

Overview:

I have made an assistant that automates my task through the python console. It has some predefined tasks and automates them whenever I command it to do so.

Introduction:

In this project I have devised F.R.I.D.A.Y (inspired from the iron man movie). I order it to (through pyttsx3 and speechRecognition module) automate my tasks and open various files that I use frequently; also it plays music for me, and searches information on Wikipedia.

Dependencies of Modules :

For the code to execute, following modules need to be installed.

1. import pyttsx3: it is a text to speech API. It uses the inbuilt voices in the computer provided by Microsoft, sapi5 (Windows 7 has MS Anna voice, whereas Windows 10 has David and Zara, I did my project on windows 7).

2.import pyaudio : this is required for pyttsx3 to run. I found difficulties in installing this module so I had to refer to an online video (<https://www.youtube.com/watch?v=->

[3am 5jMzJ4&t=187s](#), which uses Unofficial Python Binary website to manually install pyaudio)

3. *speechRecognition* :this module is used to convert our voice input in string, I have explored its various aspects like the *energy_threshold* (set to 600 to minimise the background noise) and the *pause_threshold* (gap between intake), various inbuilt functions like the microphone, recognizer, listen, *recognizer_google*.

4.*import time*: I have used this module to get the current time and for my loop to sleep, *time.sleep(seconds)*.

5.*import os*: I have used this module to play songs present in my computer, here the problem might occur with the directory as the “play music” command will run on my pc but not on the users pc until and unless they create the exact same folder in the same directory specified.

6. *import random*: I have used this module to generate a random number out of a given list so as to pick up a random song to play.

7. *import webbrowser*: I have used this module to search and open the link online. Some of the links are of: opening gmail, showing the video of iitgn campus, opening youtube, and video of a song.

8. import wikipedia: I have used this module to gather information from the Wikipedia, I have used various functions the library provides in it like the summary, and the sentence argument to restrict the number of sentences that are printed.

Challenges:

- 1. Working on windows 7 deprived me of a good voice interface that was present in the Windows 10.*
- 2. I could have used another text to speech module (gTTS) might the time constraint forced me to go with pyttsx3*
- 3. I had problem in executing and writing the code because of my specifications of the laptop, I worked the thing on sublime text and visual code. It lagged a lot and sometimes it crashed a lot (considering the RAM of my laptop was just 2gb and i5-4th gen processor).*
- 4. Due to time constraint I was unable to execute various other things I had planned for the project; like providing a new interface screen rather than executing the tasks on the console screen, and features like searching and speaking only the relevant gmails from inbox, automatically opening the link of the meeting if the time comes.*

Citations and References:

1. I had taken help from the online videos of CodewithHarry, in building this project (understanding how to use the pyttsx3, and speechrecognition)

(https://www.youtube.com/watch?v=aqvDTCpNRek&list=PLu0W_9lI9agIcnT8t4iYVSZ3eykIAOME)

I had followed his playlist of Python and that helped me in this project

2. While installing python pyaudio I had some issues hence I downloaded it from other sources :

(<https://www.lfd.uci.edu/~gohlke/pythonlibs/>) – Python Binaries Extensions

I got this reference from the video of CodewithHarry :

(https://www.youtube.com/watch?v=-3am_5jMzJ4)

3. And for learning how to use webbrowser and os modules I visited the website of geeksforgeeks.

(https://www.geeksforgeeks.org/os-module-python-examples/#:~:text=The%20OS%20module%20in%20python,u sing%20operating%20system%20dependent%20functionality.&text=path*%20modules%20include%20many%20functions%20to%20interact%20with%20the%20file%20system.)

F.R.I.D.A.Y

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