

# TASK -1 : PYTHON VOICE ASSISTANT PROJECT DOCUMENTATION

## Project Overview

This project is a Python-based voice assistant that can perform tasks using spoken commands. It demonstrates the integration of speech recognition, text-to-speech, and API services to create a simple yet functional virtual assistant.

## Objectives

- Develop a beginner-friendly voice assistant.
- Implement key features:
  - Greeting responses
  - Time and date announcements
  - Web search capabilities
  - Weather updates using live API
  - Reminder setting with voice commands
  - Music playback from YouTube

## Tools and Technologies Used

- **Python 3**
- **speech\_recognition** – for converting speech to text.
- **pyttsx3** – for converting text to speech.
- **requests** – for API calls.
- **pywhatkit** – for playing music on YouTube.

- **WeatherAPI** – to retrieve real-time weather information.

## Installation and Setup

Install required Python packages:

```
pip install speechrecognition pyttsx3 requests pywhatkit
```

Obtain a free WeatherAPI key from:

<https://www.weatherapi.com>

Replace `YOUR_API_KEY` in the `get_weather()` function with your actual API key.

## Features

- **Greeting:**  
Responds to “hello” or “hi.”
- **Time and Date:**  
Announces the current time and date.
- **Web Search:**  
Searches Google for spoken queries.
- **Weather Information:**  
Retrieves and reads out the weather for a specified city.
- **Reminders:**  
Sets a countdown timer to deliver reminder messages.
- **Music Playback:**  
Plays requested songs on YouTube.

## Outcomes

- The assistant successfully interacts with the user via voice.
- Tasks are performed accurately and in real-time.

- Weather data is retrieved dynamically.
- Music playback integrates seamlessly with YouTube.

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