In [1]:
```
!pip install PyAudio
```

```
Collecting PyAudio
  Downloading PyAudio-0.2.13-cp38-cp38-win_amd64.whl (164 kB)
     ---------------------------------- 164.1/164.1 kB 166.8 kB/s eta 0:00:00
Installing collected packages: PyAudio
Successfully installed PyAudio-0.2.13


[notice] A new release of pip available: 22.3.1 -> 23.1.2
[notice] To update, run: python.exe -m pip install --upgrade pip
```

In [2]:
```
import pyaudio
```

In [3]:
```
import wave
```

In [22]:
```
FRAMES_PER_BUFFER = 3200
```

In [23]:
```
FORMAT = pyaudio.paInt16
```

In [24]:
```
CHANNELS = 1
RATE= 16000
```

In [35]:
```
p = pyaudio.PyAudio()
```

In [36]:
```
stream = p.open(format=FORMAT,
                channels = CHANNELS,
                rate=RATE,
                input=True,
                frames_per_buffer=FRAMES_PER_BUFFER)
```

In [37]:
```
print('start recording...')
seconds = 5
frames = []
for i in range(0,int(RATE/FRAMES_PER_BUFFER*seconds)):
    data = stream.read(FRAMES_PER_BUFFER)
    frames.append(data)
stream.stop_stream()
stream.close()
p.terminate()
print('end')
```

```
start recording...
end
```

In [38]:
```
obj = wave.open('output.wav','wb')
```

In [39]:
```
obj.setframerate(RATE)
obj.setsampwidth(p.get_sample_size(FORMAT))
obj.setnchannels(CHANNELS)
obj.writeframes(b''.join(frames))
obj.close()
```

MP3

install ffmpeg

In [40]:
```
!pip install pydub
```

```
Requirement already satisfied: pydub in c:\users\farid\anaconda3\lib\site-packages (0.25.1)


[notice] A new release of pip available: 22.3.1 -> 23.1.2
[notice] To update, run: python.exe -m pip install --upgrade pip
```

In [41]:
```
from pydub import AudioSegment
```

In [44]:
```
1 audio = AudioSegment.from_wav('output.wav')
```

In [45]:
```
1 audio = audio + 6
```

In [46]:
```
1 audio = audio.fade_in(2000)
```

In [47]:
```
1 audio.export('output.mp3',format='mp3')
```

Out[47]:
```
<_io.BufferedRandom name='output.mp3'>
```

In [48]:
```
1 audio2 = AudioSegment.from_mp3('output.mp3')
```

In [49]:
```
1 print(audio2)
```

```
<pydub.audio_segment.AudioSegment object at 0x000000B1A3CB7EB0>
```

In [ ]:
```
1
```