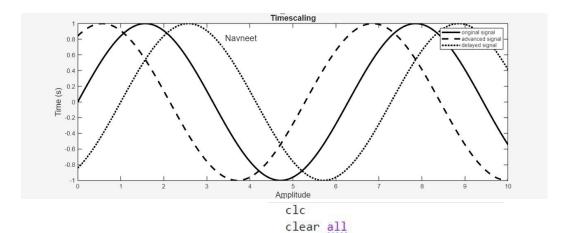
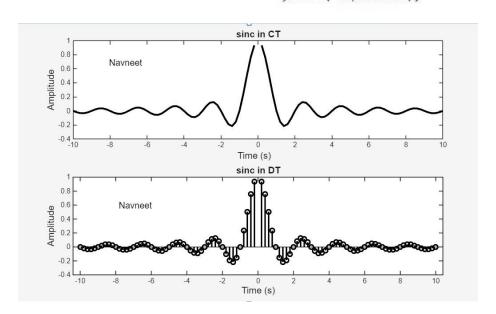
```
clc
clear all
close all
t=0:0.05:10;
x = sin(t);
y = sin(-t);
plot(t,x)
hold on
plot(t,y)
legend('original signal', 'reversed signal')
title('Timereversal')
xlabel('Amplitude')
ylabel('Time (s)')
clc
clear all
close all
t=0:0.05:10;
x = sin(t);
y = \sin(2*t);
z = \sin(t/2);
plot(t,x)
hold on
plot(t,y)
hold on
plot(t,z)
legend('original signal','compressed signal','expanded signal')
title('Timescaling')
xlabel('Amplitude')
ylabel('Time (s)')
clc
clear all
close all
t=0:0.05:10;
x = sin(t);
y = sin(t+1);
z = sin(t-1);
plot(t,x)
hold on
plot(t,y)
hold on
legend('original signal','advanced signal','delayed signal')
title('Timescaling')
xlabel('Amplitude')
ylabel('Time (s)')
```



```
close all
                                   t=-10:0.2:10;
clc
                                   for i = 1:length(t)
clear all
                                       if t(i)>=0
close all
                                          impulse(i)=1;
t=-10:0.2:10;
z=(sin(pi*t))./(pi*t);
                                          impulse(i)=-1;
subplot(2,1,1)
                                       end
                                   end
plot(t,z);
title('sinc in CT');
                                   subplot(2,1,1)
                                   plot(t,impulse);
xlabel('Time (s)');
                                   title('Unit step in CT');
ylabel('Amplitude');
                                   xlabel('Time (s)');
subplot(2,1,2)
                                   ylabel('Amplitude');
stem(t,z)
                                   subplot(2,1,2)
title('sinc in DT');
                                   stem(t,impulse)
xlabel('Time (s)');
                                   title('Unit step in DT');
ylabel('Amplitude');
                                   xlabel('Time (s)');
                                   ylabel('Amplitude');
```



```
clc
clear all
                                                       clc
                                             1
close all
                                             2
                                                       clear all
t=-10:0.2:10;
                                             3
                                                       close all
                                             4
                                                       t=-10:0.05:10;
for i = 1:length(t)
                                             5
                                                       for i = 1:length(t)
    if t(i) >= 0
                                             6
                                                           if t(i)==0
                                             7
                                                               impulse(i) = 1;
        signum(i)=1;
                                             8
    else
                                             9
                                                               impulse(i) = 0;
        signum(i)=-1;
                                            10
                                                           end
    end
                                            11
                                                      end
end
                                            12
                                                       subplot(2,1,1)
subplot(2,1,1)
                                            13
                                                       plot(t, impulse);
plot(t, signum);
                                            14
                                                       title('Impulse Signal in CT');
title('Signum in CT');
                                            15
                                                      xlabel('Time (s)');
xlabel('Time (s)');
                                                      ylabel('Amplitude');
                                            16
ylabel('Amplitude');
                                            17
                                                       subplot(2,1,2)
                                            18
                                                       stem(t,impulse)
subplot(2,1,2)
                                                       title('Impulse Signal in DT');
                                            19
stem(t,signum)
                                                      xlabel('Time (s)');
                                            20
title('Signum in DT');
                                                      ylabel('Amplitude');
                                            21
xlabel('Time (s)');
ylabel('Amplitude');
                                 Signum in CT
            Navneet
  Amplitude
     -10
                                    Time (s)
                                  Signum in DT
  Amplitude
                                    Time (s)
                                 Ramp in CT
            Navneet
  Amplitude
     -10
                                  Time (s)
                                Ramp in DT
             Navneet
  Amplitude
                                  Time (s)
```

```
clc
           clear all
 2
 3
           close all
 4
           t=-10:0.2:10;
 5
 6
           for i = 1:length(t)
               if t(i)>=0
 8
                   step(i)=1;
 9
               else
10
                   step(i)=0;
11
               end
           end
12
13
           z=t.*step; %defined ramp signal and z=t.u(t)
14
           subplot(2,1,1)
          plot(t,z);
title('Ramp in CT');
xlabel('Time (s)');
15
16
17
18
           ylabel('Amplitude');
19
           subplot(2,1,2)
20
           stem(t,z)
           title('Ramp in DT');
21
22
           xlabel('Time (s)');
23
           ylabel('Amplitude');
```

