Report

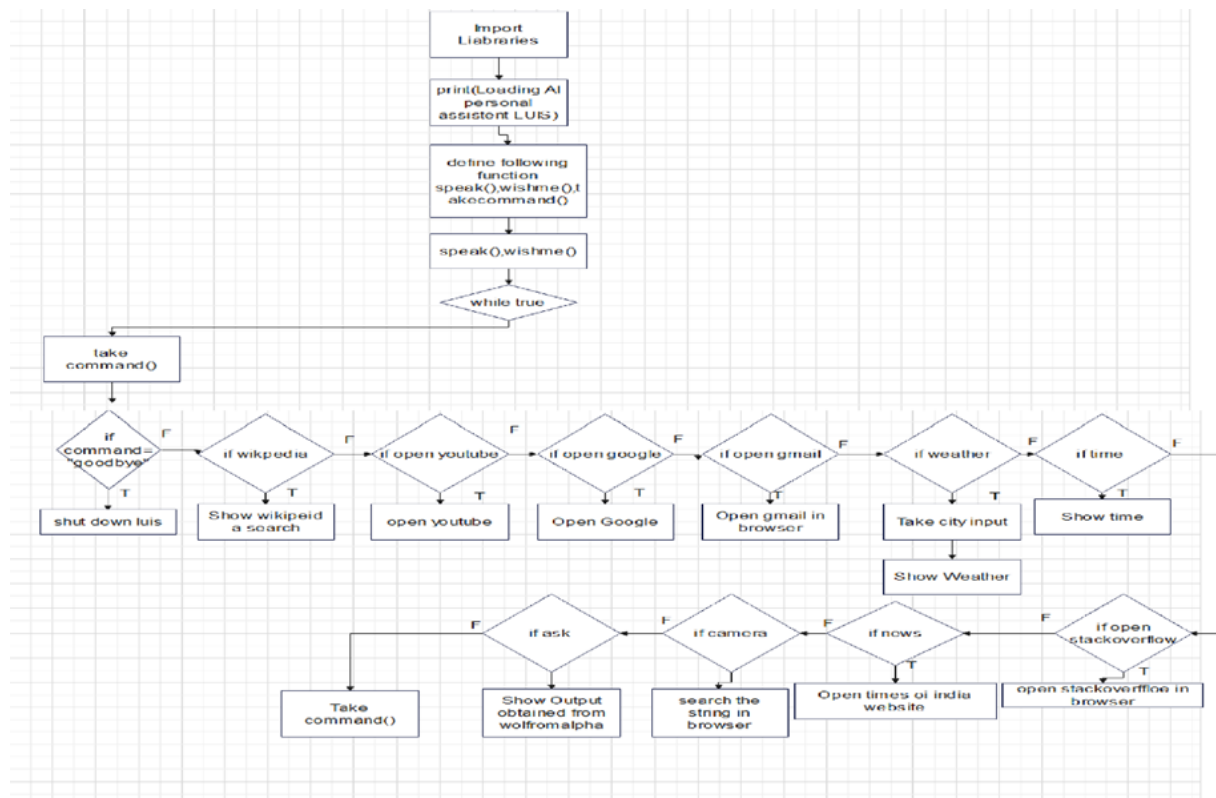**Title: -** Personal Voice Assistant

Description: - A voice assistant, also known as a virtual assistant, is a software program that uses various python packages to respond to voice commands. This assistant can be found in a variety of devices, including smartphones, smart speakers, and smart home devices.

Program Flow: -

The program executes in following manner:

The necessary libraries are imported.

The text-to-speech engine is initialized and the assistant's voice is set.

Functions are defined to speak text, greet the user, and recognize speech input.

The assistant greets the user.

The program enters an infinite loop where it waits for the user to speak a command.

If the user says "good bye", the program breaks out of the loop and the assistant says goodbye.

If the user says "wikipedia", the assistant searches Wikipedia and reads out a summary of the requested article.

If the user says "open youtube", "open google", or "open gmail", the assistant opens the corresponding website in a new tab.

If the user says "weather", the assistant asks for a city name and retrieves and reads out the weather information for that city.

If the user says "time", the assistant reads out the current time.

If the user says "who are you" or "what can you do", the assistant describes its capabilities.

If the user says "who made you", the assistant says who built it.

If the user says "open stackoverflow", the assistant opens the Stack Overflow website.

If the user says "news", the assistant opens the Times of India website and reads out some headlines.

If the user says "camera" or "take a photo", the assistant uses the computer's webcam to display a live video feed.

If the user says "search", the assistant opens a new tab and performs a search for the user's input.

The program returns to step 5 and waits for the user to speak another command.

Packages Used and their Purpose: -

1. speech_recognition: -

In Python, the speech_recognition library provides an easy-to-use interface for performing speech recognition

2. pyttsx3: -

Used to create voice of assistant.

3. Wikipedia: -

To retrieve information from Wikipedia in Python, you can use the wikipedia library. This library provides an easy-to-use interface for searching and retrieving information from Wikipedia.

4. Webbrowser:

The webbrowser module also provides other methods for controlling the browser, such as open_new() to open a new window, open_new_tab() to open a new tab, and open_help() to open the browser's help page.

5. Wolframealpha:

wolframalpha library also provides other methods for sending different types of queries to Wolfram Alpha, such as image, sound, and video queries. It also supports querying for specific properties of a topic, such as its population or location.
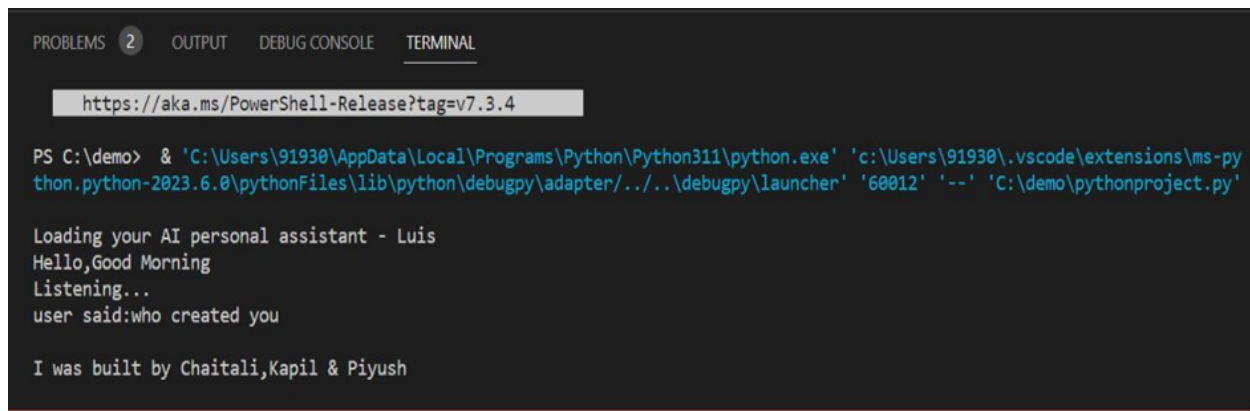
6. Opencv:

OpenCV (Open Source Computer Vision) is a popular computer vision library that provides a wide range of image and video processing functions. It is available for Python, as well as other programming languages.
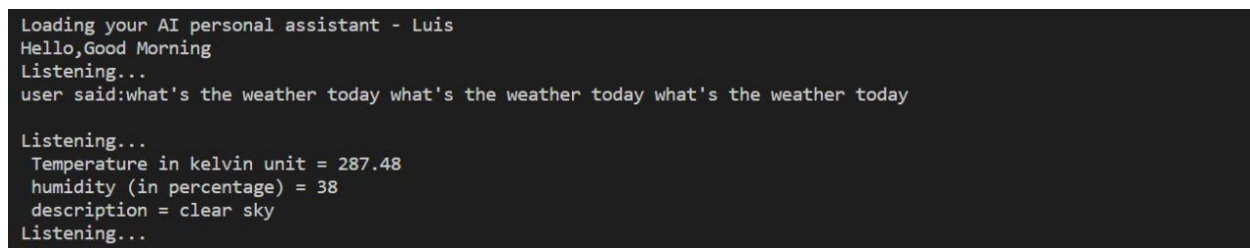
Program: -

https://github.com/chaitali-gaikwad/Personal-Voice-Assistant

Output:

Rest of the Outputs are shown in Demo Video

Conclusion:

Findings:

Building a personal assistant chat bot using built-in packages in Python is a relatively straightforward process. Python's built-in packages provide the necessary tools to create a functional chat bot capable of performing a wide range of tasks. With some creativity, a personal assistant chat bot can become a valuable tool in anyone's daily routine.

Applications:

     i.   Searching an information on Wikipedia

     ii.   Opening youtube, gmail, google, news, stackoverflow

     iii.   Responds to questions related to Time.

     iv.   Computational and Geographical questions

     v.   Weather update

     vi.   Open Camera

Future Scope:

To Add more dynamicity in personal assistant so that it can be able to make predictions.