# SPeech Translation using SDK

In [6]:
```
pip install azure-cognitiveservices-speech
```

```
Requirement already satisfied: azure-cognitiveservices-speech in d:\python\lib\site-packages (1.14.0)
Note: you may need to restart the kernel to use updated packages.
```

In [1]:
```
import os
import azure.cognitiveservices.speech as speechsdk
```

In [3]:
```
speech_key= '03ba21efd1ee4cda8294389a5f0e03ff'
service_region= 'centralindia'
```

## English to German(using microphone)

In [6]:
```
from_language, to_languages = 'en-US', 'de'

def translate_speech_to_text():
    #To call the Speech service using the Speech SDK, SpeechTranslationConfig is initialized
    translation_config = speechsdk.translation.SpeechTranslationConfig(
            subscription=speech_key, region=service_region)

     # Source (input) language
    translation_config.speech_recognition_language = from_language
    # Destination(Output) language
    translation_config.add_target_language(to_language)

    # Specifying to use microphone(default)
    recognizer = speechsdk.translation.TranslationRecognizer(
            translation_config=translation_config)

    print('Say something...')
    result = recognizer.recognize_once()
    print(get_result_text(reason=result.reason, result=result))

def get_result_text(reason, result):
    reason_format = {
        speechsdk.ResultReason.TranslatedSpeech:
            f'RECOGNIZED "{from_language}": {result.text}\n' +
            f'TRANSLATED into "{to_language}"": {result.translations[to_language]}',
        speechsdk.ResultReason.RecognizedSpeech: f'Recognized: "{result.text}"',
        speechsdk.ResultReason.NoMatch: f'No speech could be recognized: {result.no_match_details}',
        speechsdk.ResultReason.Canceled: f'Speech Recognition canceled: {result.cancellation_details}'
    }
    return reason_format.get(reason, 'Unable to recognize speech')

translate_speech_to_text()
```

```
Say something...
RECOGNIZED "en-US": Hi, how are you? Haven't just dizzy Marvel are they belong to only single person?
TRANSLATED into "de"": Hallo, wie geht es dir? Sind nicht nur schwindelerregendes Marvel nur eine Einzelperso
n?
```

# English to German(using audio file)

In [11]:
```
from_language, to_languages = 'en-US', 'de'

def translate_speech_to_text():
    #To call the Speech service using the Speech SDK, SpeechTranslationConfig is initialized
    translation_config = speechsdk.translation.SpeechTranslationConfig(
            subscription=speech_key, region=service_region)

     # Source (input) language
    translation_config.speech_recognition_language = from_language
    # Destination(Output) language
    translation_config.add_target_language(to_language)

    # Specifying to use audio file(.wav file)
    audio_config = speechsdk.audio.AudioConfig(filename=r"C:\Users\Jaswanth Reddy\Downloads\empty_1c.wav")
    recognizer = speechsdk.translation.TranslationRecognizer(
            translation_config=translation_config,audio_config=audio_config)

    print('Say something...')
    result = recognizer.recognize_once()
    print(get_result_text(reason=result.reason, result=result))

def get_result_text(reason, result):
    reason_format = {
        speechsdk.ResultReason.TranslatedSpeech:
            f'RECOGNIZED "{from_language}": {result.text}\n' +
            f'TRANSLATED into "{to_language}"": {result.translations[to_language]}',
        speechsdk.ResultReason.RecognizedSpeech: f'Recognized: "{result.text}"',
        speechsdk.ResultReason.NoMatch: f'No speech could be recognized: {result.no_match_details}',
        speechsdk.ResultReason.Canceled: f'Speech Recognition canceled: {result.cancellation_details}'
    }
    return reason_format.get(reason, 'Unable to recognize speech')

translate_speech_to_text()
```

```
Say something...
RECOGNIZED "en-US": Hi just month ready. How are you and welcome to text to speech using Microsoft Azure.
TRANSLATED into "de"": Hallo nur Monat bereit. Wie können Sie und willkommen zu Text zu Sprache mit Microsoft
Azure.
```

In [ ]:
```
```