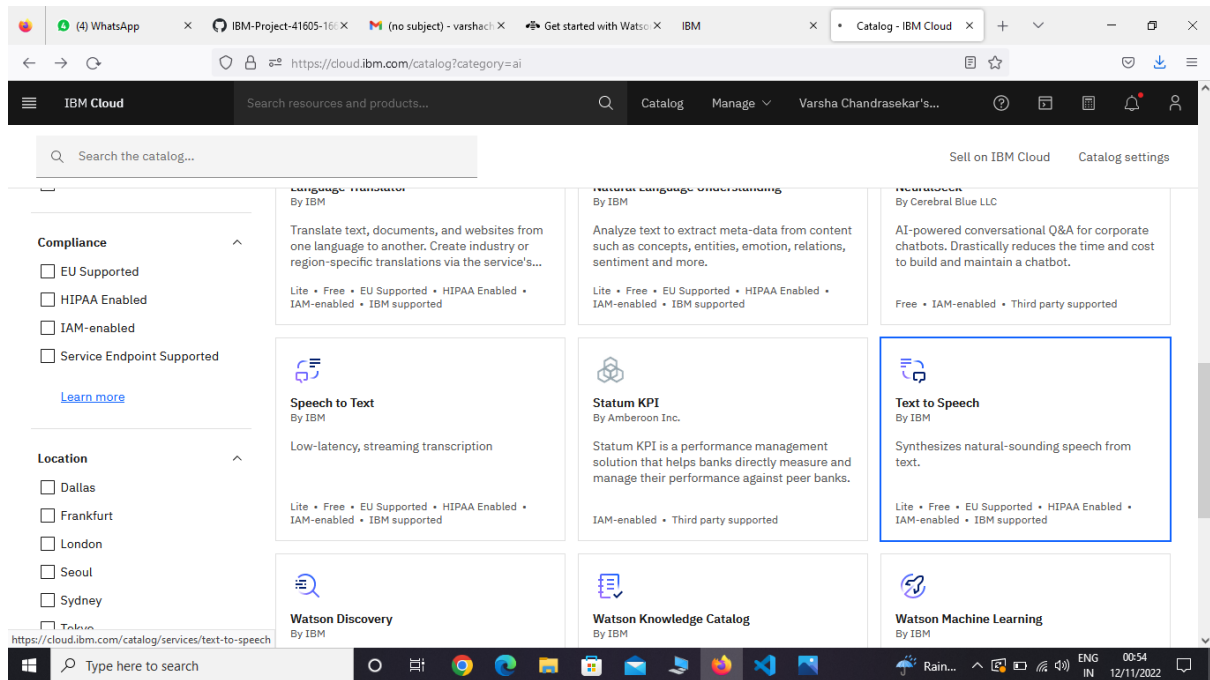


# CREATE & CONFIGURE IBM CLOUD SERVICE

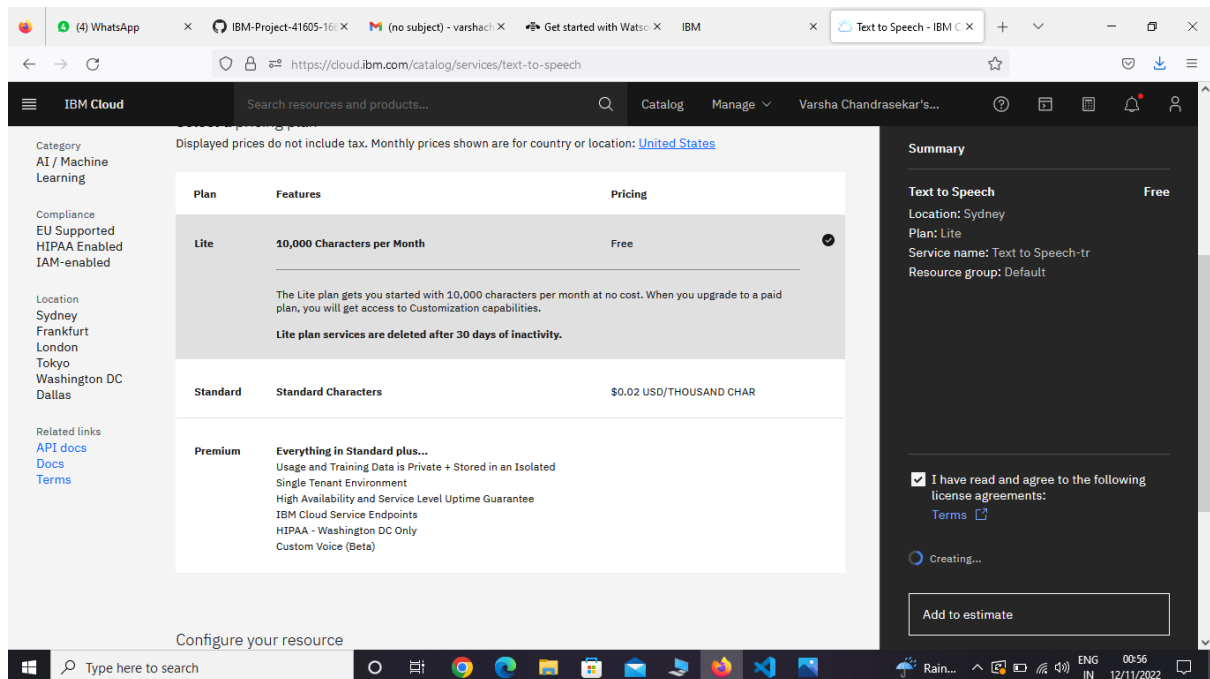
## CREATE TEXT TO SPEECH SERVICE

Team ID	PNT2022TMID47589
Project Name	Personal Assistance for Seniors who are Self-Reliant

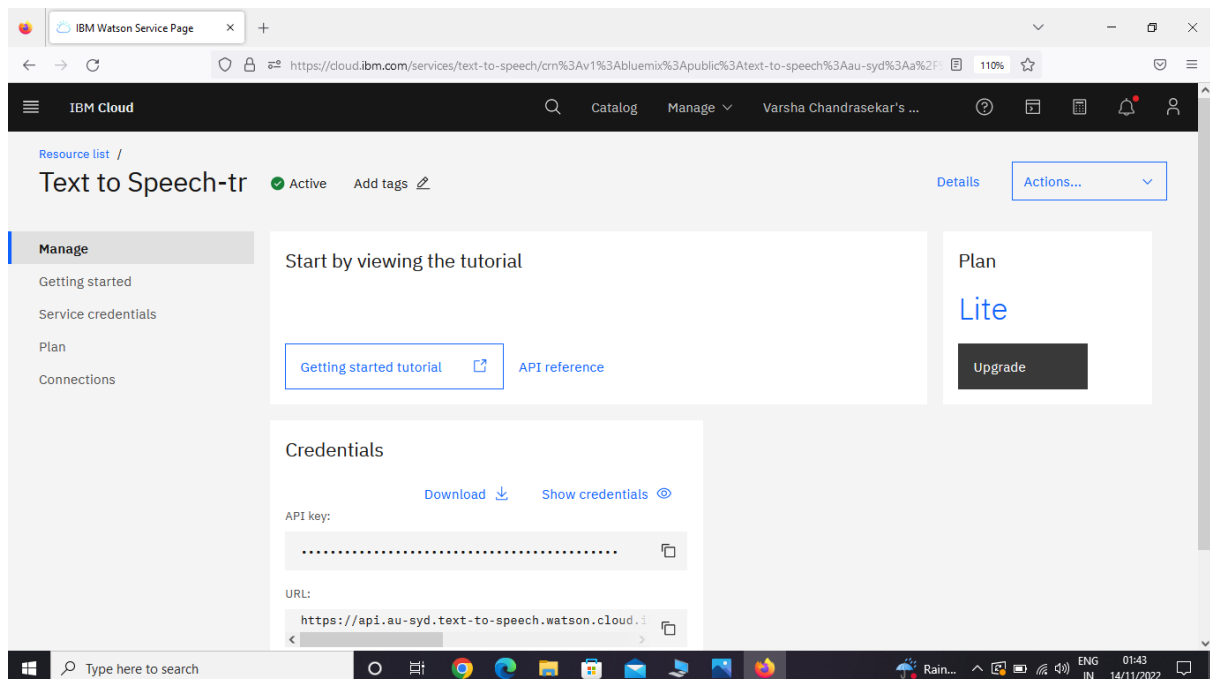
### 1. Search for the TTS Services in IBM CLOUD :



## 2.Create the TTS credential for the IBM Project :



## 3. The credential has been allocated our account and TTS services status has been activated.



## 4. Installing Pip in IBM Watson services

```
Select Command Prompt
Microsoft Windows [Version 10.0.19044.2006]
(c) Microsoft Corporation. All rights reserved.

C:\Users\varsha-gokul>pip install ibm-watson
Collecting ibm-watson
  Downloading ibm-watson-6.1.0.tar.gz (373 kB)
    ----- 373.5/373.5 kB 1.4 MB/s eta 0:00:00
  Installing build dependencies ... done
  Getting requirements to build wheel ... done
  Preparing metadata (pyproject.toml) ... done
Collecting ibm-cloud-sdk-core==3.*>=3.3.6
  Downloading ibm_cloud_sdk_core-3.16.0-py3-none-any.whl (83 kB)
    ----- 83.7/83.7 kB 941.6 kB/s eta 0:00:00
Requirement already satisfied: python-dateutil>=2.5.3 in c:\users\varsha-gokul\appdata\local\packages\pythonsoftwarefoundation.python.3.10_qbz5n2kfra8p0\localcache\loca
l-packages\python310\site-packages (from ibm-watson) (2.8.2)
Collecting websocket-client==1.1.0
  Downloading websocket_client-1.1.0-py2.py3-none-any.whl (68 kB)
    ----- 68.7/68.7 kB 1.2 MB/s eta 0:00:00
Collecting requests<3.0,>=2.0
  Downloading requests-2.28.1-py3-none-any.whl (62 kB)
    ----- 62.0/62.0 kB 482.6 kB/s eta 0:00:00
Collecting PyJWT<3.0.0,>=2.4.0
  Downloading PyJWT-2.6.0-py3-none-any.whl (20 kB)
Collecting urllib3<2.0.0,>=1.26.0
  Downloading urllib3-1.26.12-py2.py3-none-any.whl (140 kB)
    ----- 140.4/140.4 kB 1.4 MB/s eta 0:00:00
Requirement already satisfied: six>=1.5 in c:\users\varsha-gokul\appdata\local\packages\pythonsoftwarefoundation.python.3.10_qbz5n2kfra8p0\localcache\local-packages\pyt
hon310\site-packages (from python-dateutil>=2.5.3->ibm-watson) (1.16.0)
Collecting charset-normalizer<3,>=2
  Downloading charset_normalizer-2.1.1-py3-none-any.whl (39 kB)
Collecting idna<4,>=2.5
  Downloading idna-3.4-py3-none-any.whl (61 kB)
    ----- 61.5/61.5 kB 366.4 kB/s eta 0:00:00
Collecting certifi>=2017.4.17
  Downloading certifi-2022.9.24-py3-none-any.whl (161 kB)
    ----- 161.1/161.1 kB 1.6 MB/s eta 0:00:00
Building wheels for collected packages: ibm-watson
  Building wheel for ibm-watson (pyproject.toml) ... done
  Created wheel for ibm-watson: filename=ibm_watson-6.1.0-py3-none-any.whl size=370808 sha256=2d353d6022d0f8b4e6a4ce5e13af3afa6a985c08c9877f8f493c8c22bf797140
  Stored in directory: c:\users\varsha-gokul\appdata\local\packages\pythonsoftwarefoundation.python.3.10_qbz5n2kfra8p0\localcache\local\pip\cache\wheels\7e\02\2a\d2d1dd
  336f0a791f59d1cb299f4aa3f9762002ce247eccaa19
Successfully built ibm-watson
Installing collected packages: websocket-client, urllib3, PyJWT, idna, charset-normalizer, certifi, requests, ibm-cloud-sdk-core, ibm-watson
  WARNING: The script normalizer.exe is installed in 'C:\Users\varsha-gokul\AppData\Local\Packages\PythonSoftwareFoundation.Python.3.10_qbz5n2kfra8p0\LocalCache\local-p
ackages\Python310\Scripts' which is not on PATH.
  Consider adding this directory to PATH or, if you prefer to suppress this warning, use --no-warn-script-location.
Successfully installed PyJWT-2.6.0 certifi-2022.9.24 charset-normalizer-2.1.1 ibm-cloud-sdk-core-3.16.0 ibm-watson-6.1.0 idna-3.4 requests-2.28.1 urllib3-1.26.12 websoc
ket-client-1.1.0

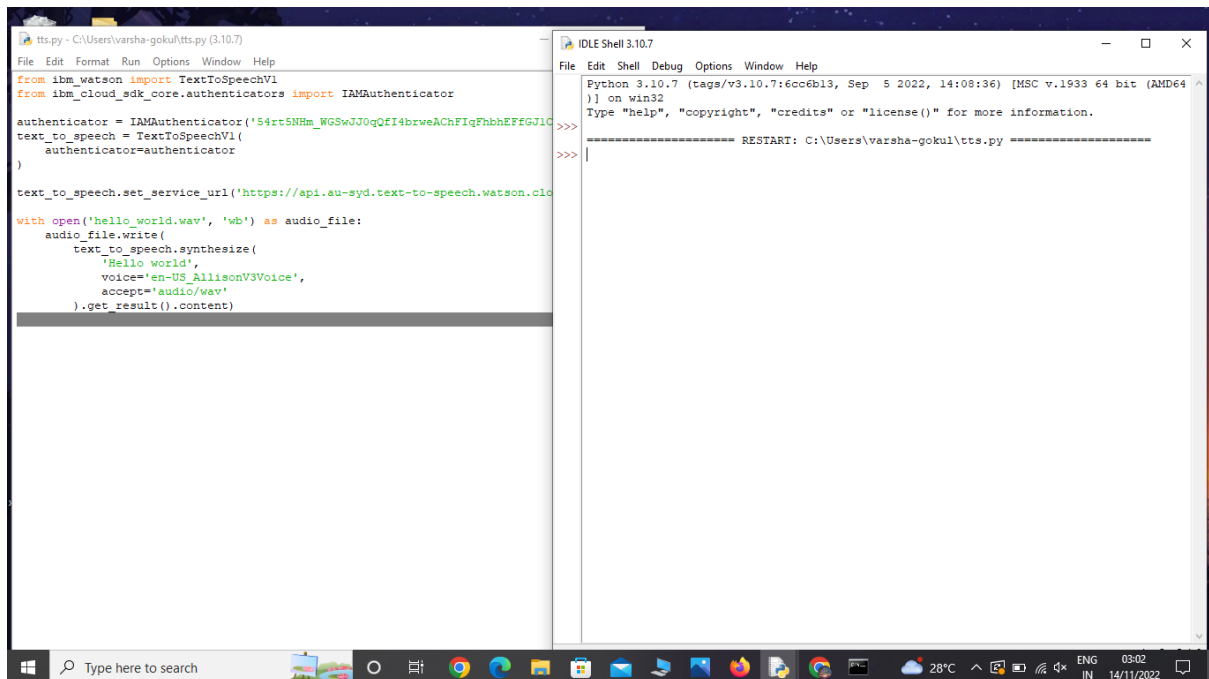
C:\Users\varsha-gokul>
```

## 5. It has been successfully installed.

```
Select Command Prompt
Python310\site-packages (from python-dateutil>=2.5.3->ibm-watson) (1.16.0)
Collecting charset-normalizer<3,>=2
  Downloading charset_normalizer-2.1.1-py3-none-any.whl (39 kB)
Collecting idna<4,>=2.5
  Downloading idna-3.4-py3-none-any.whl (61 kB)
    ----- 61.5/61.5 kB 366.4 kB/s eta 0:00:00
Collecting certifi>=2017.4.17
  Downloading certifi-2022.9.24-py3-none-any.whl (161 kB)
    ----- 161.1/161.1 kB 1.6 MB/s eta 0:00:00
Building wheels for collected packages: ibm-watson
  Building wheel for ibm-watson (pyproject.toml) ... done
  Created wheel for ibm-watson: filename=ibm_watson-6.1.0-py3-none-any.whl size=370808 sha256=2d353d6022d0f8b4e6a4ce5e13af3afa6a985c08c9877f8f493c8c22bf797140
  Stored in directory: c:\users\varsha-gokul\appdata\local\packages\pythonsoftwarefoundation.python.3.10_qbz5n2kfra8p0\localcache\local\pip\cache\wheels\7e\02\2a\d2d1dd
  336f0a791f59d1cb299f4aa3f9762002ce247eccaa19
Successfully built ibm-watson
Installing collected packages: websocket-client, urllib3, PyJWT, idna, charset-normalizer, certifi, requests, ibm-cloud-sdk-core, ibm-watson
  WARNING: The script normalizer.exe is installed in 'C:\Users\varsha-gokul\AppData\Local\Packages\PythonSoftwareFoundation.Python.3.10_qbz5n2kfra8p0\LocalCache\local-p
ackages\Python310\Scripts' which is not on PATH.
  Consider adding this directory to PATH or, if you prefer to suppress this warning, use --no-warn-script-location.
Successfully installed PyJWT-2.6.0 certifi-2022.9.24 charset-normalizer-2.1.1 ibm-cloud-sdk-core-3.16.0 ibm-watson-6.1.0 idna-3.4 requests-2.28.1 urllib3-1.26.12 websoc
ket-client-1.1.0

C:\Users\varsha-gokul>
```

## 6. Python code to access TTS Service:



The screenshot shows a Windows desktop with two windows. The left window is a text editor titled 'tts.py - C:\Users\varsha-gokul\tts.py (3.10.7)'. It contains the following Python code:

```
from ibm_watson import TextToSpeechV1
from ibm_cloud_sdk_core.authenticators import IAMAuthenticator

authenticator = IAMAuthenticator('54rt6NRhm_WGSwJ0QqQfI4brweAChFIqFhhEFfGJlC')
text_to_speech = TextToSpeechV1(authenticator=authenticator)

text_to_speech.set_service_url('https://api.au-syd.text-to-speech.watson.cloud.ibm.com/voice/en-US_AllisonV3Voice')

with open('hello_world.wav', 'wb') as audio_file:
    audio_file.write(
        text_to_speech.synthesize(
            'Hello world',
            voice='en-US_AllisonV3Voice',
            accept='audio/wav'
        ).get_result().content
    )
```

The right window is an IDLE Shell titled 'IDLE Shell 3.10.7'. It shows the output of the script, which is a restart message: 'RESTART: C:\Users\varsha-gokul\tts.py'.

## 7. Output of TTS services:

