9. More signal processing

Here is a sample of the audio file analyzed in the script below.

Guitar playing a C major chord

0:09 / 0:09

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Finding frequency peaks (External resource) (1.0 points possible)

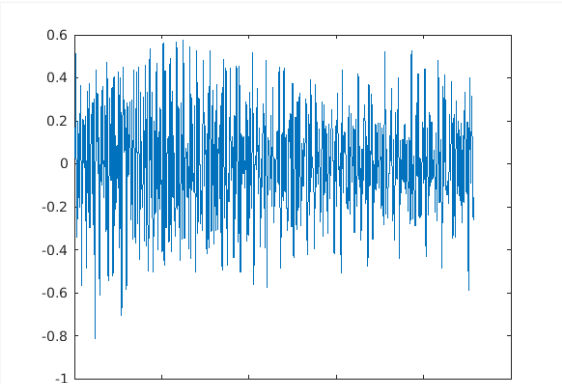
```
%Modify the minpeak so that very small peaks in harmonics (above 1000 hz) don't show in table
minpeak = 1000 %0.1
minpeakdist = 25
[pks, freq, w, p] = findpeaks(P1, f, 'MinPeakProminence',minpeak, 'MinPeakDistance', minpeakdist);
audioData = table(freq, pks, w, p, 'VariableNames', {'Frequency', 'PeakHeight', 'PeakWidth', 'Prominence'})


figure(2)
plot(f, P1)
title('Single-Sided Amplitude Specturm of X(t)')
xlabel('f (Hz)')
ylabel('|P1(f)|')
xlim([0 2000])
hold on
plot(audioData.Frequency, audioData.PeakHeight, 'ro')
hold off

```

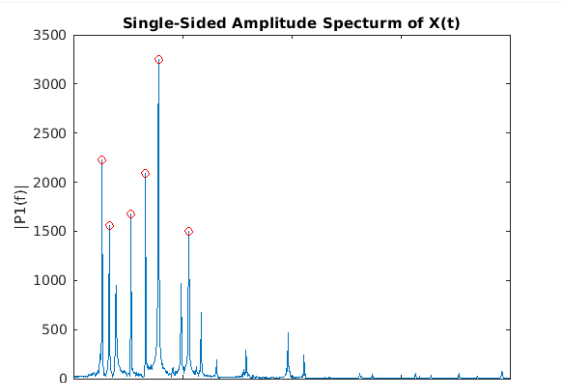
Run Script

Output

```
minpeak =

        1000


minpeakdist =

    25


audioData =

  6x4 table

    Frequency    PeakHeight    PeakWidth    Prominence
    _________    __________    _________    __________

     131.11        2224.1       2.6725        2213.4
     163.89          1563       3.0262        1541.4
```

```
264.41          1674.7          3.1848          1660.6
329.96          2089.2          2.4406          1997.3
391.15          3252.8          5.1956          3242.9
528.82          1503.8          5.4054            1488
```





9. More signal processing

Topic: Unit 1: Fourier Series / 9. More signal processing

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? i do not understand the question

when i input 235 or higher, i don't have any peaks anymore above 1000hz yet i get the wrong answer...

2

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