**MINI PROJECT – II**

Synopsis on Virtual assistant



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**Abstract**

* As we know Python is a suitable language for script writers and developers. Let’s write a script for Voice Assistant using Python. The query for the assistant can be manipulated as per the user’s need.
* Speech recognition is the process of converting audio into text. This is commonly used in voice assistants like Alexa, Siri, etc. Python provides an API called **Speech Recognition** to allow us to convert audio into text for further processing. In this article, we will look at converting large or long audio files into text using the **Speech Recognition API** in python.

### What can this A.I. assistant do for you?

* It can send emails for you.
* It can play music for you.
* It can do Wikipedia searches for you.
* It is capable of opening websites like Google, Youtube, etc., in a web browser.
* It is capable of opening your code editor or IDE with a single voice command

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# Introduction

### WHAT IS A DESKTOP ASSISTANT:

Virtual assistants are typically cloud-based programs that require internet-connected devices and/or applications to work. Three such applications are Siri on Apple devices, Cortana on Microsoft Devices and Google Assistant on Android devices.

There are also devices dedicated to providing virtual assistance. The most popular ones are available from Amazon, Google and Microsoft. To use the Amazon Echo virtual assistant, called Alexa, users call out the wake word, "Alexa." A light on the device signals to the user it is ready to receive a command, which typically involves simple language requests, such as "what is the weather today," or "play pop music." Those requests are processed and stored in Amazon's cloud.

**The Objective of this Project**

## Objective

MAIN OBJECTIVE IS TO MAKE A VIRTUAL DESKTOP ASSISTANT WHICH CAN EASE HUMAN EFFORTS-:

## SOME FEATURE INCLUDE-:

Send emails without typing a single word, doing Wikipedia searches without opening web browsers, and performing many other daily tasks like playing music with the help of a single voice command.

ALL THIS WILL BE DONE USING PYTHON LANGUAGE…

## SOFTWARE AND HARDWARE REQUIRMENTS

**Hardware Requirements**

* + Personal computer with internet connection
  + i3 Processor Based Computer or Higher
  + Memory: 2 GB RAM(Maximum)
  + Hard Drive: 1 GB(Maximum)

## Software Requirements

* + Windows 7 Or Higher
  + Google Chrome Version 40.0.2214 Or Higher
  + Python compiler,SAPI5
  + Visual Studio code/pycharm/anaconda

## Frontend Tools

* Python

# Implementation

## MODULES USED

* **Subprocess:-** This module is used for getting system subprocess details which are used in various commands i.e Shutdown, Sleep, etc. This module comes buit-in with Python.
* **Pyttsx3:-** This module is used for conversion of text to speech in a program it works offline. To install this module type the below command in the terminal.

#### pip install pyttsx3.

* **Wikipedia:-** As we all know Wikipedia is a great source of knowledge just like Geeks for Geeks we have used Wikipedia module to get information from Wikipedia or to perform Wikipedia search. To install this module type the below command in the terminal.
* **Speech Recognition:-** Since we’re building an Application of voice assistant, one of the most important things in this is that your assistant recognizes your voice (means what you want to say/ ask). To install this module type the below command in the terminal.
* **Web browser:-** To perform Web Search. This module comes buit-in with Python.
* **Date-time:-** Date and Time is used to showing Date and Time. This module comes built-int with Python.
* **Requests:** Requests is used for making GET and POST requests. To install this module type the below command in the terminal.

**pip install requests**

**SUMMARY:**

First of all, we have created a wishme() function that gives the functionality of greeting according to the system time to our A.I.

After wishme() function, we have created a takeCommand() function, which helps our A.I to take command from the user. This function is also responsible for returning the user's query in a string format.

We developed the code logic for opening different websites like google, youtube, and stack overflow.

Developed code logic for opening VS Code or any other application. At last, we added functionality to send emails.

With this, you have successfully made your very first virtual assistant

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