BY - ***Sakshi Sharma***

Project Name: Virtual Assisstant

INTRODUCTION

In today's era almost all tasks are digitalized. We have Smartphone in hands and it is nothing less than having world at your finger tips. These days we aren't even using fingers. We just speak of the task and it is done. There exist systems where we can say Text Dad, "I'll be late today." And the text is sent. That is the task of a Virtual Assistant.

Virtual Assistants are software programs that help you ease your day to day tasks, such as asking time and date, playing songs, launching application etc . They can take commands via voice. We have so many virtual assistants, such as Apple's Siri, Amazon's Alexa and Microsoft's Cortana. My assistant is a desktop application and I have named it DEVI- DIGITALLY EXPERT VOICE INTELLIGENT. This system is designed to be used efficiently on desktops. DEVI is effortless to use. Call it and give the command. And within seconds, it gets executed. Voice searches have dominated over text search. Web searches conducted via mobile devices have only just overtaken those carried out using a computer and the analysts are already predicting that 80% of searches will be via voice by 2025.Virtual assistants are turning out to be smarter than ever. Allow your intelligent assistant to make email work for you.

One of the main advantages of voice searches is their rapidity. In fact, voice is reputed to be four times faster than a written search: whereas we can write about 40 words per minute, we are capable of speaking around 150 during the same period of time15. In this respect, the ability of personal assistants to accurately recognize spoken words is a prerequisite for them to be adopted by consumers.

Abstract

The purpose of making this application is to adding the AI features into the normal voice assistant. like google and siri doesn't have the AI feature at the day like smart reminders, smart suggestions, custom commands, etc. In this application we put these features and make it AI voice assistant.

SOFTWARE REQUIREMENT

Visual Code

Windows 10 OS platform

Python

HARDWARE REQUIREMENT

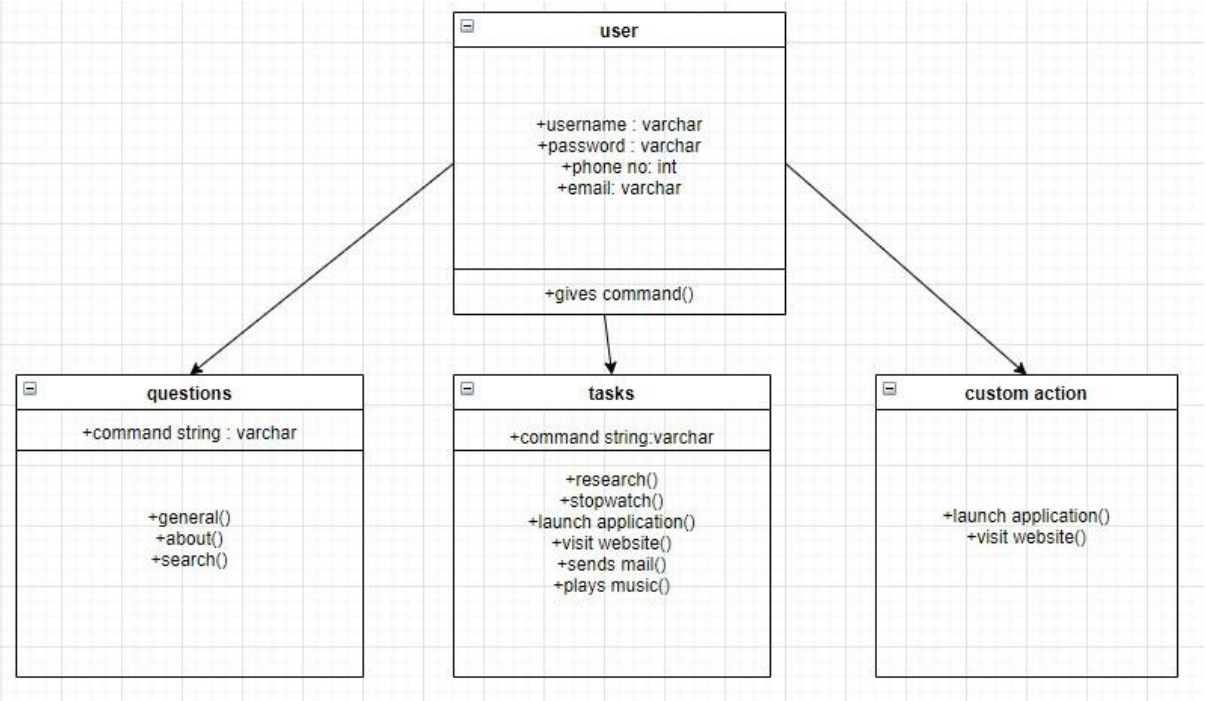
Windows pc Or laptop

8 GB Ram for building purpose

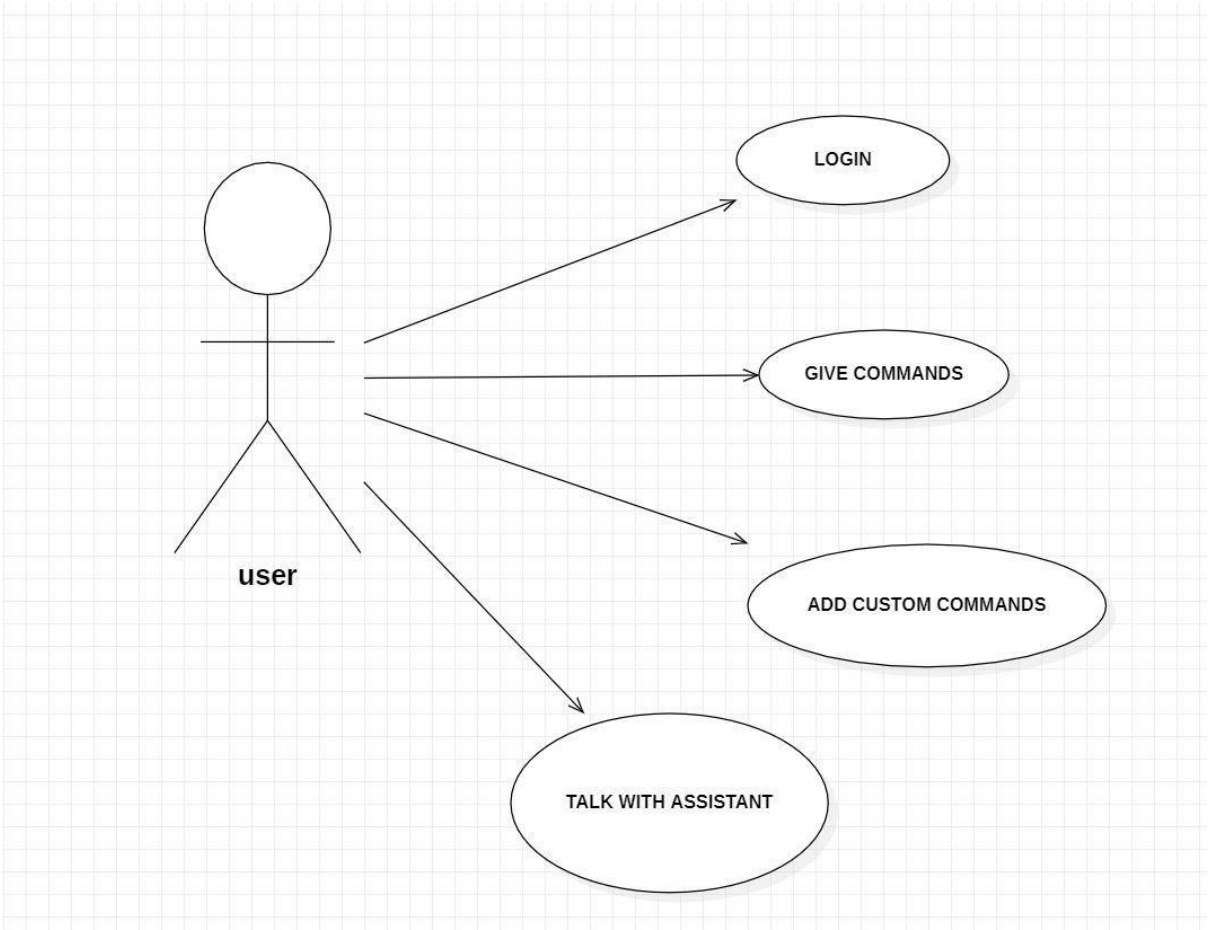
Intel i3 7 th gen or above

System Analysis

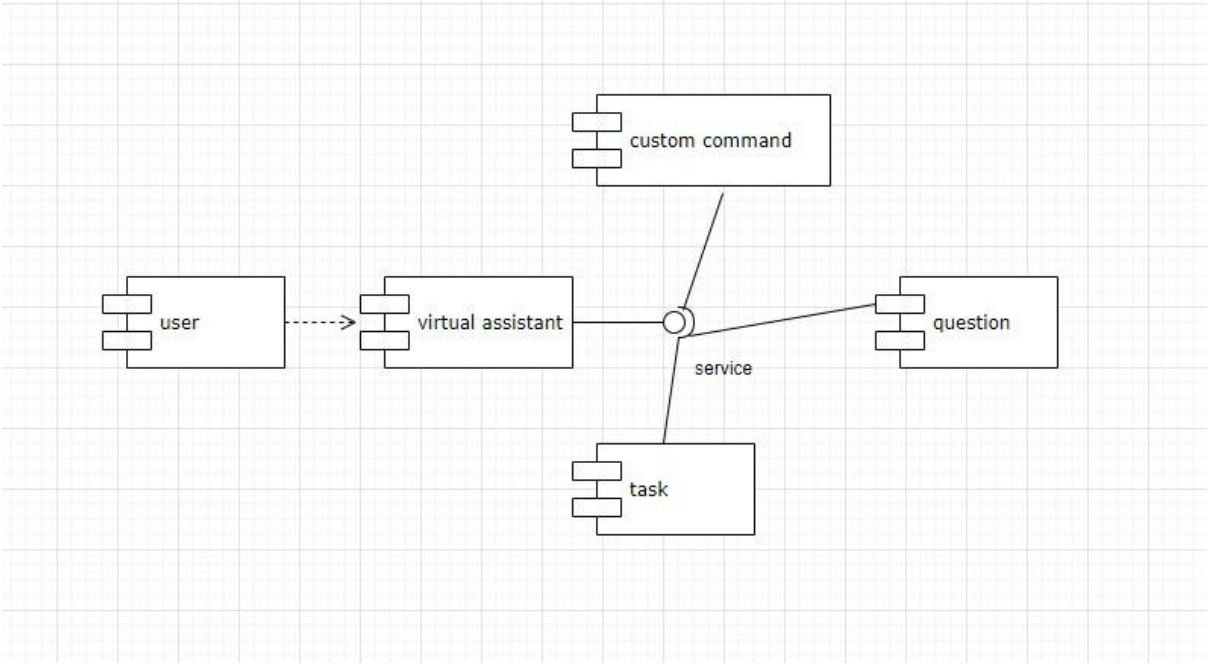
Class Diagram



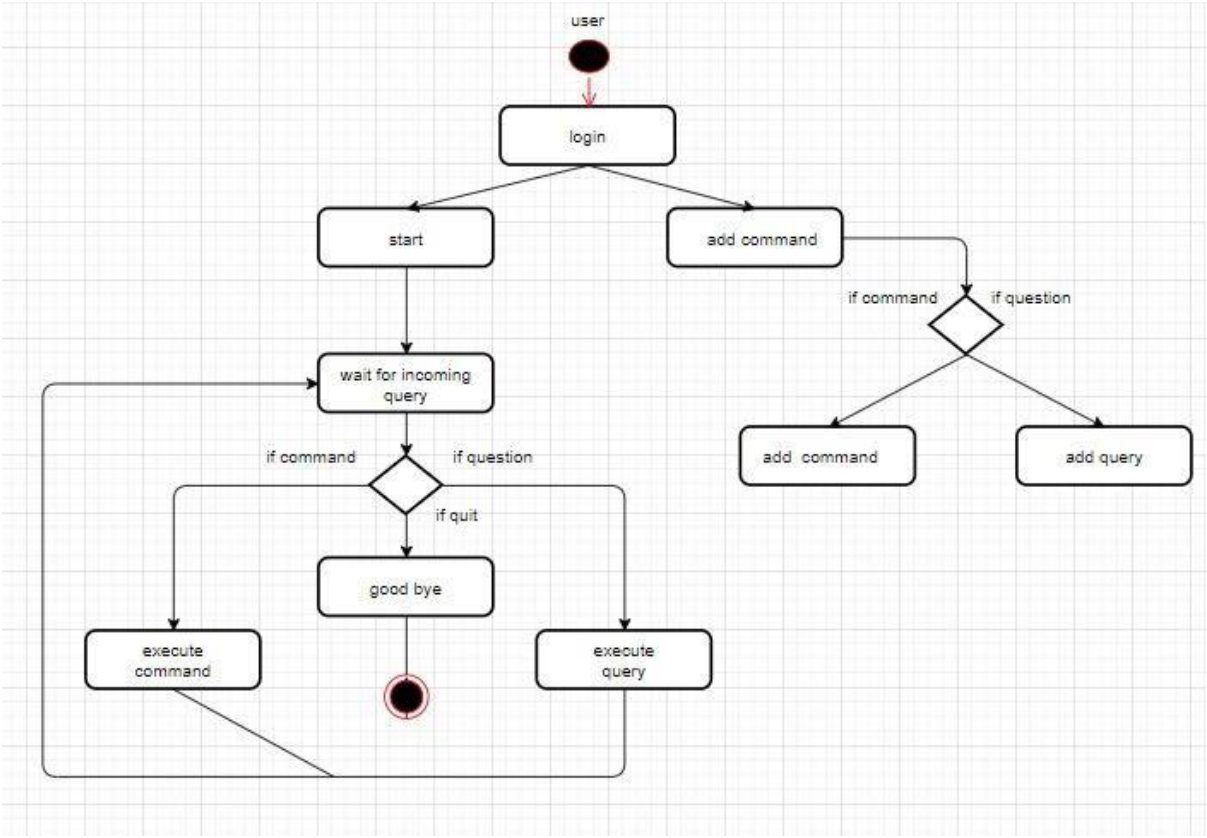
Use Case Diagram



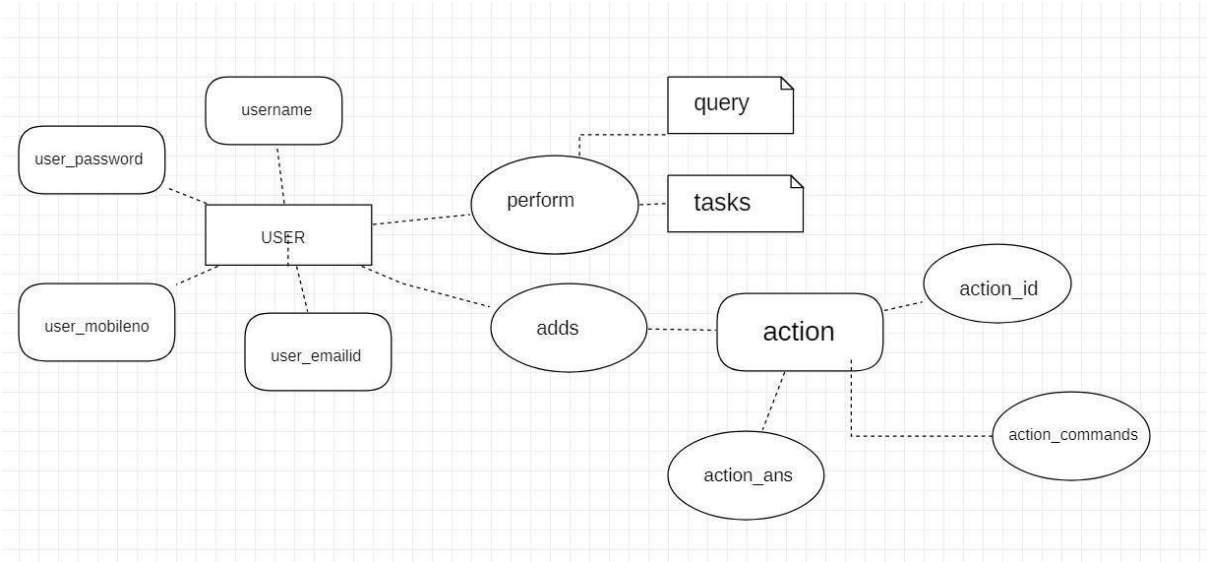
Component Diagram



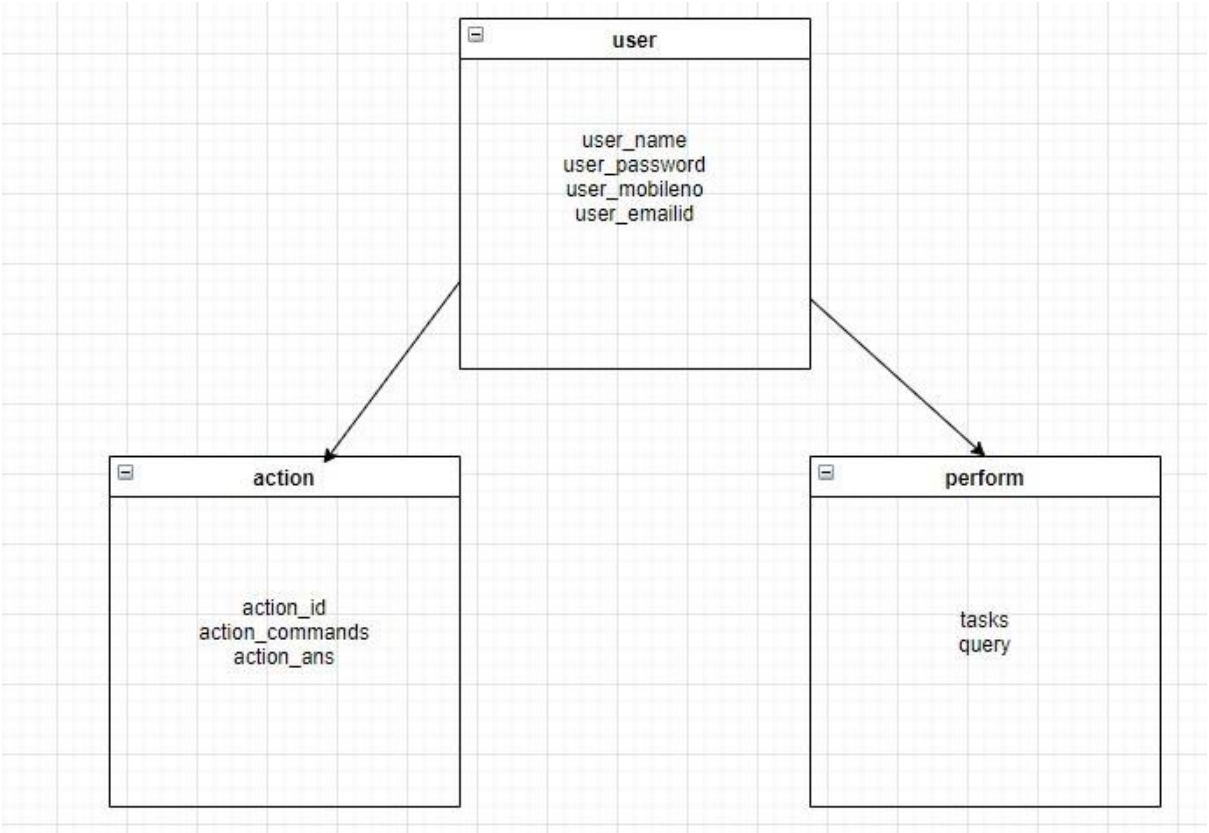
Activity Diagram



ER Diagram



ER Table



My Application database: logindb

All Tables:

	Table	Action						Rows	Type	Collation	Size	Overhead
☐	commands	☆	Browse	Structure	Search	Insert	Empty	Drop	9	InnoDB	utf8mb4_general_ci	16.0 KiB	-
☐	usertable	☆	Browse	Structure	Search	Insert	Empty	Drop	5	InnoDB	utf8mb4_general_ci	16.0 KiB	-
	2 tables	Sum							14	InnoDB	utf8mb4_general_ci	32.0 KiB	0 B

commands Table:

	id	command	ans
Edit Copy Delete	11	open chrome	C:\\Program Files\\Google\\Chrome\\Application\\ch...
Edit Copy Delete	12	open python	C:\\Program Files\\python.exe
Edit Copy Delete	13	open youtube	https://www.youtube.com/
Edit Copy Delete	14	open google	google.com
Edit Copy Delete	15	open Dev c	C:\\Program Files (x86)\\Dev-Cpp\\dev.exe
Edit Copy Delete	16	open Java T Point	https://www.javatpoint.com/
Edit Copy Delete	17	open netbeans	C:\\Program Files\\NetBeans 8.1\\bin\\netbeans.exe
Edit Copy Delete	18	open vs code	C:\\Users\\ADMIN\\AppData\\Local\\Programs\\Micros...
Edit Copy Delete	20	open apple website	https://www.apple.com/

usertable Table:

username	password	phone	email
karan	123	665522448	karan@gmail.com
sakshi	123456	8546553784	sakshi@gmail.com
admin	12345	9861237845	admin@gmail.com
tester	testy	4567846786	test@gmail.com
priya	priyaa	9853677546	priya456@gmail.com

login.py from tkinter import

* import tkinter.messagebox

import os import

mysql.connector import

subprocess mydb =

mysql.connector.connect(

host="localhost",

user="root", password="",

database="logindb"

)

```
def run():
    os.system('python main.py')
def login():
        global root2   root2 =
Toplevel(root4)
root2.title("Account Login for DEVI")
root2.geometry("400x300")
root2.config(bg="white")     global
username_verification       global
password_verification
          Label(root2, text='Please Enter your Account Details', bd=5,relief="groove",
font=('arial',
12, 'bold'), fg="white",
         bg="purple",width=300).pack()
username_verification = StringVar()
password_verification = StringVar()
       Label(root2, text="").pack()
   Label(root2, text="Username :", fg="black", font=('arial', 12, 'bold')).pack()
     Entry(root2, textvariable=username_verification).pack()
       Label(root2, text="").pack()
   Label(root2, text="Password :", fg="black", font=('arial', 12, 'bold')).pack()
    Entry(root2, textvariable=password_verification, show="*").pack()
       Label(root2, text="").pack()
  Button(root2, text="Login", bg="purple", fg='white', relief="groove", font=('arial', 12,
'bold'),command=login_verification).pack()
         Label(root2, text="")
def register():
```

```
        global root3  root3 =
Toplevel(root4)       root3.title("Account
register for DEVI")
root3.geometry("500x500")
root3.config(bg="white")    global
username_reg        global
password_reg        global phone_reg
global email_reg
        Label(root3, text='Please Enter your Account Details', bd=5,font=('arial', 12,
'bold'), relief="groove", fg="white",
        bg="purple",width=500).pack()
username_reg = StringVar()
password_reg = StringVar()
phone_reg = StringVar()
email_reg = StringVar()
      Label(root3, text="").pack()
  Label(root3, text="Username :", fg="black", font=('arial', 12, 'bold')).pack()
    Entry(root3, textvariable=username_reg).pack()
      Label(root3, text="").pack()
  Label(root3, text="Password :", fg="black", font=('arial', 12, 'bold')).pack()
   Entry(root3, textvariable=password_reg, show="*").pack()
      Label(root3, text="").pack()
        Label(root3, text="phone no :", fg="black", font=('arial', 12, 'bold')).pack()
Entry(root3, textvariable=phone_reg).pack()
        Label(root3, text="").pack()
  Label(root3, text="Email id :", fg="black", font=('arial', 12, 'bold')).pack()
```

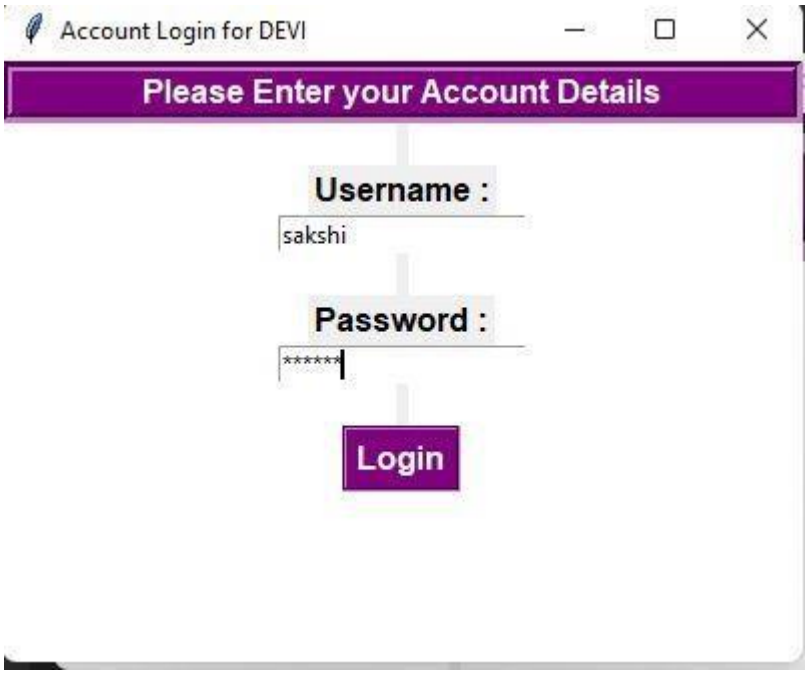
```
    Entry(root3, textvariable=email_reg).pack()

     Label(root3, text="").pack()

  Button(root3, text="Register", bg="purple", fg='white', relief="groove", font=('arial', 12, 'bold'),command=reg_verification).pack()

Label(root3, text="")

def logged_destroy():

        logged_message.destroy()

root2.destroy()

def failed_destroy():

      failed_message.destroy()

def logged():

        global logged_message

logged_message = Toplevel(root2)

logged_message.title("Welcome")

logged_message.geometry("500x100")

        Label(logged_message, text="Login Successfully!... Welcome {} ".format(username_verification.get()), fg="green", font="bold").pack()

        Button(logged_message, text="Exit", bg="purple", fg='white', relief="groove", font=('arial', 12, 'bold'), command=run).pack()


def failed():

        global failed_message

failed_message = Toplevel(root2)

failed_message.title("Invalid Message")

failed_message.geometry("500x100")
```

```
                Label(failed_message, text="Invalid Username or Password", fg="red",
                                                                    font="bold").pack()

    Label(failed_message, text="").pack()

        Button(failed_message,text="Ok", bg="purple", fg='white', relief="groove",
font=('arial', 12, 'bold'), command=failed_destroy).pack()


def login_verification():

   user_verification =username_verification.get()

pass_verification= password_verification.get()

if(user_verification == "" or pass_verification == ""):

print("Oops!","Your information can't be empty!")

return

   mycursor = mydb.cursor()     sql = "select username, password from

usertable where username=%s and password=%s"     val =

(user_verification,pass_verification)     mycursor.execute(sql, val)     result =

mycursor.fetchone()

   if result:

logged()     else:

      failed() def

reg_verification():

        user_verification = username_reg.get()

pass_verification = password_reg.get()

phone_verification = phone_reg.get()

email_verification=email_reg.get() mycursor =

mydb.cursor()

        sql = "INSERT INTO usertable(username, password, phone, email) VALUES
```

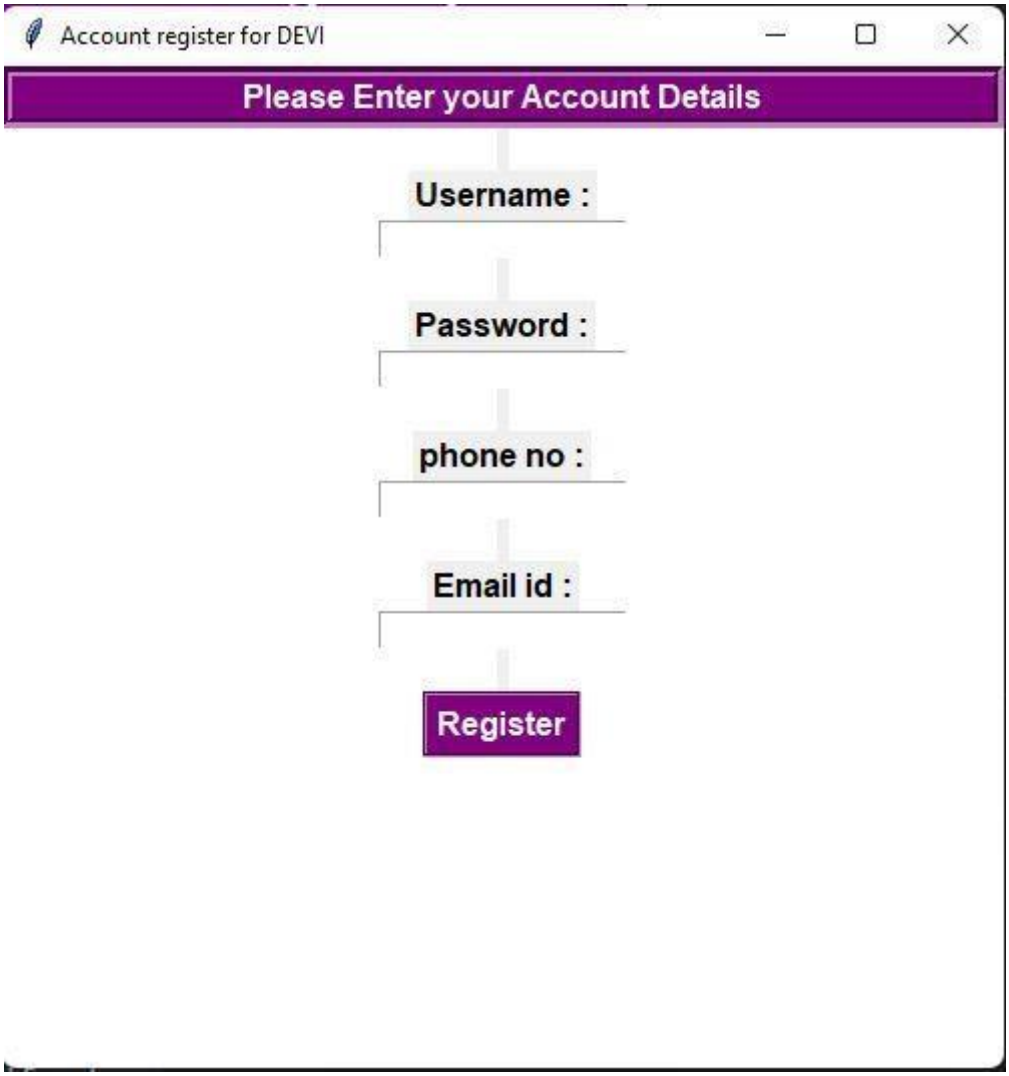
```
(%s, %s, %s, %s)"       val = (user_verification, pass_verification,

phone_verification, email_verification)     mycursor.execute(sql, val)

mydb.commit()

          print(mycursor.rowcount, "record inserted.")

root3.destroy()

def mainS():     global root4

root4 =Tk()

root4.config(bg="white")

root4.title("DEVI Login Page

")

root4.geometry("400x278")

   Label(root4,text='Welcome to Log In System', bd=20, font=('arial', 20, 'bold'),
relief="groove", fg="white",bg="purple",width=300).pack()

   Label(root4,text="").pack()

   Button(root4,text='Log In', height="1",width="20", bd=8, font=('arial', 12, 'bold'),
relief="groove", fg="white",bg="purple",command=login).pack()

   Label(root4,text="").pack()

   Button(root4,text='Register', height="1",width="20", bd=8, font=('arial', 12, 'bold'),
relief="groove", fg="white",bg="purple",command=register).pack()

   Label(root4,text="").pack()

   Button(root4,text='Exit', height="1",width="20", bd=8, font=('arial', 12, 'bold'),

relief="groove", fg="white",bg="purple",command=exit).pack()

Label(root4,text="").pack() mainS()

root4.mainloop()

def exit():

root4.destroy()

exit()
```

Output:


DEVI Login Page
Welcome to Log In System
Log In
Register
Exit


Account Login for DEVI
Please Enter your Account Details
Username :
sakshi
Password :
******
Login


Welcome
Login Successfully!... Welcome sakshi
Exit



main.py

```
from tkinter import * from
webbrowser import register
import mysql.connector
import PIL.Image,
PIL.ImageTk import pyttsx3
import datetime import
speech_recognition as sr
import wikipedia
```

```
import webbrowser
import os import smtplib
from functools import
partial from PIL import
Image import time
import subprocess

#connecting to the database
mydb =
mysql.connector.connect(
host="localhost",
user="root", password="",
database="logindb"
)
numbers = {'hundred':100, 'thousand':1000,
'lakh':100000} a =
{'DEVI':'virtualbysakshi@gmail.com'} engine =
pyttsx3.init('sapi5') voices =
engine.getProperty('voices')
engine.setProperty('voice', voices[1].id) window =
Tk() global var global var1

var = StringVar()
var1 = StringVar()
def speak(audio):
```

```
engine.say(audio)
engine.runAndWai
t()

def sendemail(to, content):
    server = smtplib.SMTP('smtp.gmail.com', 587)     server.ehlo()     server.starttls()
server.login('email id', 'password') # email id - use any email id whose
security/privacy is off     server.sendmail('email id', to, content)     server.close()

def wishme():
    hour =
int(datetime.datetime.now().hour)
if hour >= 0 and hour <= 12:
var.set("Good Morning ")
window.update()         speak("Good
Morning !")     elif hour >= 12 and hour
<= 18:         var.set("Good Afternoon
!")         window.update()
speak("Good Afternoon !")     else:
        var.set("Good Evening ")
window.update()         speak("Good
Evening !")     speak("Myself DEVI! How
may I help you ")

def takeCommand():
```

```
    r = sr.Recognizer()     with
sr.Microphone() as source:
        var.set("Listening...")
window.update()
print("Listening...")
        r.pause_threshold = 1
        r.energy_threshold = 400
audio = r.listen(source)
    try:
        var.set("Recognizing...")
window.update()         print("Recognizing")
query = r.recognize_google(audio, language='en-
in')     except Exception as e:         return "None"
var1.set(query)     window.update()     return
query

def play():
btn1.configure(bg =
'purple')     wishme()
    while True:
        btn1.configure(bg = 'purple')
query = takeCommand().lower()
        if 'exit' in query:
            var.set("Bye.Have a productive
day")             btn1.configure(bg =
```

```
'#800080')            btn2['state'] =
'normal'            btn0['state'] = 'normal'
window.update()
speak("Bye.Have a productive day")
            break


        elif 'wikipedia' in query:
if 'open wikipedia' in query:
                webbrowser.open('wikipedia.com')
            else:
try:
                    speak("searching wikipedia")
query = query.replace("according to wikipedia", "")
results = wikipedia.summary(query, sentences=5)
speak("According to wikipedia")
var.set(results)                    window.update()
speak(results)                except Exception as e:
                    var.set('sorry sir could not find any results')
window.update()                    speak('sorry sir could not find any results')


        elif 'browser' in query:            var.set('opening '+query[5:])
window.update()            speak('opening '+query[5:])            print(query)
mycursor = mydb.cursor()            command=query
command=command.replace("on","")
command=command.replace("browser","")            print(command)
```

```
mycursor.execute("SELECT id FROM commands WHERE
command='"+command+"'")

result=mycursor.fetchall()
print(result)
mydb.commit()
        str1 = ''
for item in result:
            str1 = str1 +
str(item)
print(str1[1:3])
id=str1[1:3]
        mycursor.execute("SELECT ans FROM commands WHERE id='"+id+"'")
result=mycursor.fetchall()
        mydb.commit()
        str2 = ''
        for item in result:
            str2 = str2 + str(item)
str3=str2.replace("(","")
str3=str3.replace(")","")
str3=str3.replace(",","")
str3=str3.replace("'","")
print(str3)
webbrowser.open(str3)

    elif 'on youtube search' in query:
```

```
        var.set('opening youtube')          window.update()
speak('opening youtube')          command=query[17:]
strr=command.replace(" ","+")
webbrowser.open("https://www.youtube.com/results?search_query="+s
trr)

    elif 'hello' in query:
        var.set('Hello I am Digitally Expert Voice Assistant but u can call
me DEVI ')          window.update()          speak("Hello I am Digitally
Expert Voice Assistant but u can call me DEVI.")

    elif 'play music' in query:
      var.set('Name the song')
      window.update()
      speak('name the song')
      command=query[11:]
      strr=command.replace("
      ","-")
      songstr="https://gaana.co
      m/song/"+strr
      print(songstr)
      webbrowser.open(songst
      r)

    elif 'the time' in query:
```

```
            strtime =
datetime.datetime.now().strftime("%H:%M:%S")
var.set("Sir the time is %s" % strtime)
window.update()             speak("Sir the time is %s"
%strtime)


        elif 'the date' in query:
            strdate = datetime.datetime.today().strftime("%d
%m %y")             var.set("Sir today's date is %s"
%strdate)             window.update()             speak("Sir
today's date is %s" %strdate)


        elif 'thank you' in query:
var.set("Welcome")
window.update()
speak("Welcome")


        elif 'can you do for me' in query:
          var.set('I can do multiple tasks for you . tell me whatever you want to perform
          ') window.update()
          speak('I can do multiple tasks for you . tell me whatever you want to perform
          ')


        elif 'old are you' in query:
```

```
            var.set("I am ancient,I am
infinite")             window.update()
speak("I am ancient,I am infinite")


        elif 'your name' in query:
            var.set("Myself Digitally Expert Voice Assistant but u can call
me DEVI.")             window.update()             speak('myself Digitally
Expert Voice Assistant but u can call me DEVI.')


        elif 'application' in query:
            var.set('opening '+query[5:])             window.update()
speak('opening '+query[5:])             mycursor = mydb.cursor()
command=query             command=command.replace("application","")
print(command)             mycursor.execute("SELECT id FROM commands
WHERE command='"+command+"'")
            result=mycursor.fetchall()


            mydb.commit()
           str1 = '' for item
           in result: str1 =
           str1 + str(item)

            print(str1[1:3])
id=str1[1:3]
```

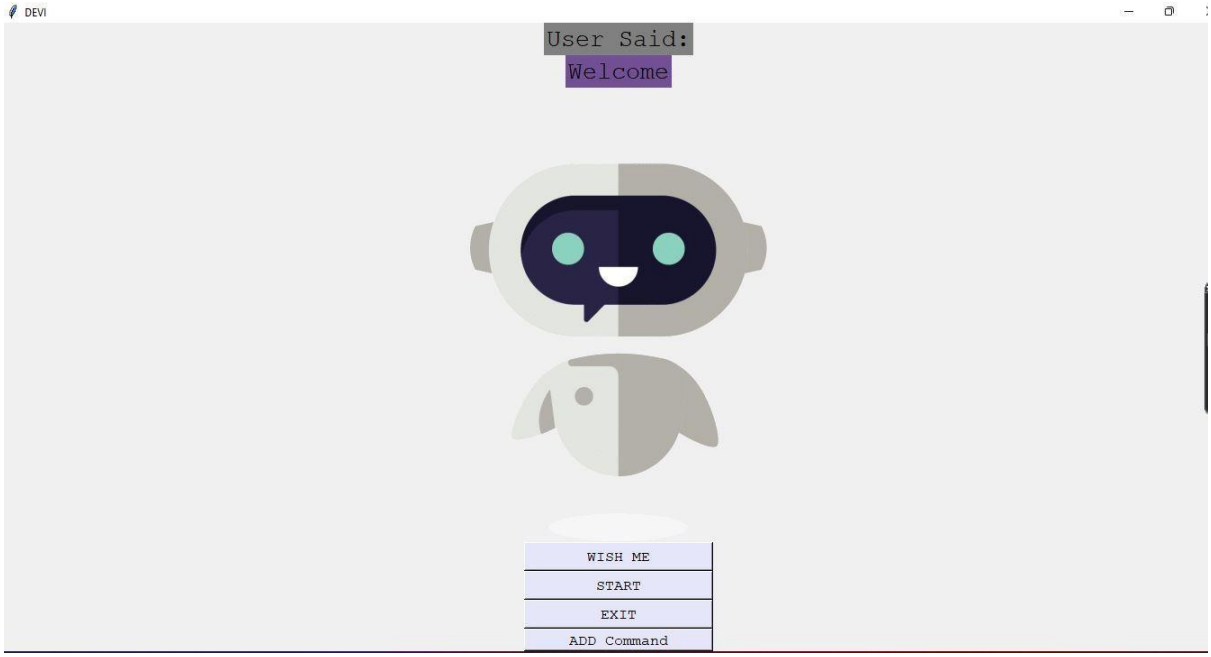
```
        mycursor.execute("SELECT ans FROM commands WHERE
id='"+id+"'")          result=mycursor.fetchall()
mydb.commit()
        str2 = ''
for item in result:
            str2 = str2 +
str(item)
str3=str2.replace("(","")
str3=str3.replace(")","")
str3=str3.replace(",","")
str3=str3.replace("'","")
print(str3)          path =
str3
os.startfile(path)       elif
'stopwatch' in query:
        second = 0              minute = 0
hour = 0            var.set("Stopwatch
has been started")
window.update()
speak("Stopwatch has been started")
        while(True):
            print('\t\t\t\t-------------')
print('\t\t\t\t  %d : %d : %d '%(hour,minute,second))
print('\t\t\t\t-------------')
time.sleep(1)                second+=1
```

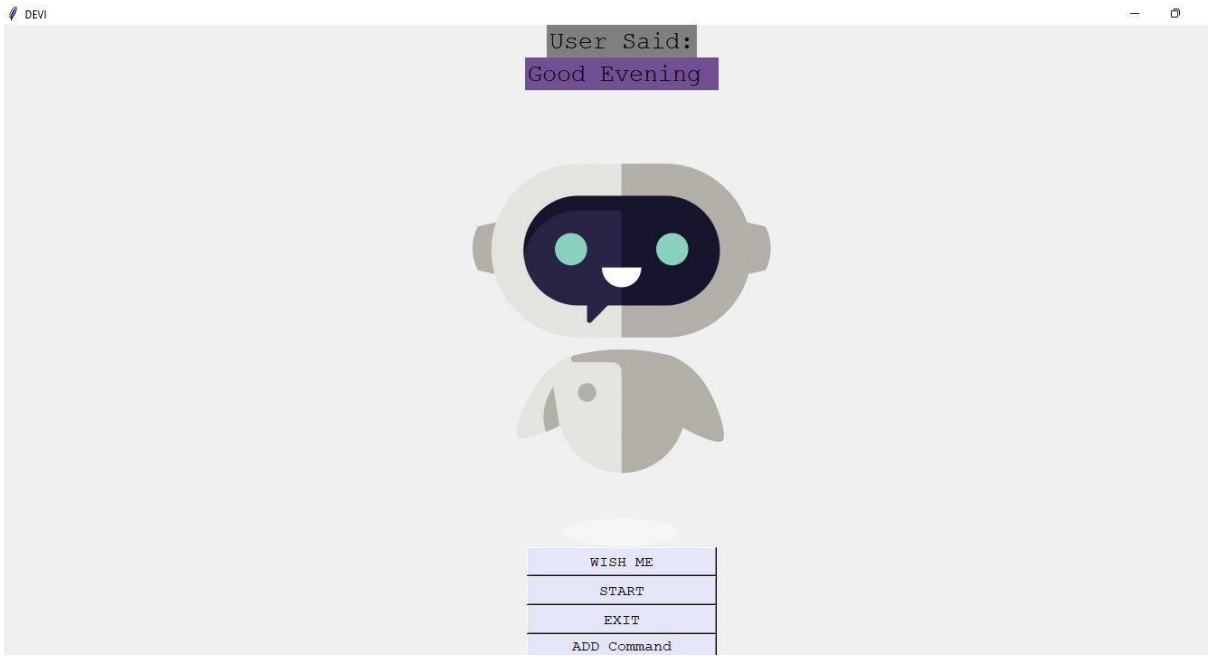
```
if(second == 60):                    second = 0
minute+=1                  if(minute == 60):
minute = 0                     hour+=1;
os.system('cls')


        elif 'email to me' in query:
            try:
                var.set("What should I say")
window.update()                speak('what
should I say')                content = "How
are you??"                to =
a['sawantkaran115@gmail.com']
sendemail(to, content)
var.set('Email has been sent!')
window.update()                speak('Email
has been sent!')


            except Exception as e:
                print(e)                var.set("Sorry Sir! I was
not able to send this email") window.update()

                speak('Sorry Sir! I was not able to send this email')


def update(ind):
    frame = frames[(ind)%100]
    ind += 1
```

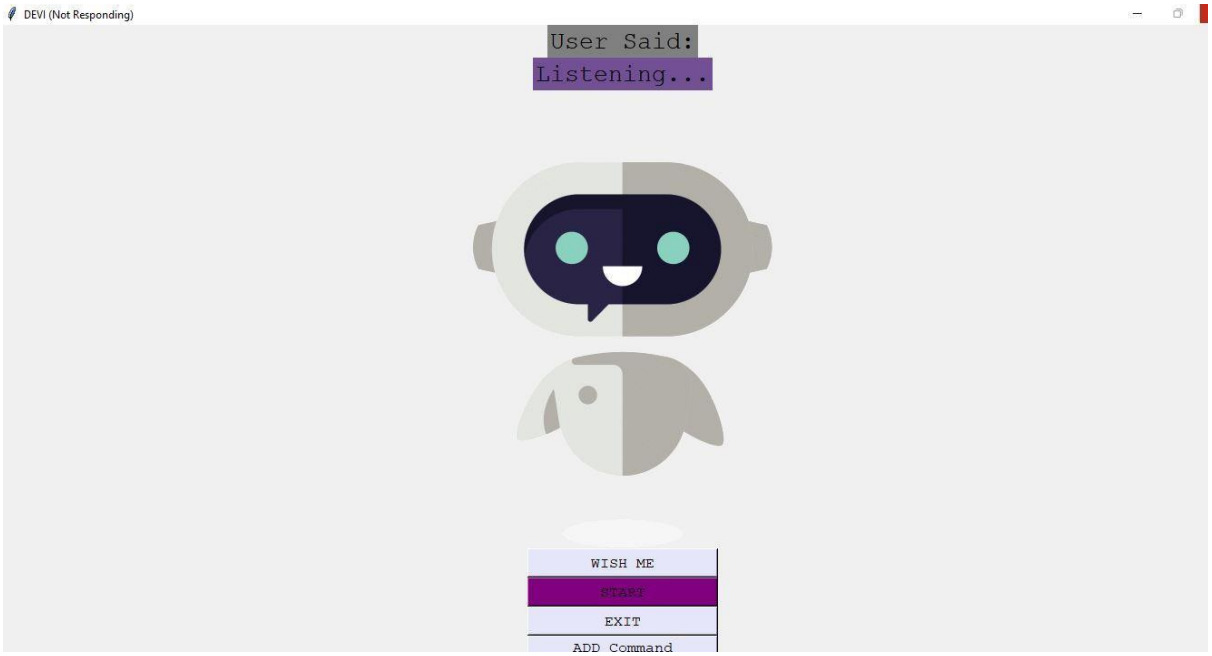
```
    label.configure(image=frame)
window.after(100, update, ind)



def mainwindow():
    label2 = Label(window, textvariable = var1, bg =
'#808080')     label2.config(font=("Courier", 20))
var1.set('User Said:')     label2.pack()

    label1 = Label(window, textvariable = var, bg = '#734f96')
label1.config(font=("Courier", 20))     var.set('Welcome')     label1.pack()
global frames     frames = [PhotoImage(file='Assistant.gif',format = 'gif -index
%i' %(i)) for i in range(100)]     window.title('DEVI')     global label     label =
Label(window, width = 500, height = 500)
    label.pack()
window.after(0, update, 0)

    global btn0      btn0= Button(text = 'WISH ME',width = 20, command =
wishme, bg = '#E6E6FA')     btn0.config(font=("Courier", 12))
btn0.pack()     global btn1     btn1 = Button(text = 'START',width =
20,command = play, bg = '#E6E6FA')     btn1.config(font=("Courier", 12))
btn1.pack()     global btn2     btn2 = Button(text = 'EXIT',width = 20,
command = window.destroy, bg = '#E6E6FA')
btn2.config(font=("Courier", 12))     btn2.pack()     global btn3     btn3 =
```

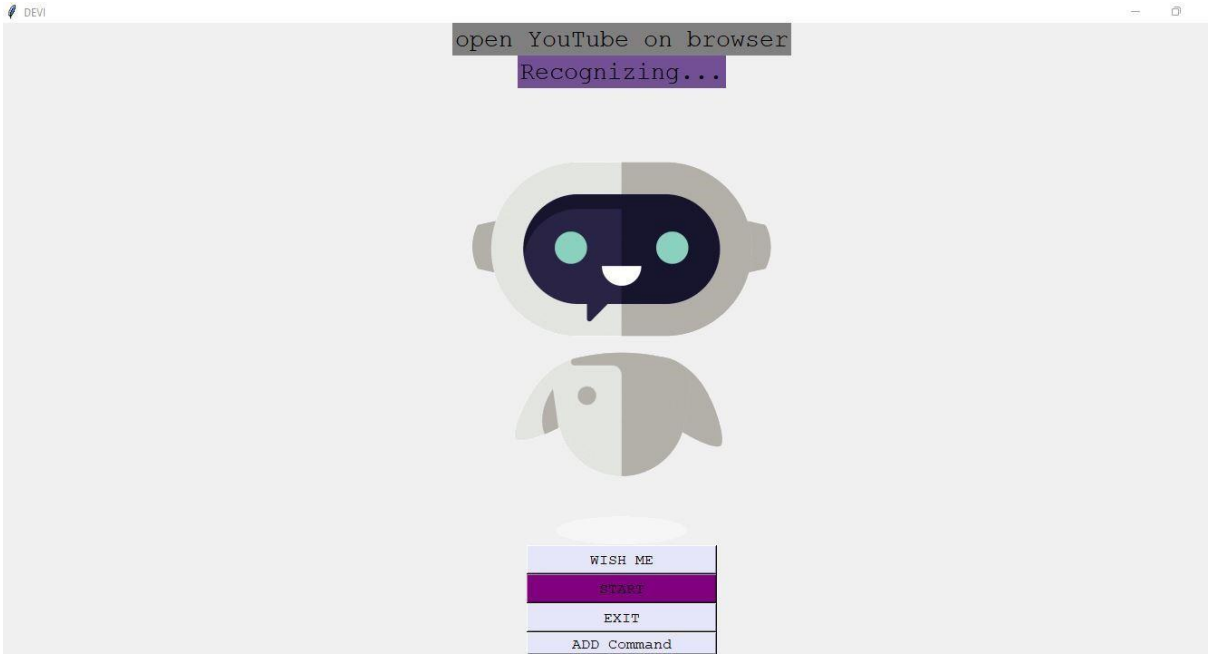
```
Button(text = 'ADD Command',width = 20, command = run, bg =
'#E6E6FA')     btn3.config(font=("Courier", 12))     btn3.pack()


connectiondb                                                                =
mysql.connector.connect(host="localhost",user="root",passwd="",databas
e="logindb") cursordb = connectiondb.cursor() def run():
   os.system('python addcmd.py')
mainwindow() window.mainloop()
```

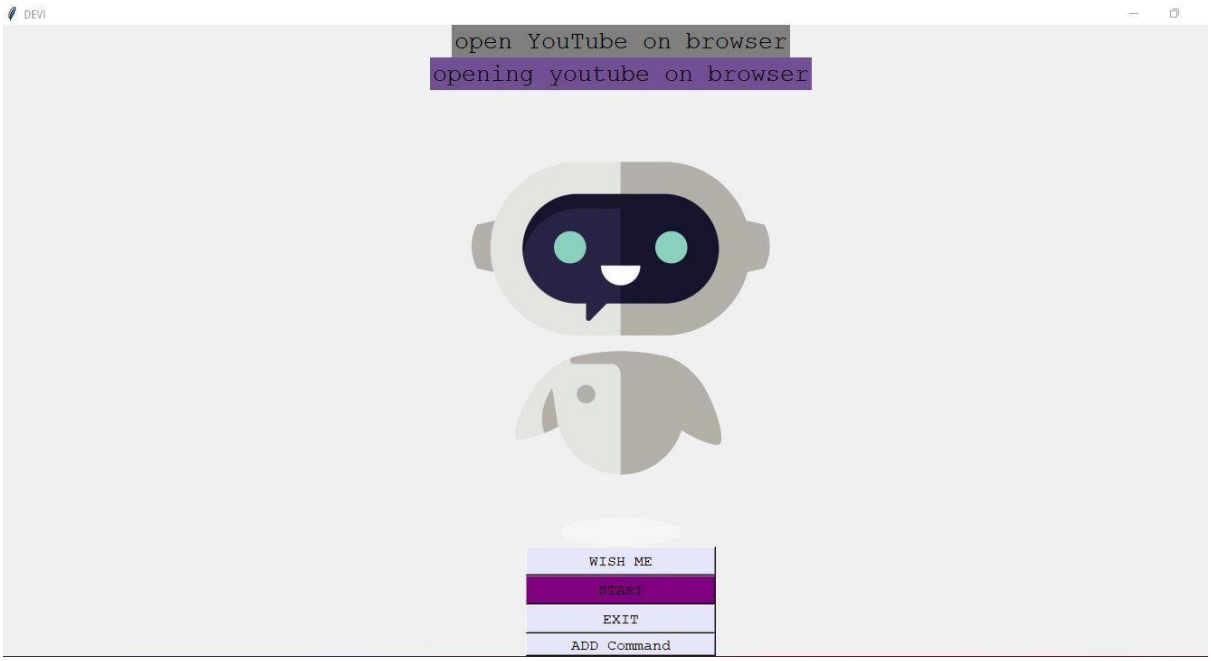
Output:

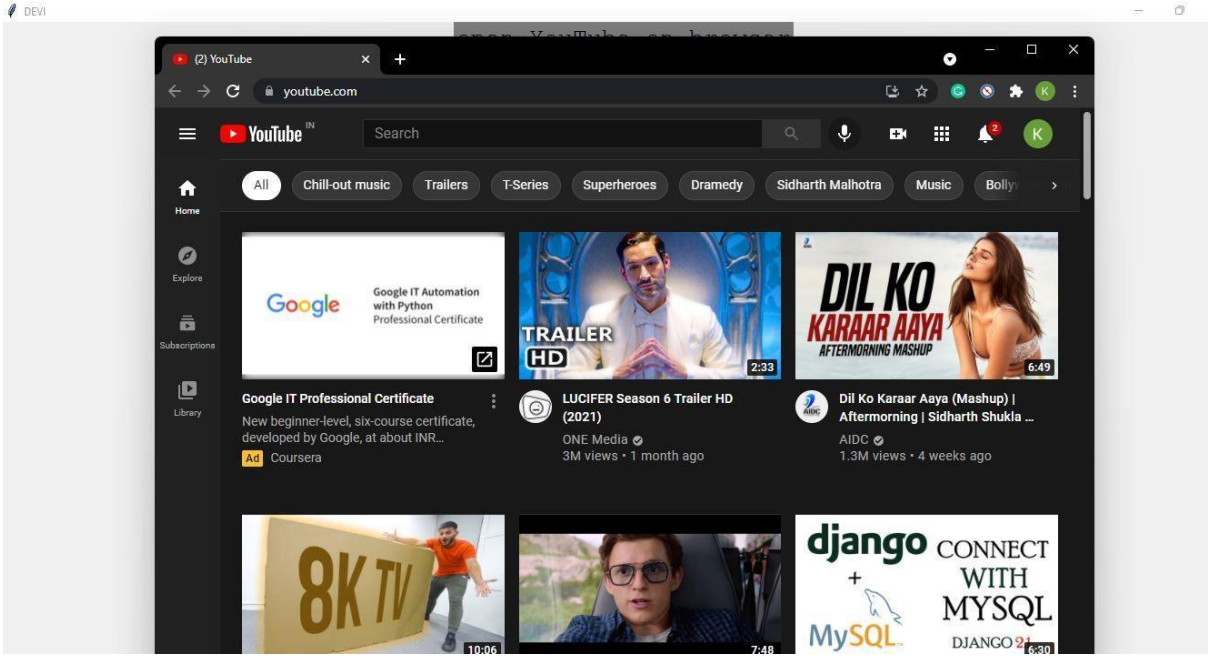

DEVI
User Said:
Welcome
WISH ME
START
EXIT
ADD Command

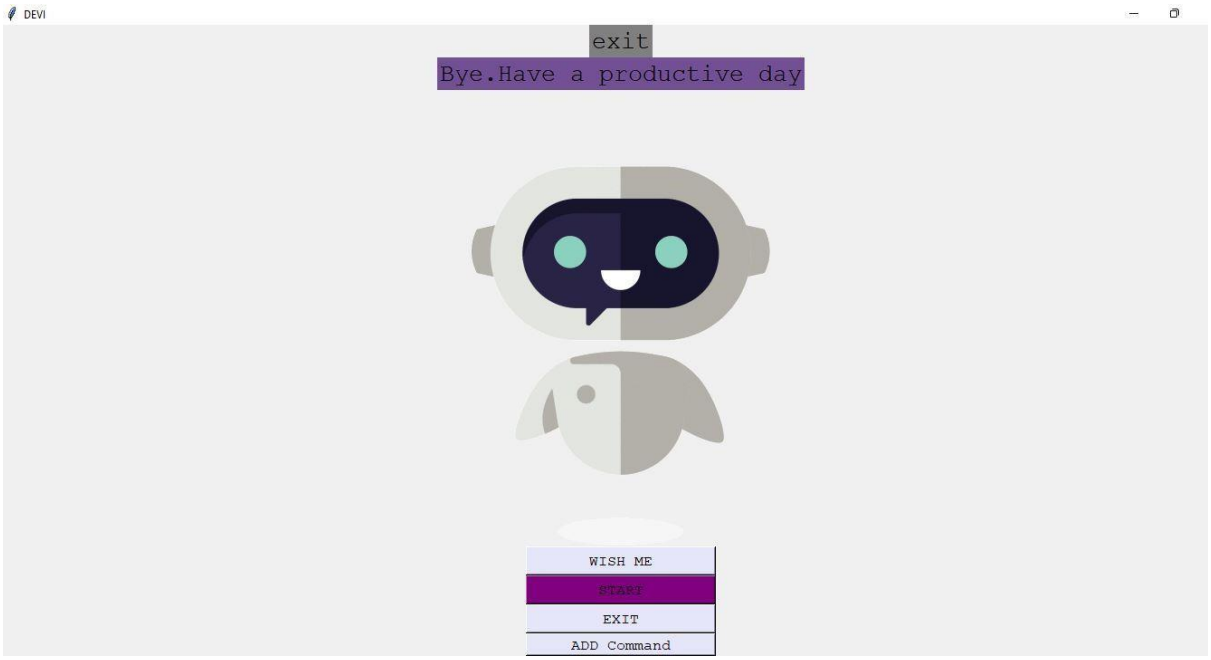

DEVI
User Said:
Good Evening
WISH ME
START
EXIT
ADD Command


DEVI (Not Responding)
User Said:
Listening...
WISH ME
START
EXIT
ADD Command


DEVI
open YouTube on browser
Recognizing...
WISH ME
START
EXIT
ADD Command


DEVI
open YouTube on browser
opening youtube on browser
WISH ME
START
EXIT
ADD Command


DEVI
(2) YouTube
youtube.com
YouTube
Search
All
Chill-out music
Trailers
T-Series
Superheroes
Dramedy
Sidharth Malhotra
Music
Home
Explore
Subscriptions
Library
Google IT Automation with Python Professional Certificate
Google IT Professional Certificate
New beginner-level, six-course certificate, developed by Google, at about INR...
Ad Coursera
TRAILER HD
2:33
LUCIFER Season 6 Trailer HD (2021)
ONE Media
3M views • 1 month ago
DIL KO KARAAR AAYA
AFTERMORNING MASHUP
6:49
Dil Ko Karaar Aaya (Mashup) | Aftermorning | Sidharth Shukla ...
AIDC
1.3M views • 4 weeks ago
8K TV
10:06
7:48
django + MySQL
CONNECT WITH MYSQL
DJANGO
6:30



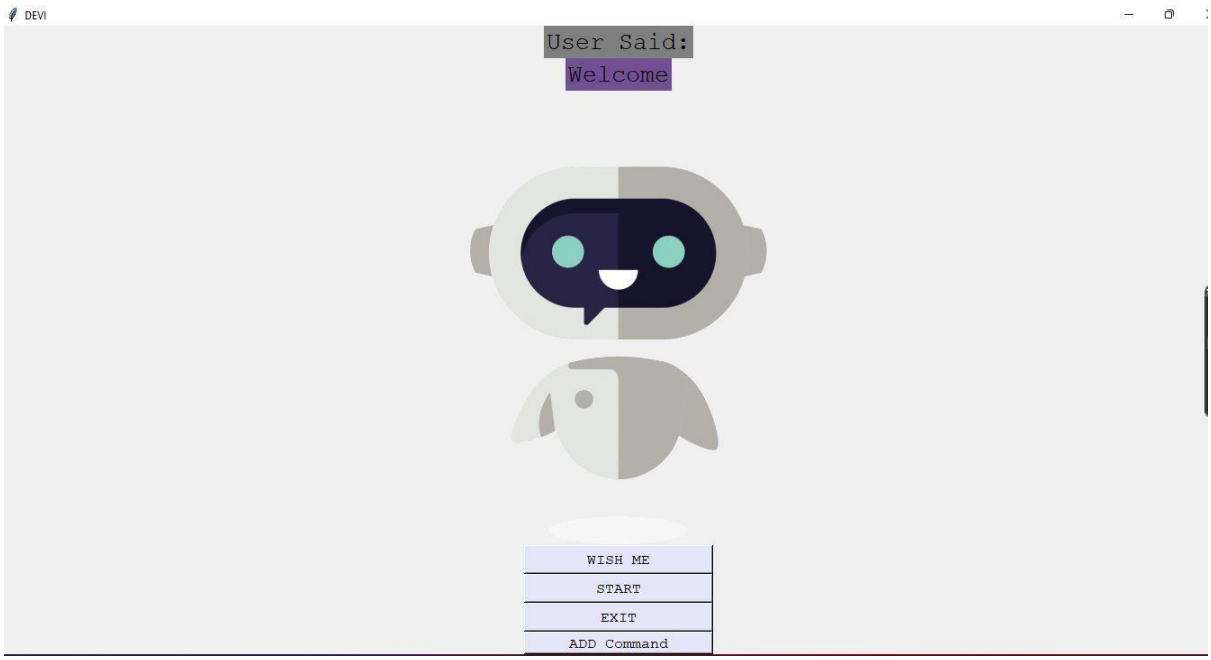
addcmd.py

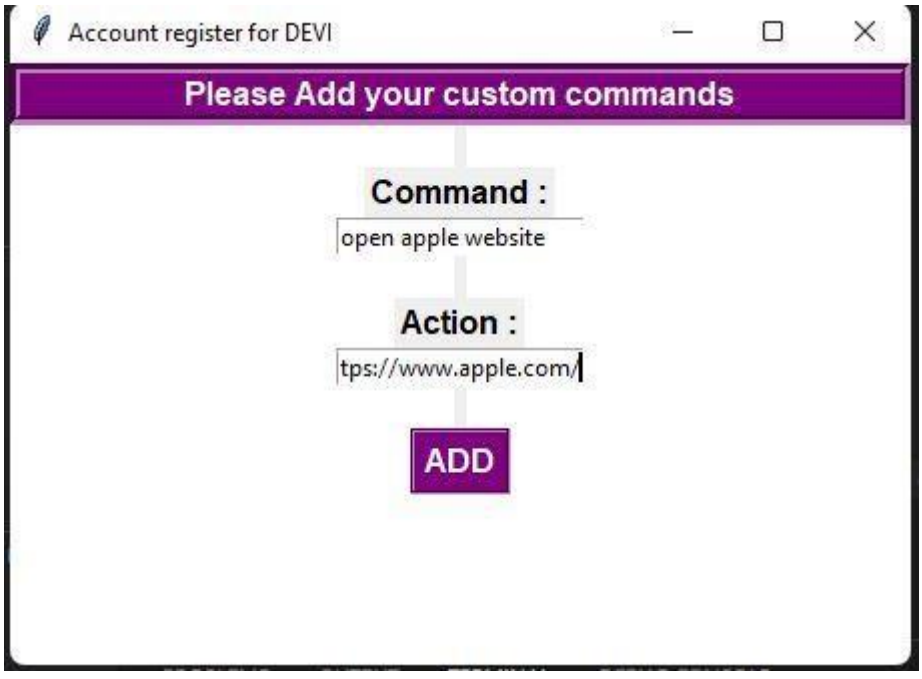
```
from tkinter import *

import mysql.connector

def cmd():

        global root3

root3 = Tk()

        root3.title("Account register for

DEVI")

root3.geometry("450x300")

root3.config(bg="white")    global

command_reg         global ans_reg

        Label(root3, text='Please Add your custom commands', bd=5,font=('arial', 12,
'bold'), relief="groove", fg="white",
```

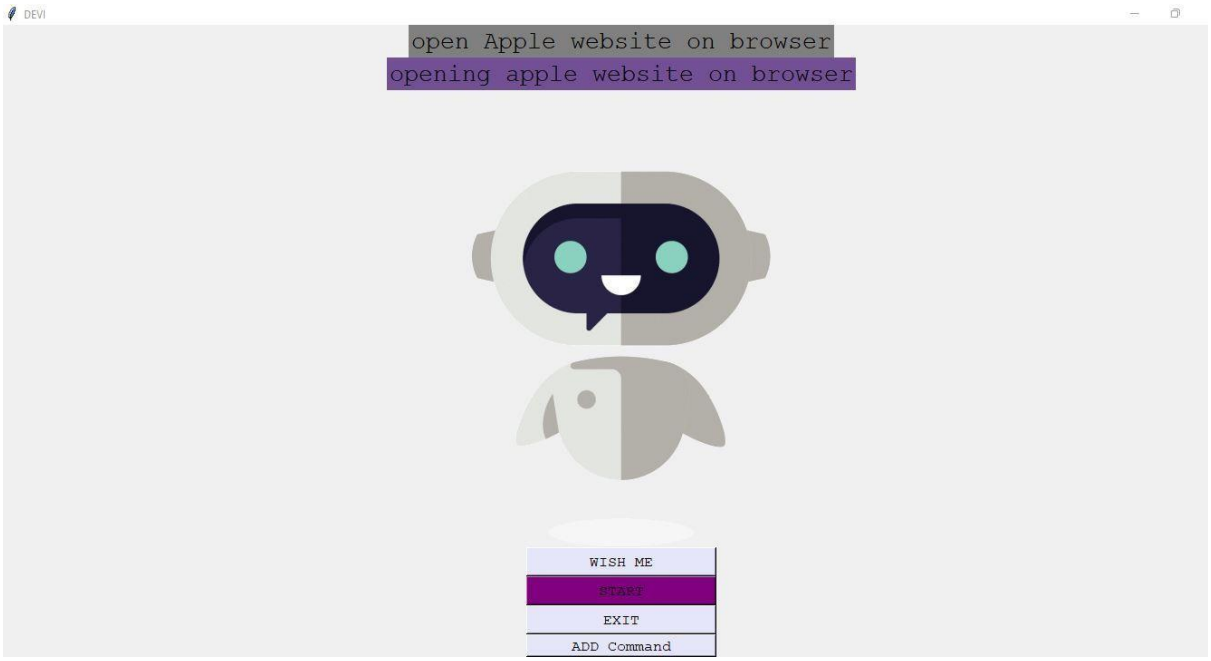
```
        bg="purple",width=300).pack()
command_reg = StringVar()          ans_reg =
StringVar()

       Label(root3, text="").pack()
   Label(root3, text="Command :", fg="black", font=('arial', 12, 'bold')).pack()
      Entry(root3, textvariable=command_reg).pack()
       Label(root3, text="").pack()
    Label(root3, text="Action :", fg="black", font=('arial', 12, 'bold')).pack()
      Entry(root3, textvariable=ans_reg).pack()
       Label(root3, text="").pack()
  Button(root3, text="ADD", bg="purple", fg='white', relief="groove", font=('arial', 12,
'bold'),command=cmd_verification).pack()
       Label(root3, text="")


def cmd_verification():
 cmd_verification  =  command_reg.get()
ans_verification = ans_reg.get()   import
mysql.connector


        mydb =
mysql.connector.connect(
host="localhost",     user="root",
password="",
database="logindb"
        )
```

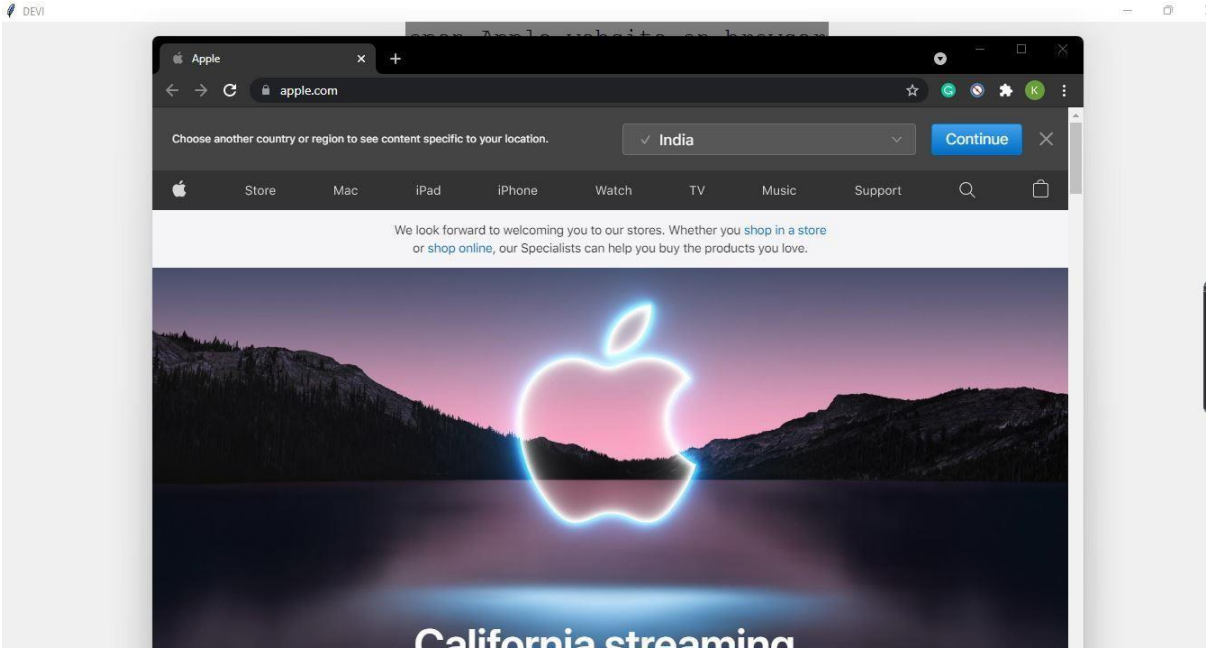
```
        mycursor = mydb.cursor()

          sql = "INSERT INTO commands(command, ans) VALUES
(%s, %s)"       val = (cmd_verification, ans_verification)

        mycursor.execute(sql, val)

         mydb.commit()

          print(mycursor.rowcount, "record
inserted.")  cmd() root3.mainloop()
```

Output:


DEVI
User Said:
Welcome
WISH ME
START
EXIT
ADD Command


Account register for DEVI
Please Add your custom commands
Command :
open apple website
Action :
tps://www.apple.com/
ADD


DEVI
open Apple website on browser
opening apple website on browser
WISH ME
START
EXIT
ADD Command


DEVI
Apple
apple.com
Choose another country or region to see content specific to your location.
India
Continue
Store
Mac
iPad
iPhone
Watch
TV
Music
Support
We look forward to welcoming you to our stores. Whether you shop in a store or shop online, our Specialists can help you buy the products you love.

Conclusion

Voice control, also called voice assistance, is a user interface that allows hands-free operation of a digital device.The understanding of the device means Artificial Intelligence needs to be integrated with the device so that the device can work in a smart way and can also control IoT applications and devices and can also respond to query which will search the web for results and process it.

It not only works on human commands but also give responses to the user based on the query being asked or the words spoken by the user such as opening tasks and operations. It is greeting the user the way the user feels more comfortable and feels free to interact with the voice assistant. The application should also eliminate any kind of unnecessary manual work required in the user life of performing every task. The entire system works on the verbal input rather than the next one.