

final Lab

Audio Equalizer

Command-Line Version

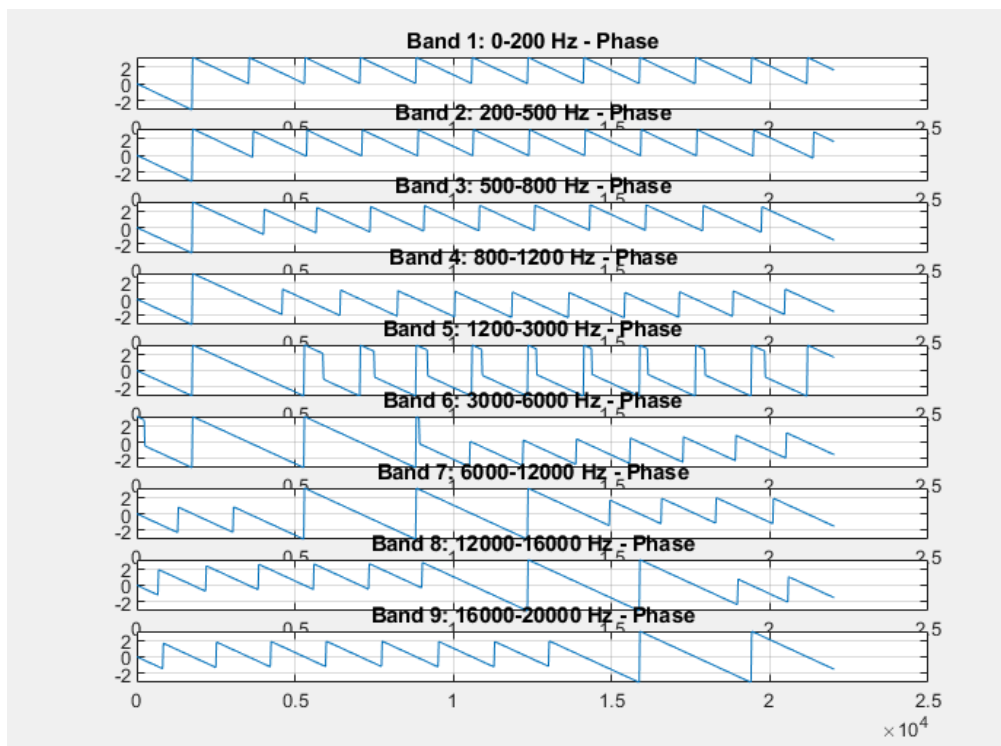
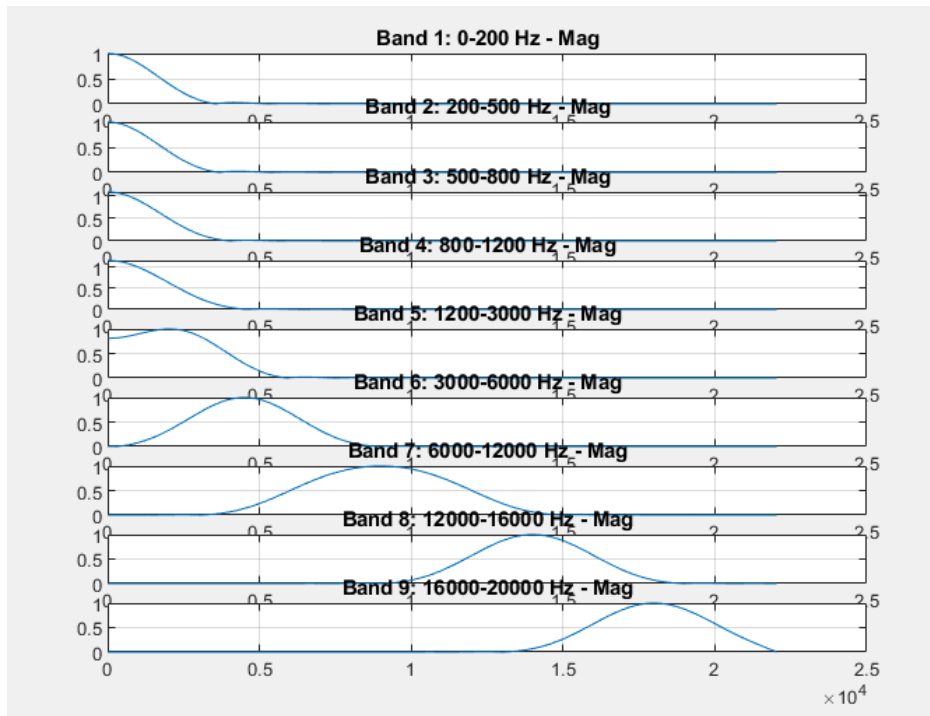
DSP

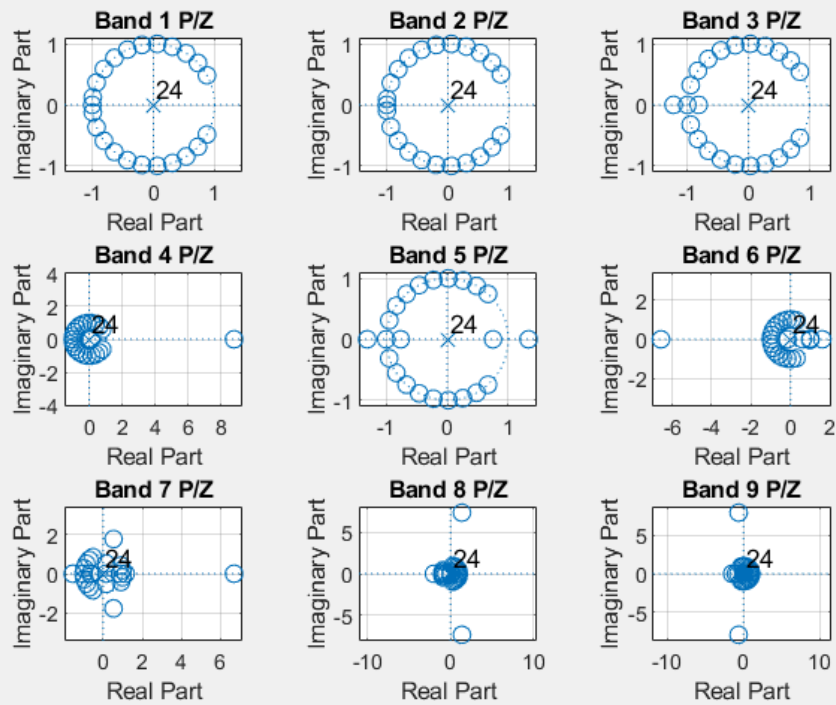
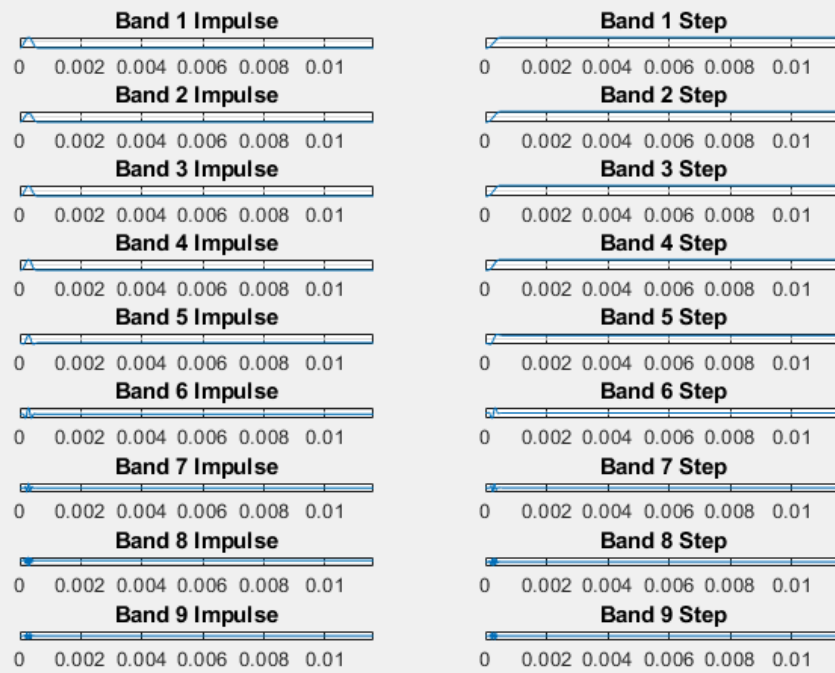


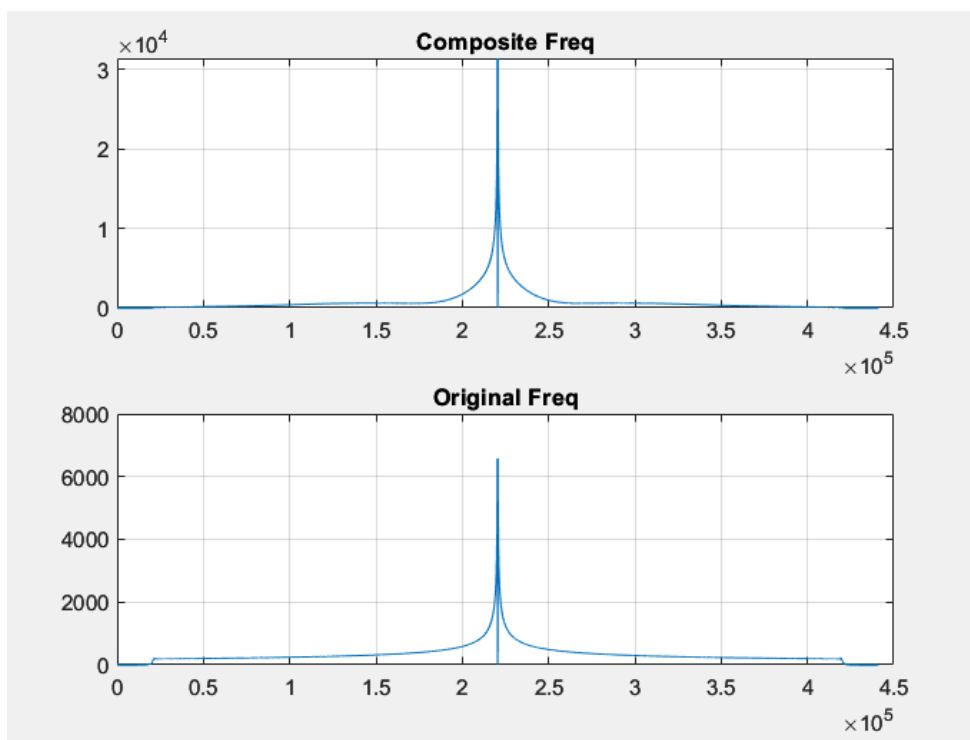
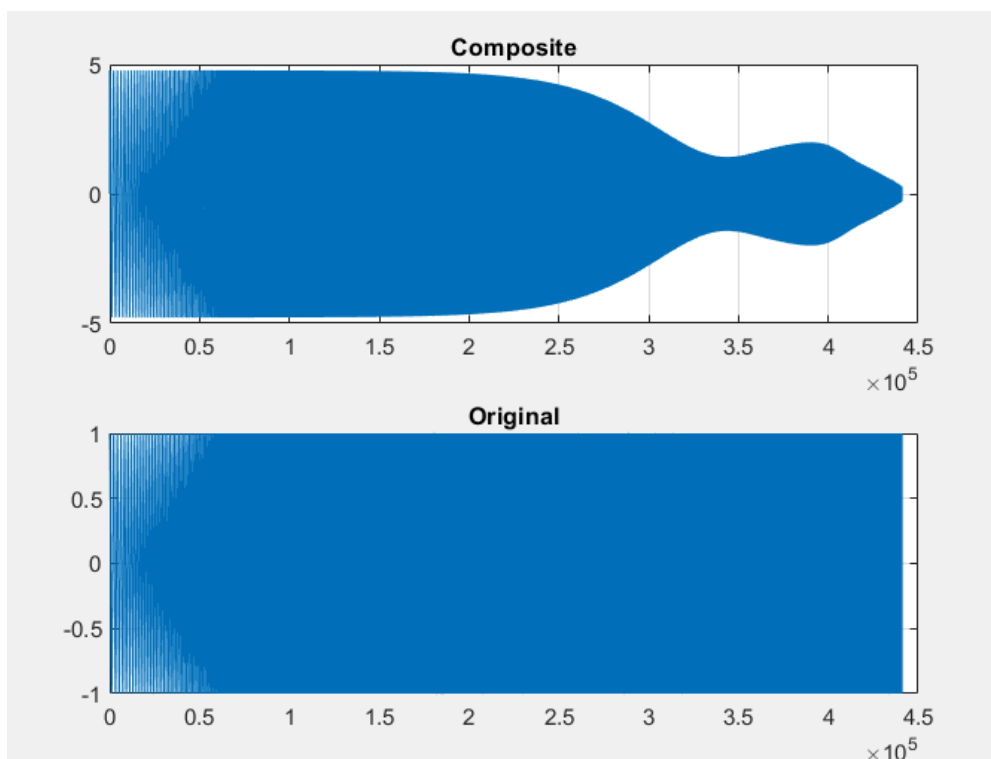
Jomana Ehab	9178
Habiba Abdelhameed	8633

FIR

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*** WELCOME TO AUDIO EQUALIZER ***
Gain for band 1 in dB: -6
Gain for band 2 in dB: 0
Gain for band 3 in dB: +3
Gain for band 4 in dB: 0
Gain for band 5 in dB: -3
Gain for band 6 in dB: 0
Gain for band 7 in dB: +6
Gain for band 8 in dB: 0
Gain for band 9 in dB: -6
Enter FIR filter order (default 25):
Enter output sample rate (Hz): 44100
Analysis data saved to filter_analysis.mat
Equalized audio saved to equalized_output.wav
*** THANK YOU ***
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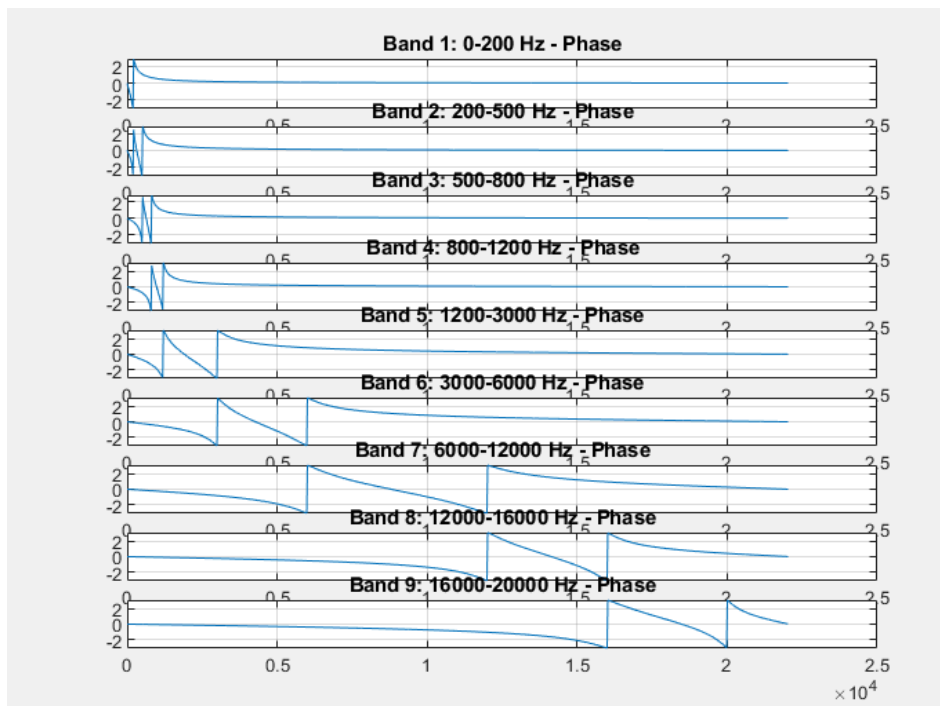
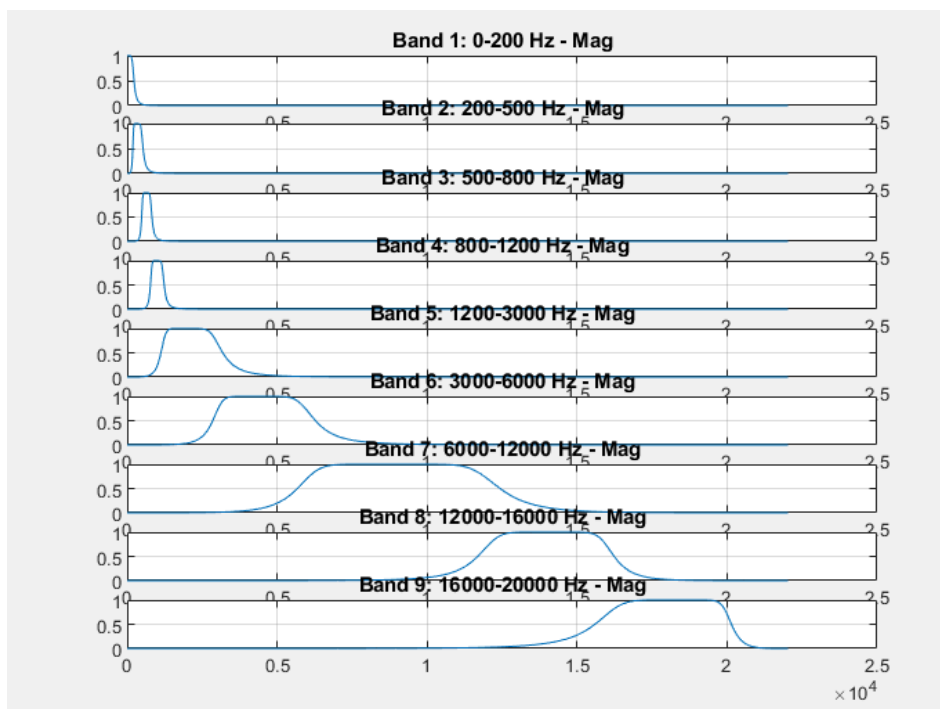


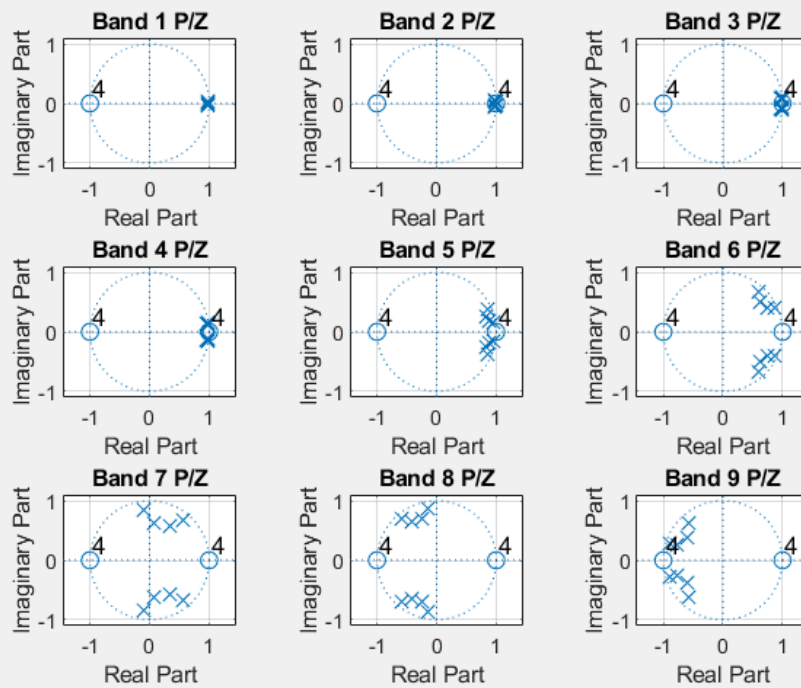
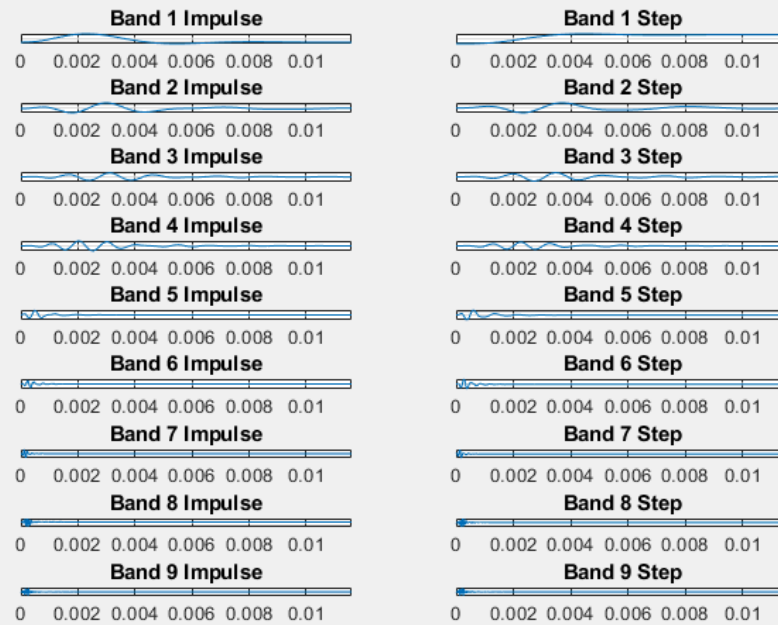


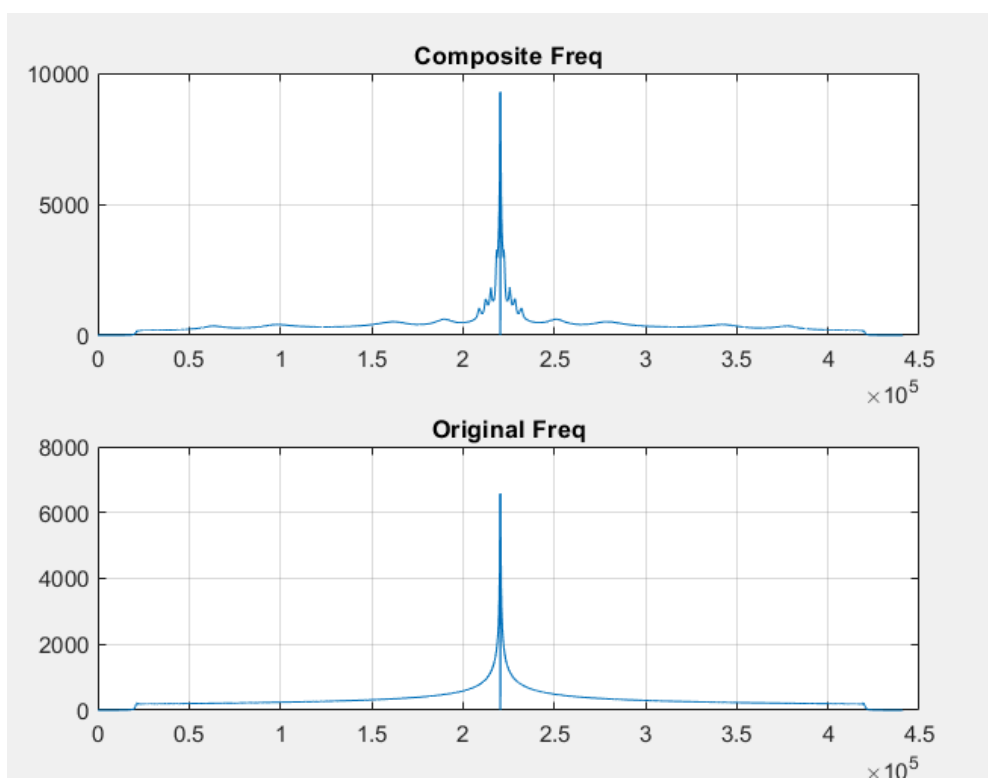
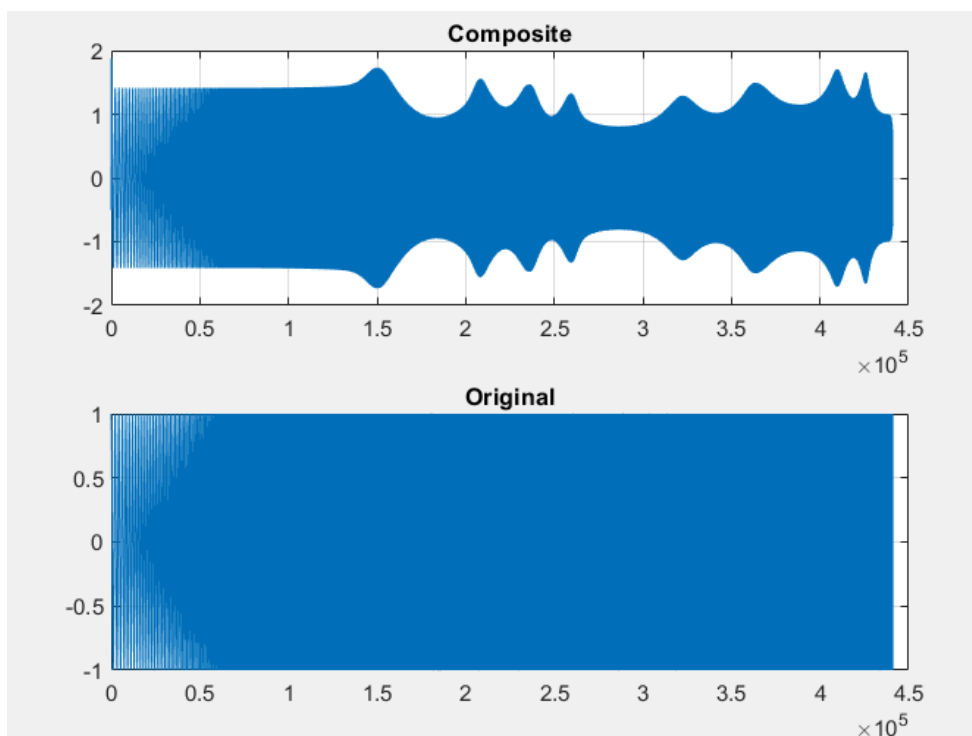


IIR

```
*** WELCOME TO AUDIO EQUALIZER***  
Gain for band 1 in dB: 3  
Gain for band 2 in dB: 0  
Gain for band 3 in dB: 1  
Gain for band 4 in dB: 0  
Gain for band 5 in dB: -2  
Gain for band 6 in dB: 0  
Gain for band 7 in dB: 1  
Gain for band 8 in dB: 02  
Gain for band 9 in dB: 0  
Enter IIR filter order (default 4): 4  
Enter output sample rate (Hz): 44100  
Analysis data saved to filter_analysis.mat  
Equalized audio saved to equalized_output.wav  
*** THANK YOU ***
```







Sample rate is multiplied by four

*** WELCOME TO AUDIO EQUALIZER***

Gain for band 1 in dB: 3

Gain for band 2 in dB: 0

Gain for band 3 in dB: 1

Gain for band 4 in dB: 0

Gain for band 5 in dB: -2

Gain for band 6 in dB: 0

Gain for band 7 in dB: 1

Gain for band 8 in dB: 2

Gain for band 9 in dB: 0

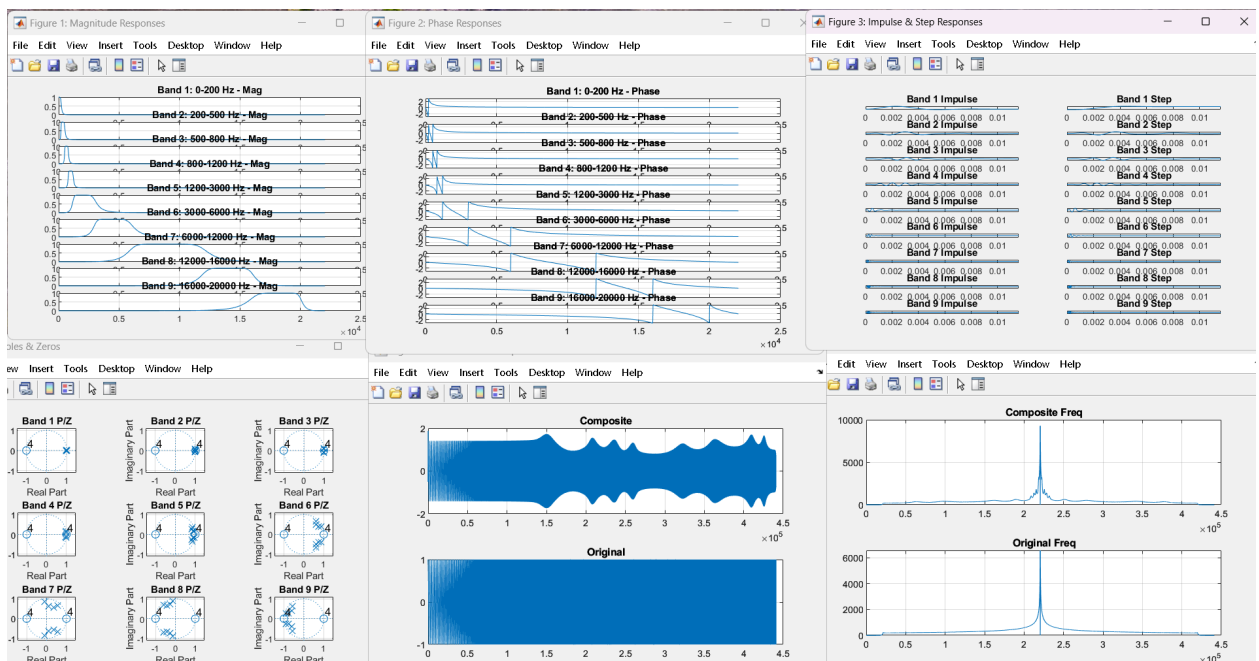
Enter IIR filter order (default 4):

Enter output sample rate (Hz): 44100

Analysis data saved to filter_analysis.mat

Equalized audio saved to equalized_output.wav

*** THANK YOU ***



Decreasing it to half

*** WELCOME TO AUDIO EQUALIZER***

Gain for band 1 in dB: 3

Gain for band 2 in dB: 0

Gain for band 3 in dB: 1

Gain for band 4 in dB: 0

Gain for band 5 in dB: -2

Gain for band 6 in dB: 0

Gain for band 7 in dB: 1

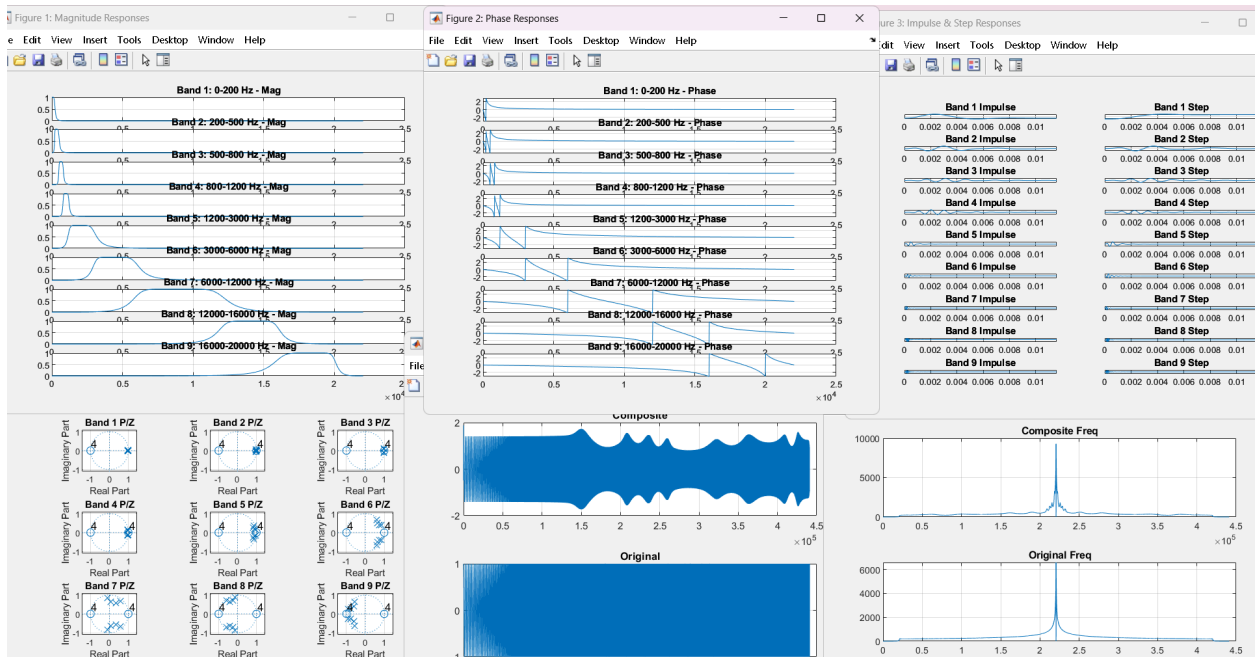
Gain for band 8 in dB: 0

Gain for band 9 in dB: 2

Enter IIR filter order (default 4):

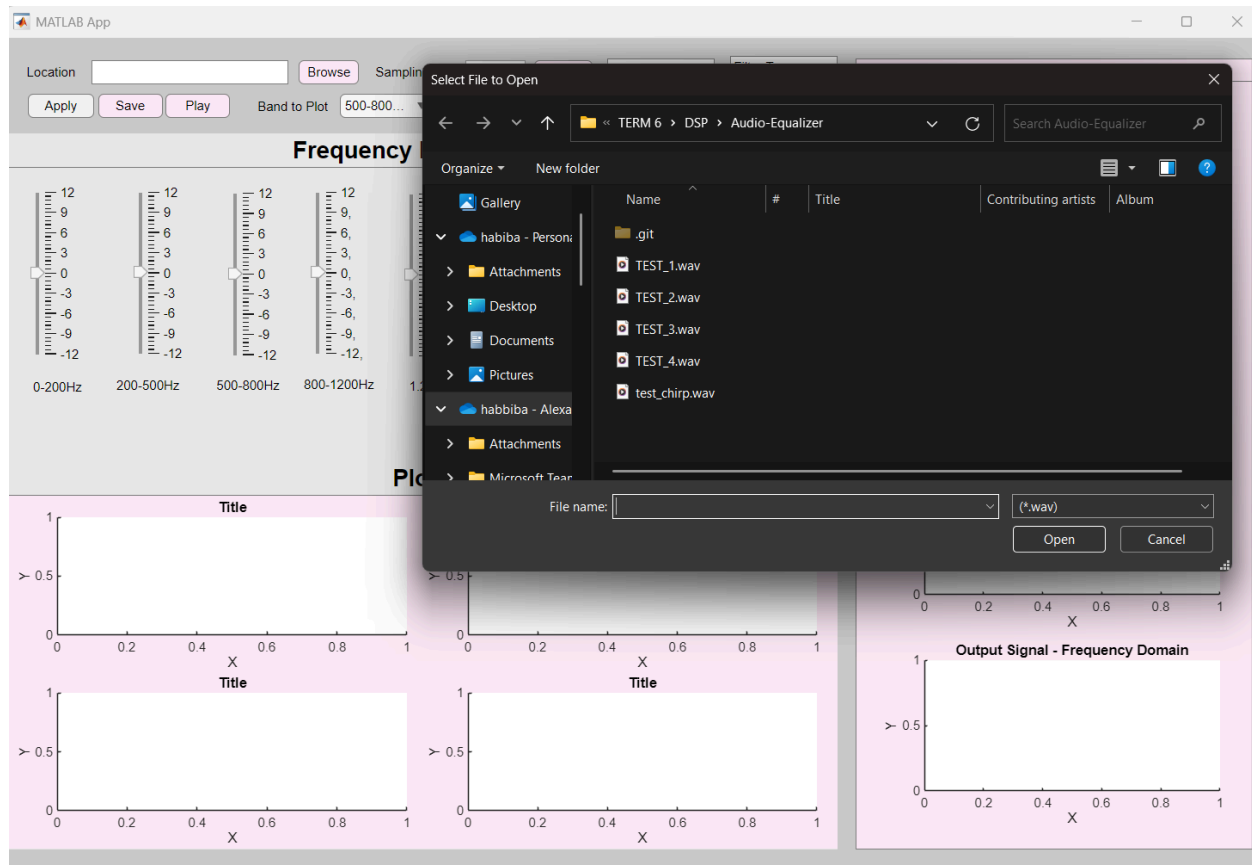
Enter output sample rate (Hz): 22050

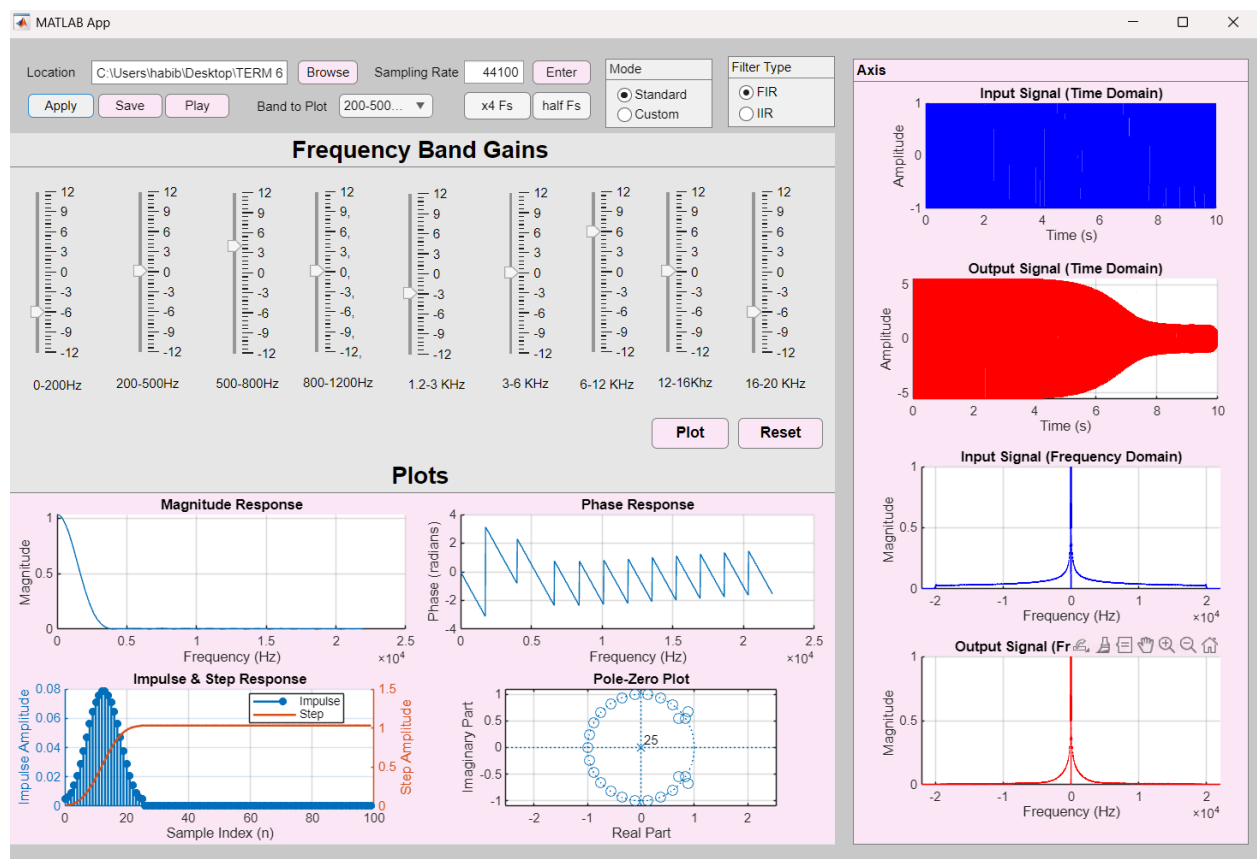
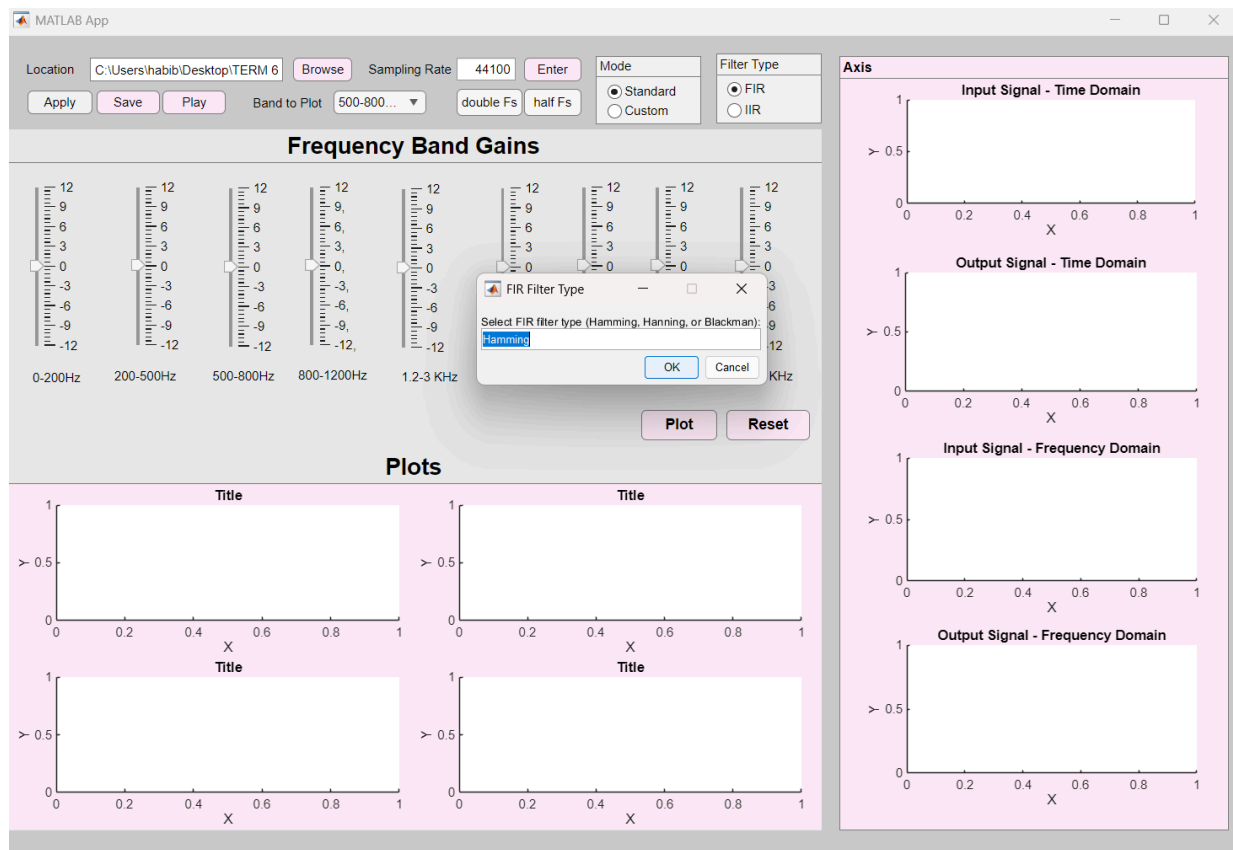
Analysis data saved to filter_analysis.mat

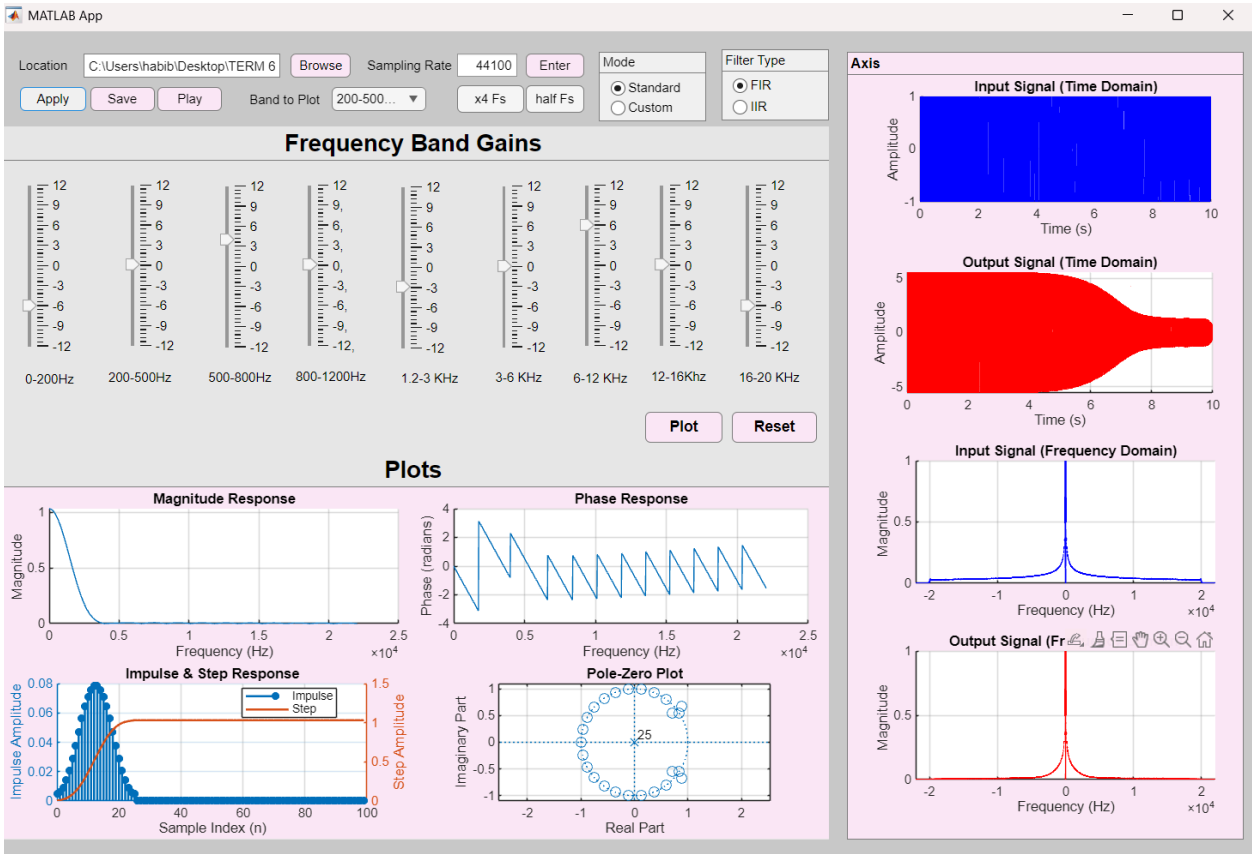
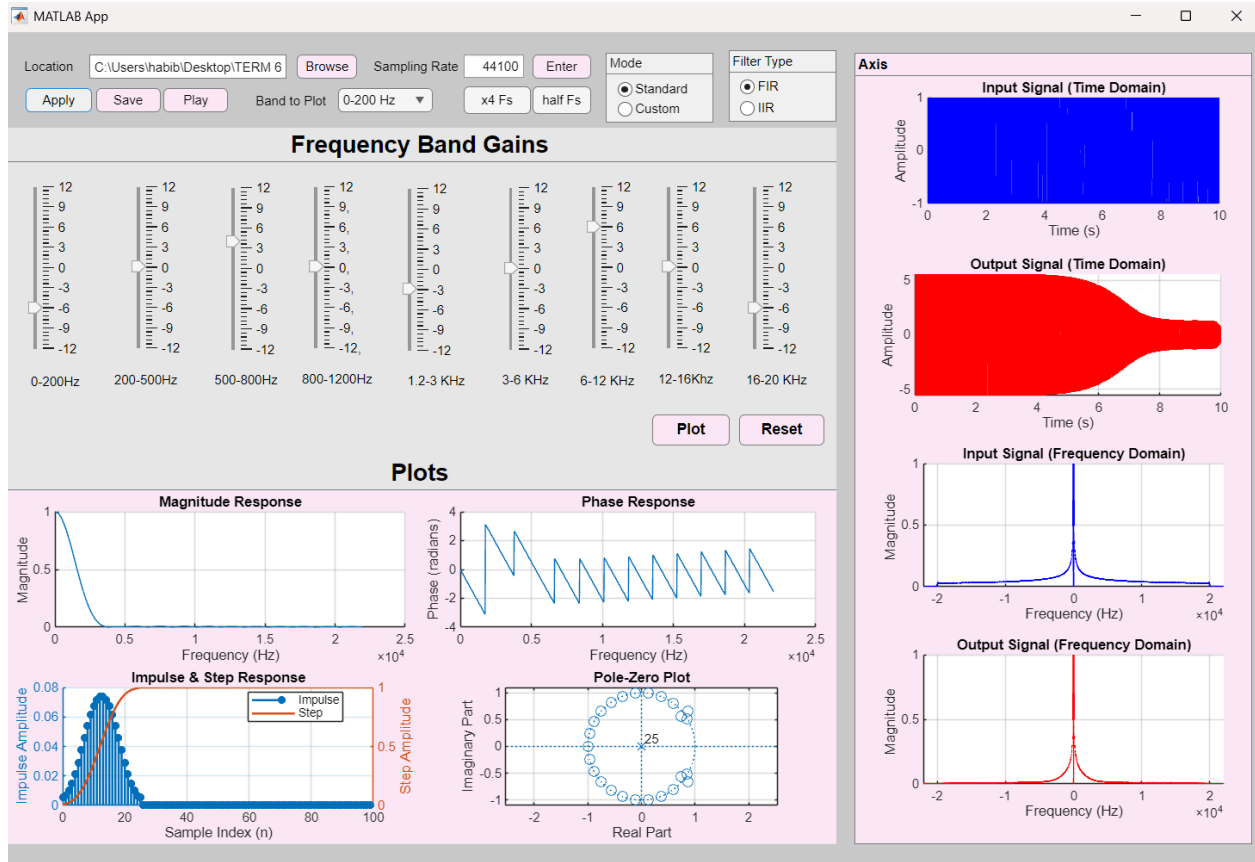


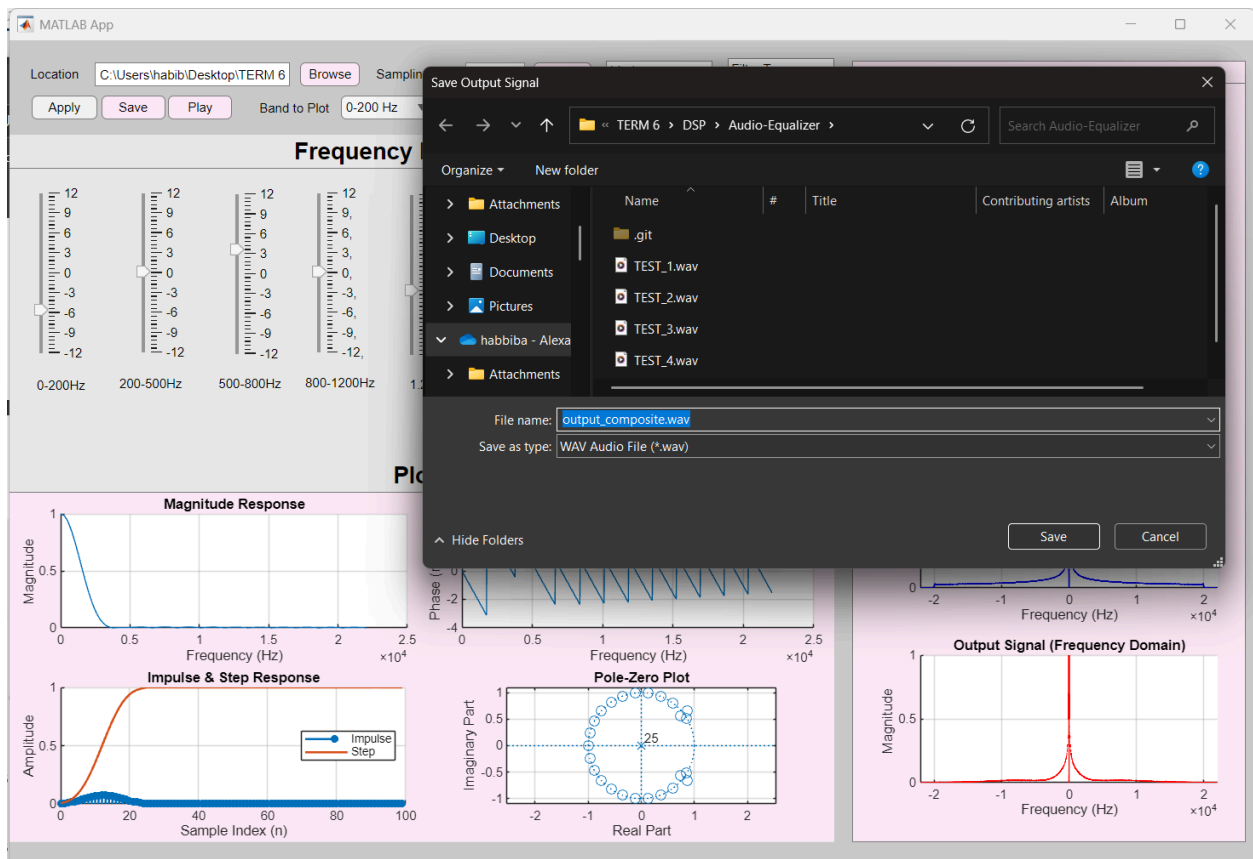
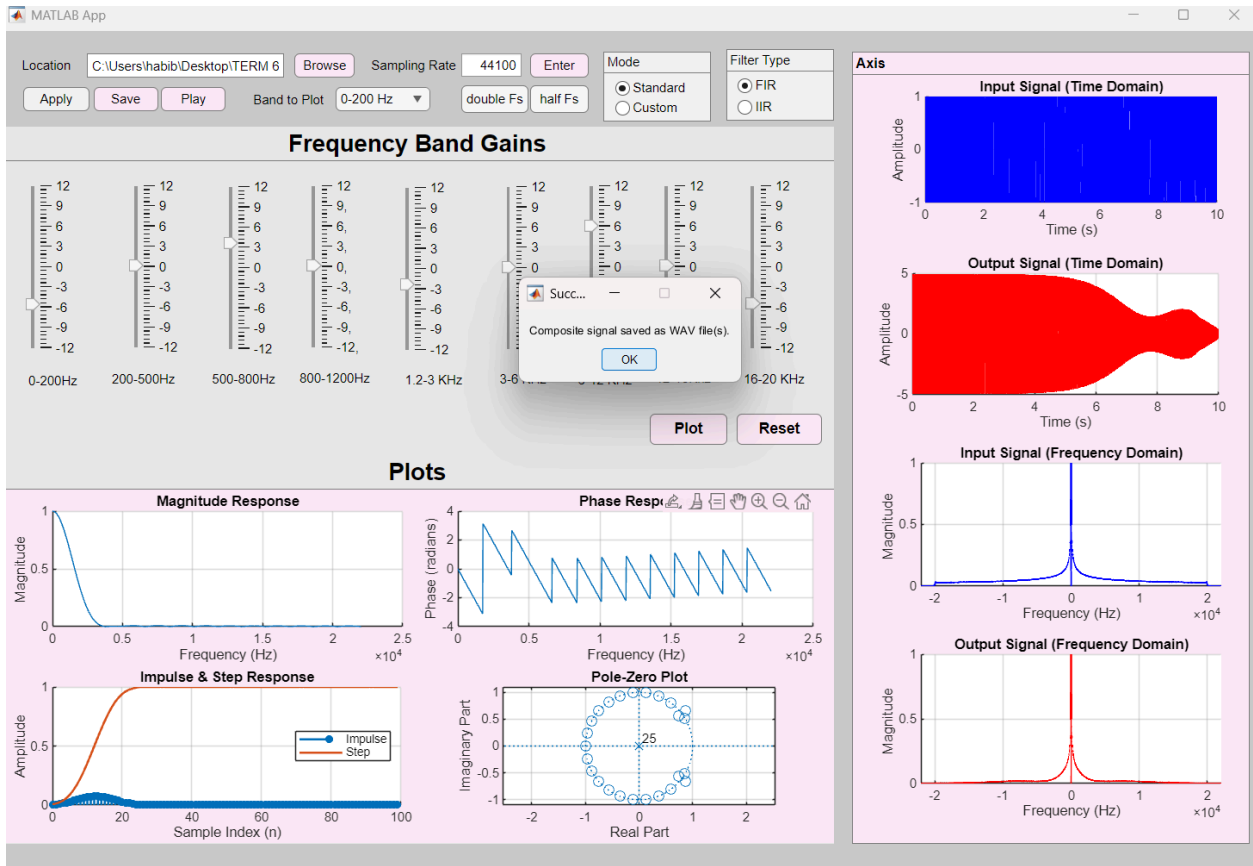
Audio Equalizer (GUI Interface)

FIR

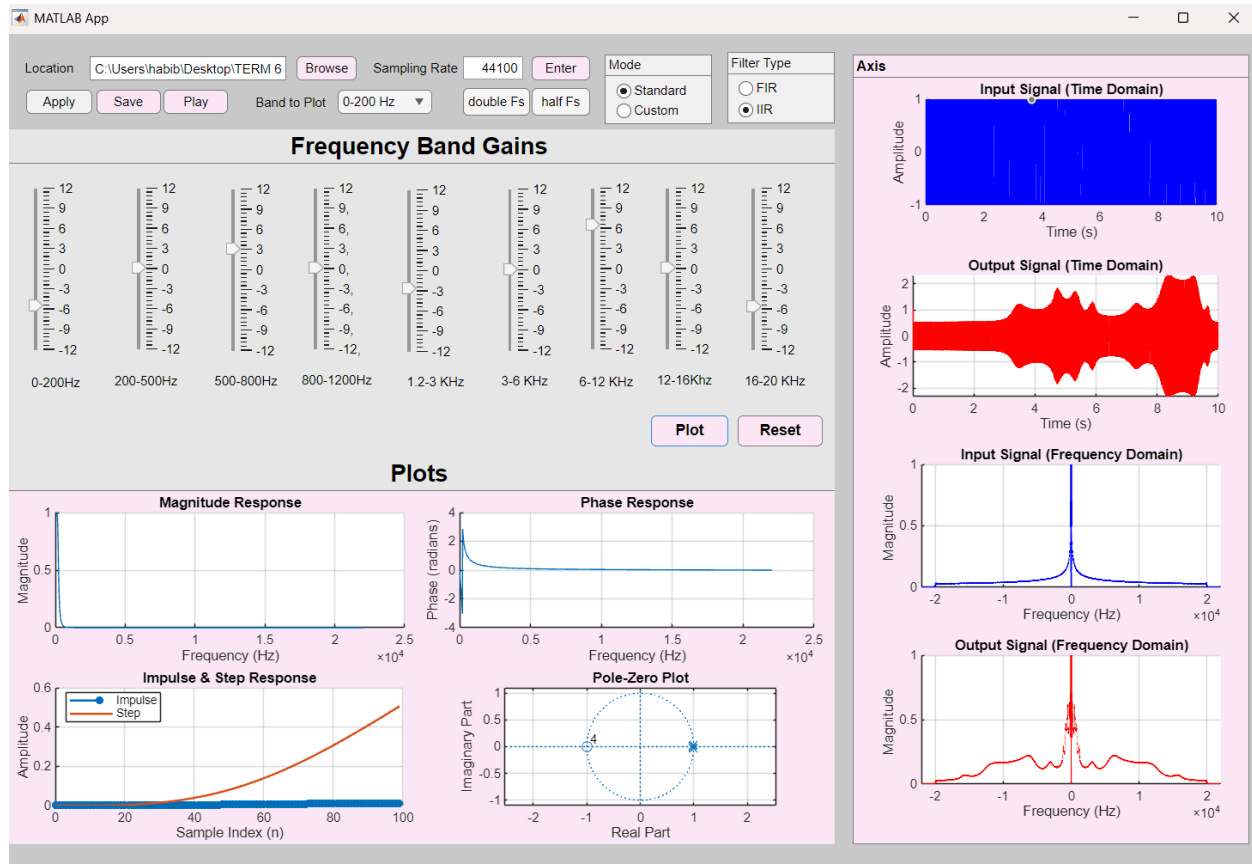


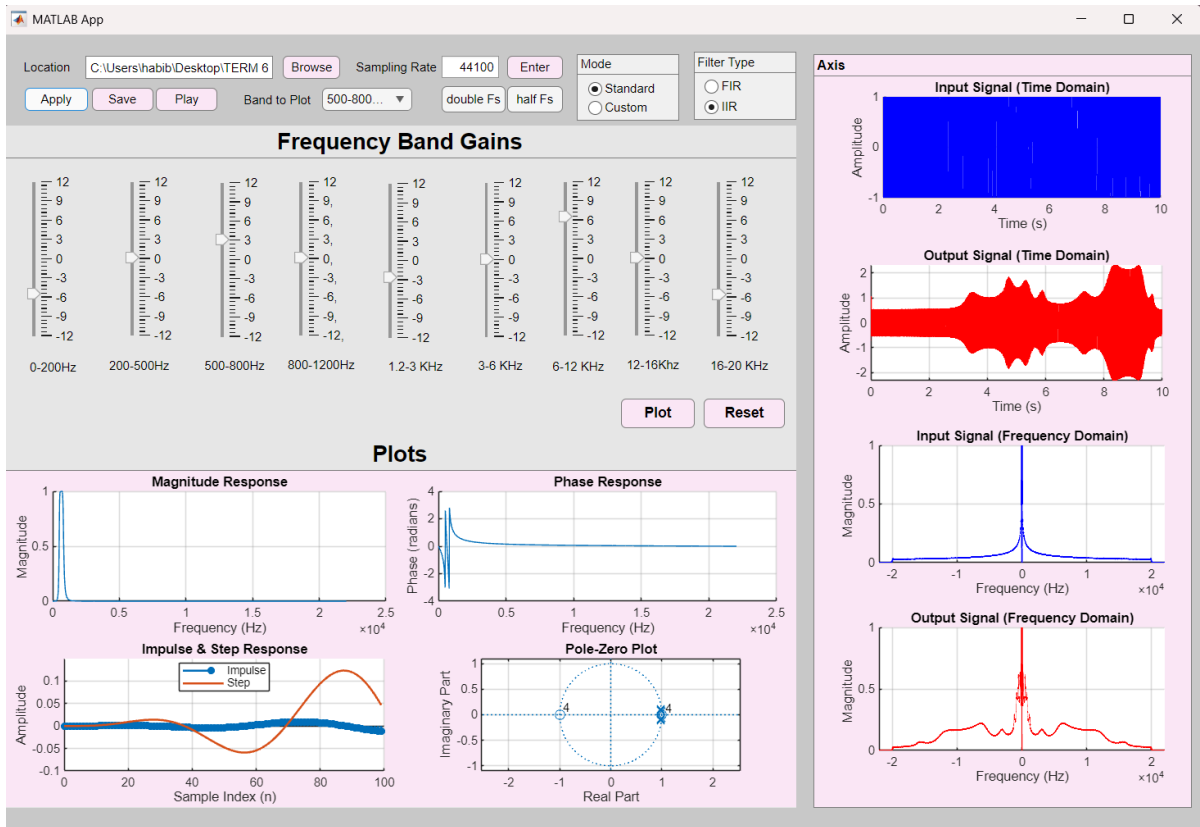
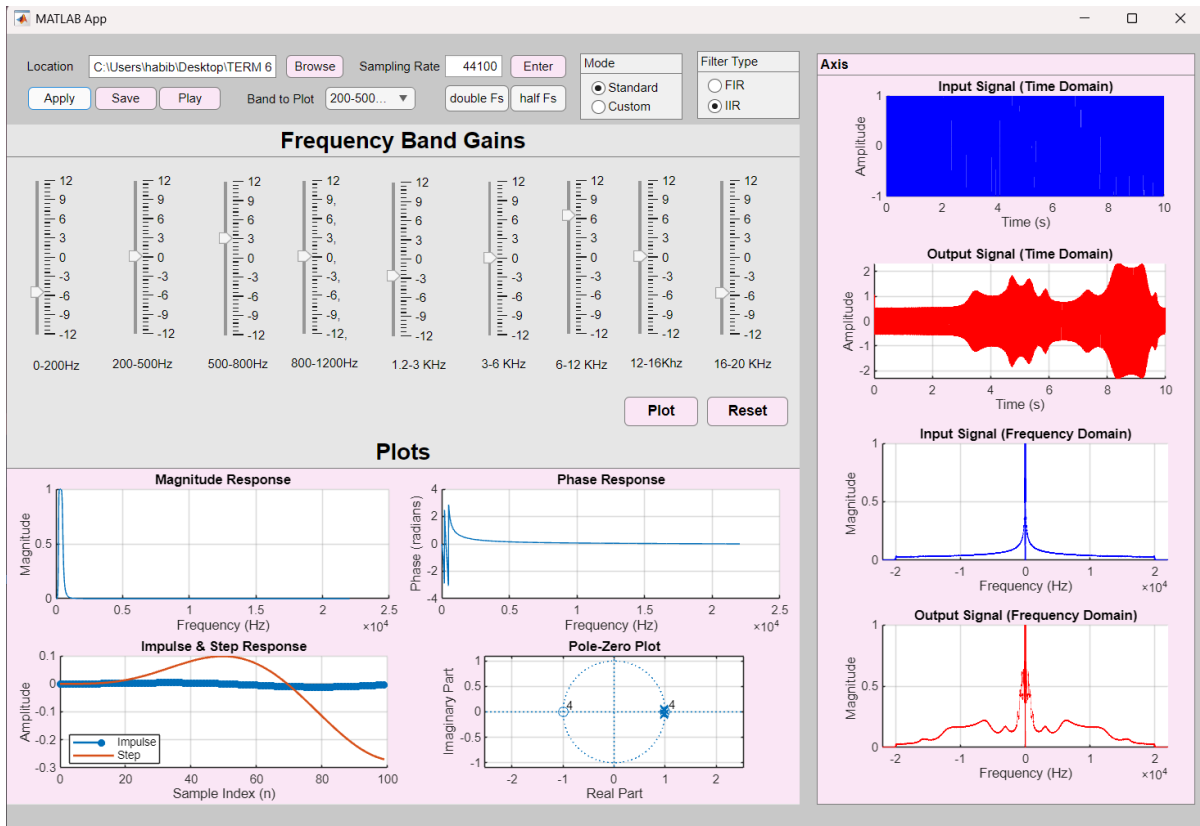






IIR





Decreasing to half

