

```

from tkinter import * # Used for making interactive GUI

import pyttsx3      #pip install pyttsx3

import datetime

import speech_recognition as sr #pip install speechRecognition

import wikipedia     #pip install wikipedia

import webbrowser    # To take information or to operate browser

import os           # To open or search any software in our system

import smtplib      # To send email


#numbers = {'hundred':100, 'thousand':1000, 'lakh':100000}

#a = {'name':'your email'}


# This is used for selecting the voice for using in our program


engine = pyttsx3.init('sapi5')

# SAPI5 (speech application programming interface) is an API developed by microsoft to allow the use of
speech recognition.

voices = engine.getProperty('voices')

# To print the name of the voice

# print(voices[0].id)

engine.setProperty('voice', voices[0].id)


window = Tk() # To create GUI's Window


global var

```

```
global var1
```

```
var = StringVar()
```

```
var1 = StringVar()
```

```
# This function is used by the assistant to speak.
```

```
# This function gives the voice to my assistant
```

```
def speak(audio):
```

```
    engine.say(audio)
```

```
    engine.runAndWait()
```

```
# It is used for sending the email.
```

```
'''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()'''
```

```
# This function is used to tell the assistant about the time so that he can wish me.
```

```
def wishme():  
    hour = int(datetime.datetime.now().hour)  
  
    if hour >= 0 and hour <= 12:  
        var.set("Good Morning! Sir")  
        window.update()  
        speak("Good Morning! Sir")  
    elif hour >= 12 and hour <= 18:  
        var.set("Good Afternoon! Sir")  
        window.update()  
        speak("Good Afternoon! Sir")  
    else:  
        var.set("Good Evening! Sir")  
        window.update()  
        speak("Good Evening! Sir")  
  
    speak("I am your Assistant Sir. Please tell me how may I help you")
```

This function take the command by the user to recognise it and work on it.

```
def takeCommand():  
  
    #It takes microphone input from the user and returns string output.  
  
    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')

    # If the assistant does not recognise the command given by the user then it will run exception.

except Exception as e:

    return "None"

var1.set(query)

window.update()

return query


# Here main program starts by pressing the play button in the GUI Window.

def play():

    btn2['state'] = 'disabled'

    btn0['state'] = 'disabled'

    btn1.configure(bg = 'grey')

    wishme()

```

while True:

 btn1.configure(bg = 'grey')

 query = takeCommand().lower()

 # Logic for executing tasks based on query.

 # To quit our program here we use exit function by giving quit, bye or exit command.

 if 'exit' in query or 'quit' in query or 'bye' in query:

 var.set("Quitting Sir. Thanks for your time")

 btn1.configure(bg = 'grey')

 btn2['state'] = 'normal'

 btn0['state'] = 'normal'

 window.update()

 speak("Quitting Sir. Thanks for your time")

 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=2)

 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 'open youtube' in query:
```

```
    var.set('opening Youtube')
```

```
    window.update()
```

```
    speak('opening Youtube')
```

```
    webbrowser.open("youtube.com")
```

```
elif 'open course error' in query:
```

```
    var.set('opening course era')
```

```
    window.update()
```

```
    speak('opening course era')
```

```
    webbrowser.open("coursera.com")
```

```
elif 'open google' in query:
```

```
    var.set('opening google')
```

```
    window.update()
```

```
    speak('opening google')
```

```
    webbrowser.open("google.com")
```

```
elif 'hello' in query:
```

```
var.set('Hello Sir')
```

```
window.update()
```

```
speak("Hello Sir")
```

```
elif 'open stackoverflow' in query:
```

```
var.set('opening stackoverflow')
```

```
window.update()
```

```
speak('opening stackoverflow')
```

```
webbrowser.open('stackoverflow.com')
```

```
# To play music from your internal directeries.
```

```
    # I don't have any music file in the system.
```

```
elif ('play music' in query) or ('change music' in query):
```

```
var.set('Here are your favorites')
```

```
window.update()
```

```
speak('Here are your favorites')
```

```
music_dir = 'D:\My Music\Favourites'    #Enter the correct Path according to your system
```

```
songs = os.listdir(music_dir)
```

```
n = random.randint(0,27) # For suffling the music files.
```

```
os.startfile(os.path.join(music_dir, songs[n]))
```

```
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 Sir")
```

```
    window.update()
```

```
    speak("Welcome Sir")
```

```
elif 'can you do for me' in query:
```

```
    var.set('I can do multiple tasks for you sir. tell me whatever you want to perform sir')
```

```
    window.update()
```

```
    speak('I can do multiple tasks for you sir. tell me whatever you want to perform sir')
```

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

```
    var.set("I am a little baby sir")
```

```
    window.update()
```

```
    speak("I am a little baby sir")
```

```
elif 'open media player' in query:
```



```
var.set("opening VLC media Player")  
  
window.update()  
  
speak("opening V L C media player")  
  
path = "C:\\Program Files (x86)\\VideoLAN\\VLC\\vlc.exe" #Enter the correct Path according to your  
system  
  
os.startfile(path)
```

elif 'your name' in query:

```
var.set("Myself Tushar's Assistant Sir")  
  
window.update()  
  
speak("myself Tushar's Assistant sir")
```

elif 'who creates you' in query:

```
var.set('My Creator is Mr. Tushar')  
  
window.update()  
  
speak('My Creator is Mr. Tushar')
```

elif 'say hello' in query:

```
var.set("Hello Everyone! My self Tushar's Assistant")  
  
window.update()  
  
speak("Hello Everyone! My self Tushar's Assistant")
```

elif 'open vs code' in query:

```
var.set("Opening VS code")  
  
window.update()  
  
speak("Opening VS code")
```

path = "C:\\Users\\This PC\\AppData\\Local\\Programs\\Microsoft VS Code\\Code.exe" #Enter the correct Path according to your system

```
os.startfile(path)
```

elif 'open chrome' in query:

```
var.set("Opening Google Chrome")
```

```
window.update()
```

```
speak("Opening Google Chrome")
```

path = "C:\\Program Files (x86)\\Google\\Chrome\\Application\\chrome.exe" #Enter the correct Path according to your system

```
os.startfile(path)
```

elif 'email to me' in query:

```
try:
```

```
var.set("What should I say")
```

```
window.update()
```

```
speak('what should I say')
```

```
content = takeCommand()
```

```
to = a['name']
```

```
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')
```

```
elif 'open code block' in query:
```

```
var.set('Opening Codeblocks')
```

```
window.update()
```

```
speak('opening Codeblocks')
```

```
os.startfile("C:\\Program Files (x86)\\CodeBlocks\\codeblocks.exe") #Enter the correct Path  
according to your system
```

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

```
var.set('I am fine, Thank you')
```

```
window.update()
```

```
speak("I am fine, Thank you")
```

```
var.set('How are you, Sir')
```

```
window.update()
```

```
speak("How are you, Sir")
```

```
elif 'fine' in query or "good" in query:
```

```
var.set("It's good to know that your fine")
```

```
window.update()
```

```
speak("It's good to know that your fine")
```

```
elif "what's your name" in query or "What is your name" in query:
```

```
var.set("My friends call me Tushar's assistant")
```

```
window.update()

speak("My friends call me")

speak("Tushar's assistant")

#print("My friends call me Tushar's assistant")
```

elif "who made you" in query:

```
#    print("I have been created by Tushar.")

    var.set('I have been created by Tushar.')

    window.update()

    speak("I have been created by Tushar.")
```

elif "who are you" in query:

```
    var.set("I am your virtual assistant created by Tushar")

    window.update()

    speak("I am your virtual assistant created by Tushar")
```

elif "open powerpoint" in query:

```
    var.set("opening powerpoint")

    window.update()
```

Path= "C:\\Program Files\\Microsoft Office\\root\\Office16\\POWERPNT.EXE" #Enter the correct Path according to your system

```
os.startfile(Path)

speak("opening powerpoint")
```

elif "open word" in query:

var.set("Opening Word")

window.update()

wPath= "C:\\Program Files\\Microsoft Office\\root\\Office16\\WINWORD.EXE" #Enter the
correct Path according to your system

os.startfile(wPath)

speak("opening Word")

'''

elif 'enter student details' in query:

s = Student()

var.set('Name of the student')

window.update()

```
speak('Name of the student')

name = takeCommand()

var.set('standard in which he/she study')

window.update()

speak('standard in which he/she study')

standard = takeCommand()

var.set('Role Number')

window.update()

speak('Role number')

rollno = takeCommand()

s.Enterdetalis(name,standard,rollno)

var.set('Details are saved')

window.update()

speak('Details are saved')

elif 'show me details' in query:

    var.set('Name: '+name+' Standard: '+ standard+' Roll No.: '+ rollno)

    window.update()


elif 'click photo' in query:

    stream = cv2.VideoCapture(0)

    grabbed, frame = stream.read()

    if grabbed:

        cv2.imshow('pic', frame)

        cv2.imwrite('pic.jpg',frame)

    stream.release()
```

elif 'record video' in query:

```
cap = cv2.VideoCapture(0)
```

```
out = cv2.VideoWriter('output.avi', -1, 20.0, (640,480))
```

```
while(cap.isOpened()):
```

```
    ret, frame = cap.read()
```

```
    if ret:
```

```
        out.write(frame)
```

```
        cv2.imshow('frame',frame)
```

```
        if cv2.waitKey(1) & 0xFF == ord('q'):
```

```
            break
```

```
    else:
```

```
        break
```

```
cap.release()
```

```
out.release()
```

```
cv2.destroyAllWindows()
```

elif 'read the photo' in query: #If you have Pytesseract installed for Optical Character Recognition

```
try:
```

```
    im = Image.open('pic.jpg')
```

```
    text = pytesseract.image_to_string(im)
```

```
    speak(text)
```

```
except Exception as e:
```

```
        print("Unable to read the data")

        print(e)

'''
```

```
def update(ind):
```

```
    frame = frames[(ind)%100]
```

```
    ind += 1
```

```
    label.configure(image=frame)
```

```
    window.after(100, update, ind)
```

```
label2 = Label(window, textvariable = var1, bg = 'WHITE')
```

```
label2.config(font=("Engravers MT", 20))
```

```
var1.set('User Said:')
```

```
label2.pack()
```

```
label1 = Label(window, textvariable = var, bg = '#ADD8E6')
```

```
label1.config(font=("Engravers MT", 20))
```

```
var.set('Welcome')
```

```
label1.pack()
```

```
frames = [PhotoImage(file='Assistant.gif',format = 'gif -index %i' %(i)) for i in range(100)]
```

```
window.title("TUSHAR'S ASSIATANT")
```



```
label = Label(window, width = 500, height = 500)
```

```
label.pack()
```

```
window.after(0, update, 0)
```

```
btn0 = Button(text = 'WISH ME',width = 20, command = wishme, bg = '#5C85FB')
```

```
btn0.config(font=("Engravers MT", 12))
```

```
btn0.pack()
```

```
btn1 = Button(text = 'PLAY',width = 20,command = play, bg = '#5C85FB')
```

```
btn1.config(font=("Engravers MT", 12))
```

```
btn1.pack()
```

```
btn2 = Button(text = 'EXIT',width = 20, command = window.destroy, bg = '#5C85FB')
```

```
btn2.config(font=("Engravers MT", 12))
```

```
btn2.pack()
```

```
window.mainloop()
```