development tutorial: https://www.w3resource.com/