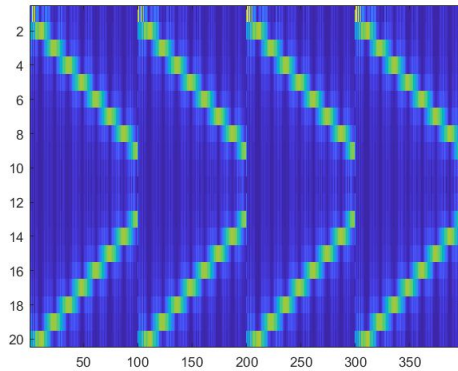


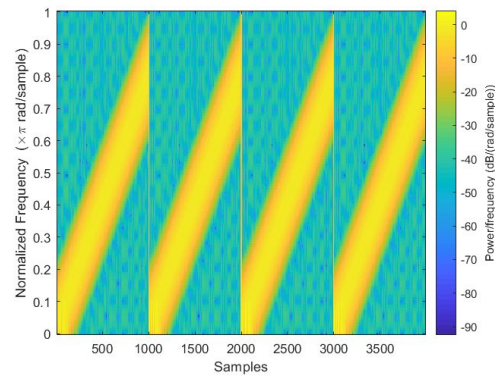
## Question 7:

### Part 1:

Implemented spectrogram



Inbuilt spectrogram

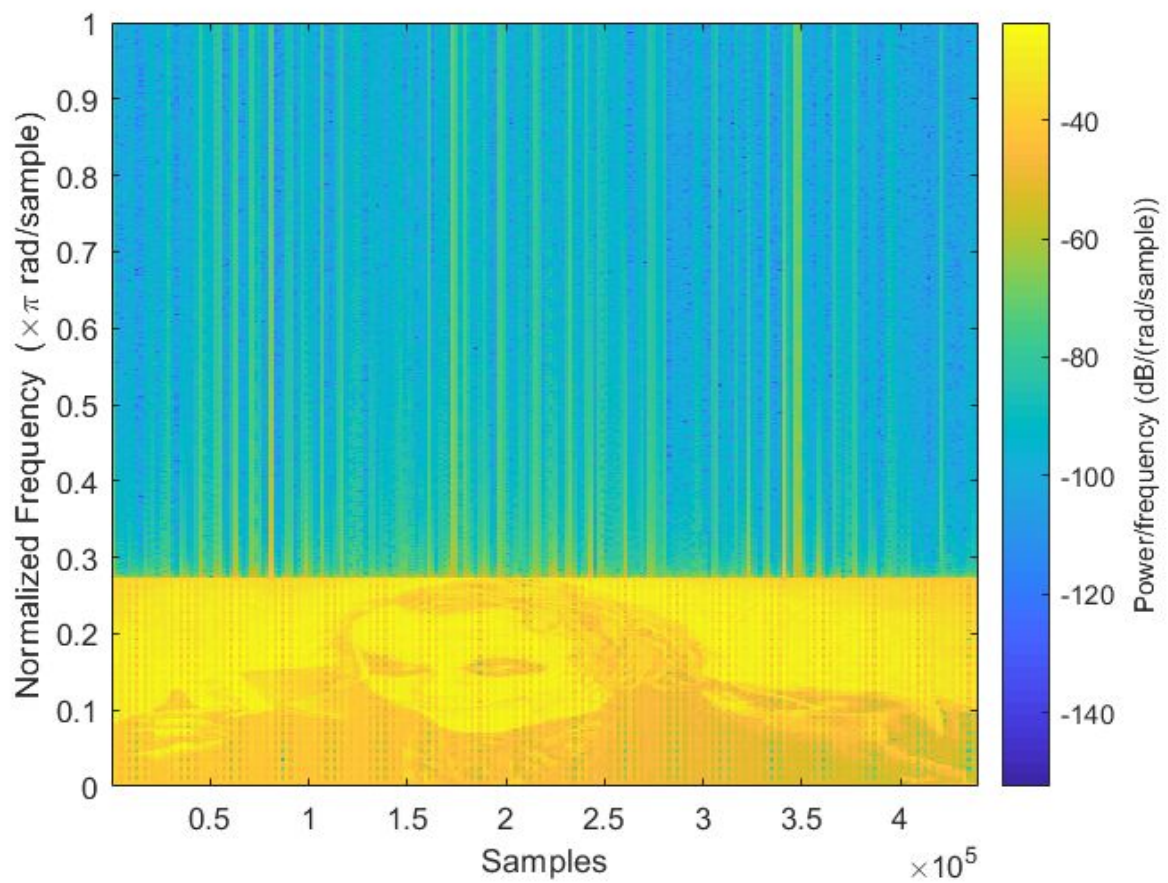


### Explanation:

While implementing spectrogram, we find the indexes from 1 to N at the interval of the stride length,  
Then we keep all those which are within the N+1-window\_length range.  
Then we rearrange the image to columns and apply fft to the indexes

## Part 2:

The spectrogram we get for message.wav is



The message can be seen in the image.