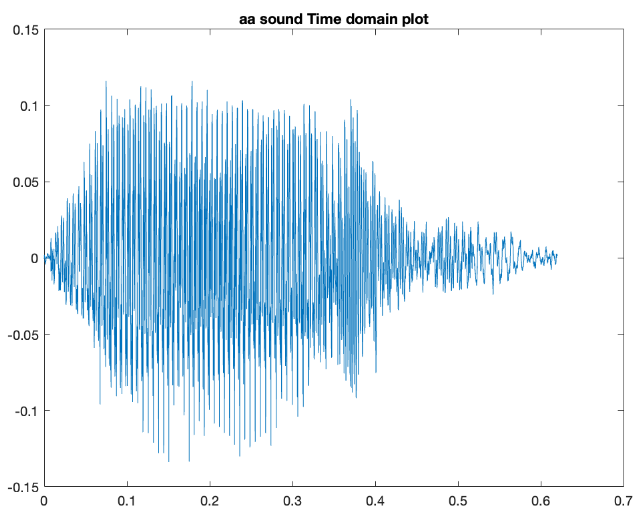
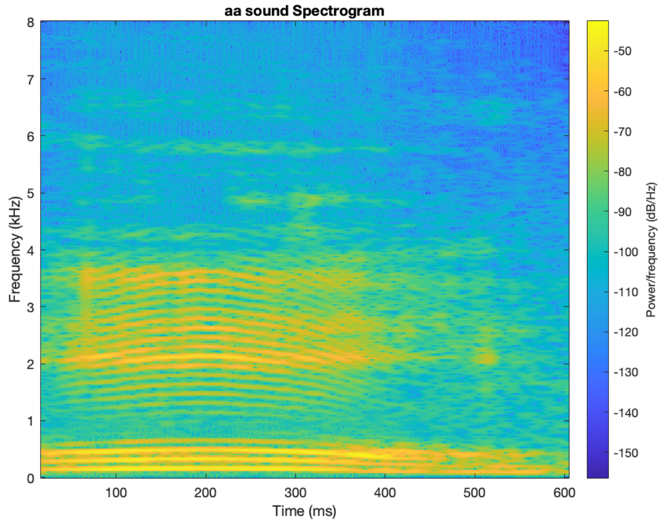
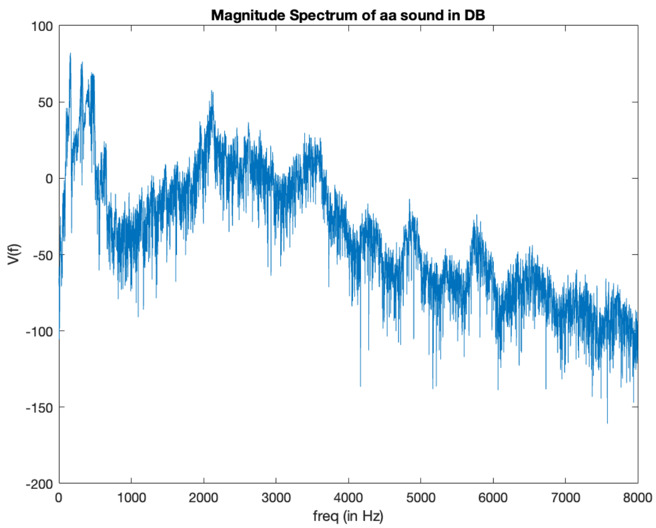
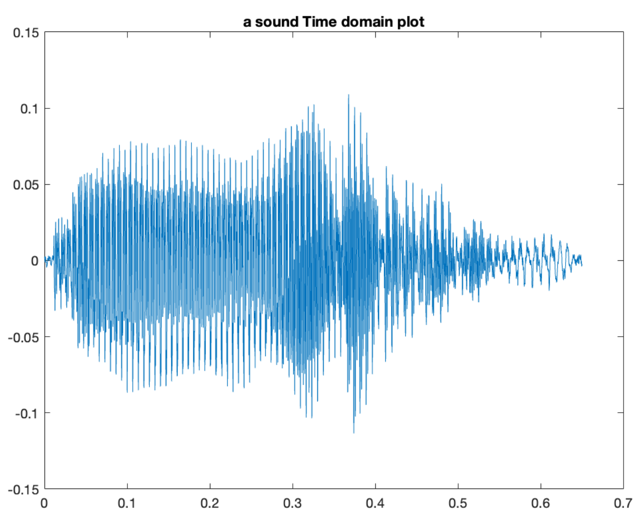
```
%Original audio Bits/sample = 16 and Fs = 16 kHz
[y,Fs] = audioread('Lab5A.wav');

%Extracting each sound
aa_sound = y(0.76*Fs : 1.38*Fs);

a_sound = y(2.1*Fs : 2.75*Fs);

oi_sound = y(3.55*Fs : 4.05*Fs);

o_sound = y(4.95*Fs : 5.5*Fs);

i_sound = y(6.23*Fs : 6.83*Fs);

%Plotting
Lab5A(aa_sound,Fs,"aa sound");
```

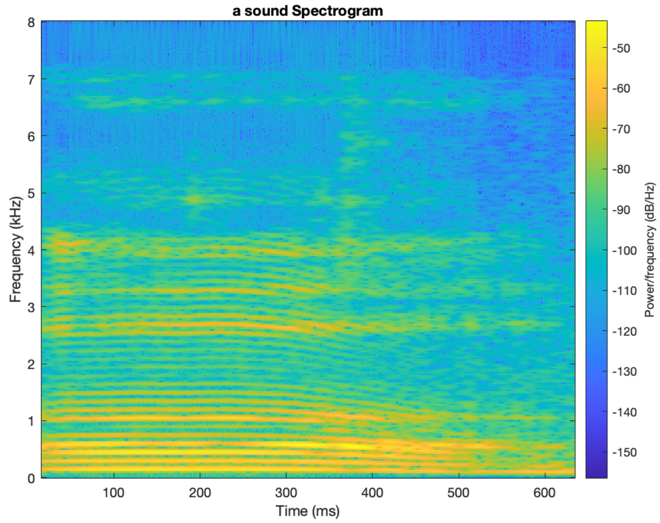


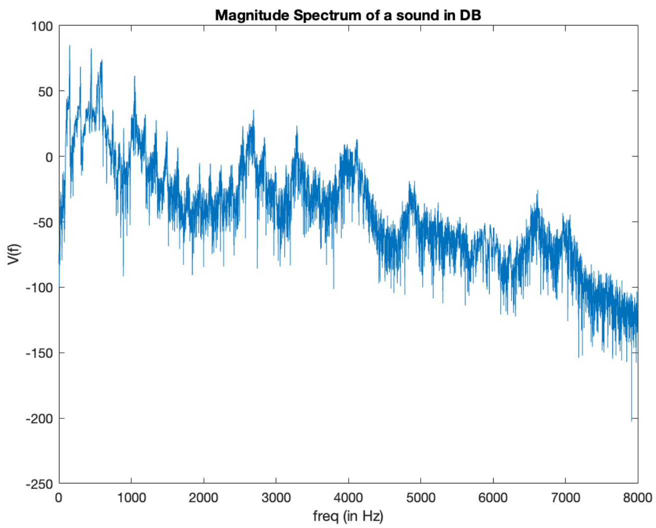




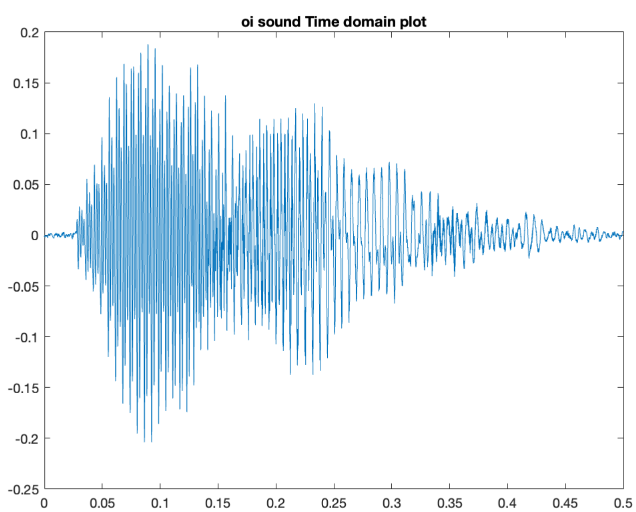

```
Lab5A(a_sound,Fs,"a sound");
```

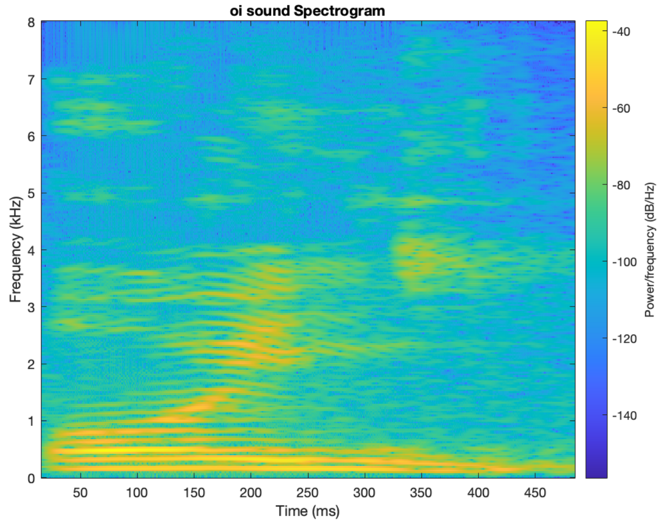


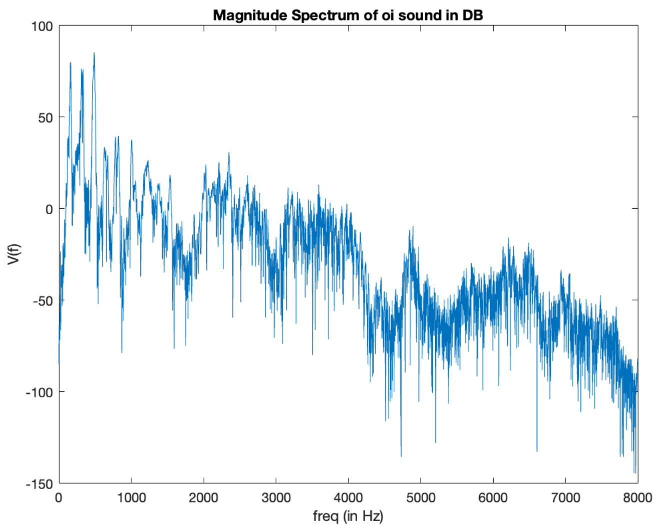




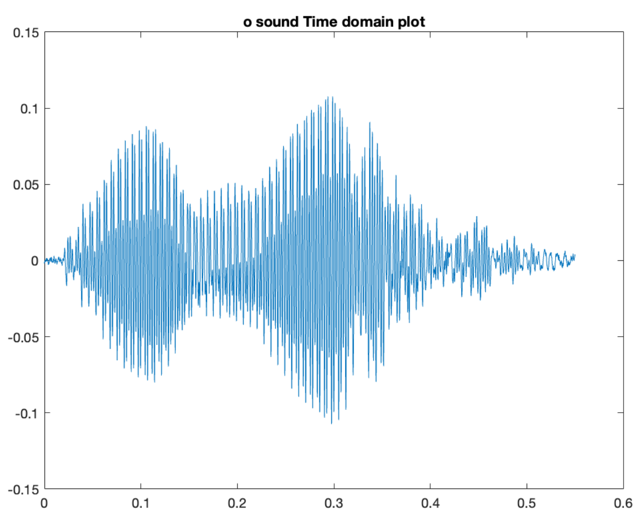

```
Lab5A(oi_sound,Fs,"oi sound");
```

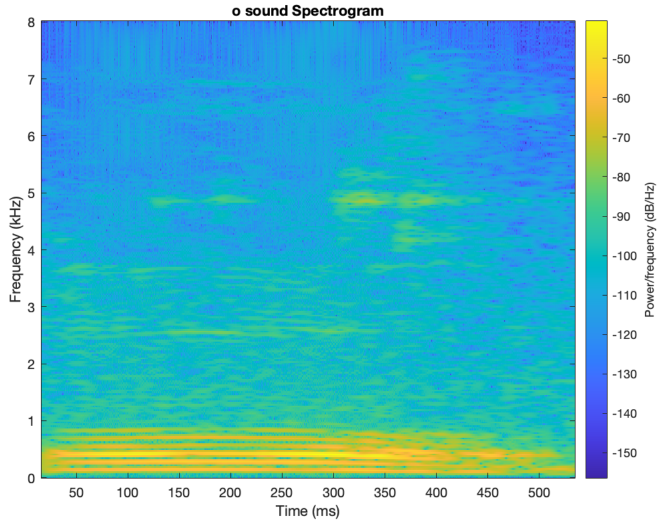


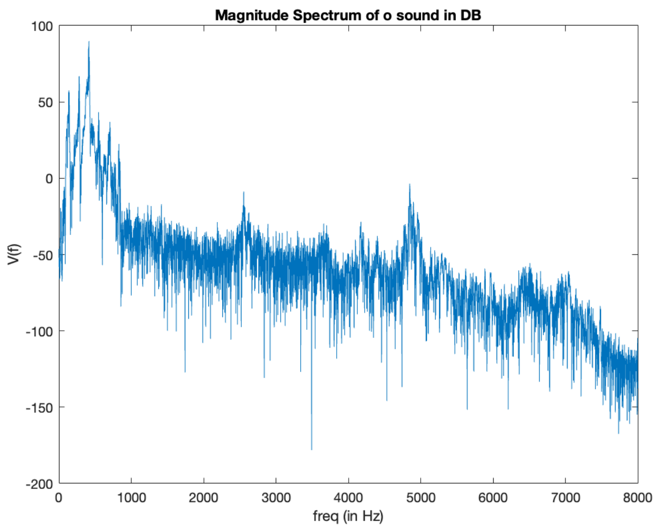




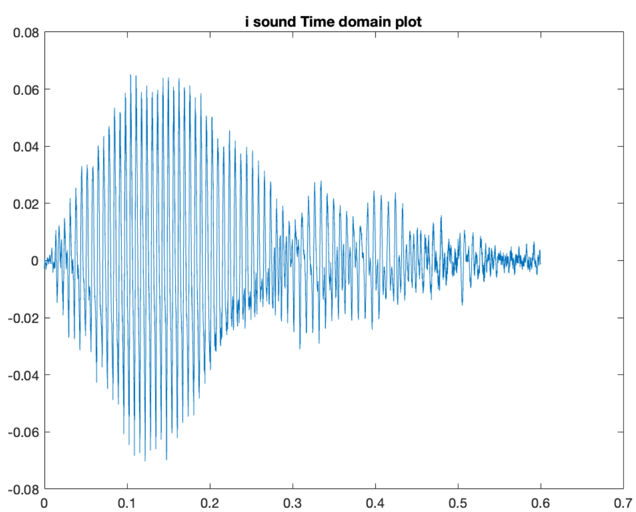

```
Lab5A(o_sound,Fs,"o sound");
```

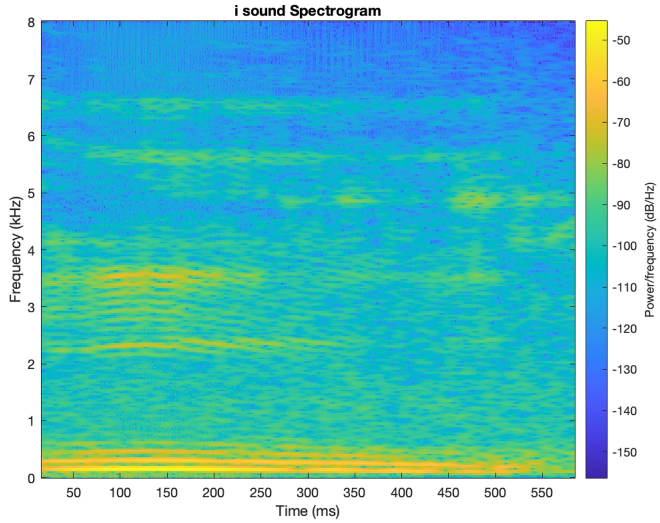


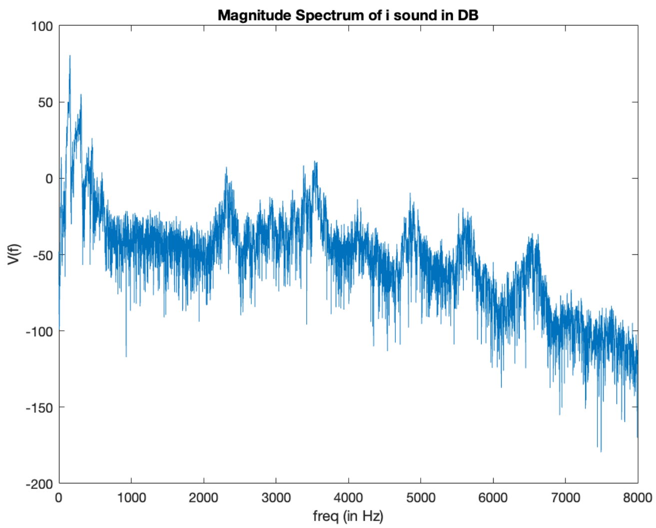





```
Lab5A(i_sound,Fs,"i sound");
```








```
function [] = Lab5A(y,Fs,text)

    %time duration of the given audio file
    time_duration = length(y)/Fs;

    %generating the time axis
    t = 0 : 1/Fs : time_duration - 1/Fs;

    %plotting audio in time domain and spectrogra
    figure(1);
    plot(t,y);
    title(text + " Time domain plot");
```

```
    figure(2);
    spectrogram(y,hamming(200),150,[],Fs,'yaxis')
    title(text + " Spectrogram");

    fftFull = fft(y);

    %length of the FFT of non stationary signal i
    Len_f = length(fftFull);

    %Taking only +ve frequencies
    fftHalf = fftFull(1:round(Len_f/2));

    %converting in DB scale
    fftDB = 20*log(abs(fftHalf));

    %iterating freq from 0 to +len/2
    freq = 0 : 1 : round(Len_f/2) - 1;

    %converting each term of freq into frequency
    freq = Fs*freq/Len_f;

    %Plotting
    figure(3);
    plot(freq,fftDB);
    title("Magnitude Spectrum of " + text + " in
    xlabel("freq (in Hz)");
    ylabel("V(f)");

end
```