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SEC:15

Project:

TRANSLATE LANGUAGE OF TEXT AND SPEECH

Work Flow:

-->An AWS account

--> Visual studio code

--> AWS lambda

--> Amazon API Gateway

--> AWS Amplify

--> Amazon DynamoDB

--> Amazon Translate

Introduction:

IN THE AWS CLOUD WE CAN TRANSLATE THE LANGUAGE OF TEXT AND IN THIS WE CAN TRANSLATE ANY LANGUAGE IT IS EASIER TO WHO DONT KNOW THE PARTICULAR LANGUAGE AND THE BENIFIT IN THIS IS IT CAN BE TRANSLATE ANY OF THE LANGUAGE IT CAN BE GET THE VOICE ASSISTANT OF THE TRANSLATE LANGUAGE IN THE AWS CLOUD WITH THE HELP OF AWS TRANSLATE.

DESCRIPTION :

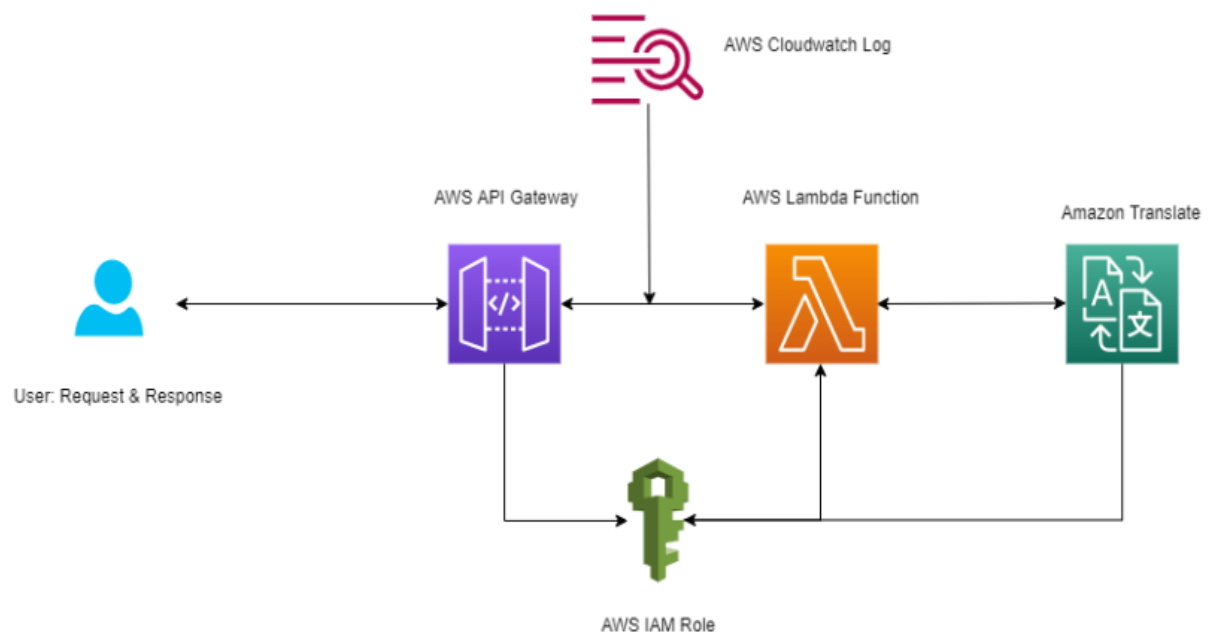
AWS Cloud service that allows you to easily translate text from one language to another. With "TRANSLATE", you can provide a source text in one language and receive the corresponding translation in another language in real time. This service supports a wide range of languages, including commonly spoken languages such as English, Spanish, Chinese, and French, as well as less common languages such as Icelandic and Tagalog. "TRANSLATE" uses advanced machine learning algorithms to accurately translate text, ensuring that the

resulting translations are both accurate and natural-sounding. Additionally, "TRANSLATE" can be easily integrated into your existing applications, making it a powerful tool for businesses and individuals looking to expand their reach and communicate with people in different parts of the world.

Abstract:

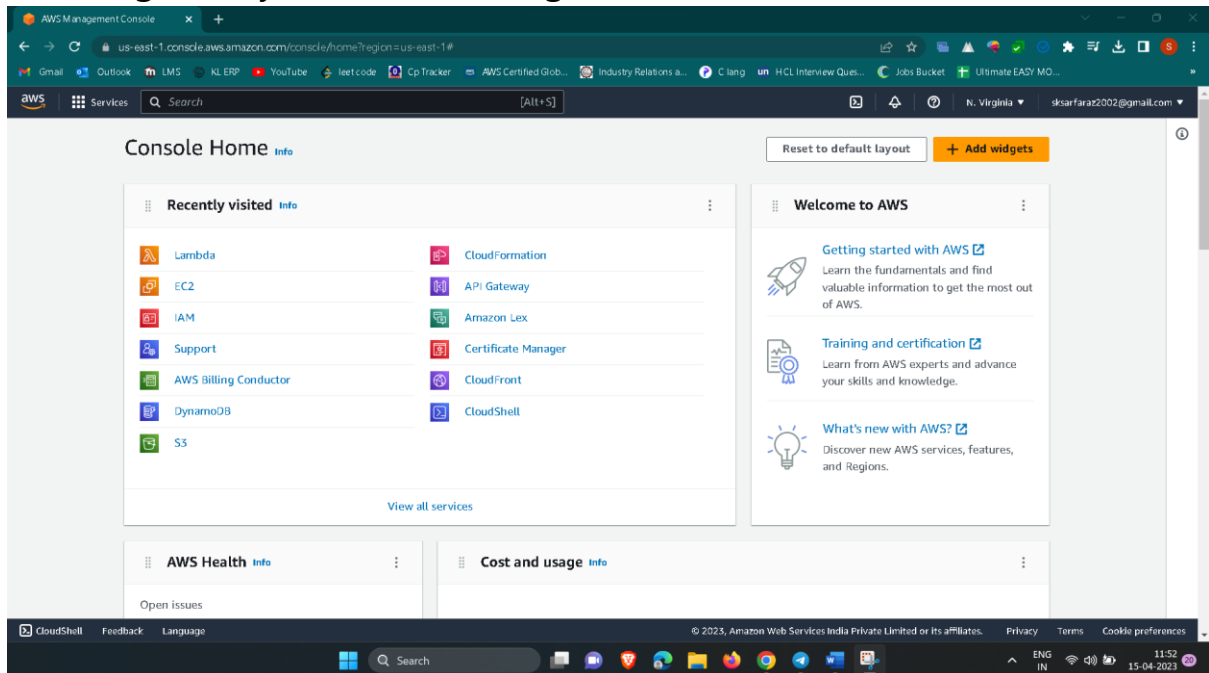
First using the an Aws account for the help of the project and with the help of Visual studio code have deployed the code for the Text to speech and messages can be distributed from a single source to numerous downstream consumers and used the amazon api gateway, AWS Amplify and amazon dynamo db for the help of frontend and used amazon translate for the translation of the text to speech.

Architecture:

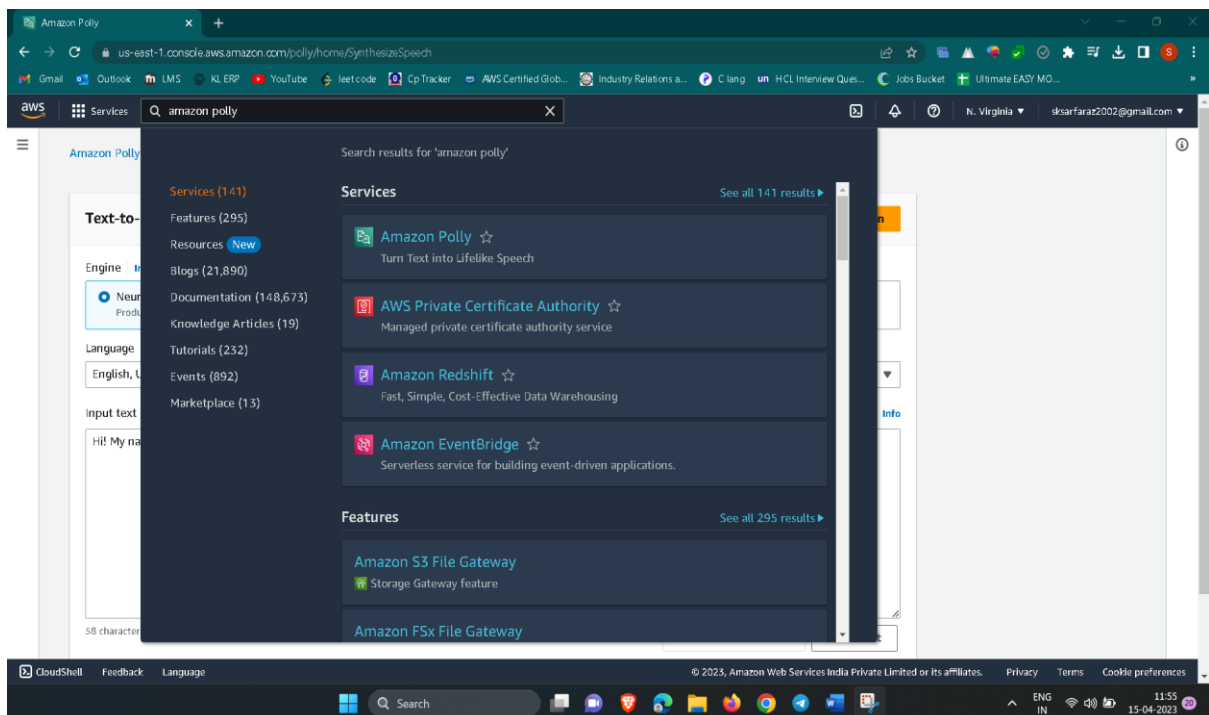


Procedure:

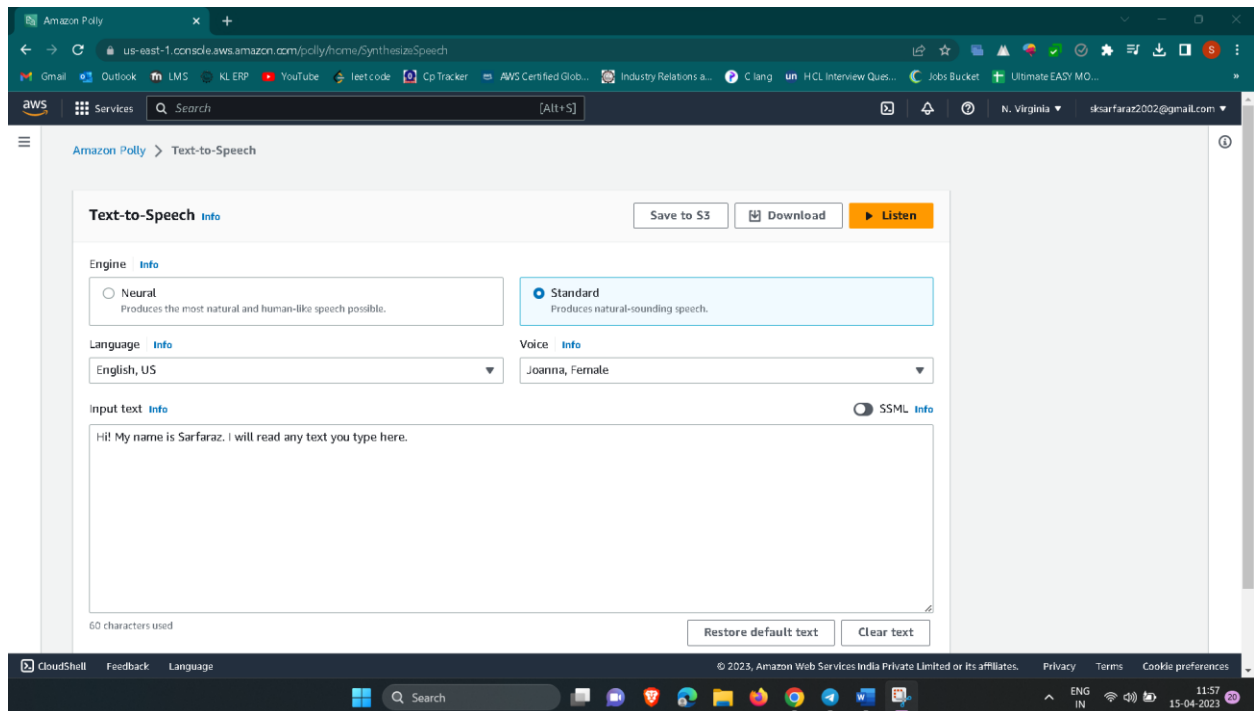
First Log in to your AWS management console.



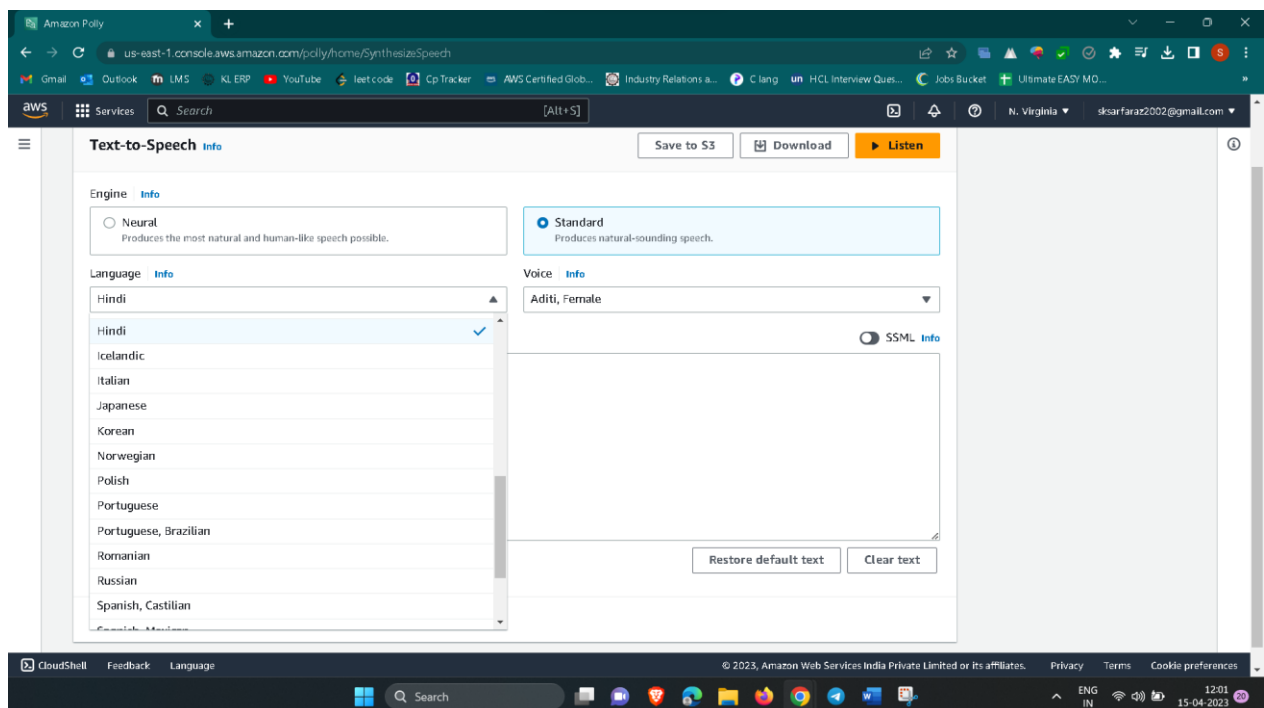
Step-2 :Now in search click amazon polly



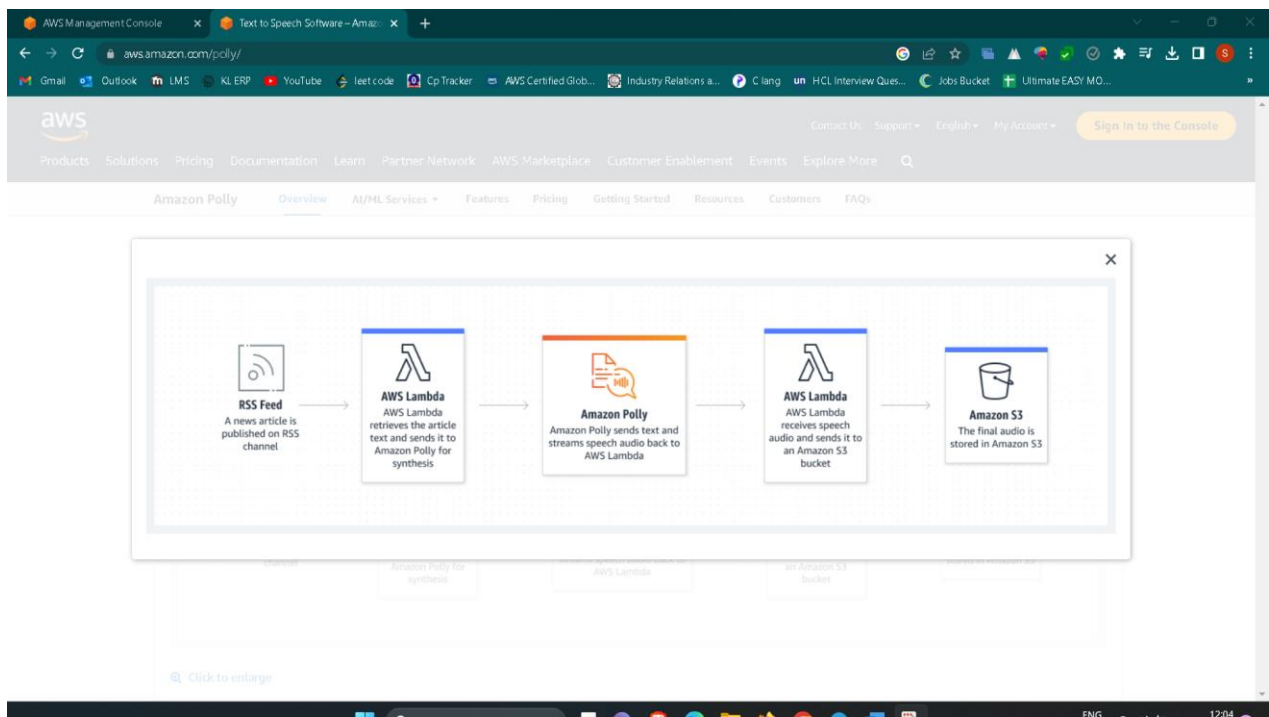
Step-3: after clicking that it displays like above here with the help of amazon polly can translate text to speech.



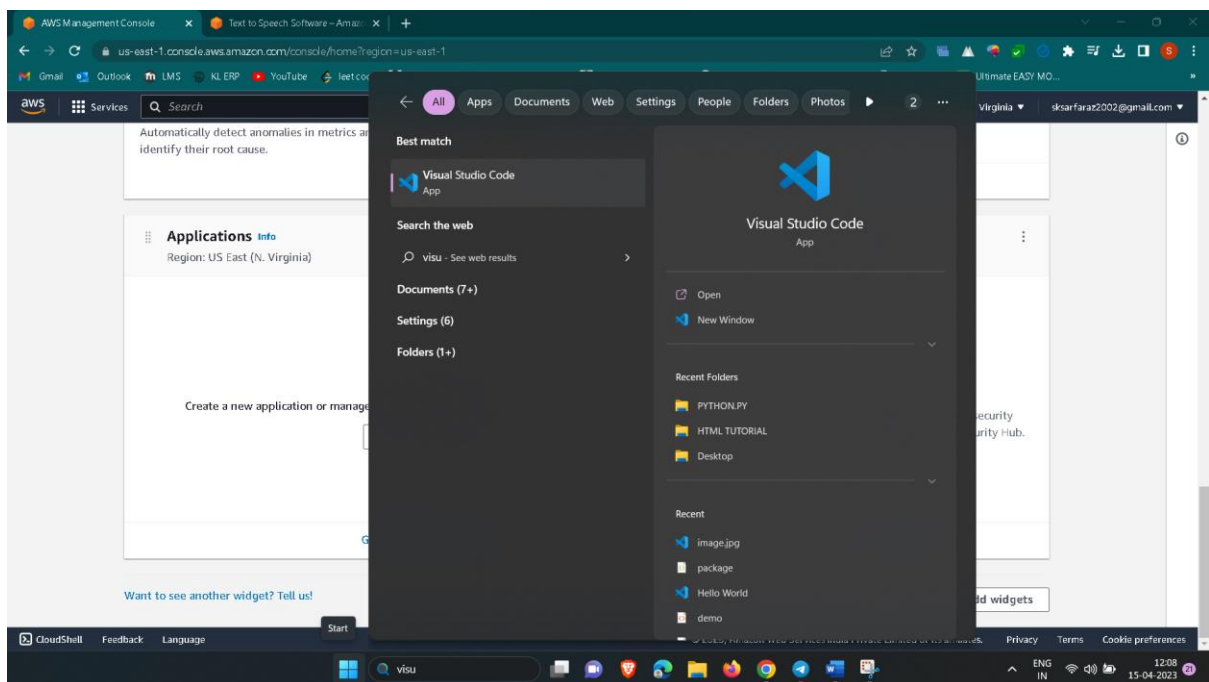
Step-4: Here we can select any of the language from text to speech.



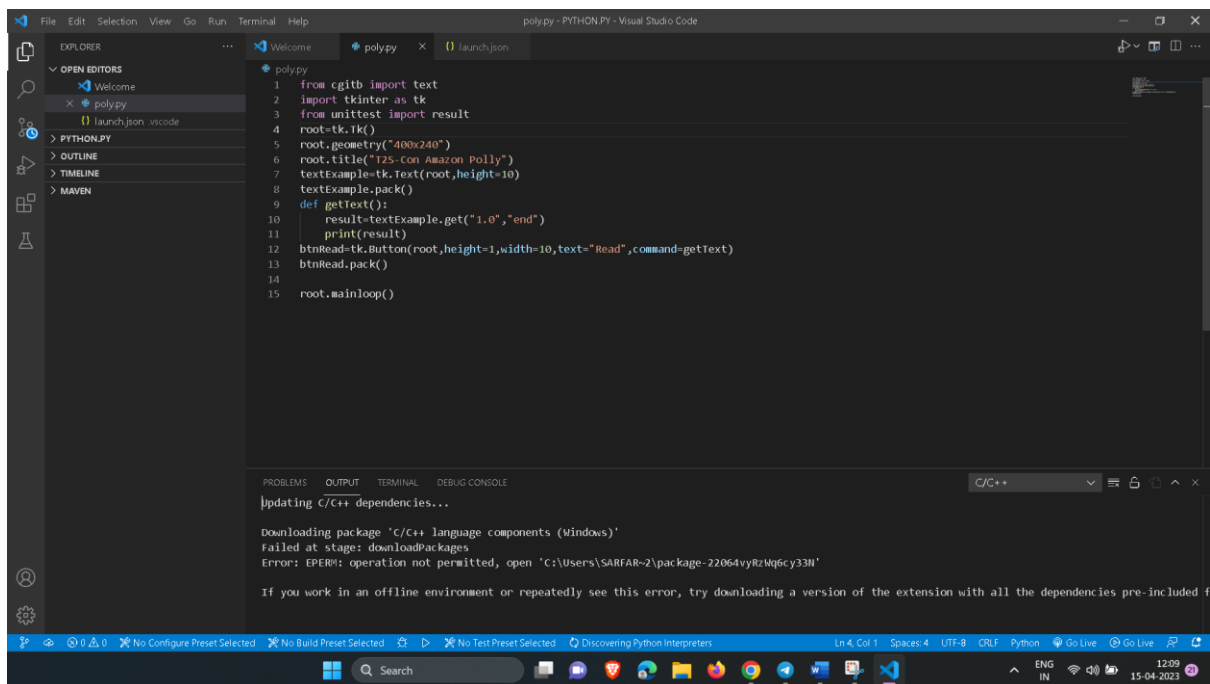
Step-5: Here with the help of these services we can do the project of language to text



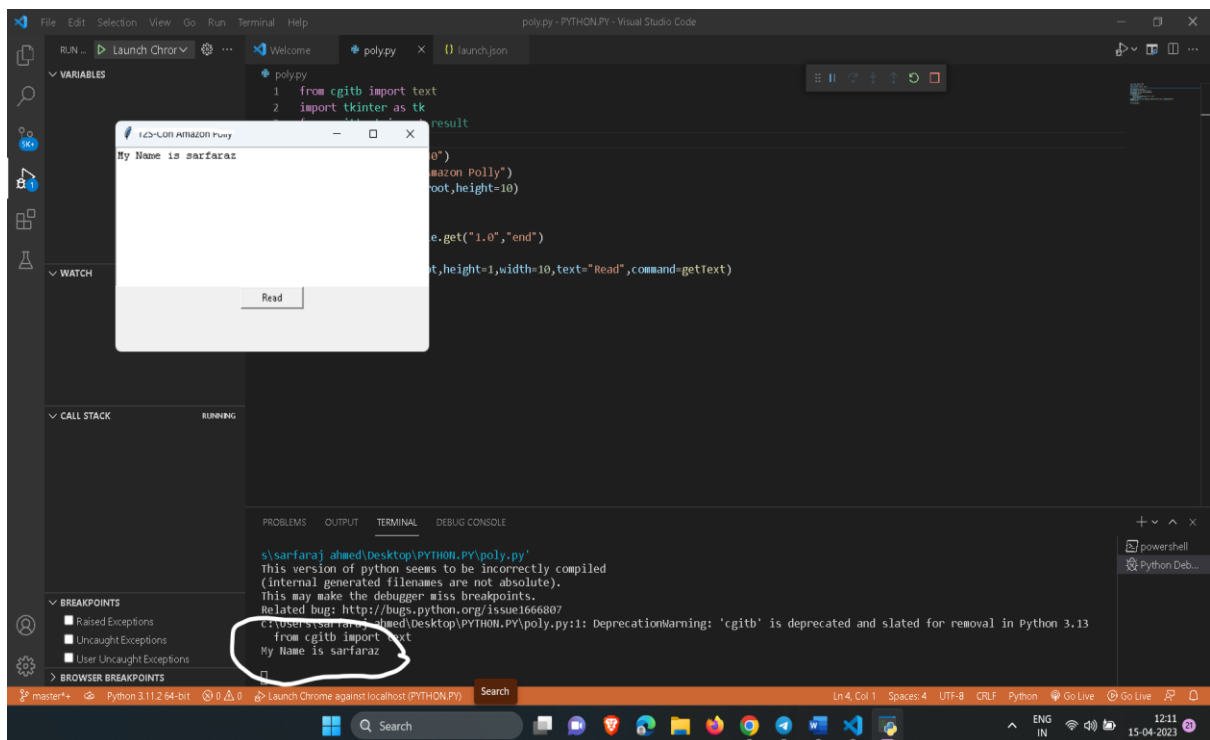
Step-6: Now go to the Visual Studio Code.



Step-7: In the vs code should type the python code to get the output of the text



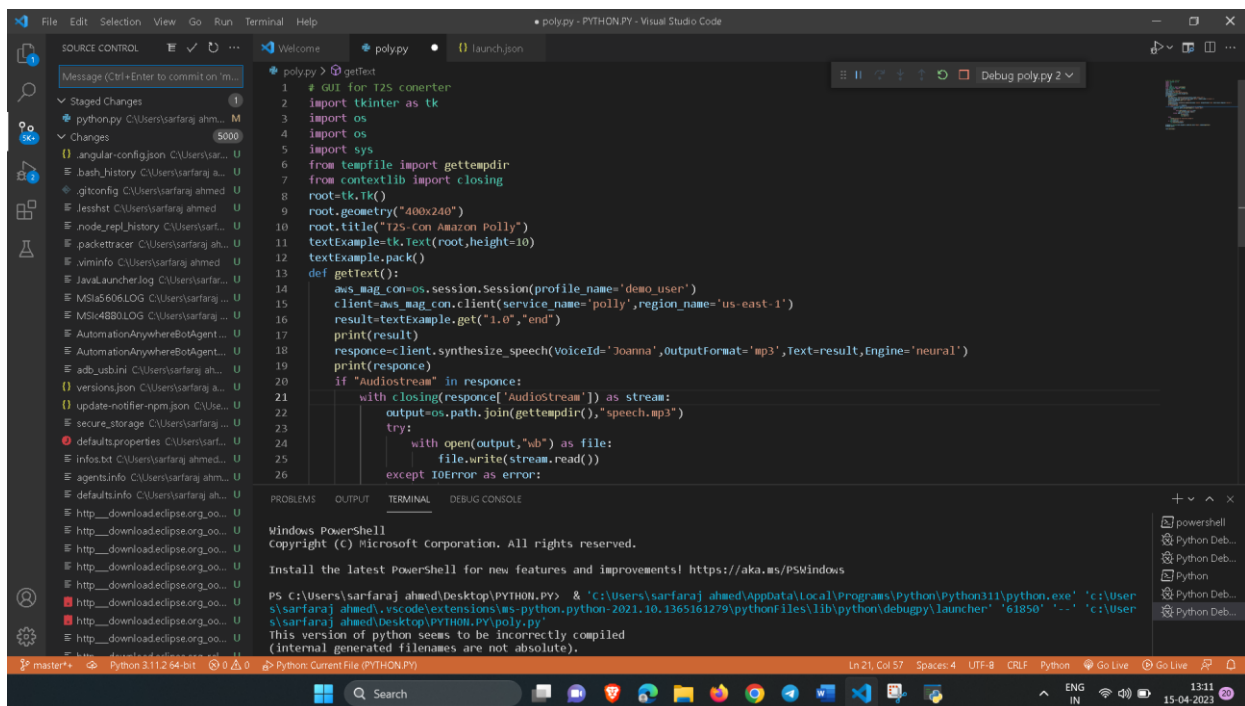
Step-8: Here we can see the Text in the output



Step-9: This is the response syntax of polly

```
{  
  
  'Lexicon': {  
  
    'Content': 'string',  
  
    'Name': 'string'  
  
  },  
  
  'LexiconAttributes': {  
  
    'Alphabet': 'string',  
  
    'LanguageCode': 'arb'  
  
  },  
  
  'LastModified': datetime(2015, 1, 1),  
  
  'LexiconArn': 'string',  
  
  'LexemesCount': 123,  
  
  'Size': 123  
  
}
```

Step-9: This is the complete code in python from text to speech.



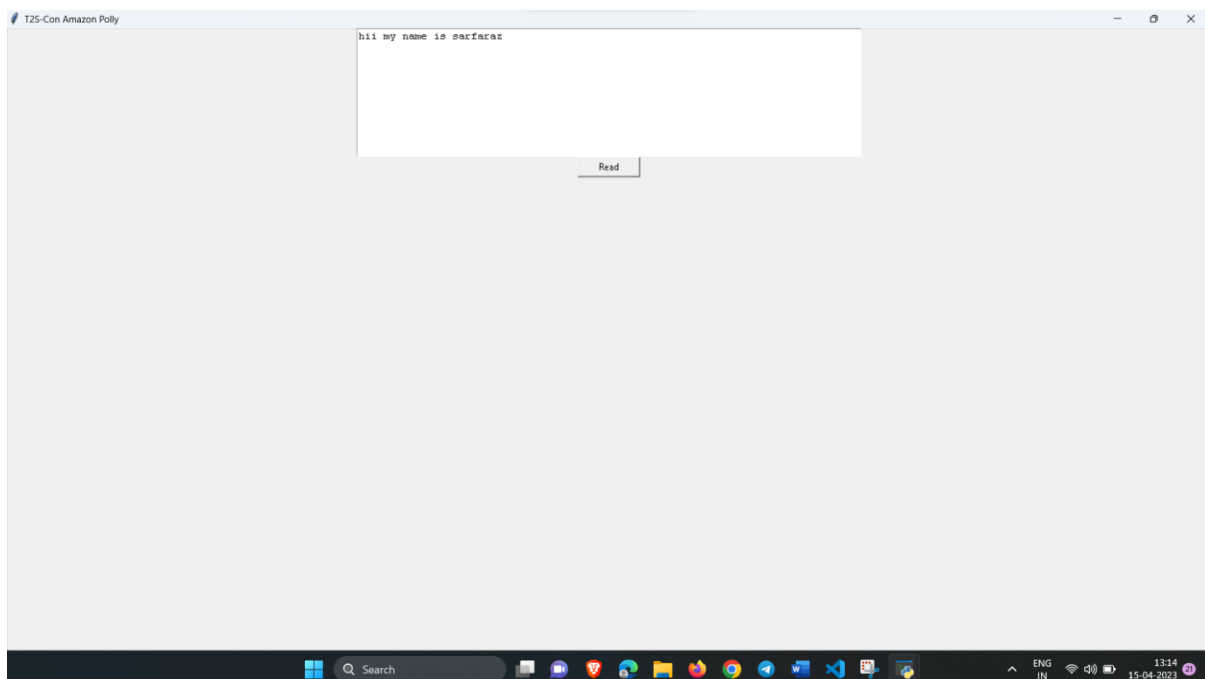
The screenshot shows the Visual Studio Code editor with a Python file named `polypy.py`. The code is a GUI application using Tkinter that interacts with the AWS Polly service to convert text to speech. The code is as follows:

```
1 # GUI for T2S converter
2 import tkinter as tk
3 import os
4 import sys
5 from tempfile import gettempdir
6 from contextlib import closing
7 root=tk.Tk()
8 root.geometry("400x240")
9 root.title("T2S-con Amazon Polly")
10 textExample=tk.Text(root,height=10)
11 textExample.pack()
12
13 def getText():
14     aws_mag_con=os.session.Session(profile_name='demo_user')
15     client=aws_mag_con.client(service_name='polly',region_name='us-east-1')
16     result=textExample.get("1.0","end")
17     print(result)
18     response=client.synthesize_speech(VoiceId='Joanna',OutputFormat='mp3',Text=result,Engine='neural')
19     print(response)
20     if "AudioStream" in response:
21         with closing(response["AudioStream"]) as stream:
22             output=os.path.join(gettempdir(),"speech.mp3")
23             try:
24                 with open(output,"wb") as file:
25                     file.write(stream.read())
26             except IOError as error:
```

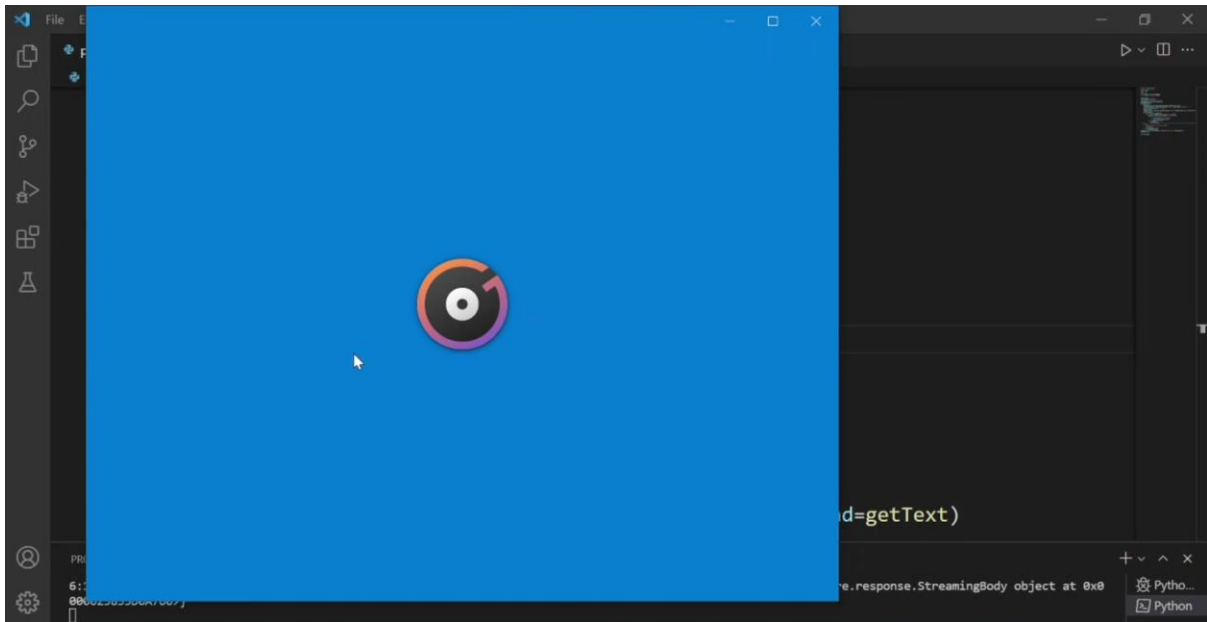
The bottom of the screenshot shows the Windows PowerShell terminal window with the command to run the script:

```
PS C:\Users\sarfara\ahmed\Desktop\PYTHON.PY> .\polypy.py
```

Step-10: Now if we run the code in the terminal it automatically opens the T2S-con Amazon Polly.



Step-11: Now we should click on the read it will take to the mp3 music to read the Text which was texted.



Step-12: Finally the Amazon polly reads the text to speech in the mp3 which have deployed in the Visual studio code to Aws.

