import pyttsx3

import datetime

import speech\_recognition as sr

import wikipedia

import pyfirmata

import pywhatkit

import imaplib

import email

from email.header import decode\_header

import webbrowser

import os

import smtplib

import requests

comport='COM3'

board=pyfirmata.Arduino(comport)

led1=board.get\_pin('d:8:o')

fan=board.get\_pin('d:9:o')

port1=board.get\_pin('d:10:o')

port2=board.get\_pin('d:11:o')

def led\_switch(val):

    if val==1:

        led1.write(1)

    elif val==0:

        led1.write(0)

def fan\_switch(val):

    if val==1:

        fan.write(1)

    elif val==0:

        fan.write(0)

def port1\_switch(val):

    if val==1:

        port1.write(1)

    elif val==0:

        port1.write(0)

def port2\_switch(val):

    if val==1:

        port2.write(1)

    elif val==0:

        port2.write(0)

engine = pyttsx3.init('sapi5')

voices=engine.getProperty("voices")

# print(voices[0].id)

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

newVoiceRate = 145

engine.setProperty('rate',newVoiceRate)

def speak(audio):

    engine.say(audio)

    engine.runAndWait()

def wishMe():

    hour=int(datetime.datetime.now().hour)

    if hour>=0 and hour<12:

        speak('Good morning')

    elif hour>12 and hour<18:

        speak('Good afternoon')

    else:

        speak('Good evening')

    speak('I am Clare sir. please tell me how may I help you')

def take\_command():

    r = sr.Recognizer()

    with sr.Microphone() as source:

        print("Listening...")

        r.pause\_threshold = 1

        audio = r.listen(source,timeout=5,phrase\_time\_limit=3)

        # r.adjust\_for\_ambient\_noise(source, duration = 1)

    try:

        print("Recognizing...")

        query = r.recognize\_google(audio, language='en-in')

        print(f"User said: {query}\n")

    except Exception as e:

        # print(e)

        print("Say that again please...")

        return "None"

    return query

def youtube ():

    print(f'user want to watch {topic} ')

    pywhatkit.playonyt(f'{topic}')

def readMail():

    #credentials

    username ="raspberry02pi2003@gmail.com"

    #generated app password

    app\_password= "shubhankar@2003"

    # https://www.systoolsgroup.com/imap/

    gmail\_host= 'imap.gmail.com'

    #set connection

    mail = imaplib.IMAP4\_SSL(gmail\_host)

    #login

    mail.login(username, app\_password)

    #select inbox

    mail.select("INBOX")

    #select specific mails

    \_, selected\_mails = mail.search(None, '(FROM "raspberry02pi2003@gmail.com")')

    #total number of mails from specific user

    print("Total Messages from user :" , len(selected\_mails[0].split()))

    for num in selected\_mails[0].split():

        \_, data = mail.fetch(num , '(RFC822)')

        \_, bytes\_data = data[0]

        #convert the byte data to message

        email\_message = email.message\_from\_bytes(bytes\_data)

        print("\n===========================================")

        #access data

        print("Subject: ",email\_message["subject"])

        print("To:", email\_message["to"])

        print("From: ",email\_message["from"])

        print("Date: ",email\_message["date"])

        for part in email\_message.walk():

            if part.get\_content\_type()=="text/plain" or part.get\_content\_type()=="text/html":

                message = part.get\_payload(decode=True)

                print("Message: \n", message.decode())

                a=(message.decode())

                speak(a)

                print("==========================================\n")

                break

def sendEmail(to,content):

    server=smtplib.SMTP('smtp.gmail.com',587)

    server.ehlo()

    server.starttls()

    server.login('raspberry02pi2003@gmail.com', 'shubhankar@2003')

    server.sendmail('raspberry02pi2003@gmail.com', to, content)

def get\_random\_advice():

    res = requests.get("https://api.adviceslip.com/advice").json()

    # print(res)

    return res['slip']['advice']

def get\_random\_joke():

    headers = {

        'Accept': 'application/json'

    }

    res = requests.get("https://icanhazdadjoke.com/", headers=headers).json()

    # print(res)

    return res["joke"]

if \_\_name\_\_ =='\_\_main\_\_':

    # speak('Good afternoon')

    wishMe()

    while True:

        query=take\_command().lower()

        if 'wikipedia' in query:

            speak('searching wikipedia...')

            query=query.replace("wikipedia","")

            results=wikipedia.summary(query,sentences=2)

            speak('According to wikipedia')

            speak(results)

        elif 'light on' in query:

            print('light on......')

            speak('light on........')

            led\_switch(1)

        elif 'light off' in query:

            print('light off......')

            speak('light off........')

            led\_switch(0)

        elif 'turn on fan' in query:

            print('turning on fan.....')

            speak('turning on fan')

            fan\_switch(1)

        elif 'turn off fan' in query:

            print('turning off fan.....')

            speak('turning off fan')

            fan\_switch(0)

        elif 'light up' in query:

            print('turning on desk light')

            speak('turning on desk light')

            port1\_switch(1)

        elif 'darkness' in query:

            print('turning off desk light')

            speak('turning off desk light')

            port1\_switch(0)

        elif 'turn on device' in query:

            print('Your device is alive')

            speak('Your device is alive')

            port2\_switch(1)

        elif 'turn off device' in query:

            print('Your device is off')

            speak('Your device is off')

            port2\_switch(0)

        elif 'on youtube' in query:

            speak("what you want to watch")

            topic=take\_command()

            youtube()

        elif 'open Youtube' in query:

            speak('opening youtube')

            webbrowser.open('https://www.youtube.com/')

        elif 'open google' in query:

            speak('opening google')

            webbrowser.open('https://www.google.com/')

        elif 'open gpp' in query:

            speak('opening login page')

            webbrowser.open('https://gppune.ac.in/gpp/gpp\_s20/userindex.php')

        elif 'play music' in query:

            speak('hope this will entertain you')

            dir='C:\\Users\\Public\\Music\\Sample Music'

            songs=os.listdir(dir)

            print(songs)

            os.startfile(os.path.join(dir,songs[-1]))

        elif 'the time' in query:

            strTime=datetime.datetime.now().strftime("%H hours %M minutes and %S seconds")

            speak(f'sir the time is{strTime}')

        elif 'stop music' in query:

            os.system("TASKKILL /F /IM wmplayer.exe")

        elif 'read my mail' in query:

            speak('reading your latest emails sir')

            readMail()

        elif 'send email to' in query:

            try:

                speak('what should I say..')

                content=take\_command()

                to='raspberry02pi2003@gmail.com'

                sendEmail(to,content)

                speak('email has been sent')

            except Exception as e:

                print(e)

                speak('sorry sir I am not able to send the mail')

        elif 'advice' in query:

            speak("Here's an advice for you sir")

            advice=get\_random\_advice()

            speak(advice)

            print(advice)

        elif 'joke' in query:

            speak('hope you will like this one')

            joke=get\_random\_joke()

            speak(joke)

            print(joke)

        elif 'exit' in query:

            speak("well see you soon sir Thank you")

            break