

# DEVELOPMENT – DELIVERY OF SPRINT 3

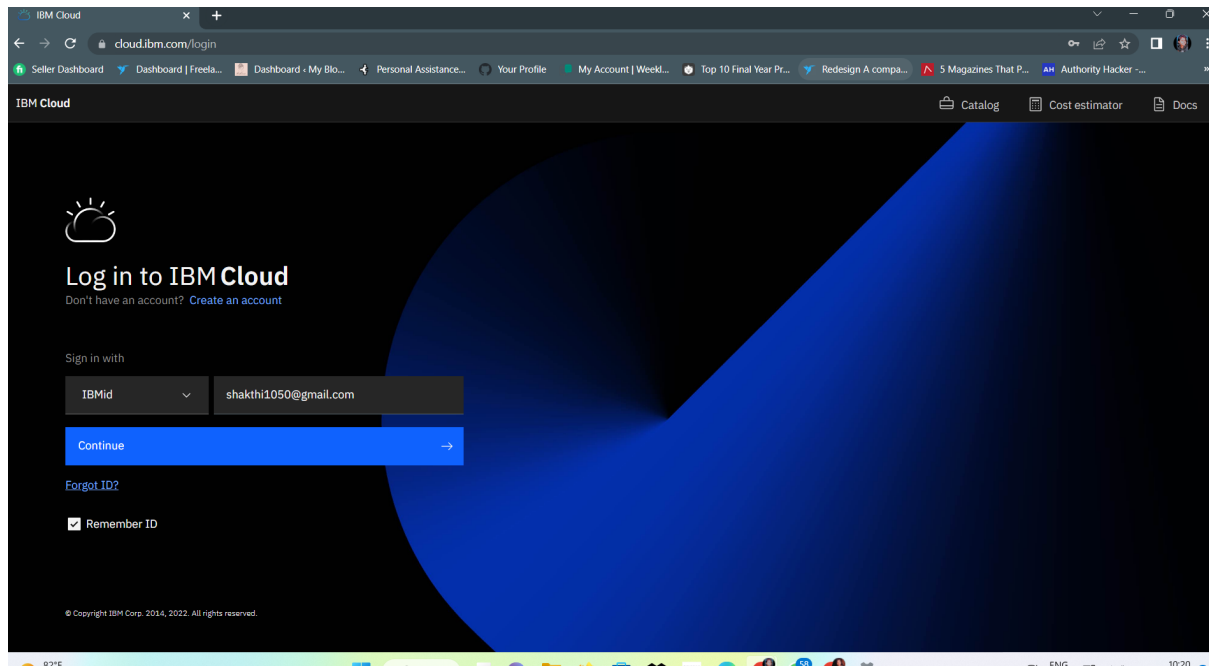
## ( TEXT TO SPEECH SERVICE )

TEAM ID	PNT2022TMID26620
PROJECT NAME	Personal Assistance for Seniors Who Are Self-Reliant

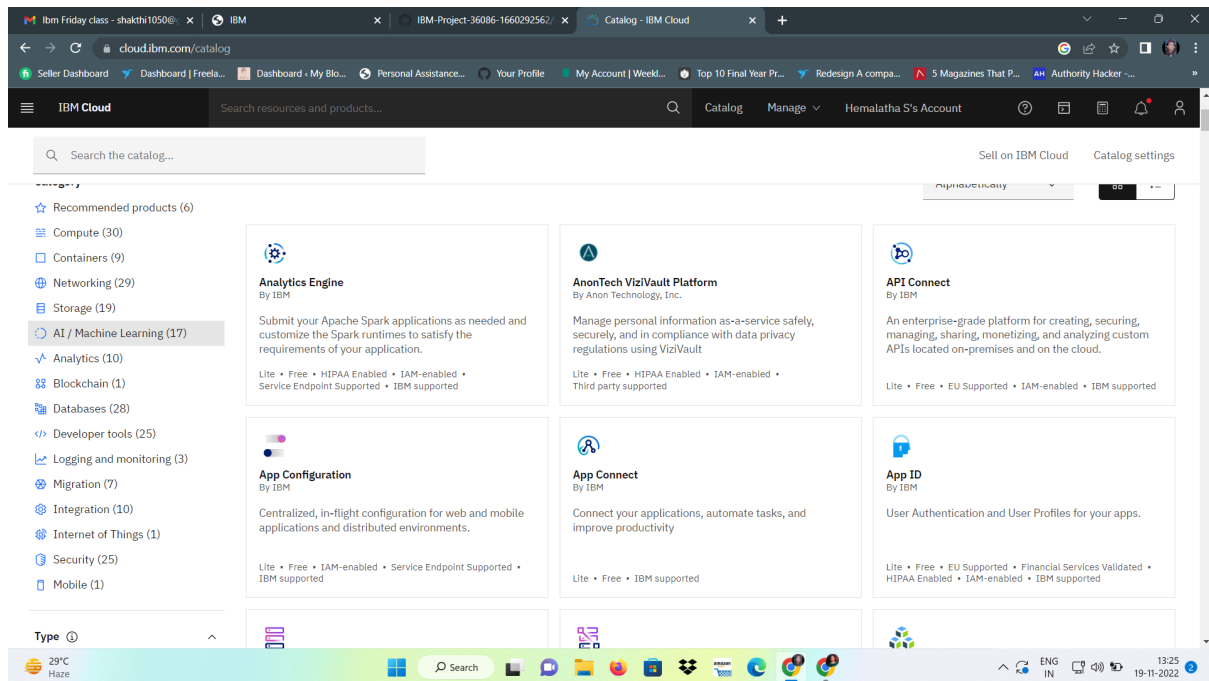
**AIM :** TO CREATE AN TEXT TO SPEECH SERVICE IN AN IOT IBM PLATFORM

**STEPS TO BE FOLLOWED :**

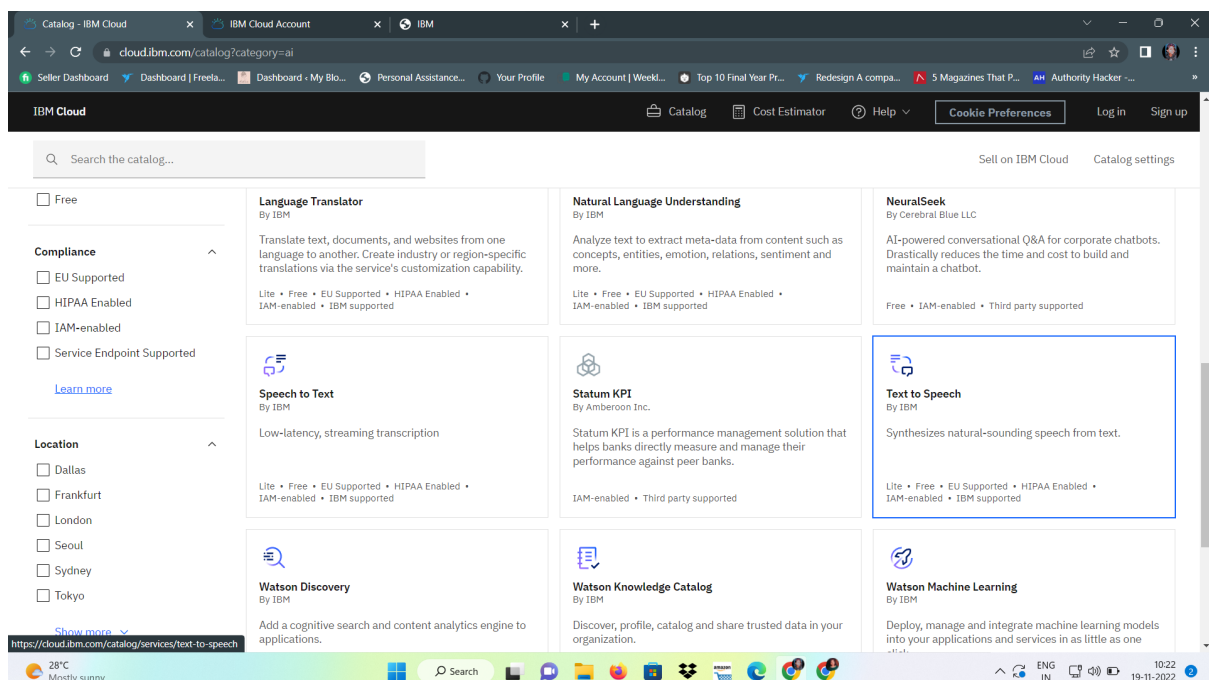
**STEP 1 :** FIRST SHOULD LOGIN IN YOUR IBM CLOUD ACCOUNT IN YOUR BROWSER



## STEP 2 : OPEN CATALOG MENU GIVEN ON THE RIGHT SIDE OF THE TOP



## STEP 3 : IN THE CATEGORY MENU GIVEN IN THE LEFT SIDE, CHOOSE AN ARTIFICIAL INTELLIGENCE OPTION.



## STEP 4 : JUST SCROLL DOWN, SEARCH AND SELECT THE “ TEXT TO SPEECH SERVICE “

The screenshot shows the IBM Cloud catalog page for the Text to Speech service. The page is titled "Text to Speech" and describes it as a service that synthesizes natural-sounding speech from text. It features a "Create" button and a "Pricing plans" section. The pricing table lists three plans: Lite (Free), Standard (\$0.02 USD/THOUSAND CHAR), and Premium (Everything in Standard plus...).

Plan	Features	Pricing
Lite	10,000 Characters per Month The Lite plan gets you started with 10,000 characters per month at no cost. When you upgrade to a paid plan, you will get access to Customization capabilities. Lite plan services are deleted after 30 days of inactivity.	Free
Standard	Standard Characters	\$0.02 USD/THOUSAND CHAR
Premium	Everything in Standard plus... Usage and Training Data is Private + Stored in an Isolated Single Tenant Environment High Availability and Service Level Uptime Guarantee IBM Cloud Service Endpoints HIPAA - Washington DC Only	

On the right side, there is a "Summary" panel showing the service name "Text to Speech" and the plan "Plan: Lite". It also includes a "Sign up to create" button and an "Add to estimate" button.

## STEP 5 : READ AND FILL CAREFULLY WITH REQUIRED DATA AND TO CREATE AN ACCOUNT

The screenshot shows the IBM Cloud console page for the Text to Speech service. The page is titled "Getting started with Text to Speech" and includes a "Last Updated: 2021-02-02" timestamp. It provides a brief overview of the service and its capabilities, mentioning that it converts written text to natural-sounding speech. The page also includes a video player with a play button and a "Get started with Watson Text to Speech" link.

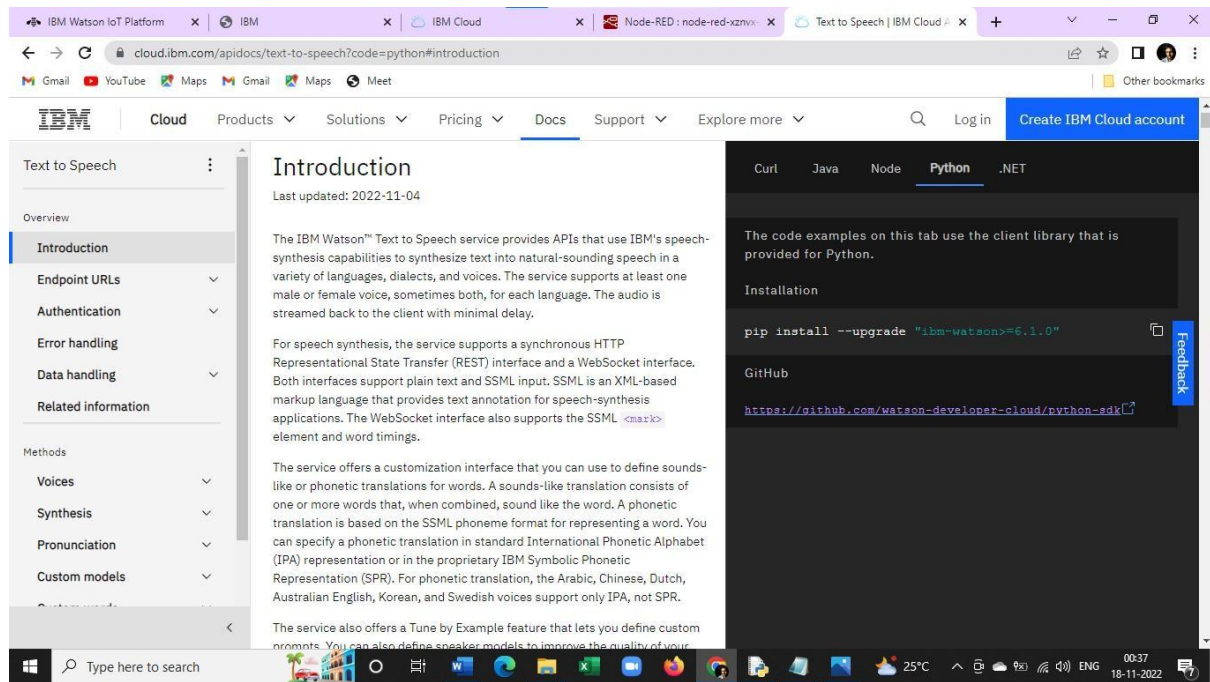
The page content includes:

- Getting started with Text to Speech**
- Last Updated: 2021-02-02**
- The IBM Watson® Text to Speech service converts written text to natural-sounding speech to provide speech-synthesis capabilities for applications. This `curl`-based tutorial can help you get started quickly with the service. The examples show you how to call the service's `POST` and `GET /v1/synthesize` methods to request an audio stream.
- IBM Cloud® only.** Watch the following video for a visual summary of getting started with the Text to Speech service.

The video player shows a thumbnail with the text "Get started with Watson Text to Speech".

**STEP 6 :** AFTER CREATING IT WILL GENERATES API KEY AND URL  
TAKE IT DOWN CAREFULLY

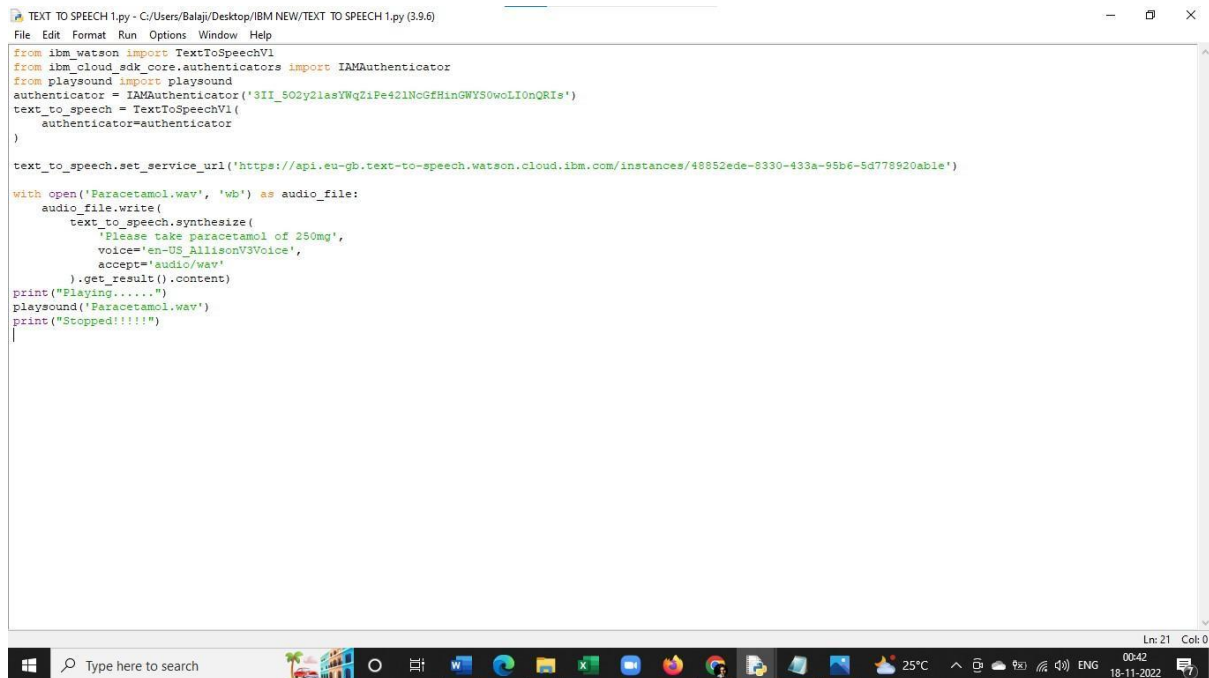
**STEP 7 :** INSTALL USING THE GIVEN COMMAND IN YOUR PYTHON  
SOFTWARE



The screenshot shows a web browser displaying the IBM Watson Text to Speech API documentation for Python. The page title is "Text to Speech" and the sub-header is "Introduction". The introduction text states: "The IBM Watson™ Text to Speech service provides APIs that use IBM's speech-synthesis capabilities to synthesize text into natural-sounding speech in a variety of languages, dialects, and voices. The service supports at least one male or female voice, sometimes both, for each language. The audio is streamed back to the client with minimal delay." It also mentions that the service supports a synchronous HTTP RESTful interface and a WebSocket interface, both supporting plain text and SSML input. The SSML is an XML-based markup language that provides text annotation for speech-synthesis applications. The WebSocket interface also supports the SSML <mark> element and word timings. The service offers a customization interface that can be used to define sounds-like or phonetic translations for words. A sounds-like translation consists of one or more words that, when combined, sound like the word. A phonetic translation is based on the SSML phoneme format for representing a word. You can specify a phonetic translation in standard International Phonetic Alphabet (IPA) representation or in the proprietary IBM Symbolic Phonetic Representation (SPR). For phonetic translation, the Arabic, Chinese, Dutch, Australian English, Korean, and Swedish voices support only IPA, not SPR. The service also offers a Tune by Example feature that lets you define custom prompts. You can also define speaker models to improve the quality of your speech.

On the right side of the page, there is a "Python" tab selected, showing the installation command: `pip install --upgrade "ibm-watson>=6.1.0"`. Below this, there is a "GitHub" link: <https://github.com/watson-developer-cloud/python-sdk>. A "Feedback" button is also visible.

**STEP 8 :** AND NOW START CODING IN YOUR PYTHON SOFTWARE  
AND GET RESULTS



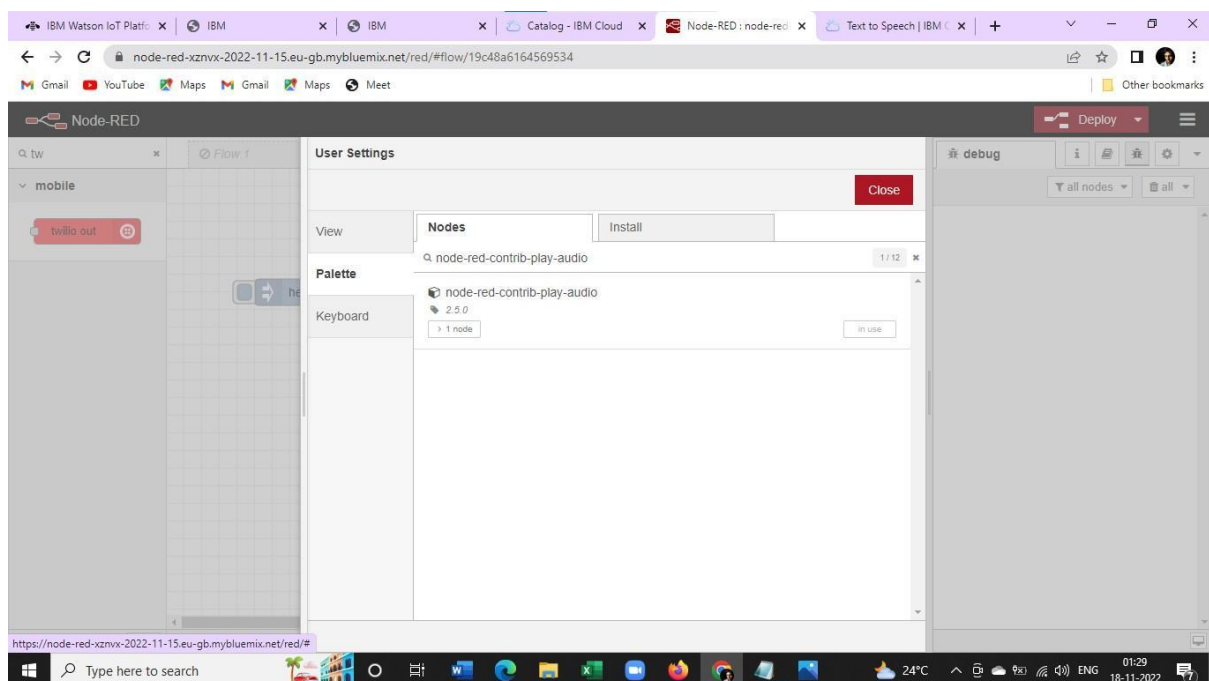
```
TEXT TO SPEECH 1.py - C:/Users/Balaji/Desktop/IBM NEW/TEXT TO SPEECH 1.py (3.9.6)
File Edit Format Run Options Window Help

from ibm_watson import TextToSpeechV1
from ibm_cloud_sdk_core.authenticators import IAMAuthenticator
from playsound import playsound
authenticator = IAMAuthenticator('3II_5O2y2lasYWqZiPe42lNoGfHingWYS0woLIonQRIs')
text_to_speech = TextToSpeechV1(
    authenticator=authenticator
)

text_to_speech.set_service_url('https://api.eu-gb.text-to-speech.watson.cloud.ibm.com/instances/48852ede-8330-433a-95b6-5d778920able')

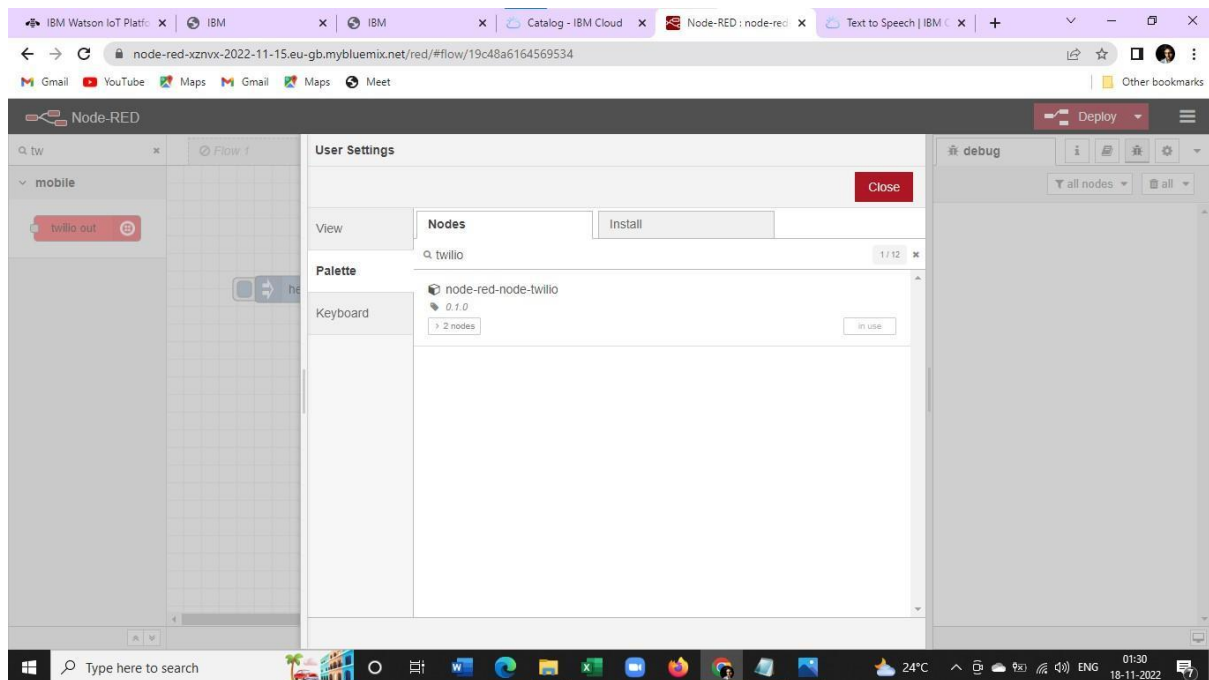
with open('Paracetamol.wav', 'wb') as audio_file:
    audio_file.write(
        text_to_speech.synthesize(
            'Please take paracetamol of 250mg',
            voice='en-US_AllisonV3Voice',
            accept='audio/wav'
        ).get_result().content
    )
print("Playing.....")
playsound('Paracetamol.wav')
print("Stopped!!!!")
```

## STEP 9 : BY USING NODE RED SERVICES INSTALL A NODE-RED-PLAY-AUDIO TOOL

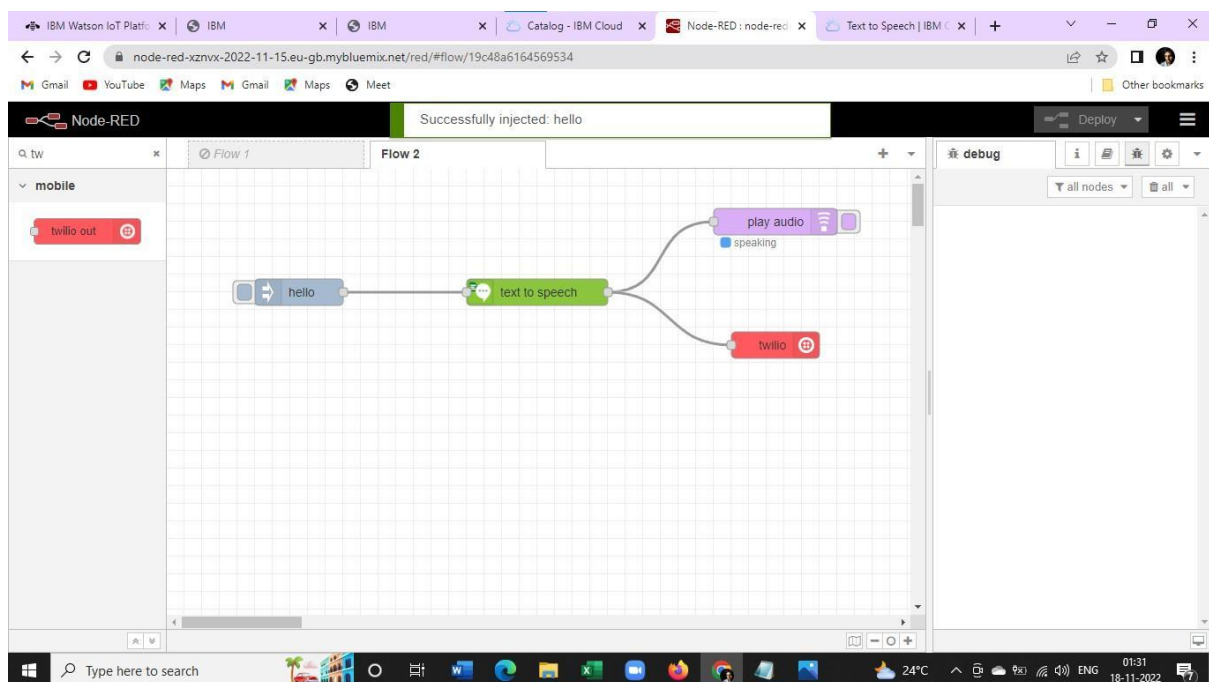


## STEP 10 : ALSO INSTAL TWILIO FOR SENDING VOICE SMS AND CALLS (NOTE IN TWILIO WEB SITE NUMBERS SHOULD BE VERIFIED

THEN ONLY WE WILL GET API KEYS AND AUTH TOKENS AND ALSO RECEIVE CALL OR VOICE NOTES )



**STEP 11 :** IN TWILIO NODE INJECT THE RECEIVER DETAILS AFTER DEPLOY AND INJECT THE MSG.PAYLOAD



**RESULT :**

VOICE WILL BE GENERATED FOR THE GIVEN INPUT TO THE RECEIVER.