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In [8]: import pyttsx3 #module that we use to intepretate the text and make our program talk
import speech_recognition as sr #recognizes the voice of the user and translate command
import datetime #for date and time information
import wikipedia #to gather information from wikipedia
import webbrowser #interact with web browsers
import subprocess #open applications
import os
import pywhatkit
import openai
```

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In [10]: #Secret key:
#openai_key = 'sk-7o4tZMTZwwArePnWaML1T3B1bkFJjkFUCPGFNR8bdHkn4C6U'
openai.api_key = 'sk-7o4tZMTZwwArePnWaML1T3B1bkFJjkFUCPGFNR8bdHkn4C6U'

engine = pyttsx3.init('sapi5')
voices = engine.getProperty('voices')
engine.setProperty('voice', voices[0].id)

#Speak function will produce audio with the string that it takes as input
def speak(text):
    engine.say(text)
    engine.runAndWait()

#greetMe function welcomes the user when it is called
def greetMe():
    hour = int(datetime.datetime.now().hour) #Depending on the time, the greet function
    print(hour)

    if hour >=0 and hour <12:
        speak("Good morning my friend!")

    elif hour >=12 and hour <18:
        speak("Good afternoon my friend!")

    else:
        speak("Good evening my friend!")

    speak("Hasbulla is here to help you...")

#takeOrder is the function that captures the order given by the user to run the code
def takeOrder():

    speak('Ready to listen...')

    r = sr.Recognizer()

    with sr.Microphone() as source:
        print("Listening...")
        r.dynamic_energy_threshold = False
        audio = r.listen(source)

    try:
        print('Recognizing...')
        query = r.recognize_google(audio, language = 'en-in')
        print(f"User said: {query}\n")
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except Exception as e:
    speak("I didn't understand you...")
    query = None

    return query

#Main Program starts here
greetMe()

active = True

while active:

    query = takeOrder()

    #Logic to execute tasks based on the instructions by the user
    #The data structure follows a while loop that stays active until the user decides he d

    if query == None:
        print("Didn't receive command")
        speak("Didn't receive command")
        continue

    #The assistant answers to the question by the user
    elif 'how are you' in query.lower():
        print('I am doing fine, happy to serve...')
        speak('I am doing fine, happy to serve...')

    #The assistant plays a video on youtube (ideally music)
    elif 'play' in query.lower() and 'on youtube' in query.lower():
        query = query.replace('play', '').replace('on youtube', '')
        pywhatkit.playonyt(query)

    #This statement was generated using the OpenAI API from DALL-E-2 to generate AI images
    elif 'create image' in query.lower():
        query = query.replace('generate image of', '')
        size = '1024x1024'
        gen_image = openai.Image.create(
            prompt = query,
            n = 1,
            size = "1024x1024"
        )

        image_url = gen_image['data'][0]['url']
        chrome_path = 'C:/Program Files/Google/Chrome/Application/chrome.exe %s'
        webbrowser.get(chrome_path).open(image_url)

    #This statement retrieves the current time
    elif 'time is' in query.lower():
        strTime = datetime.datetime.now().strftime("%H:%M:%S")
        print(f"The time is {strTime}")
        speak(f"The time is {strTime}")

    #This statement retrieves the current date
    elif 'date' and 'today' in query.lower():
        strDate = datetime.datetime.now().date()
        print(f"The date is {strDate}")
        speak(f"The date is {strDate}")

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#This statement looks for the input of the user in wikipedia, if it does not find a match
    elif 'search' in query.lower() or 'what is' in query.lower() or 'who is' in query.lower():

        try:
            speak('Searching...')
            query = query.replace("search ", "").replace("what is the", "").replace("who is", "")
            result = wikipedia.summary(query, sentences = 2, auto_suggest = False)
            print(result)
            speak(result)

        except Exception:
            query = query.replace("search ", "").replace("what is the", "").replace("who is", "")
            pywhatkit.search(query)

#This statement opens the calculator:
    elif 'open calculator' in query.lower():
        subprocess.call('calc.exe')

#This statement uses the word run as input to open different applications in the computer
    elif 'run' in query.lower():
        if 'microsoft word' in query.lower():
            subprocess.Popen("C:\Program Files (x86)\Microsoft Office\root\Office16\WINWORD.EXE")
        elif 'microsoft excel' in query.lower():
            subprocess.Popen("C:\Program Files (x86)\Microsoft Office\root\Office16\EXCEL.EXE")
        elif 'microsoft powerpoint' in query.lower():
            subprocess.Popen("C:\Program Files (x86)\Microsoft Office\root\Office16\POWERPNT.EXE")
        elif 'spotify' in query.lower():
            subprocess.Popen("spotify.exe")
        elif 'minecraft' in query.lower():
            subprocess.Popen("C:\Program Files (x86)\Minecraft Launcher\MinecraftLauncher.exe")

#This statement uses the word open as an input to open any .com webpage using chrome
    elif 'open' in query.lower():
        query = query.replace("open ", "")
        page = f"{query}.com"

        chrome_path = 'C:/Program Files/Google/Chrome/Application/chrome.exe %s'
        webbrowser.get(chrome_path).open(page)
        continue

#This statement uses the word exit as the input to close apps
    elif 'exit' in query.lower():
        if 'microsoft word' in query.lower():
            os.system("taskkill /f /im winword.exe")

        elif 'microsoft excel' in query.lower():
            os.system("taskkill /f /im excel.exe")

        elif 'chrome' in query.lower():
            os.system("taskkill /f /im chrome.exe")

        elif 'power point' in query.lower():
            os.system("taskkill /f /im powerpnt.exe")

        elif 'minecraft' in query.lower():
            os.system("taskkill /f /im MinecraftLauncher.exe")

    else:
        query = query.replace("close", "")
        os.system("taskkill /f /im {query}.exe")

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#This statement finishes the program if the user says goodbye or stop
elif 'goodbye' in query.lower() or 'stop' in query.lower():
    print("Have a good one, I will be here for you")
    speak("Have a good one, I will be here for you")
    active = False

else:
    print("Didn't receive command")

```

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Listening...

Recognizing...

result2:

```

{ 'alternative': [ { 'confidence': 0.67553002,
                    'transcript': 'hello hello how are you'},
                  { 'transcript': 'alhamdulillah how are you'},
                  { 'transcript': 'call hello how are you'},
                  { 'transcript': 'call Hula how are you'},
                  { 'transcript': 'call Abdullah how are you'}],
  'final': True}

```

User said: hello hello how are you

I am doing fine, happy to serve...

Listening...

Recognizing...

result2:

```

{ 'alternative': [ { 'confidence': 0.98762906,
                    'transcript': 'what time is it'}],
  'final': True}

```

User said: what time is it

The time is 12:28:40

Listening...

Recognizing...

result2:

```

{ 'alternative': [ { 'confidence': 0.987629,
                    'transcript': 'what is the date of today'}],
  'final': True}

```

User said: what is the date of today

The date is 2022-12-13

Listening...

Recognizing...

result2:

```

{ 'alternative': [ { 'confidence': 0.91919553,
                    'transcript': 'who is Alexis Sanchez'},
                  { 'transcript': 'who is Alexi Sanchez'}],
  'final': True}

```

User said: who is Alexis Sanchez

Alexis Alejandro Sánchez Sánchez (Spanish pronunciation: [a'leksis 'santʃes]; born 19 December 1988), also known mononymously as Alexis, is a Chilean professional footballer who plays as a forward for Ligue 1 club Marseille and the Chile national team. He is often lauded as the greatest Chilean player of all time. Dubbed "El Niño Maravilla" (The Wonder Child), Sánchez began his senior club career playing for Cobreloa, and signed with Udinese in 2006, aged 18; he won consecutive league titles while on loan to Colo-Colo and River Plate.

Listening...

Recognizing...

result2:

```

{ 'alternative': [ { 'confidence': 0.98762906,
                    'transcript': 'who is Olivier Giroud'}],
  'final': True}

```

User said: who is Olivier Giroud

Olivier Jonathan Giroud (born 30 September 1986) is a French professional footballer who plays as a striker for Serie A club AC Milan and the France national team. Regarded for his work-rate, strength, shot power and consistent goal-scoring ability, he is often considered one of the most underrated strikers in the world. Giroud began his senior club career playing for hometown club Grenoble, before he signed with Tours in 2008, aged 21.

Listening...

Recognizing...

result2:

```
{  'alternative': [    {  'confidence': 0.91713893,
                          'transcript': 'what is Arsenal Football Club'},
                        {'transcript': "what is Arsenal's Football Club"},
                        {'transcript': "what is Arsenal's Futbol Club"}],
  'final': True}
```

User said: what is Arsenal Football Club

Arsenal Football Club, commonly referred to as Arsenal, is a professional football club based in Islington, London, England. Arsenal plays in the Premier League, the top flight of English football.

Listening...

Recognizing...

result2:

```
{  'alternative': [    {'confidence': 0.81533647, 'transcript': 'goodbye'},
                      {'transcript': 'goodbyes'},
                      {'transcript': 'good-by'},
                      {'transcript': 'good bye'}],
  'final': True}
```

User said: goodbye

Have a good one, I will be here for you

In [ ]:

In [ ]:

In [ ]: