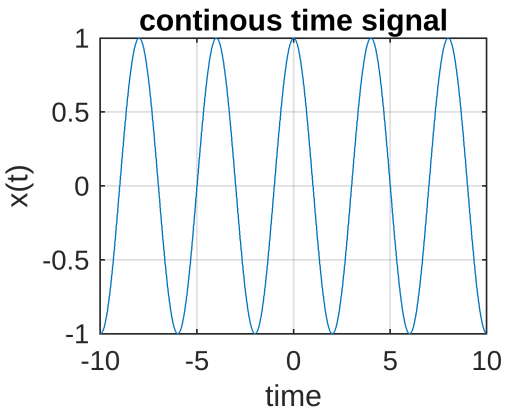
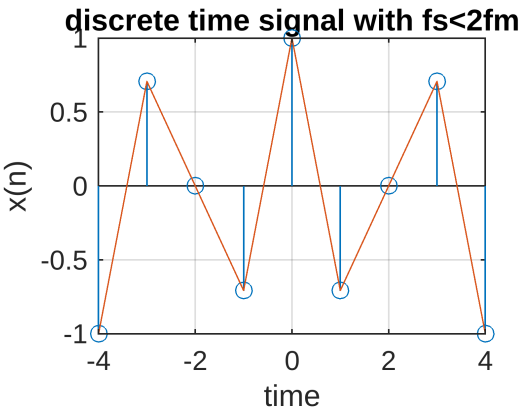
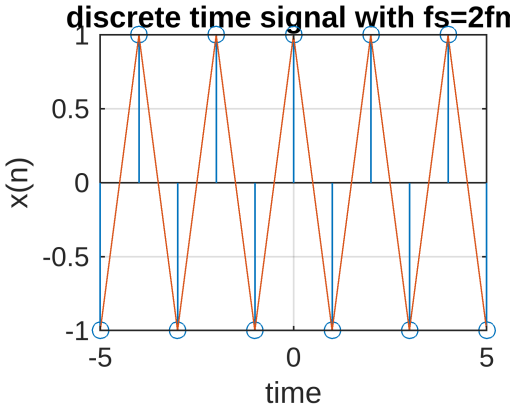
```
t=-10:.01:10;
T=4;
fm=1/T;
x=cos(2*pi*fm*t);
subplot(2,2,1);
plot(t,x);
xlabel('time');ylabel('x(t)')
title('continous time signal')
grid;
n1=-4:1:4
```

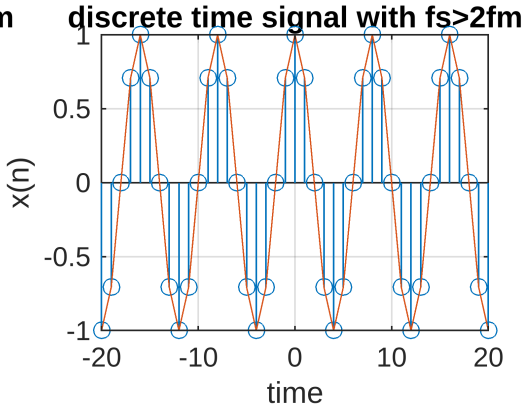
```
n1 = 1×9
    -4    -3    -2    -1     0     1     2     3     4
```

```
fs1=1.6*fm;
fs2=2*fm;
fs3=8*fm;
x1=cos(2*pi*fm/fs1*n1);
subplot(2,2,2);
stem(n1,x1);
xlabel('time');ylabel('x(n)')
title('discrete time signal with fs<2fm')
hold on
subplot(2,2,2);
plot(n1,x1)
grid;
n2=-5:1:5;
x2=cos(2*pi*fm/fs2*n2);
subplot(2,2,3);
stem(n2,x2);
xlabel('time');ylabel('x(n)')
title('discrete time signal with fs=2fm')
hold on
subplot(2,2,3);
plot(n2,x2)
grid;
n3=-20:1:20;
x3=cos(2*pi*fm/fs3*n3);
subplot(2,2,4);
stem(n3,x3);
xlabel('time');ylabel('x(n)')
title('discrete time signal with fs>2fm')
hold on
subplot(2,2,4);
plot(n3,x3)
grid;
```


continous time signal
x(t)
time
1
0.5
0
-0.5
-1
-10
-5
0
5
10


discrete time signal with fs<2fm
x(n)
time
1
0.5
0
-0.5
-1
-4
-2
0
2
4


discrete time signal with fs=2fm
x(n)
time
1
0.5
0
-0.5
-1
-5
0
5


discrete time signal with fs>2fm
x(n)
time
1
0.5
0
-0.5
-1
-20
-10
0
10
20