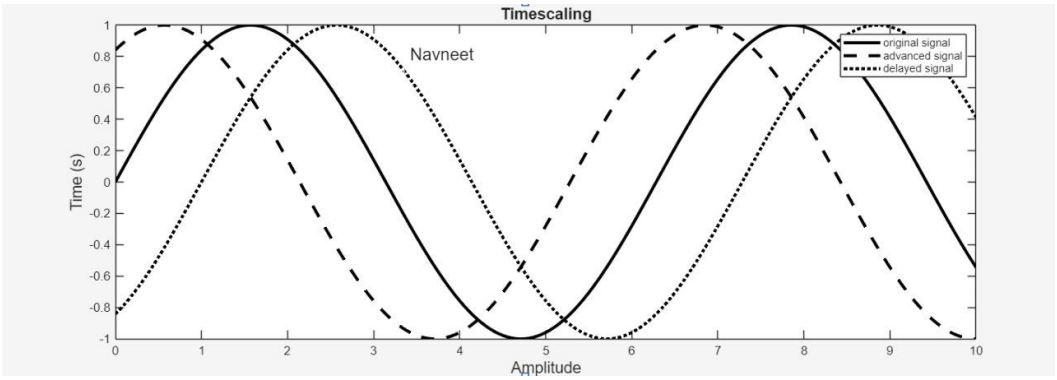
```
clc
clear all
close all
t=0:0.05:10;
x = sin(t);
y = sin(-t);
plot(t,x)
hold on
plot(t,y)
legend('original signal','reversed signal')
title('Timereversal')
xlabel('Amplitude')
ylabel('Time (s)')
```

```
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)')
```

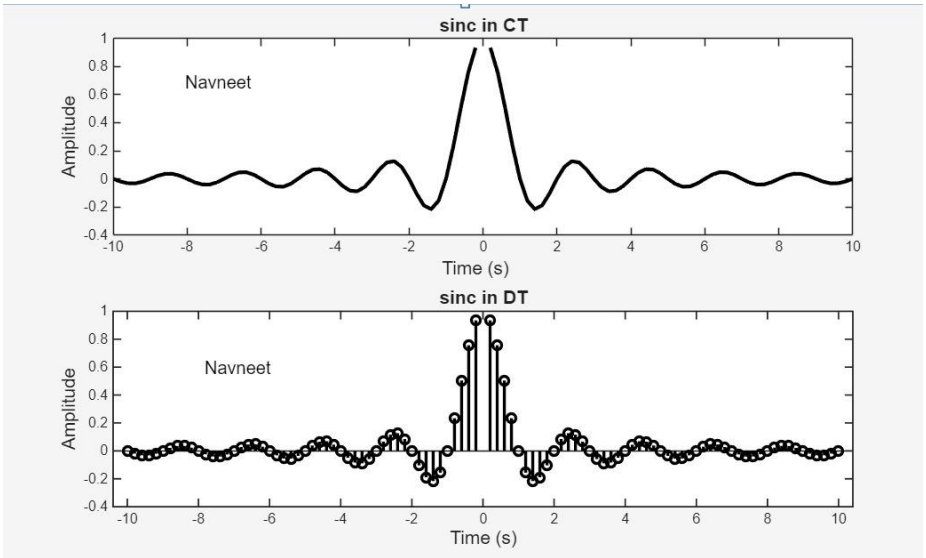
```
clc
clear all
close all
t=0:0.05:10;
x = sin(t);
y = sin(t+1);
z = sin(t-1);
plot(t,x)
hold on
plot(t,y)
hold on
plot(t,z)
legend('original signal','advanced signal','delayed signal')
title('Timescaling')
xlabel('Amplitude')
ylabel('Time (s)')
```




```
clc
clear all
close all
t=-10:0.2:10;
z=(sin(pi*t))./(pi*t);
subplot(2,1,1)
plot(t,z);
title('sinc in CT');
xlabel('Time (s)');
ylabel('Amplitude');
subplot(2,1,2)
stem(t,z)
title('sinc in DT');
xlabel('Time (s)');
ylabel('Amplitude');
```

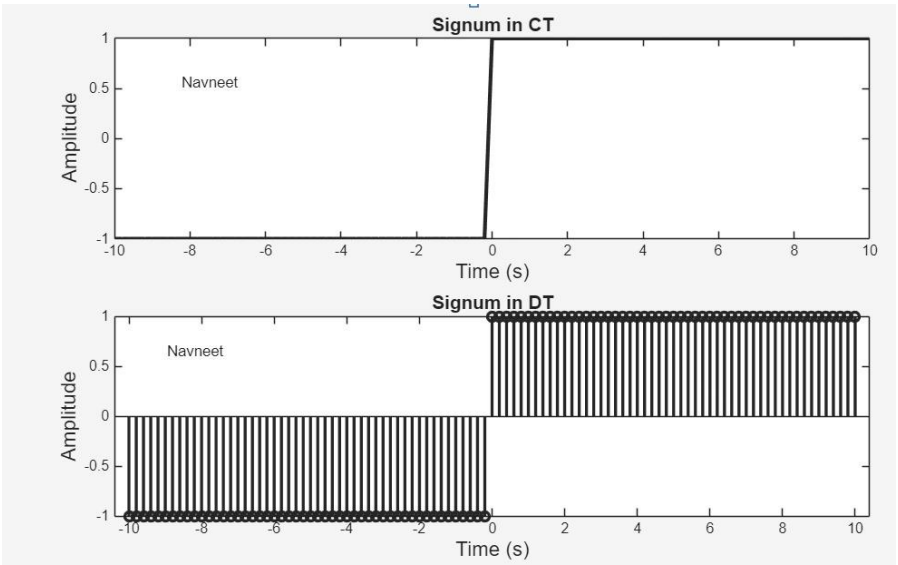
```
clc
clear all
close all
t=-10:0.2:10;

for i = 1:length(t)
    if t(i)>=0
       impulse(i)=1;
    else
       impulse(i)=-1;
    end
end
subplot(2,1,1)
plot(t,impulse);
title('Unit step in CT');
xlabel('Time (s)');
ylabel('Amplitude');
subplot(2,1,2)
stem(t,impulse)
title('Unit step in DT');
xlabel('Time (s)');
ylabel('Amplitude');
```

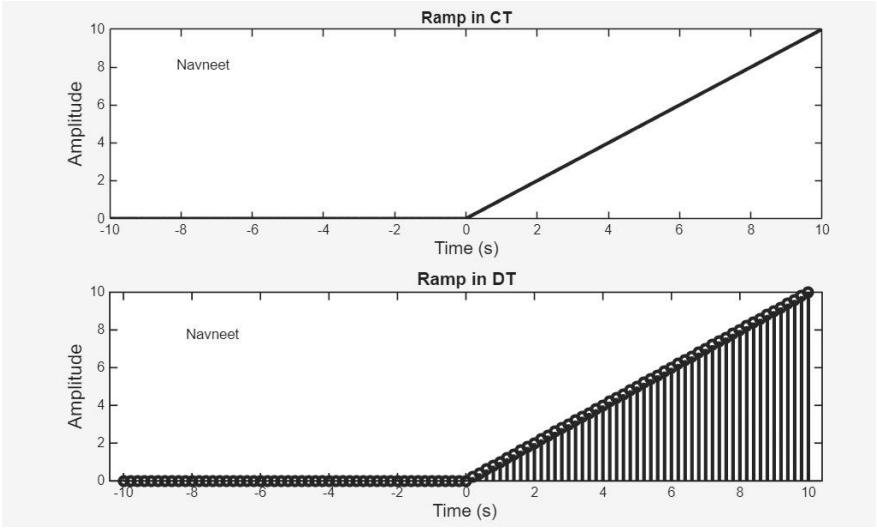


```
clc
clear all
close all
t=-10:0.2:10;

for i = 1:length(t)
    if t(i)>=0
       signum(i)=1;
    else
       signum(i)=-1;
    end
end
subplot(2,1,1)
plot(t,signum);
title('Signum in CT');
xlabel('Time (s)');
ylabel('Amplitude');
subplot(2,1,2)
stem(t,signum)
title('Signum in DT');
xlabel('Time (s)');
ylabel('Amplitude');
```




```
clc
clear all
close all
t=-10:0.05:10;
for i = 1:length(t)
    if t(i)==0
        impulse(i) = 1;
    else
        impulse(i) = 0;
    end
end
subplot(2,1,1)
plot(t, impulse);
title('Impulse Signal in CT');
xlabel('Time (s)');
ylabel('Amplitude');
subplot(2,1,2)
stem(t,impulse)
title('Impulse Signal in DT');
xlabel('Time (s)');
ylabel('Amplitude');
```



```
clc
clear all
close all
t=-10:0.2:10;

for i = 1:length(t)
    if t(i)>=0
       step(i)=1;
    else
       step(i)=0;
    end
end
z=t.*step; %defined ramp signal and z=t.u(t)
subplot(2,1,1)
plot(t,z);
title('Ramp in CT');
xlabel('Time (s)');
ylabel('Amplitude');
subplot(2,1,2)
stem(t,z)
title('Ramp in DT');
xlabel('Time (s)');
ylabel('Amplitude');
```