

College Name: - Walchand College of Engineering, Sangli

Year: - Third Year

Name: - Om Ajit Patil

PRN: - 2020BTEEN00058

Subject: - Digital Signal System Lab

Batch: - EN3

Code

DFT

```
close all;
clc;

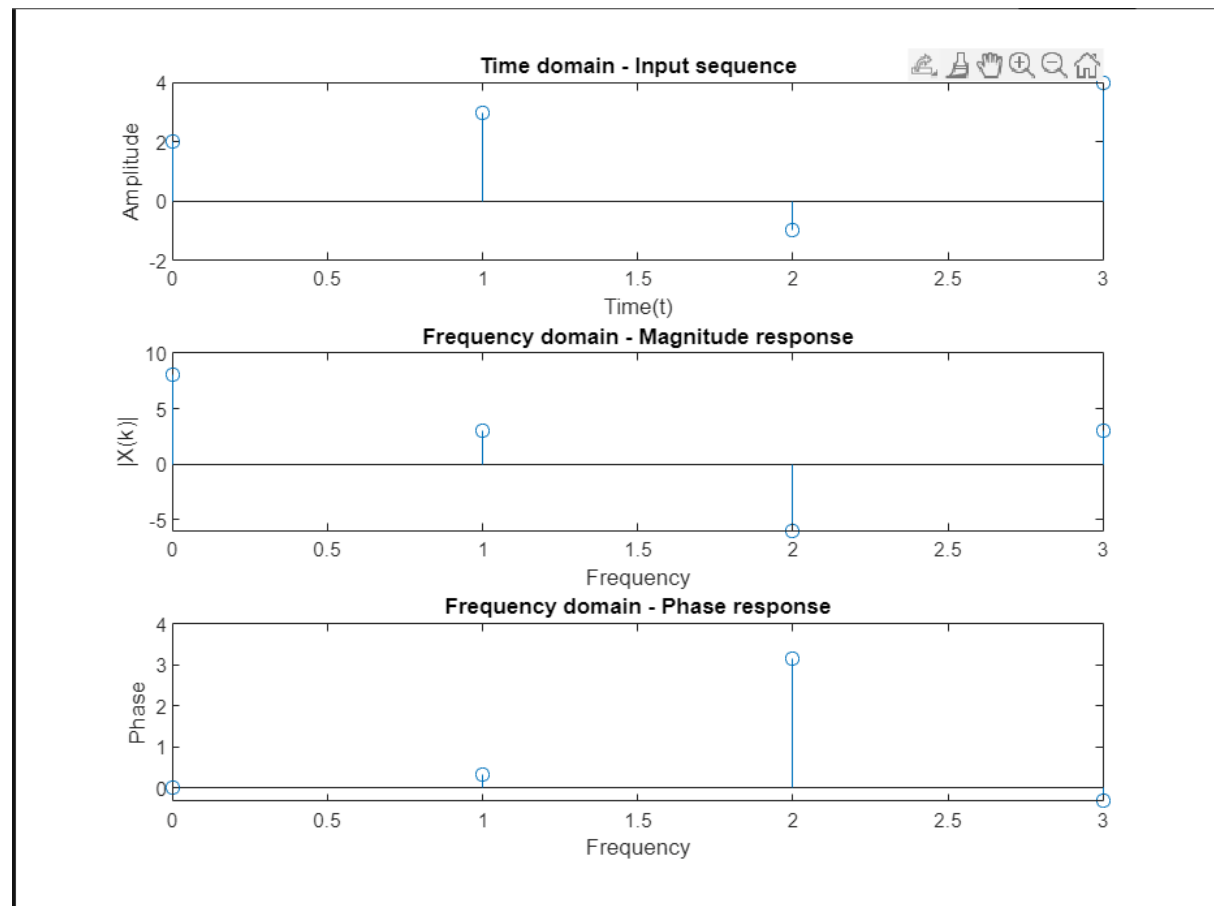
x = [2 3 -1 4];
N = length(x);
y=fft(x,N);

t=0:N-1;
subplot(311)
stem(t,x);
xlabel('Time(t)');
ylabel('Amplitude');
title('Time domain - Input sequence')
title('Time domain - Input sequence')

subplot(312)
stem(t,y)
xlabel('Frequency');
ylabel('|X(k)|');
title('Frequency domain - Magnitude response')

subplot(313)
stem(t,angle(y))
xlabel('Frequency');
ylabel('Phase');
title('Frequency domain - Phase response')
```

Output



IDFT

```

clc;
close all;

N=4;
x1=[8,3+i,-6,3-i];

y1=ifft(x1);

t=0:N-1;
subplot(312);
stem(t,y1);

xlabel('Time(s)');
ylabel('Amplitude');
title('Time Domain Signal');

```

Output

