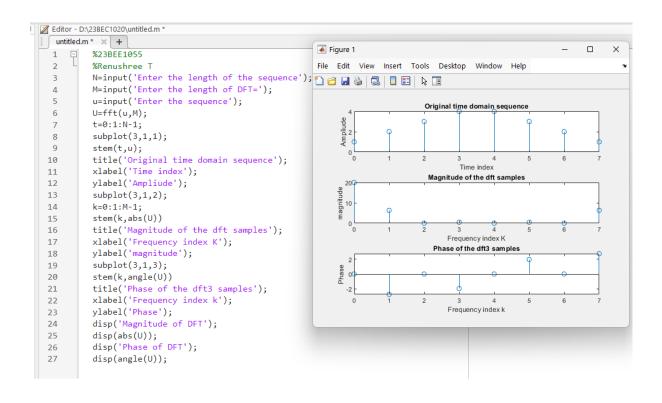
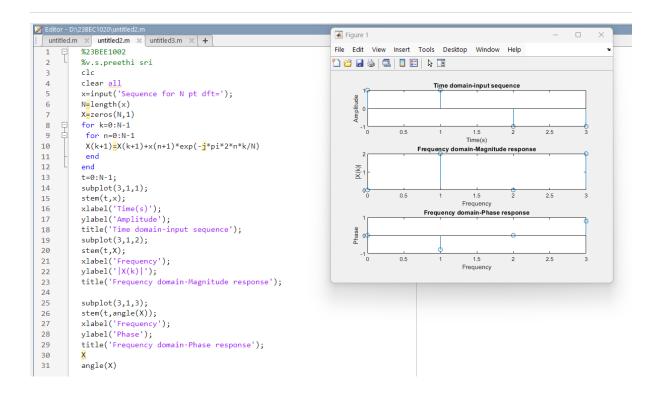
```
untitled.m * × +
                                                         Figure 1
          %23BEE1002
          %V.S.Preethi sri
                                                         File Edit View Insert Tools Desktop Window Help
          3
          M=input('Enter the length of DFT=');
  4
  5
          u=input('Enter the sequence');
                                                                               Original time domain sequence
          U=fft(u,M);
  6
          t=0:1:N-1;
  7
          subplot(3,1,1);
  8
  9
          stem(t,u);
 10
          title('Original time domain sequence');
          xlabel('Time index');
 11
                                                                                Magnitude of the dft samples
          ylabel('Ampliude');
 12
                                                               200
          subplot(3,1,2);
 13
          k=0:1:M-1;
 15
          stem(k,abs(U))
          title('Magnitude of the dft samples');
 16
          xlabel('Frequency index K');
ylabel('magnitude');
                                                                                    Frequency index K
 17
                                                                                 Phase of the dft3 samples
 18
          subplot(3,1,3);
 19
          stem(k,angle(U))
title('Phase of the dft3 samples');
 20
 21
          xlabel('Frequency index k');
 22
                                                                                     Frequency index k
 23
          ylabel('Phase');
          disp('Magnitude of DFT');
 24
          disp(abs(U));
disp('Phase of DFT');
 25
 26
 27
          disp(angle(U));
```

```
>> untitled
  Enter the length of the sequence8
  Enter the length of DFT=8
  Enter the sequence [1, 2, 3, 4, 4, 3, 2, 1]
  Magnitude of DFT
    Columns 1 through 6
     20.0000
                6.3086
                              0
                                     0.4483
                                                   0
                                                          0.4483
    Columns 7 through 8
                6.3086
  Phase of DFT
    Columns 1 through 6
               -2.7489
                          0
                                  -1.9635
                                                   0
                                                          1.9635
    Columns 7 through 8
           0
                2.7489
f\underline{x} >>
```



```
>> untitled
  Enter the length of the sequence8
  Enter the length of DFT=8
  Enter the sequence[1,2,3,4,4,3,2,1]
  Magnitude of DFT
   Columns 1 through 6
     20.0000
                6.3086
                             0
                                   0.4483
                                                0
                                                        0.4483
    Columns 7 through 8
                6.3086
  Phase of DFT
    Columns 1 through 6
               -2.7489
                             0 -1.9635
                                                        1.9635
                                                  0
    Columns 7 through 8
               2.7489
f_{x} >>
```



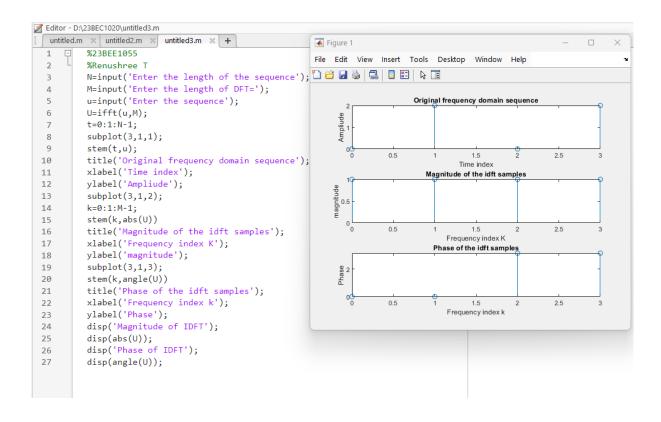
```
TION
                     RUN
Editor - D\238EC1020\untitled2.m *

untitled.m × untitled2.m * untitled3.m × +

1 □ %23BEE1055
                                                                                          Figure 1
                                                                                                                                                          - □ ×
                                                                                          File Edit View Insert Tools Desktop Window Help
               %Renushree T
                                                                                          clc
              clear all
x=input('Sequence for N pt dft=');
                                                                                                                        Time domain-input sequence
               N=length(x)
               X=zeros(N,1)
               for k=0:N-1
for n=0:N-1
                                                                                                                                   1.5
                                                                                                                                                         2.5
   10
               X(k+1)=X(k+1)+x(n+1)*exp(-j*pi*2*n*k/N)
                                                                                                                   Frequency domain-Magnitude response
   11
   12
               end
                                                                                                X(K)
               t=0:N-1;
   13
   14
               subplot(3,1,1);
              supplot(3,1,1);
stem(t,x);
xlabel('Time(s)');
ylabel('Amplitude');
title('Time domain-input sequence');
                                                                                                             0.5
                                                                                                                                  1.5
                                                                                                                                                         2.5
   15
                                                                                                                                Frequency
   16
                                                                                                                     Frequency domain-Phase respons
   17
   18
               subplot(3,1,2);
   19
   20
               stem(t,X);
                                                                                                                                1.5
Frequency
   21
              xlabel('Frequency');
ylabel('|X(k)|');
title('Frequency domain-Magnitude response');
   22
   23
   24
              subplot(3,1,3);
stem(t,angle(X));
xlabel('Frequency');
   25
  26
27
               ylabel('Phase');
               title('Frequency domain-Phase response');
   29
   30
31
               angle(X)
```

```
Editor - D:\23BEC1020\untitled3.m
                                                                                                                                              - 0 ×
untitled.m × untitled2.m × untitled3.m × +
                                                                            Figure 1
               %23BEE1002
                                                                                File Edit View Insert Tools Desktop Window Help
               %v.s.preethi sri
               M=input('Enter the length of DFT=');
u=input('Enter the sequence');
Original'
                                                                                                            Original frequency domain sequence
               U=ifft(u,M);
               t=0:1:N-1;
subplot(3,1,1);
   8
               subplot(3,1,1);
stem(t,u);
title('Original frequency domain sequence');
xlabel('Time index');
ylabel('Ampliude');
                                                                                                     0.5
  10
  11
                                                                                                                        de of the idft sa
  13
               subplot(3,1,2);
k=0:1:M-1;
  14
               k=0:1:M-1;
stem(k,abs(U))
title('Magnitude of the idft samples');
xlabel('Frequency index K');
ylabel('magnitude');
  16
  17
                                                                                                                   Phase of the idft samples
  19
                subplot(3,1,3);
               supplot(J,1J,r),
stem(k,angle(U))
title('Phase of the idft samples');
xlabel('Frequency index k');
  20
  21
  22
23
                                                                                                                      1.5
Frequency index k
               ylabel('Phase');
  24
25
                disp('Magnitude of IDFT');
               disp(abs(U));
disp('Phase of IDFT');
  26
  27
               disp(angle(U));
```

```
Enter the length of the sequence4
Enter the length of DFT=4
Enter the sequence[0,2-2i,0,2+2i]
Warning: Using only the real component of complex data.
> In matlab.graphics.chart.internal.getRealData (line 63)
In stem (line 96)
In untitled3 (line 7)
Magnitude of IDFT
     1
           1
                1
                       1
Phase of IDFT
                   0
                        3.1416
                                  3.1416
```



```
Enter the length of the sequence4
Enter the length of DFT=4
Enter the sequence [0,2-2i,0,2+2i]
Warning: Using only the real component of complex data.
> In matlab.graphics.chart.internal.getRealData (line 63)
In stem (line 96)
In untitled3 (line 7)
Magnitude of IDFT
     1
          1
                 1
Phase of IDFT
         0
                   0
                        3.1416
                                  3.1416
```