



KIET Group of Institutions, Ghaziabad

Department of Computer Applications

(An ISO – 9001: 2015 Certified & 'A' Grade accredited Institution by NAAC)

Artificial Intelligence Lab

KCA 351: Session 2021-22

Experiment – No-11

Problem Statement : Write a program to Implement pattern recognition problems of speech recognition.

PREREQUISITES:

Step 1: pip install pyttsx3

Step 2: pip install Speech Recognition

Step 3: pip install pyaudio

IDE Environment: VsCode, Jupyter e.t.c

Must Have: Microphone in your System

Required: Good Internet Connection for Voice recognition through Google Voice API.



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Program:

```
import pyttsx3
import speech_recognition as sr

engine = pyttsx3.init('sapi5')
voices = engine.getProperty('voices')
engine.setProperty('voice', voices[0].id)

def speak(audio):
    engine.say(audio)
    engine.runAndWait()

def takeCommand():
    r = sr.Recognizer()
    with sr.Microphone() as source:
        print("Listening...")
        r.pause_threshold = 1
        audio = r.listen(source)
    try:
        print("Recognizing...")
        query = r.recognize_google(audio, language='en-in')
        print(f"User said: {query}\n")
    except Exception as e:
        print(e)
        print("Say that again please...")
        return "None"
    return query

if __name__ == "__main__":
    if 1:
        #while True:
            query = takeCommand().lower()
            speak(query)
```



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Output :

```
PROBLEMS 28 OUTPUT TERMINAL DEBUG CONSOLE
[Running] python -u "c:\Users\Akshay singh\Desktop\Python\Speech2Text.py"
Listening...
Recognizing...
User said: hello what's up I am Akshay

[Done] exited with code=0 in 21.409 seconds
```