```
% Generation of signals and sequences
clc;
clear all;
close all;
%~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ %generation of unit impulse signal
t1=-1:0.01:1
```

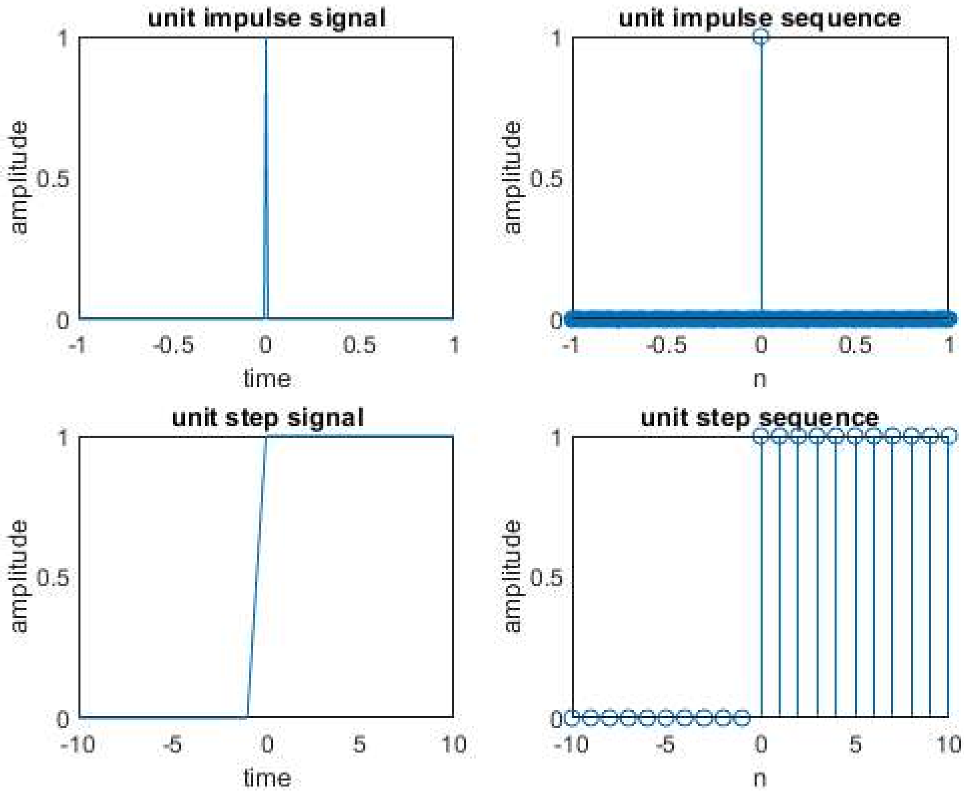
```
t1 = 1×201
   -1.0000   -0.9900   -0.9800   -0.9700   -0.9600   -0.9500   -0.9400   -0.9300   -0.9200   -0
```

```
y1=(t1==0);
subplot(2,2,1);
plot(t1,y1);
xlabel('time');
ylabel('amplitude');
title('unit impulse signal');

%generation of impulse sequence
subplot(2,2,2);
stem(t1,y1);
xlabel('n');
ylabel('amplitude');
title('unit impulse sequence');
%~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

%generation of unit step signal
t2=-10:1:10;
y2=(t2>=0);
subplot(2,2,3);
plot(t2,y2);
xlabel('time');
ylabel('amplitude');
title('unit step signal');

%generation of unit step sequence
subplot(2,2,4);
stem(t2,y2);
xlabel('n');
ylabel('amplitude');
title('unit step sequence');
```




```
%~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

%generation of square wave signal
t=0:0.002:0.1;
y3=square(2*pi*50*t)
```

```
y3 = 1×51
     1     1     1     1     1    -1    -1    -1    -1    -1     1     1     1     1     1    -
```

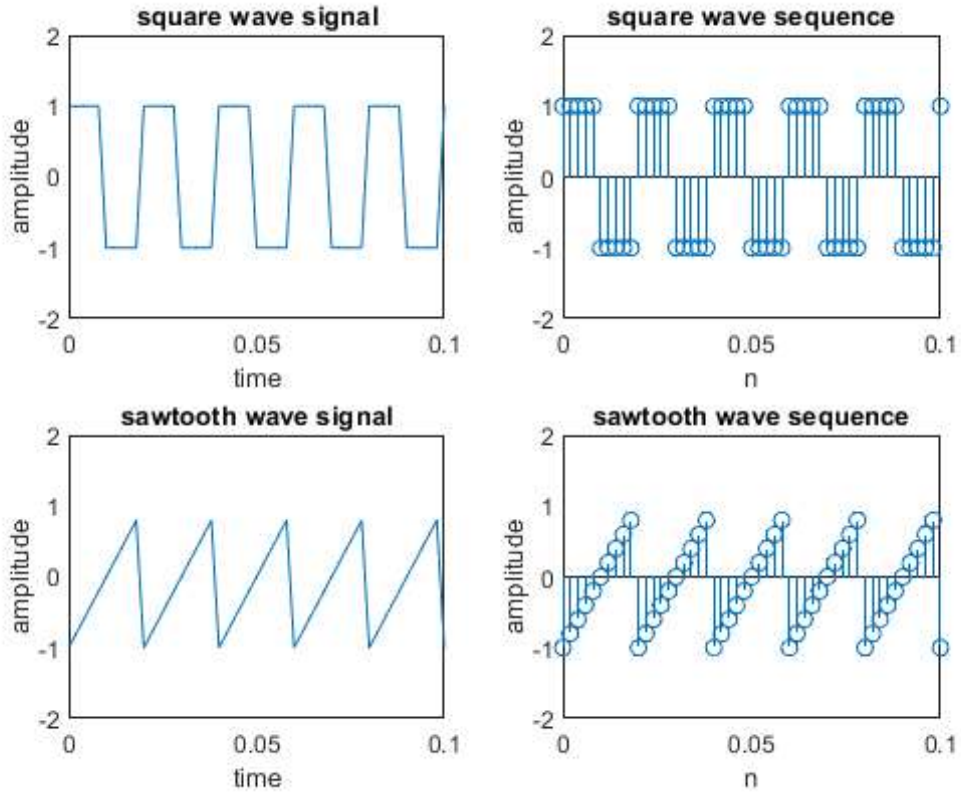
```
figure;
subplot(2,2,1);
plot(t,y3);
axis([0 0.1 -2 2]);
xlabel('time');
ylabel('amplitude');
title('square wave signal');

%generation of square wave sequence
subplot(2,2,2);
stem(t,y3);
axis([0 0.1 -2 2]);
xlabel('n');
ylabel('amplitude');
title('square wave sequence');
%~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

%generation of sawtooth signal
y4=sawtooth(2*pi*50*t);
subplot(2,2,3);
plot(t,y4);
axis([0 0.1 -2 2]);
xlabel('time');
ylabel('amplitude');
```

```
title('sawtooth wave signal');

%generation of sawtooth sequence
subplot(2,2,4);
stem(t,y4);
axis([0 0.1 -2 2]);
xlabel('n');
ylabel('amplitude');
title('sawtooth wave sequence');
```

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%~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

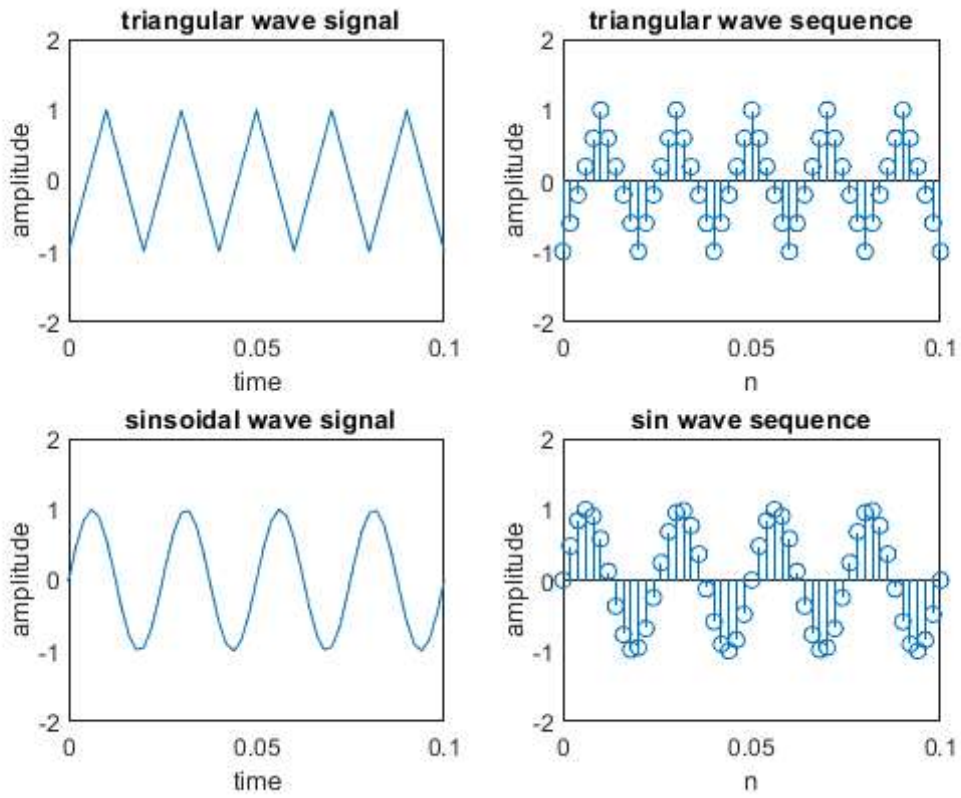
%generation of triangular wave signal
y5=sawtooth(2*pi*50*t,.5);
figure;
subplot(2,2,1);
plot(t,y5);
axis([0 0.1 -2 2]);
xlabel('time');
ylabel('amplitude');
title(' triangular wave signal');

%generation of triangular wave sequence
subplot(2,2,2);
stem(t,y5);
axis([0 0.1 -2 2]);
xlabel('n');
ylabel('amplitude');
title('triangular wave sequence');
%~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

%generation of sinsoidal wave signal
y6=sin(2*pi*40*t);
subplot(2,2,3);
```

```
plot(t,y6);
axis([0 0.1 -2 2]);
xlabel('time');
ylabel('amplitude');
title(' sinsoidal wave signal');

%generation of sin wave sequence
subplot(2,2,4);
stem(t,y6);
axis([0 0.1 -2 2]);
xlabel('n');
ylabel('amplitude');
title('sin wave sequence');
```




```
%~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

%generation of ramp signal
y7=t;
figure;
subplot(2,2,1);
plot(t,y7);
xlabel('time');
ylabel('amplitude');
title('ramp signal');

%generation of ramp sequence
subplot(2,2,2);
stem(t,y7);
xlabel('n');
ylabel('amplitude');
title('ramp sequence');

%~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
```

```
%generation of sinc signal
t3=linspace(-5,5);
y8=sinc(t3);
subplot(2,2,3);
plot(t3,y8);
xlabel('time');
ylabel('amplitude');
title(' sinc signal');

%generation of sinc  sequence
subplot(2,2,4);
stem(y8);
xlabel('n');
ylabel('amplitude');
title('sinc sequence');
```