

Daily Entries

Tuesday, September 17, 2019

2:08 PM

START 3:30 PM - 9/18/19

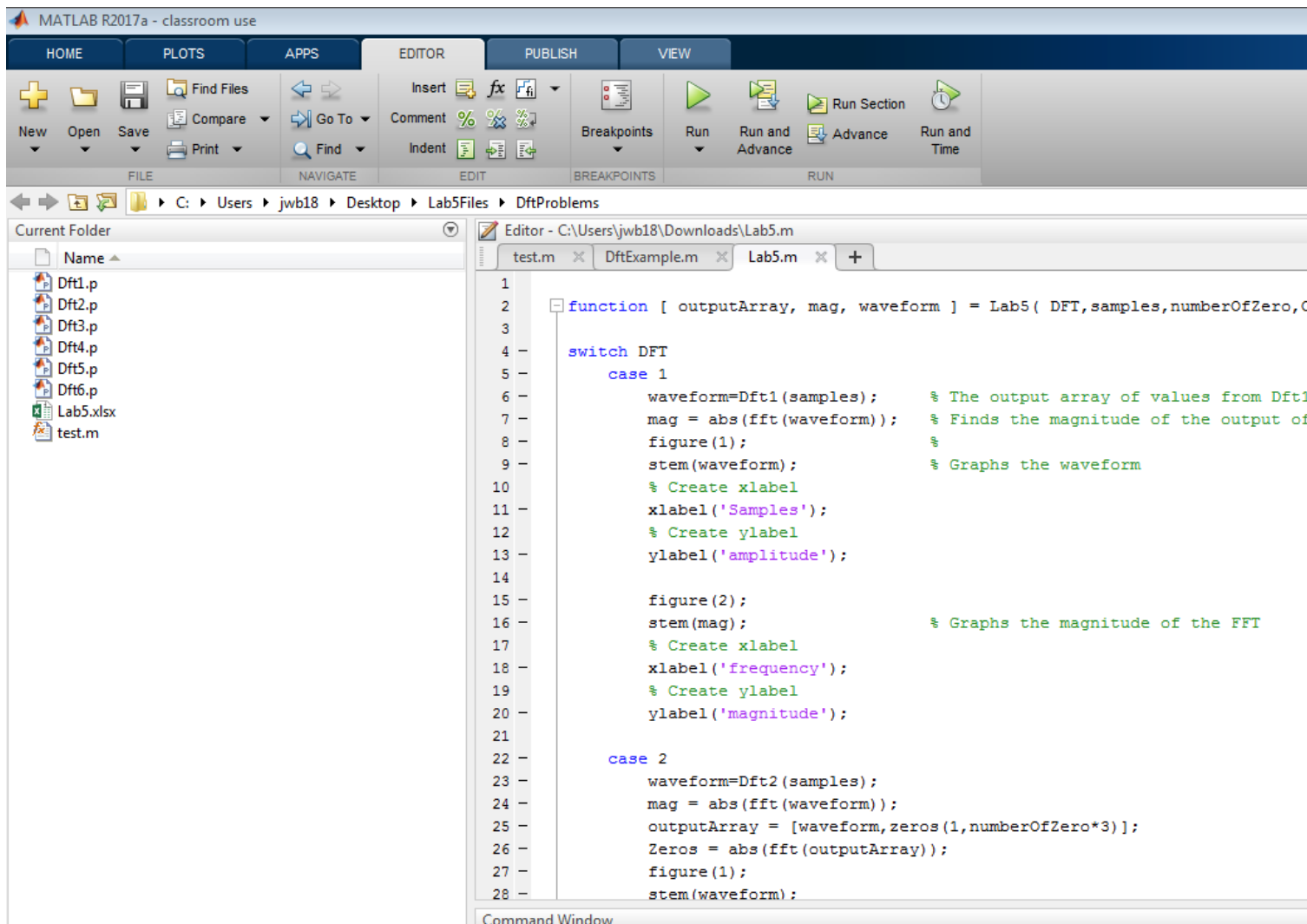
PROBLEM:

Started putting all of my data in excel assuming we had to do it that graphing improperly and put myself in the wrong direction.

SOLUTION:

Started modifying the program to work off of MatLab directly.

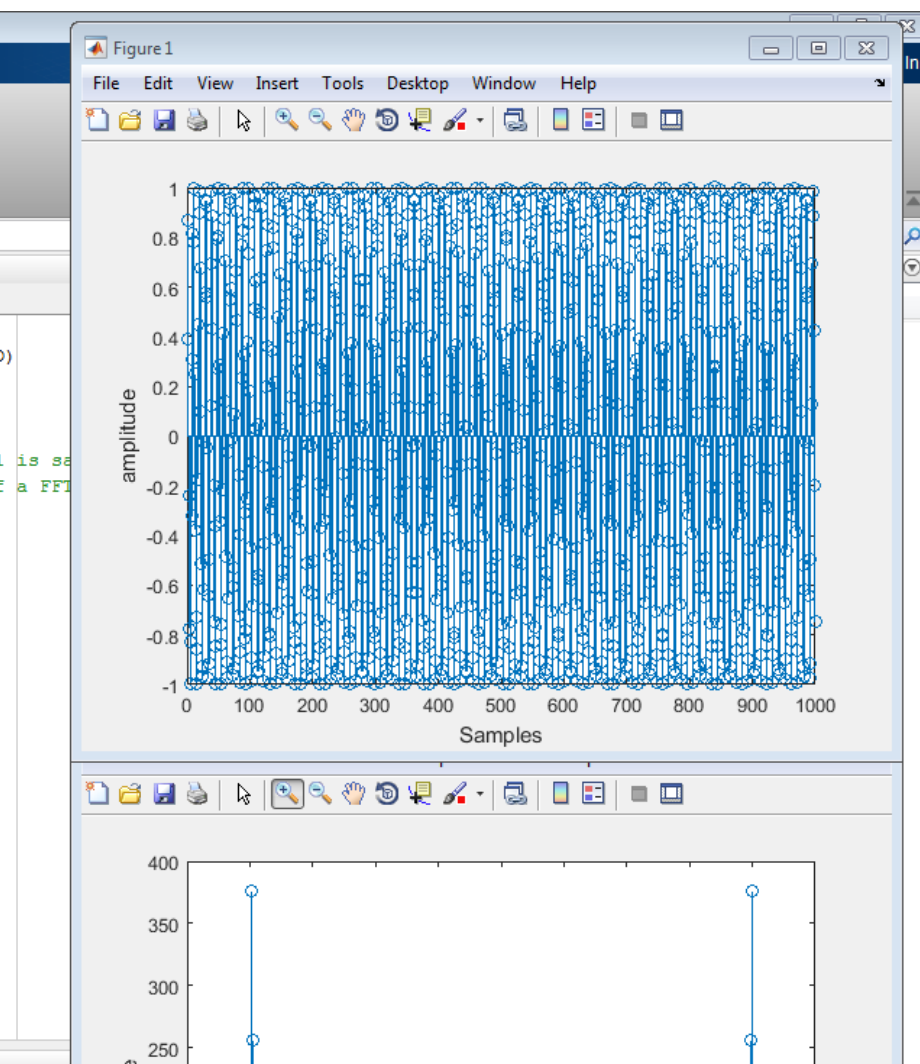
DFT1: Ran with: 1000 Bin #, 2 Zeros, 100 Samples



The image shows the MATLAB R2017a - classroom use interface. The top menu bar includes HOME, PLOTS, APPS, EDITOR, PUBLISH, and VIEW. Below the menu bar is a toolbar with icons for New, Open, Save, Find Files, Compare, Go To, Find, Insert, Comment, Indent, Breakpoints, Run, Run and Advance, Run Section, and Run and Time. The current folder is C:\Users\jwb18\Desktop\Lab5Files. The editor window shows a script named Lab5.m with the following code:

```
1 function [ outputArray, mag, waveform ] = Lab5( DFT,samples,numberOfZero,C
2
3
4 switch DFT
5     case 1
6         waveform=Dft1(samples); % The output array of values from Dft1
7         mag = abs(fft(waveform)); % Finds the magnitude of the output of
8         figure(1); %
9         stem(waveform); % Graphs the waveform
10        % Create xlabel
11        xlabel('Samples');
12        % Create ylabel
13        ylabel('amplitude');
14
15        figure(2);
16        stem(mag); % Graphs the magnitude of the FFT
17        % Create xlabel
18        xlabel('frequency');
19        % Create ylabel
20        ylabel('magnitude');
21
22     case 2
23         waveform=Dft2(samples);
24         mag = abs(fft(waveform));
25         outputArray = [waveform,zeros(1,numberOfZero*3)];
26         Zeros = abs(fft(outputArray));
27         figure(1);
28         stem(waveform);
```

way. Ended up



Details

Select a file to view details

New to MATLAB? See resources for [Getting Started](#).

Classroom License -- for classroom instructional use only.

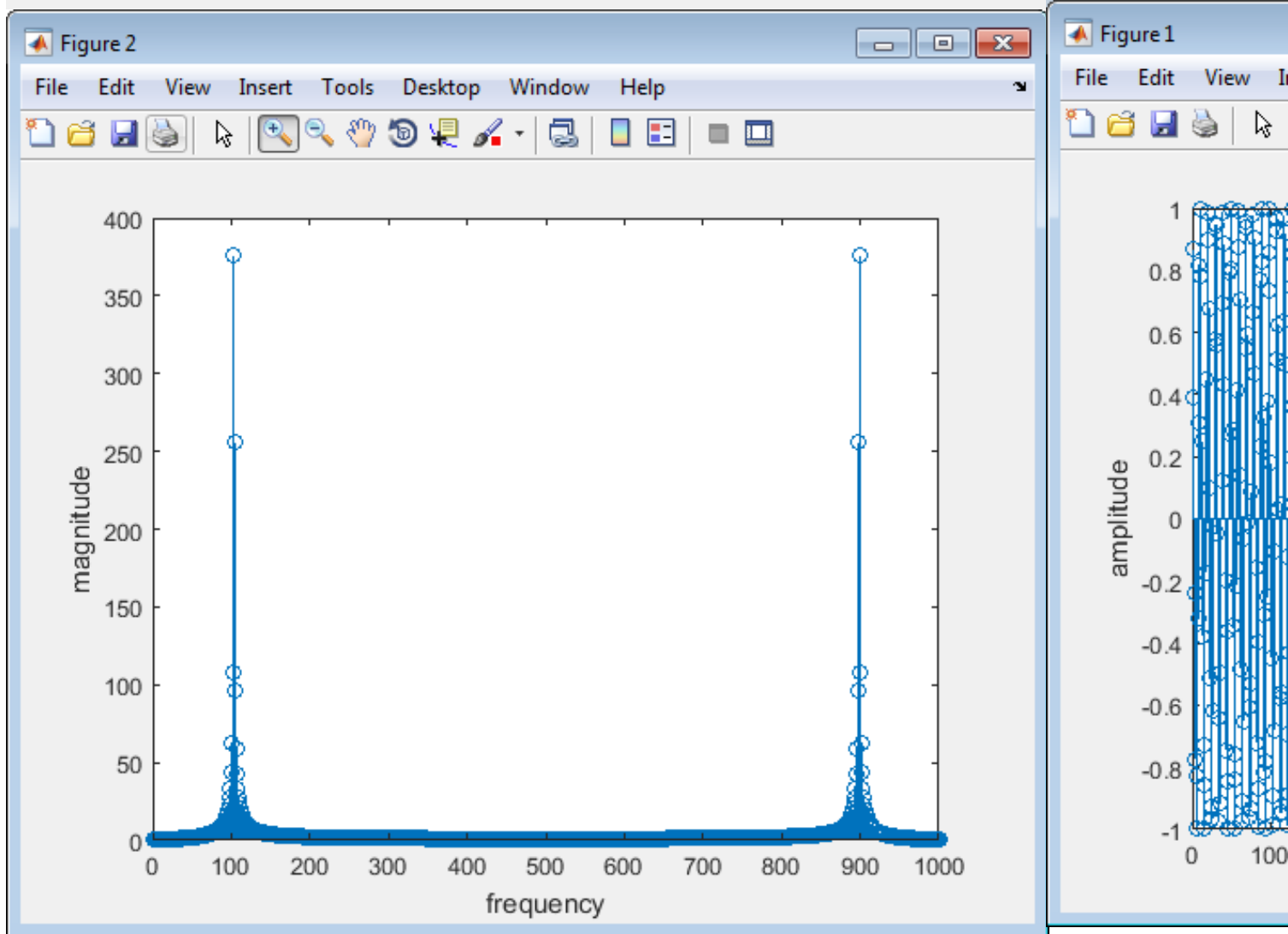
```

>> Lab5
Not enough input arguments.

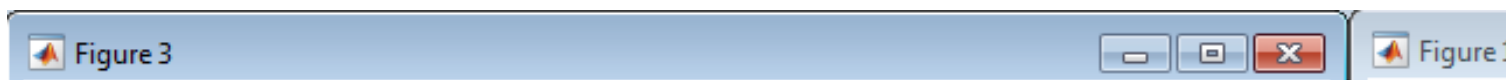
Error in Lab5 (line 4)
switch DFT

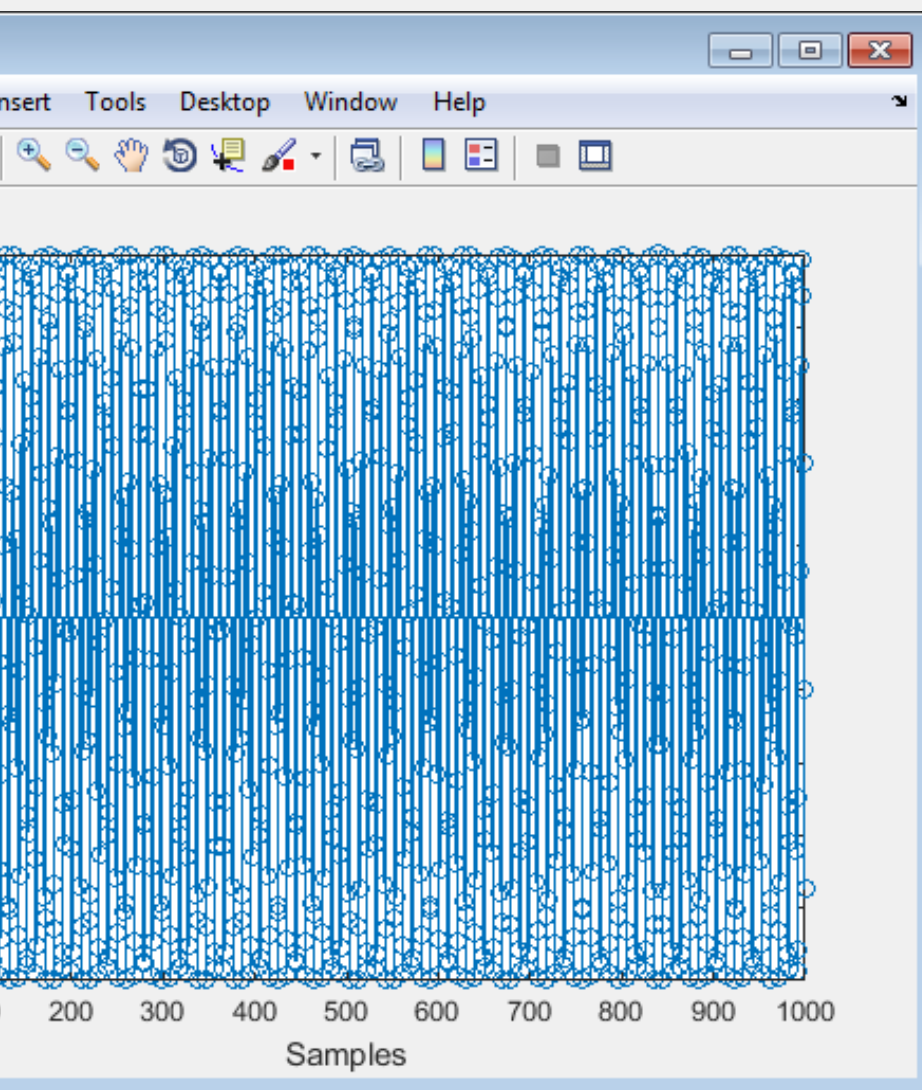
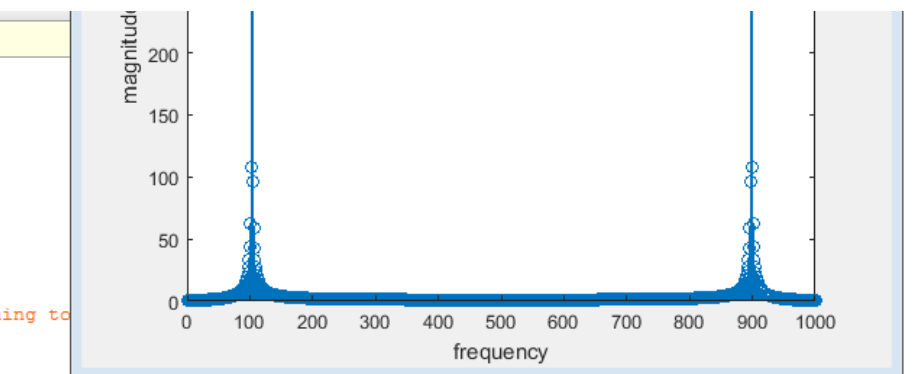
>> Lab5(1,1000,2,100)
Warning: MATLAB has disabled some advanced graphics rendering features by switch
information, click here.
fx >>

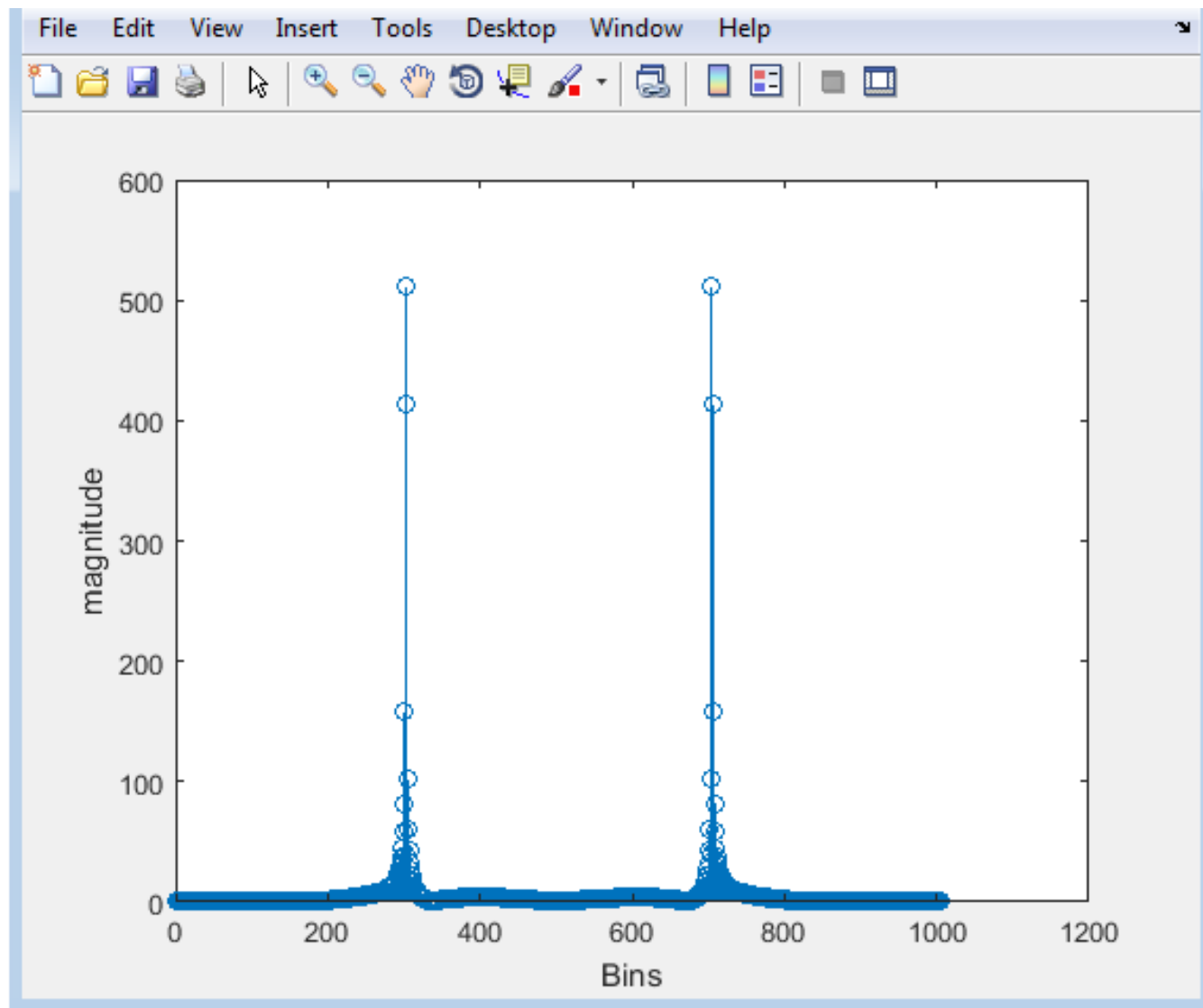
```



DFT2: 1000 Samples, 0 Zeros, 100 Samples







```

xlabel('Samples');
% Create ylabel
ylabel('amplitude');

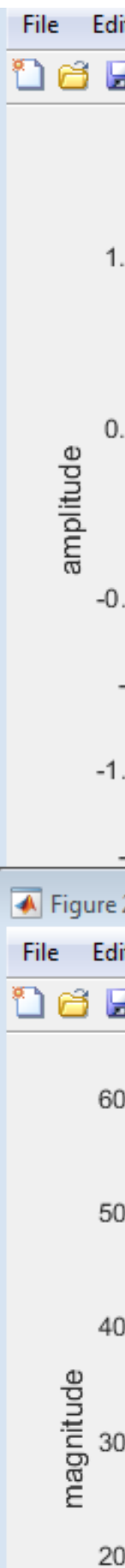
figure(2);

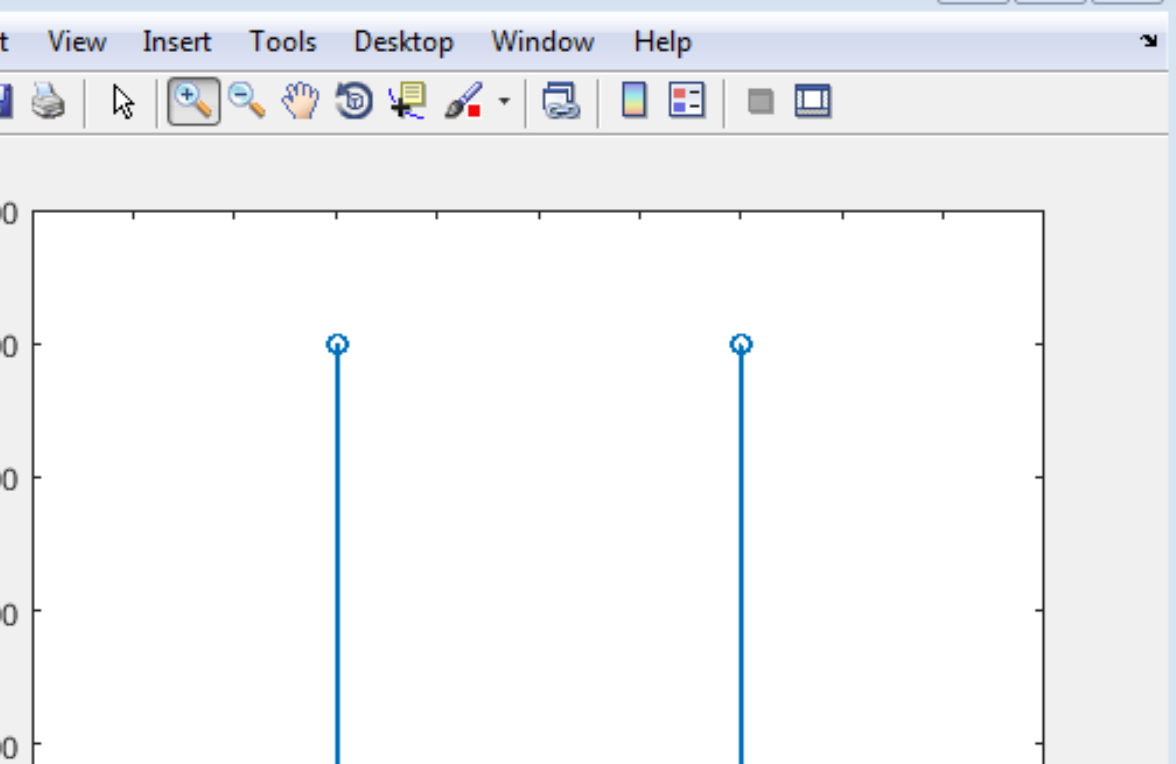
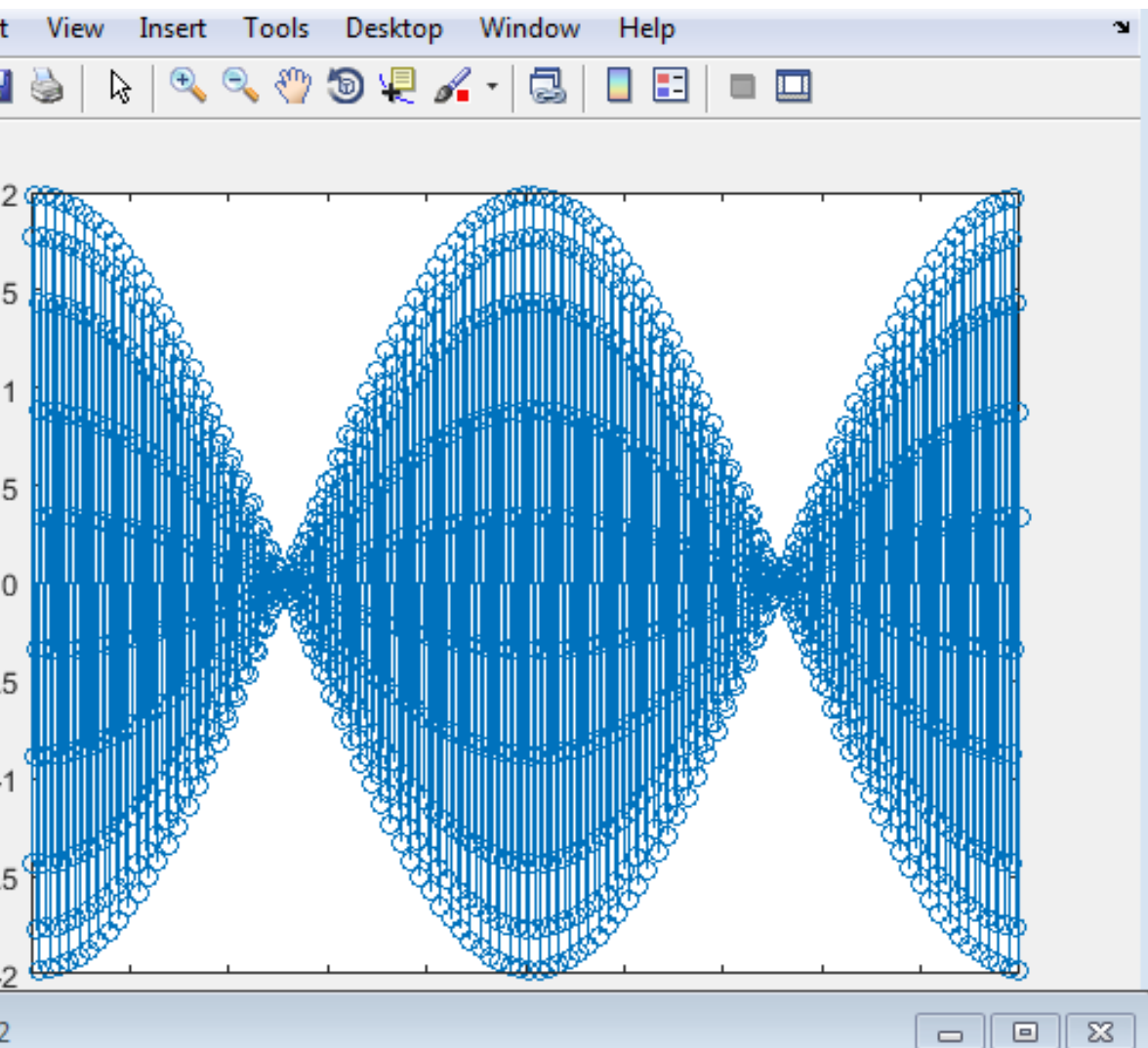
stem(mag);
% Create xlabel
xlabel('Bins');
% Create ylabel
vlabel('magnitude');

```

sources for [Getting Started](#).

1.7448 -1.4176 -0.8713 1.9593 -0.3391 -1.7529 1.4239 0.





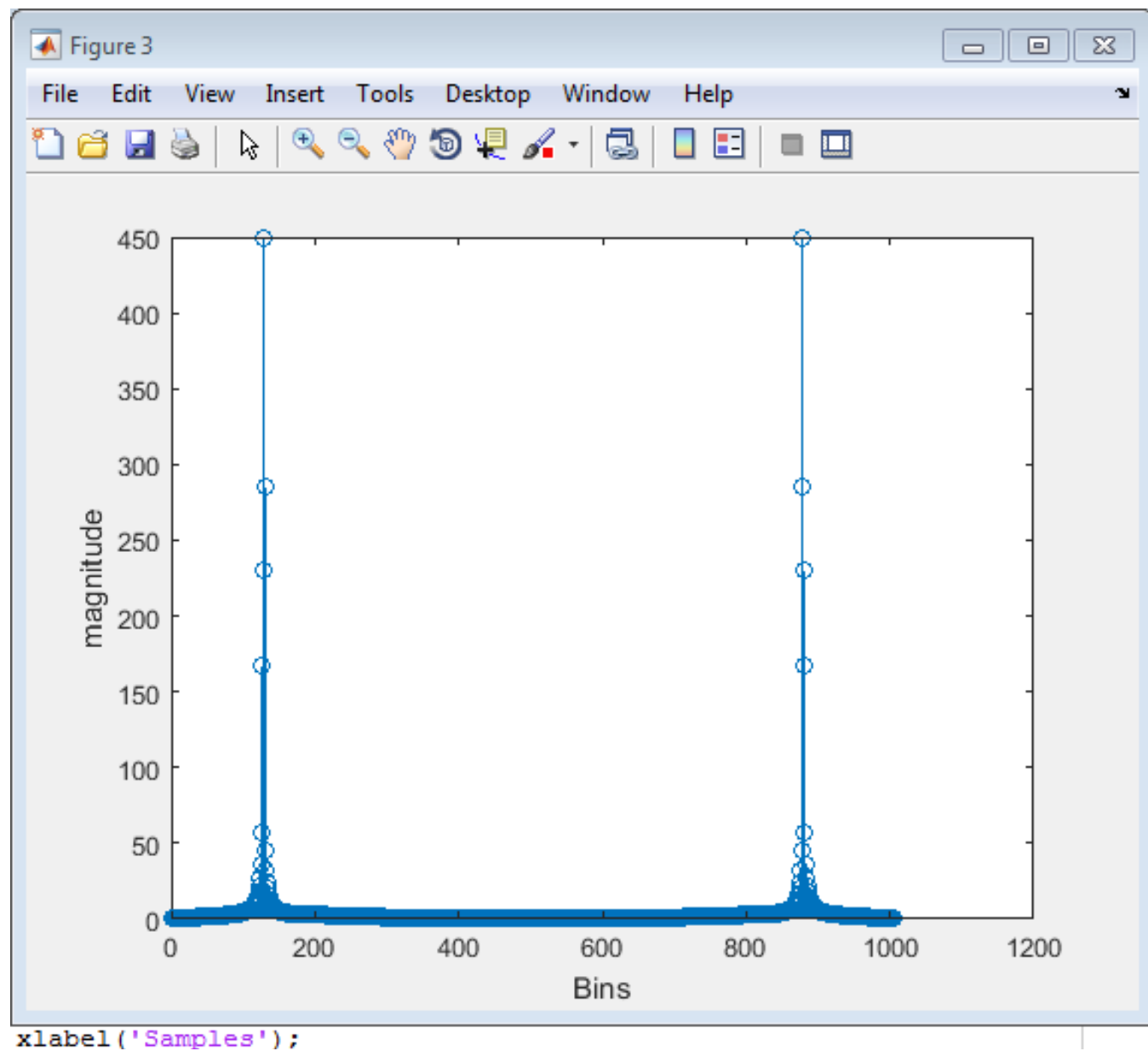
through 1001

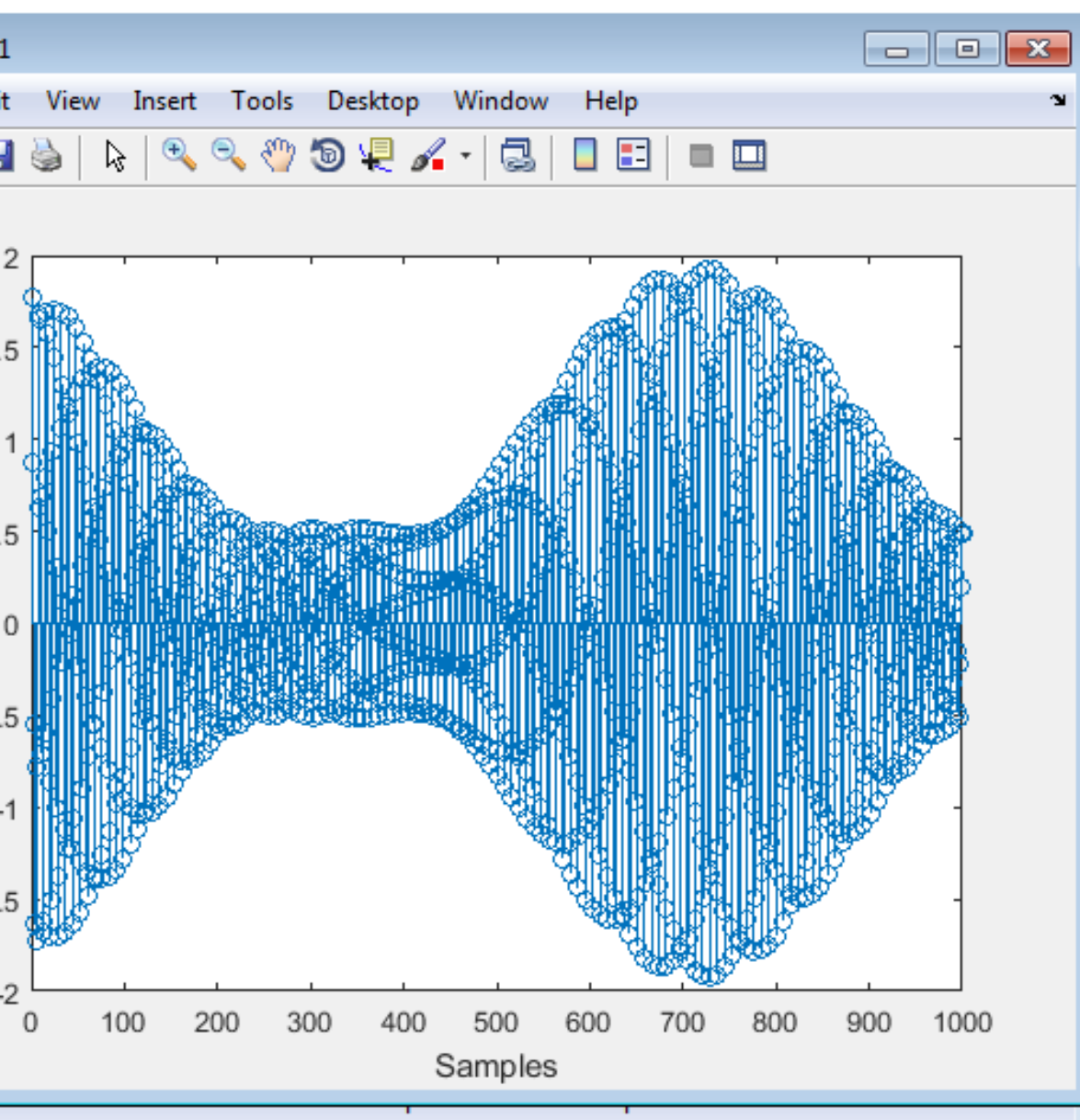
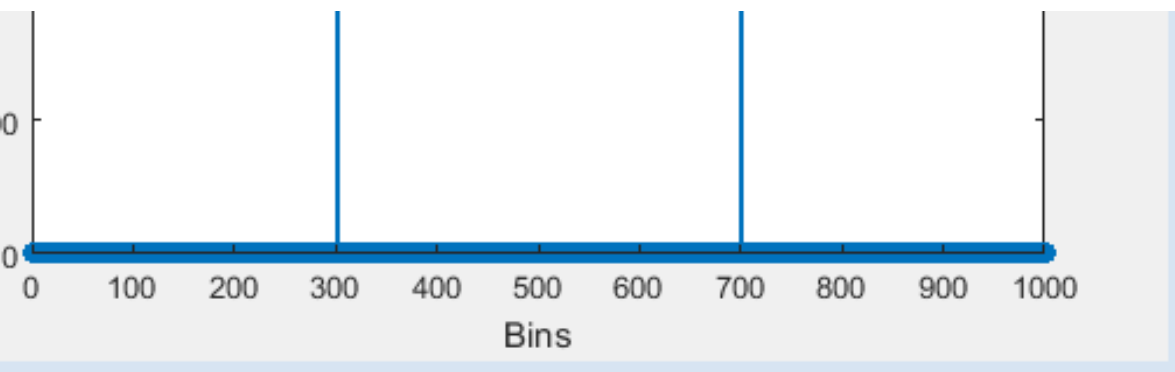
1.4289 -0.8778 1.9733 -0.3414 -1.7640 1.4324 0.8798 -1.

through 1006

0 0 0 0

DFT3: 1000 Samples, 0 Zeros, 100 Samples






```

% Create ylabel
ylabel('amplitude');

figure(2);

stem(mag);
% Create xlabel
xlabel('Bins');
% Create ylabel
ylabel('magnitude');

```

sources for [Getting Started](#).

```

0.4166    0.0079    0.4226    0.5729    0.3694   -0.0590   -0.4464   -0.
through 1001

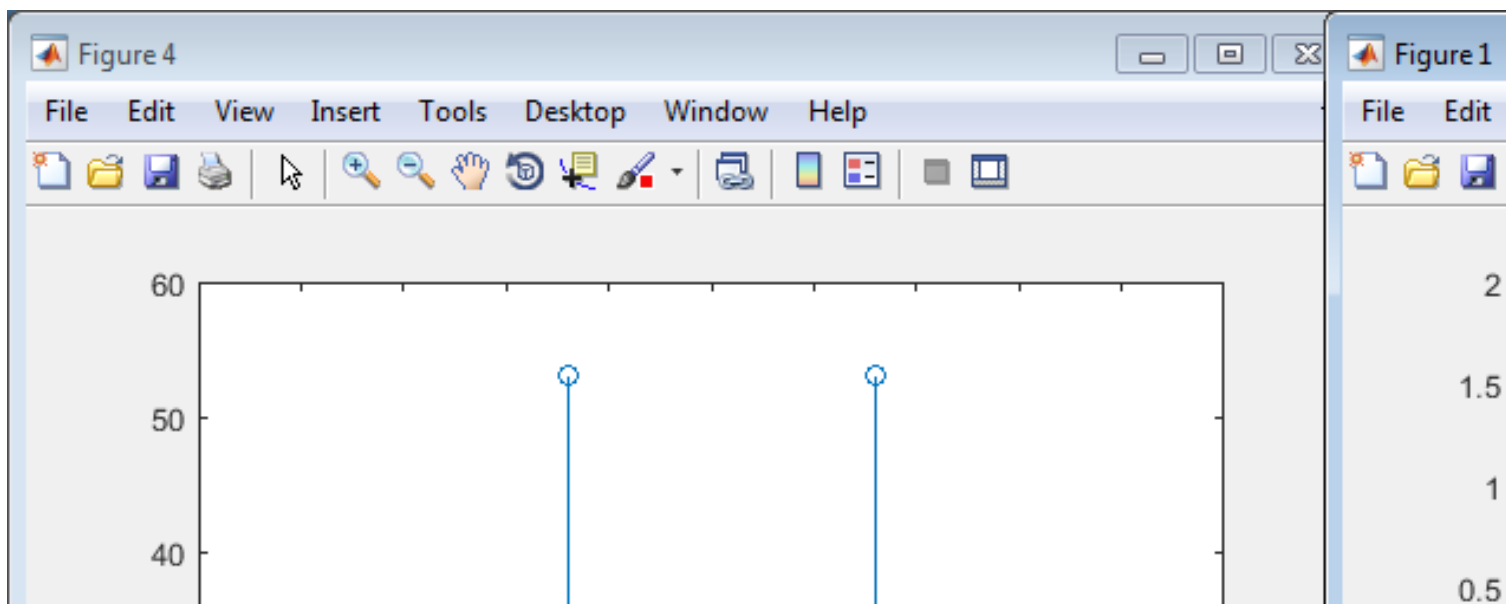
0.5344    0.2727   -0.1545   -0.4827   -0.5107   -0.2238    0.1985    0.
through 1006

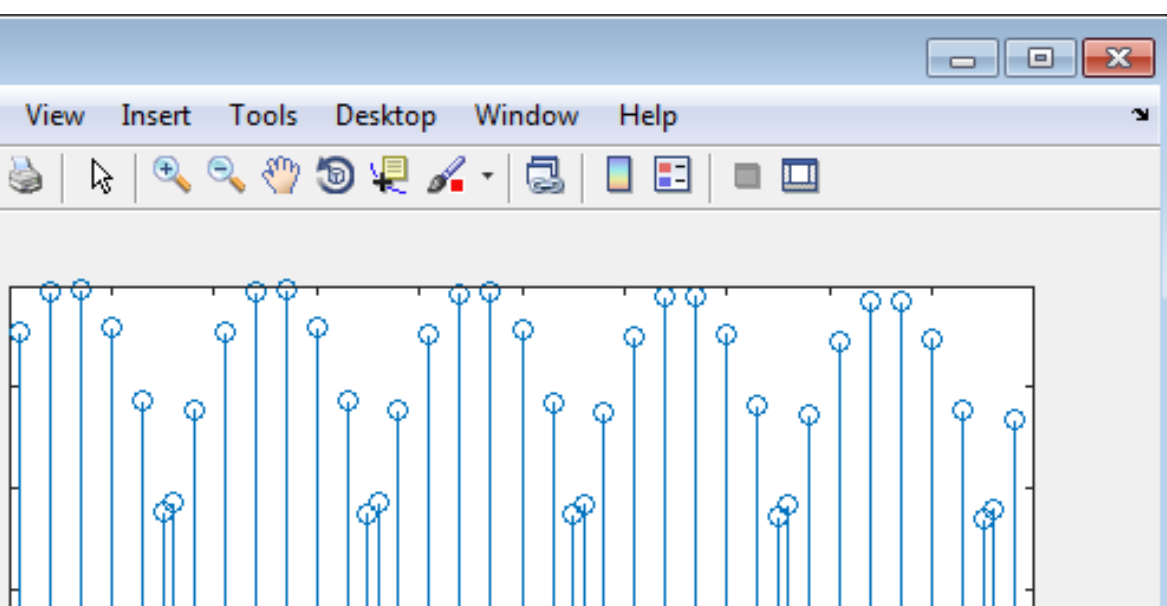
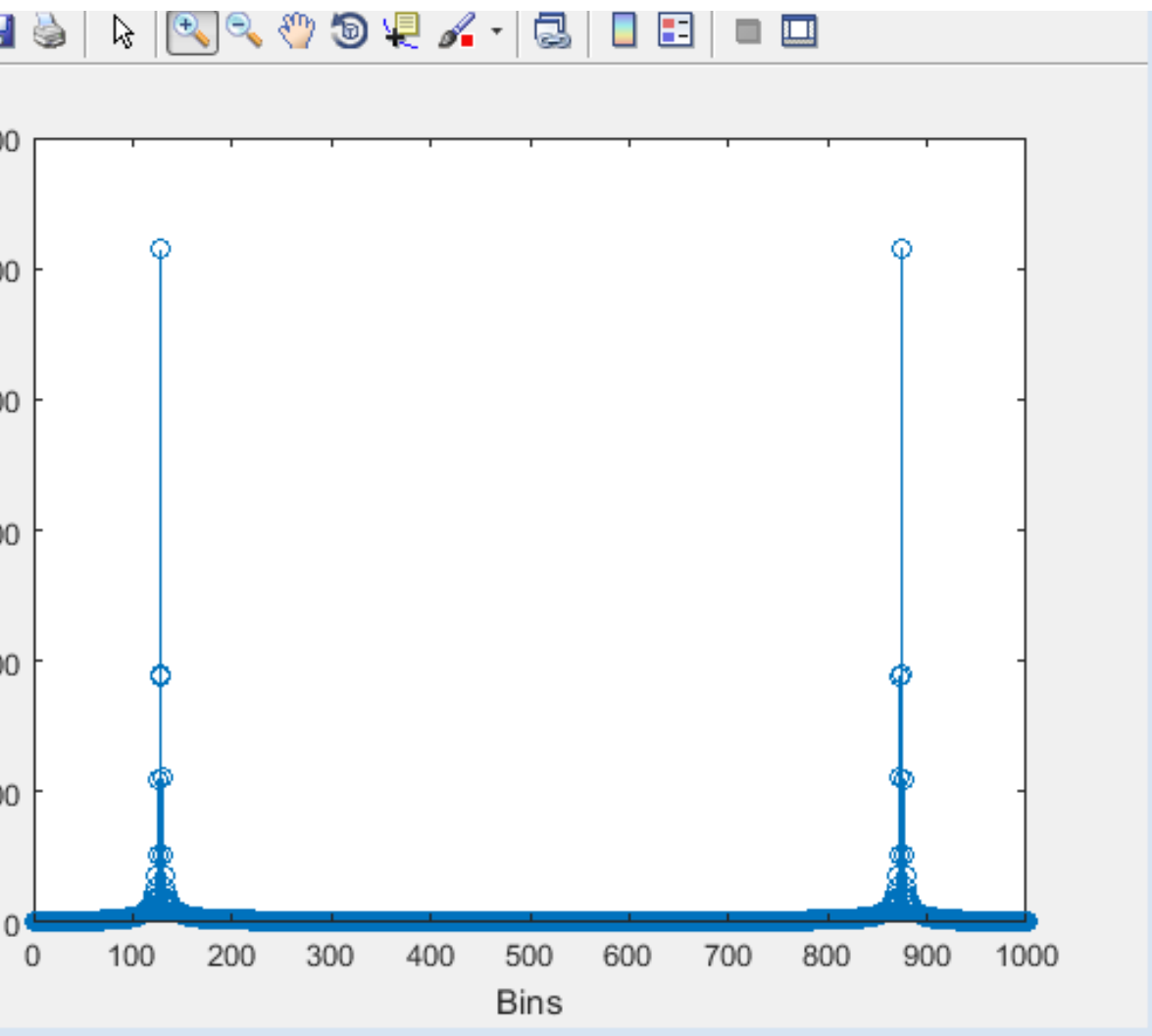
         0         0         0         0

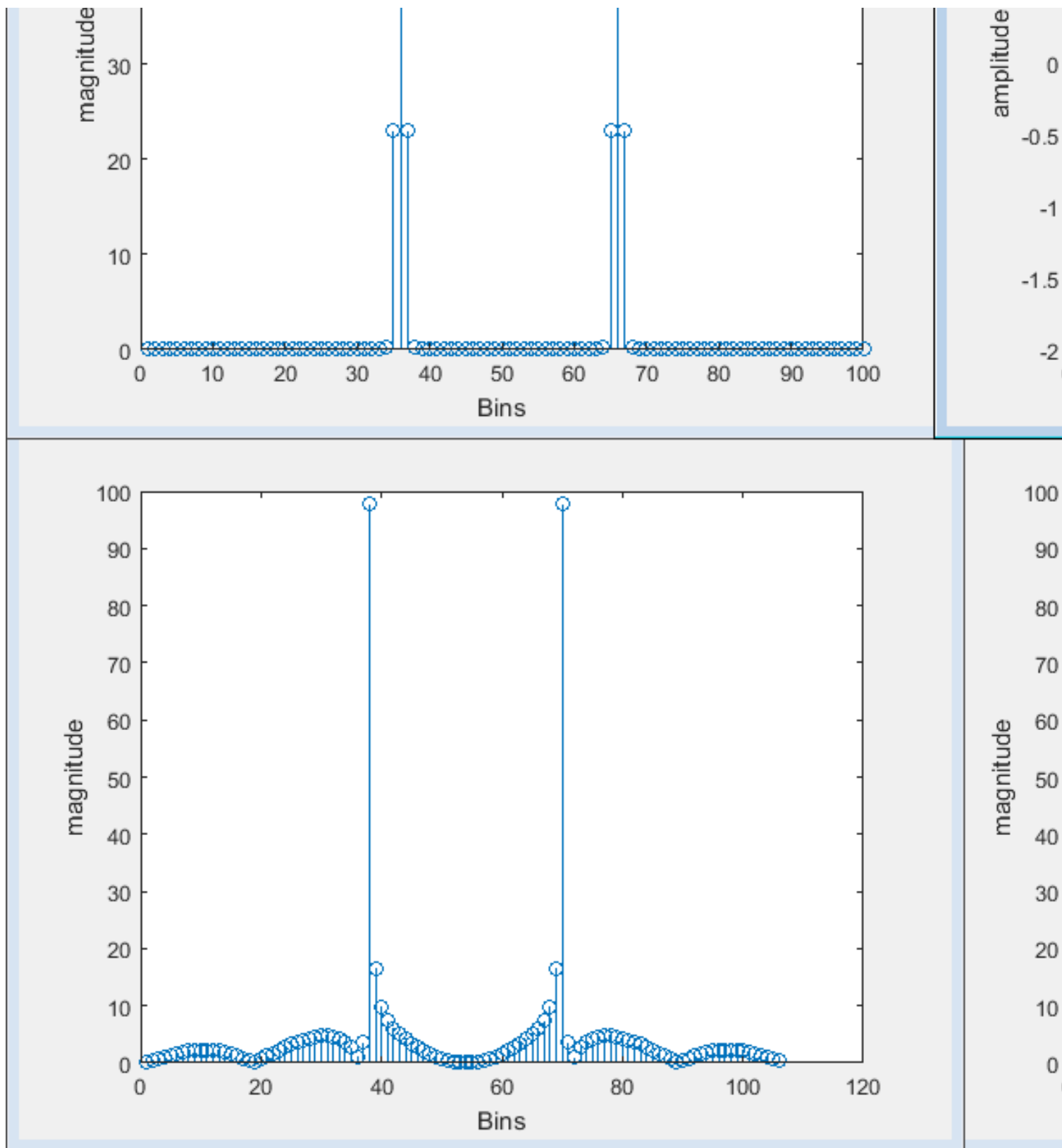
```



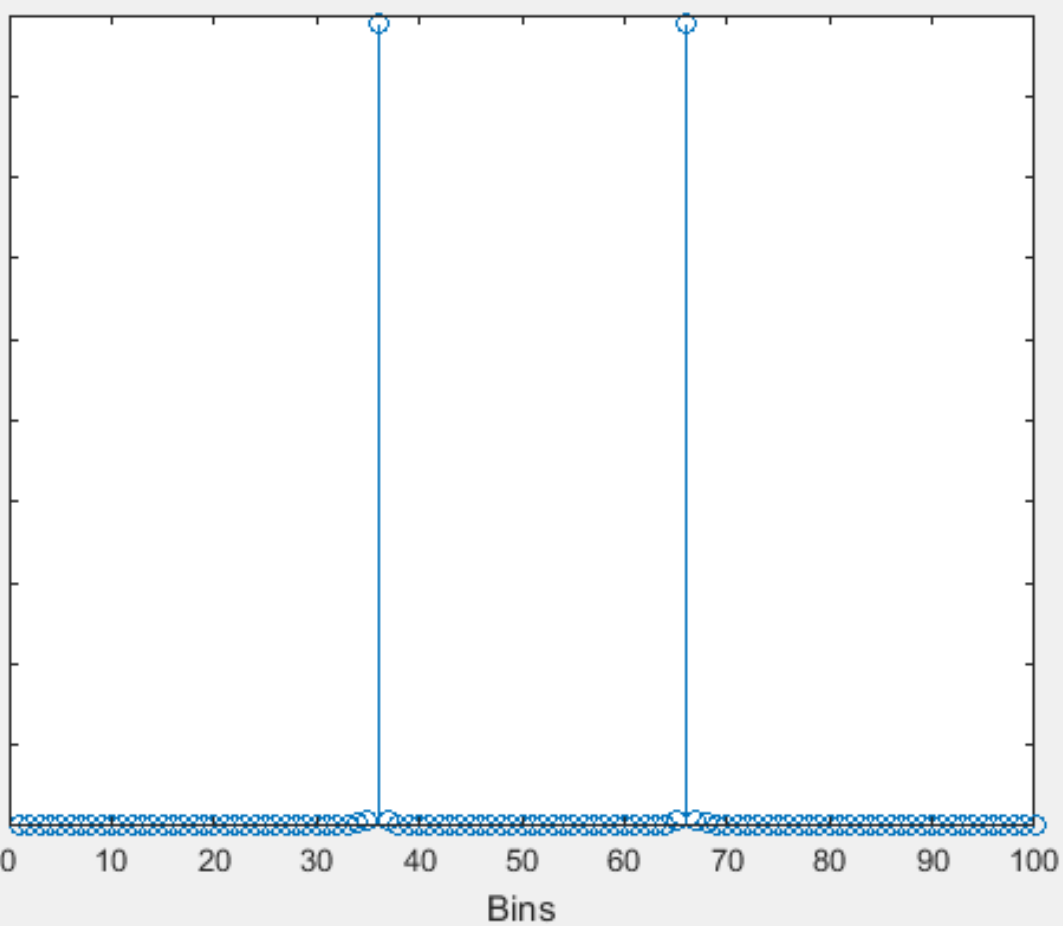
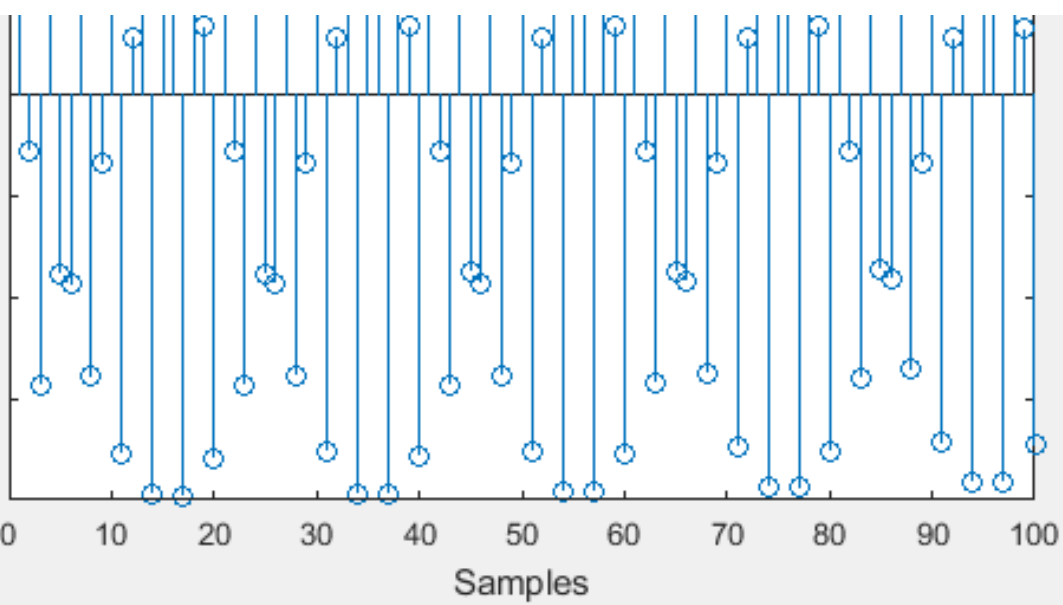
DFT4: 100 Samples, 2 Zeros, 100 Samples

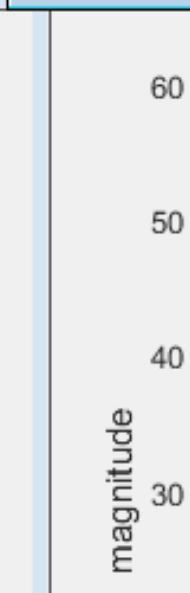
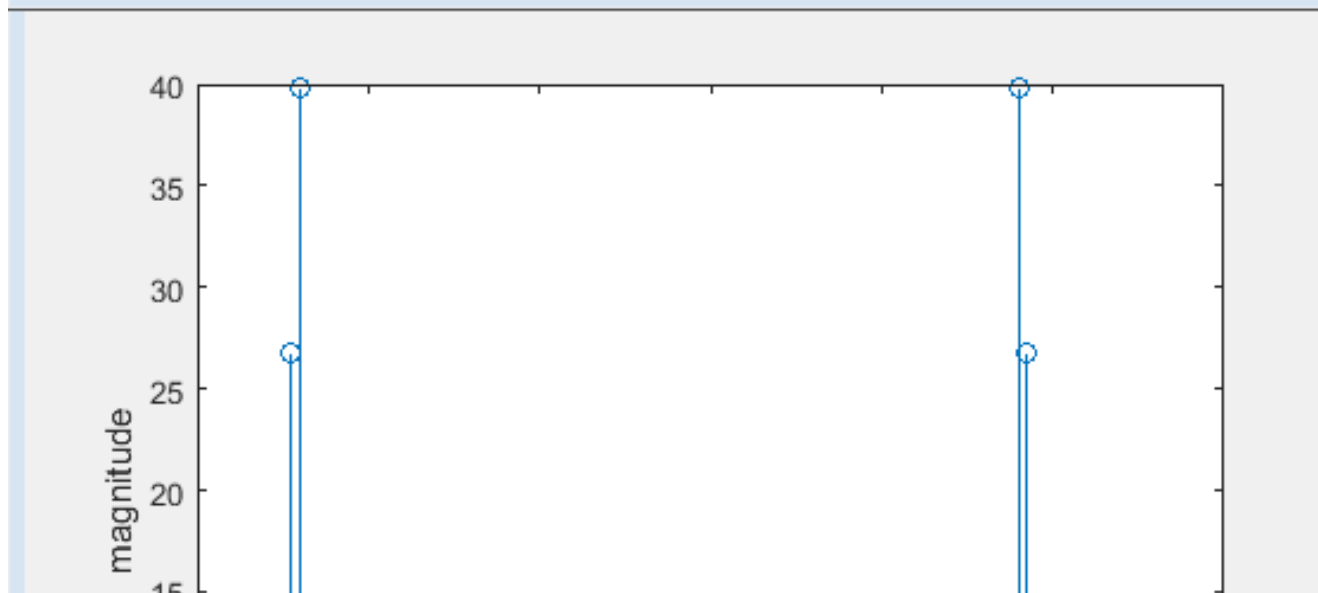
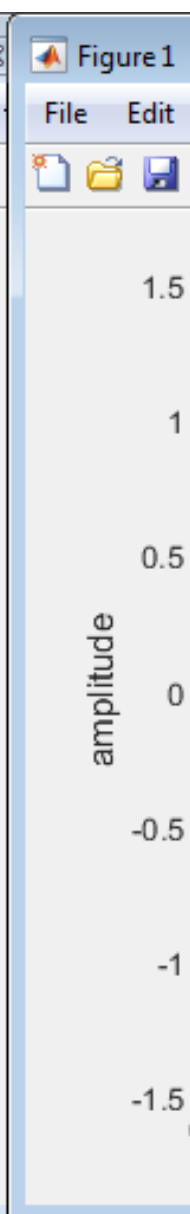
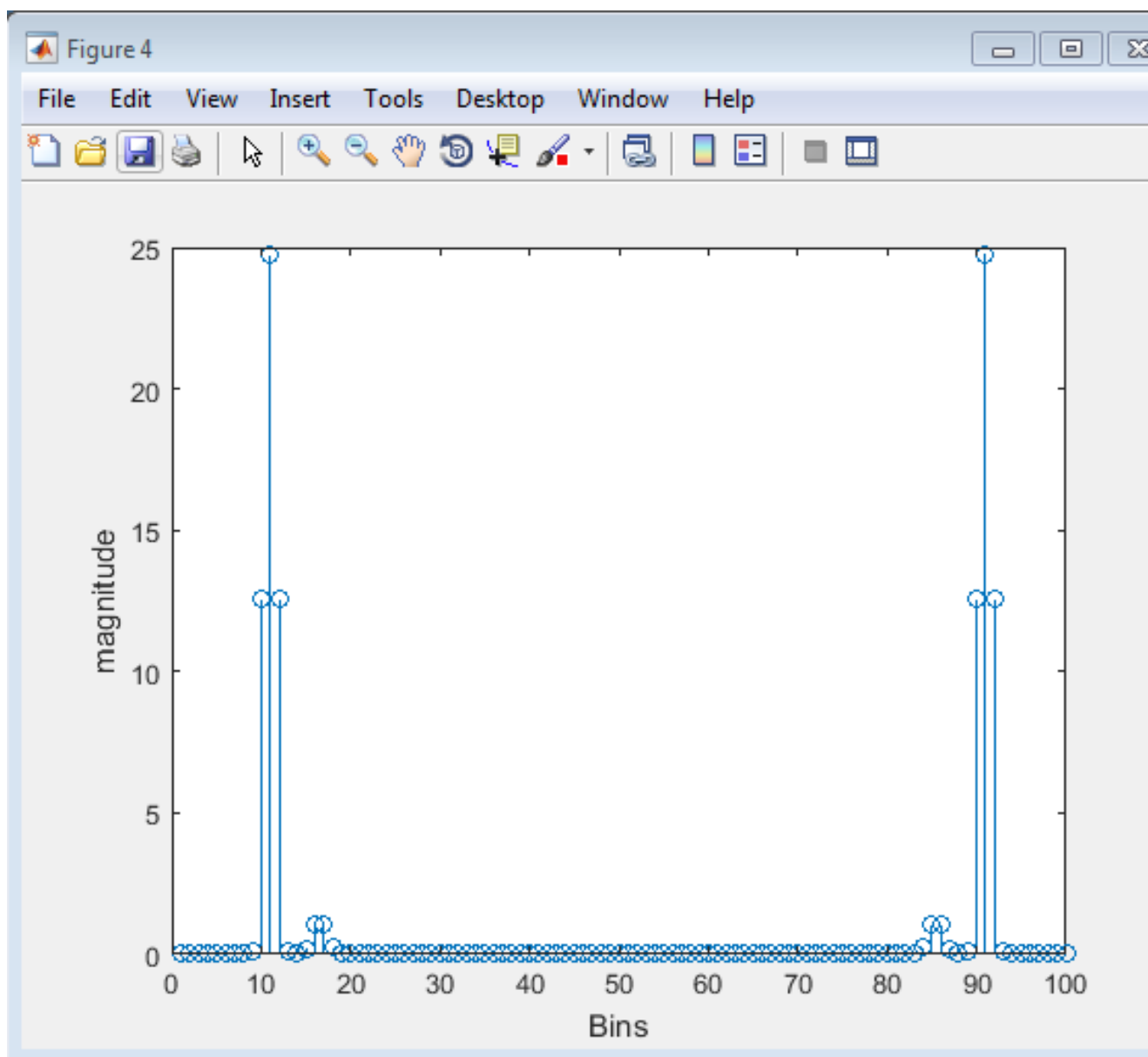


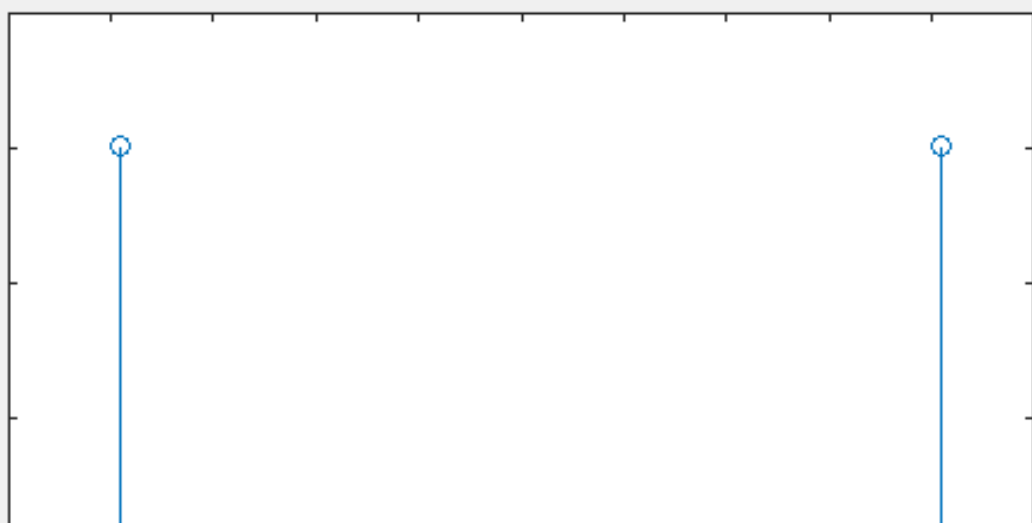
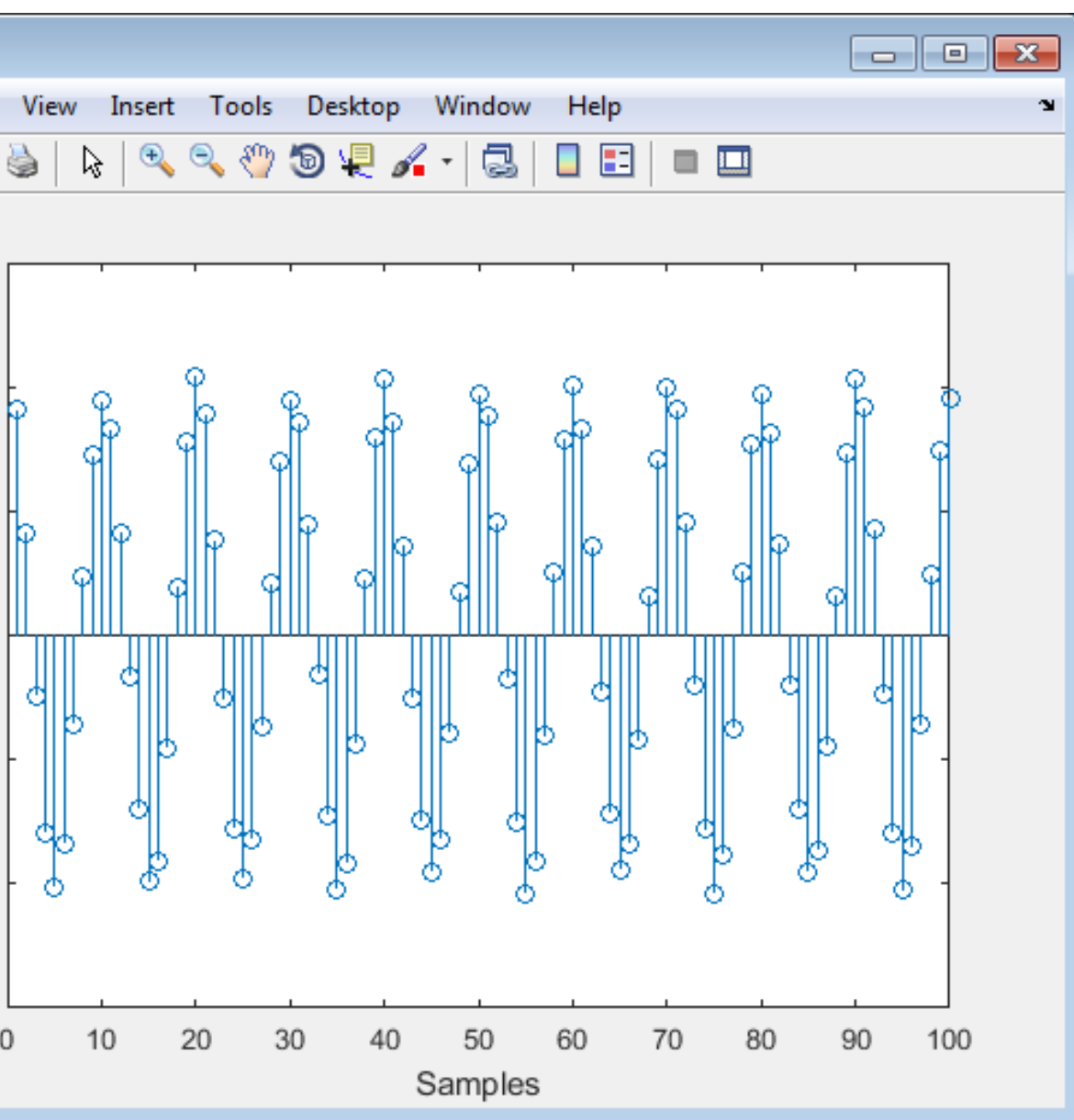


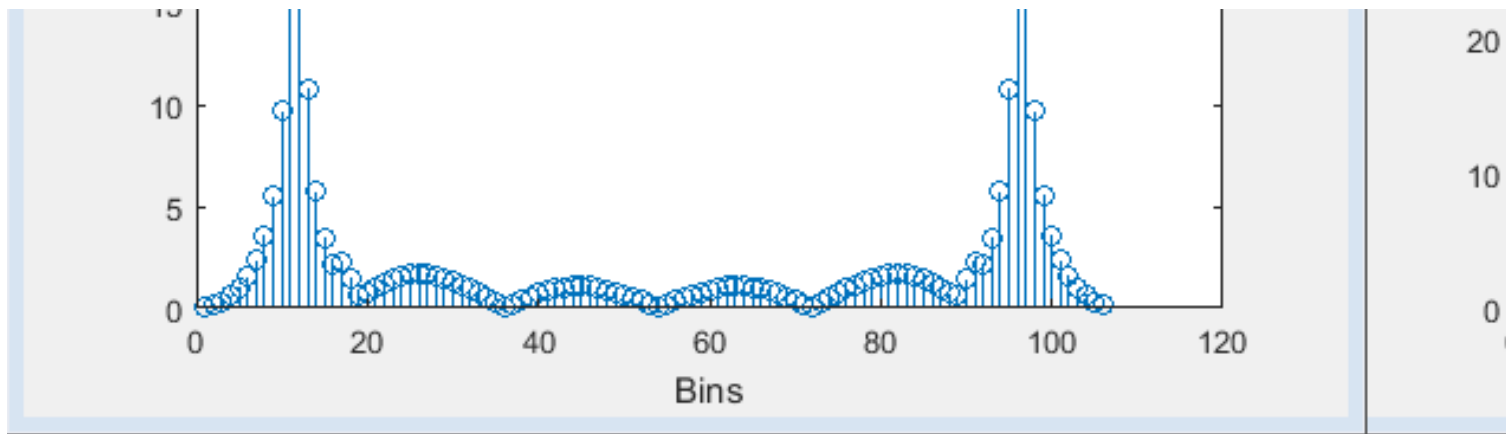


DFT5: 100 Samples, 2 Zeroes, 100 Samples









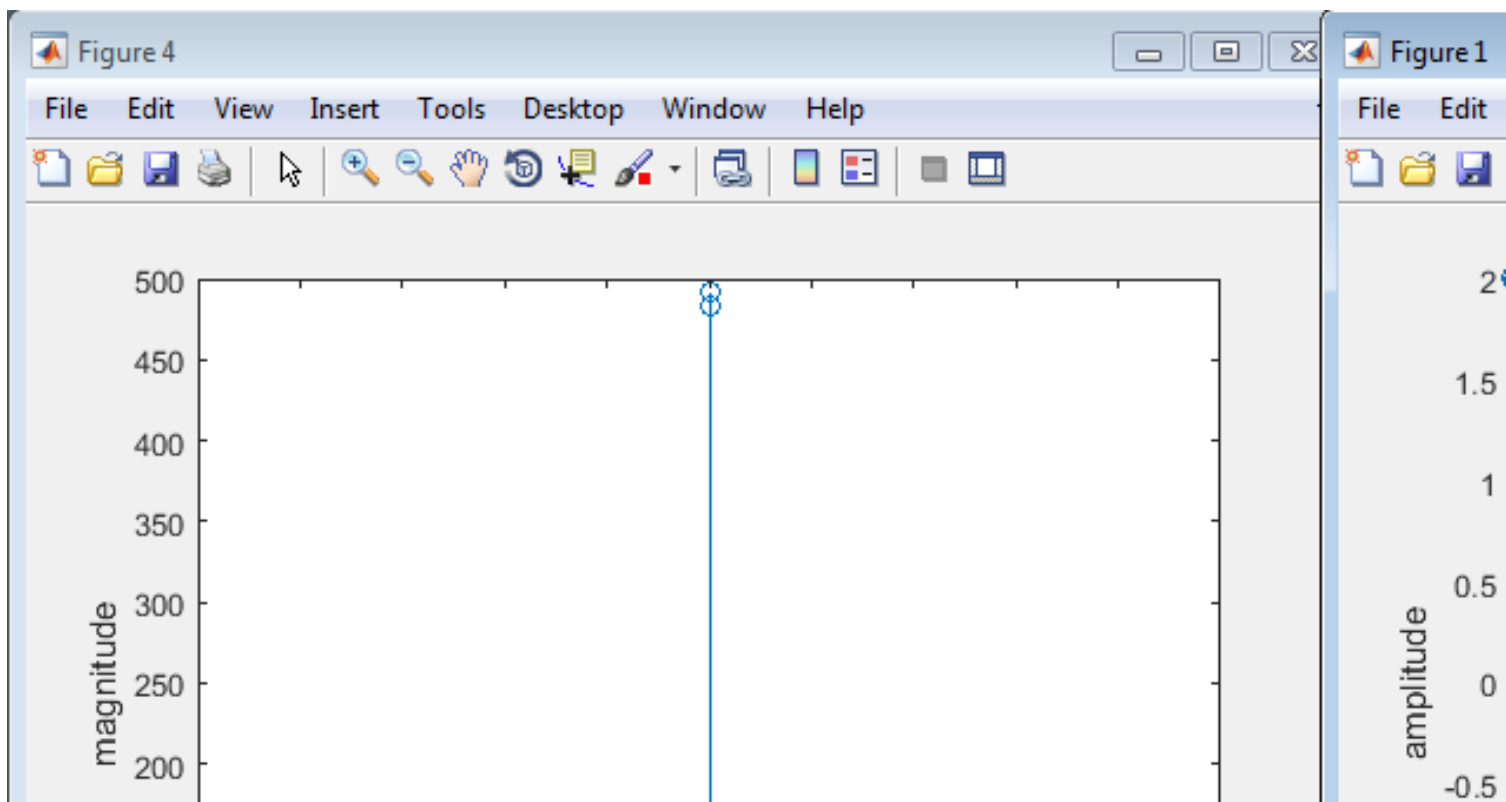
DFT6: Figure 1: 1000 Samples, 2 Zeros, 100 Samples

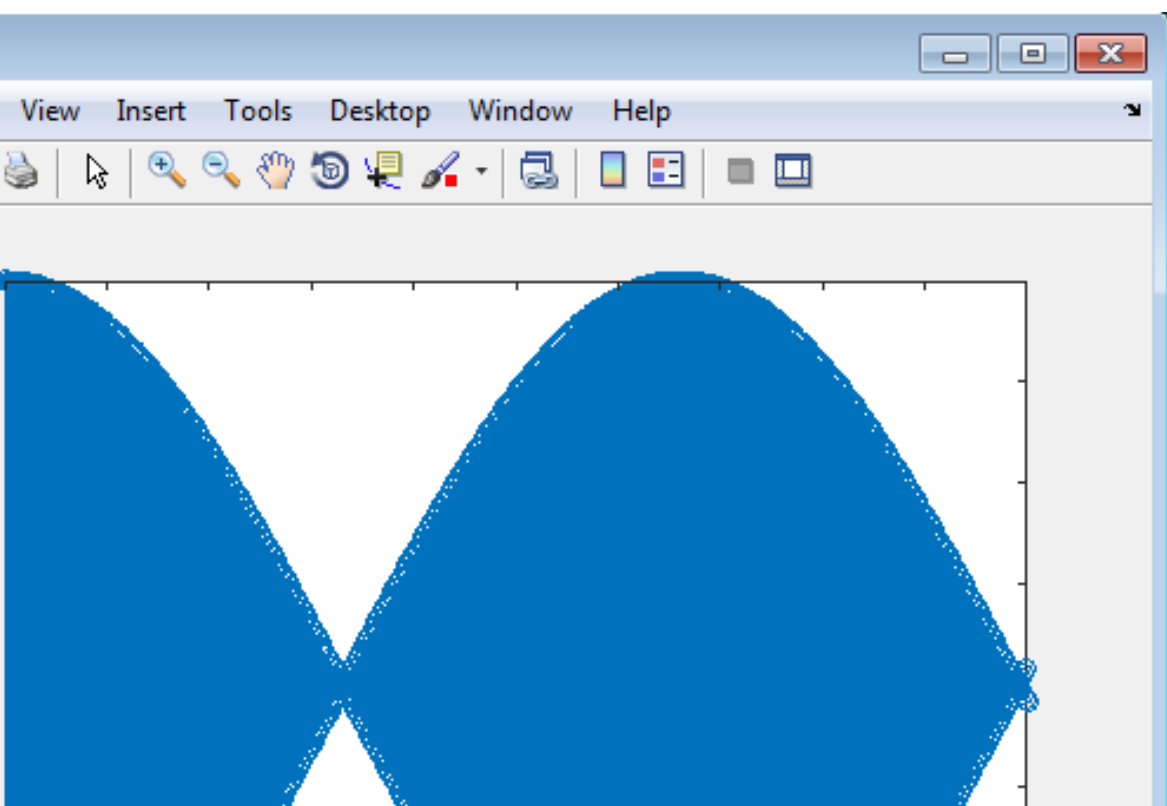
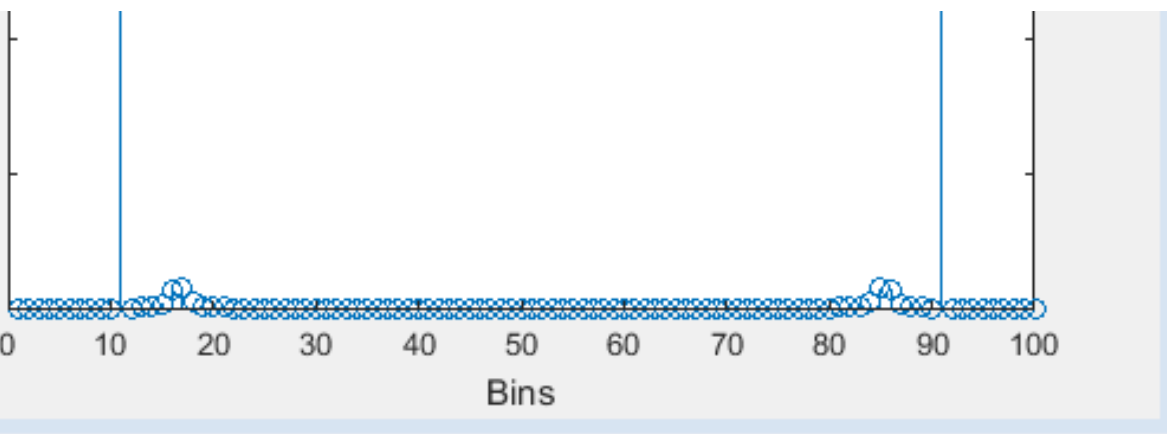
PROBLEM:

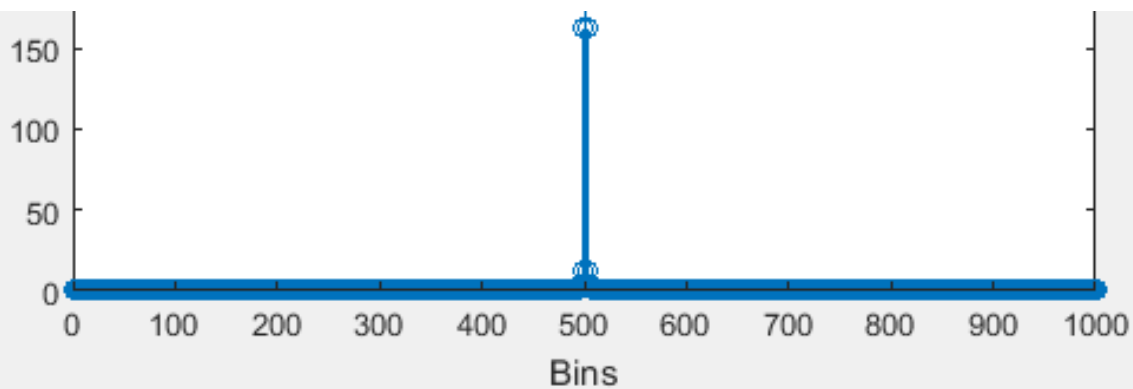
File couldn't run the 6th DFT.

SOLUTION:

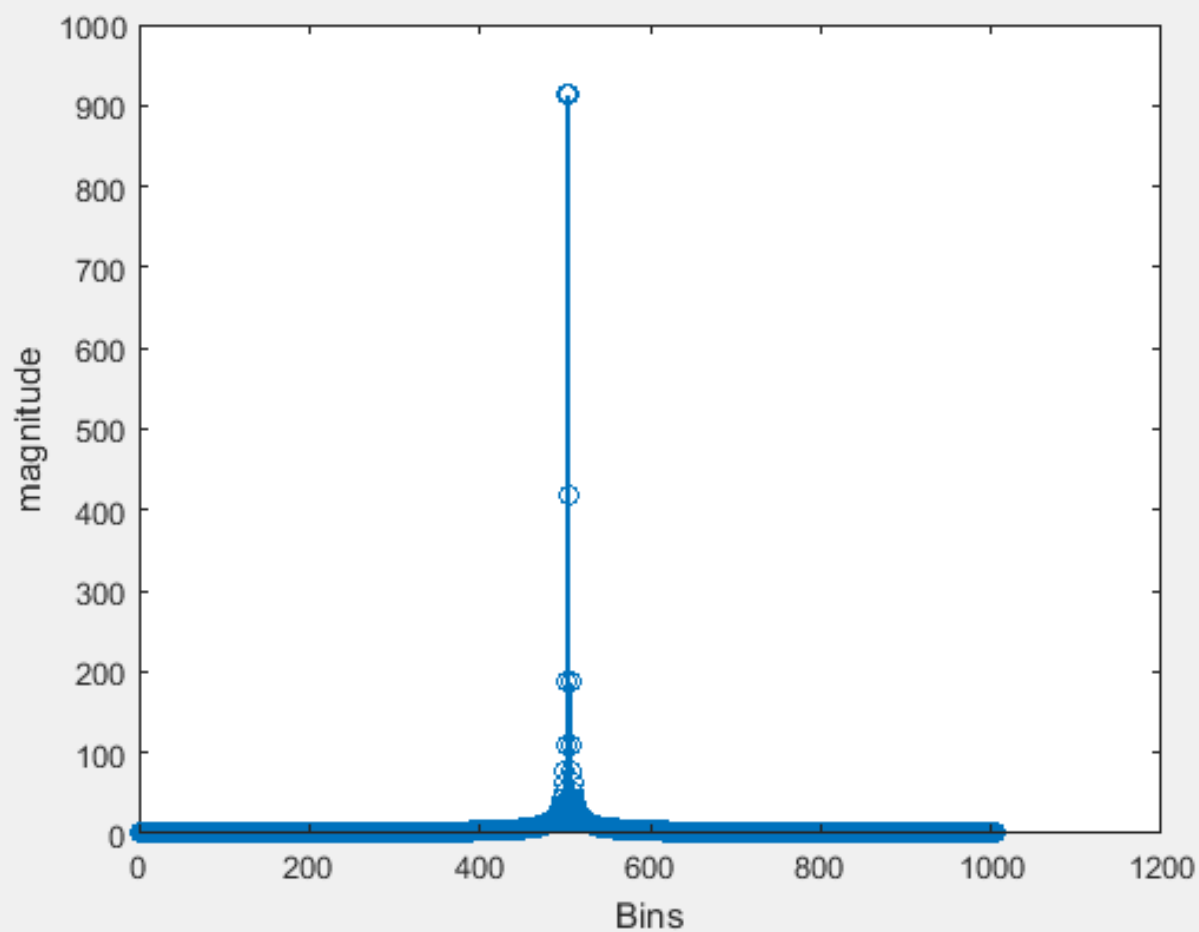
Found out I was calling the function improperly.







-1
-1.5
-2
0



1000
900
800
700
600
500
400
300
200
100
0

