```
%DFT using direct function
x=input('enter i/p seq. in square bracket')
x=fft(x)
stem(abs(x))
stem(angle(x))
i/p [3 2 1 1]
```

```
3.)DFT without using direct function
x=input('enter i/p seq. in square bracket')
N=length(x);
k=0:1:N-1;
n=0:1:N-1;
Wn=exp(-i*2*pi/N);
nk=n'*k;
Wnk=Wn.^nk;
x=x*Wnk;
subplot(2,1,1)
stem(abs(x))
disp(x);
title'amplitude'
subplot(2,1,2)
stem(angle(x))
title'phase'
```