In [ ]:

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import speech_recognition as sr
import pyttsx3
import webbrowser
import subprocess
import datetime

# Initialize the speech recognition and text-to-speech engines
recognizer = sr.Recognizer()
engine = pyttsx3.init()

def speak(text):
    """Convert text to speech and play it."""
    engine.say(text)
    engine.runAndWait()

def listen():
    """Listen for audio and convert it to text."""
    with sr.Microphone() as source:
        print("Listening...")
        # Adjust recognizer sensitivity to ambient noise
        recognizer.adjust_for_ambient_noise(source)
        audio = recognizer.listen(source, timeout=5)  # Add a timeout to avoid hang
        try:
            text = recognizer.recognize_google(audio)
            print(f"You said: {text}")
            return text
        except sr.UnknownValueError:
            speak("Sorry, I did not understand that.")
            return None
        except sr.RequestError:
            speak("Sorry, there was a problem with the request.")
            return None

def process_command(command):
    """Process the command and provide a response."""
    command = command.lower()
    if 'hello' in command:
        speak("Hello! How can I assist you today?")
    elif 'time' in command:
        now = datetime.datetime.now()
        speak(f"The current time is {now.strftime('%H:%M:%S')}")
    elif 'youtube' in command:
        speak("Opening YouTube")
        webbrowser.open("https://www.youtube.com")
    elif 'facebook' in command:
        speak("Opening Facebook")
        webbrowser.open("https://www.facebook.com")
    elif 'whatsapp' in command:
        speak("Opening WhatsApp")
        webbrowser.open("https://web.whatsapp.com")
    elif 'linkedin' in command:
        speak("Opening LinkedIn")
        webbrowser.open("https://www.linkedin.com")
    elif 'chrome' in command:
        speak("Opening Google Chrome")
        subprocess.Popen(['start', 'chrome'], shell=True)
    elif 'google' in command:
        speak("Opening Google")
        webbrowser.open("https://www.google.com")
    elif 'command prompt' in command:
        speak("Opening Command Prompt")
        subprocess.Popen('start cmd', shell=True)
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    elif 'microsoft edge' in command:
        speak("Opening Microsoft Edge")
        subprocess.Popen(['start', 'msedge'], shell=True)
    elif 'exit' in command or 'quit' in command:
        speak("Goodbye!")
        return True
    else:
        speak("Sorry, I don't know how to respond to that.")
    return False

def main():
    """Main function to run the assistant."""
    speak("Hello! I'm your assistant. What can I do for you?")
    while True:
        command = listen()
        if command:
            exit_program = process_command(command)
            if exit_program:
                break

# Run the assistant
if __name__ == "__main__":
    main()
```

```
Listening...
You said: open Chrome
Listening...
You said: open WhatsApp
Listening...
You said: start timer
Listening...
Listening...
You said: open Facebook Facebook
Listening...
You said: open Facebook
Listening...
Listening...
Listening...
Listening...
Listening...
Listening...
Listening...
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