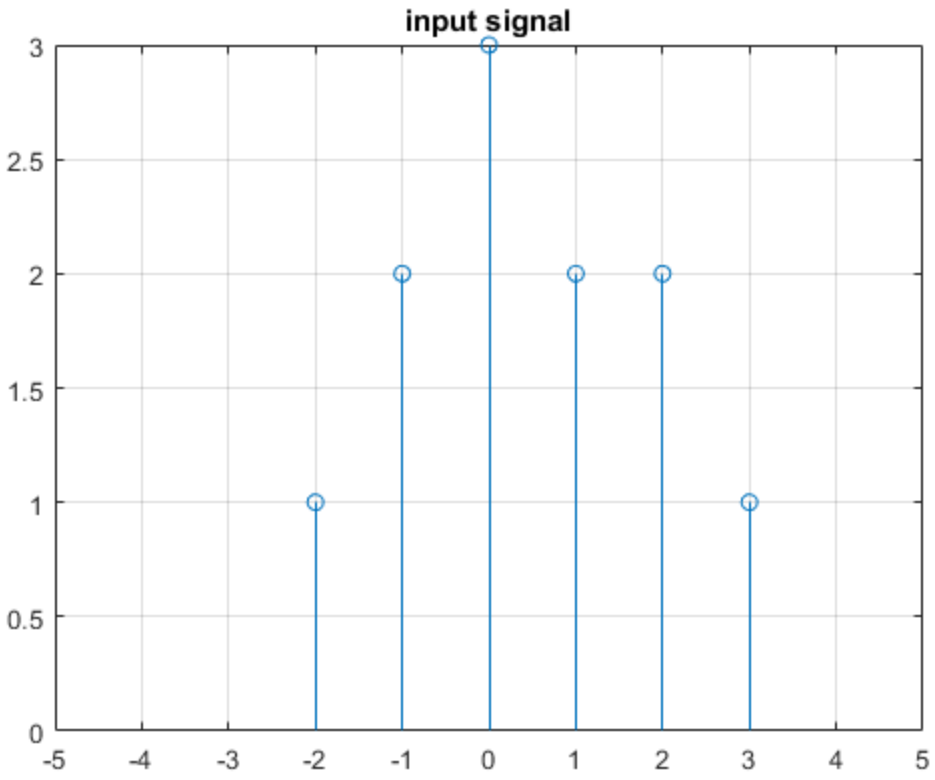
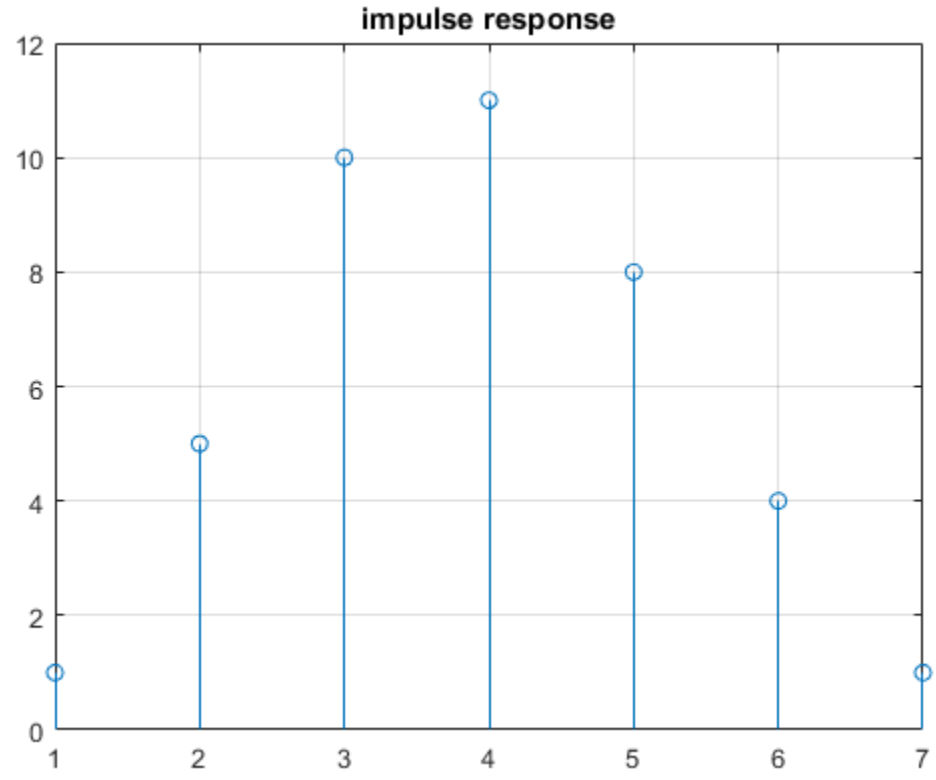
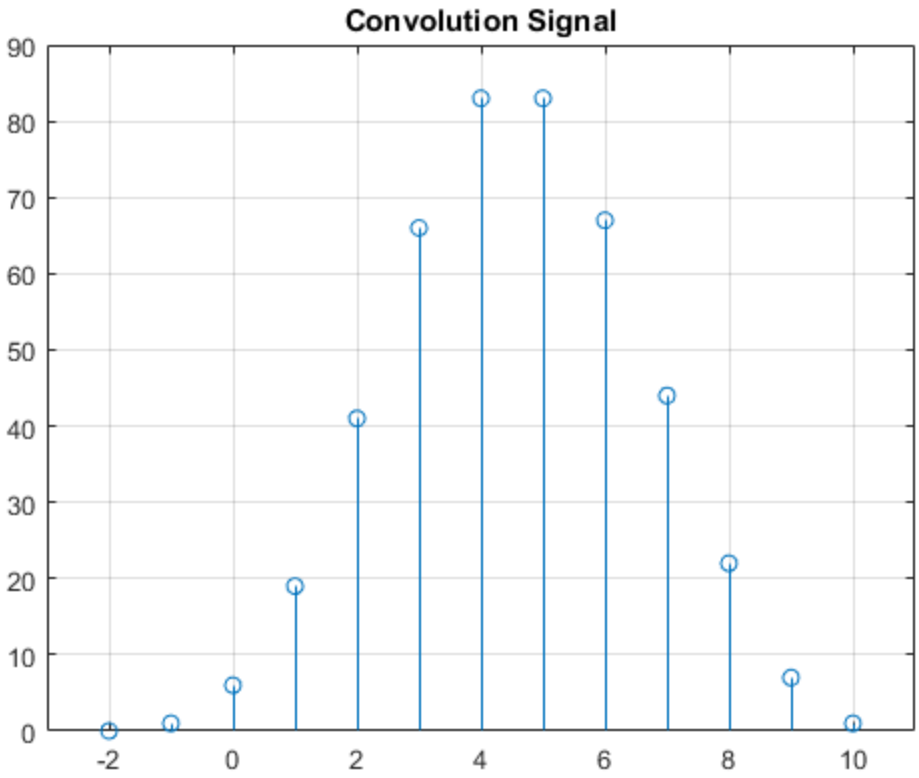
```
y= [1,2,3,2,2,1]; % input signal
indexy=[-2 -1 0 1 2 3 ]; % index of signal
h=[1,5,10,11,8,4,1]; % impulse response
figure(1);
stem(indexy,y);
title('input signal');
grid on;
xlim([-5,5]);
figure(2)
stem(h);
title('impulse response');
grid on;

hk=fliplr(h); % flip left to right signal
lenConv= length(hk)+length(y); % length of convolution sum
Conv=[]; % output of signal

for i=1:lenConv;
    sum=0;
        for j=1:length(y);

            if i-j>0 && i-j<(length(hk)+1)
            sum= sum+ hk(i-j)*y(j);
            end

        end
    Conv=[ Conv sum];

end


indexConv=[];

for i=1:lenConv
    indexConv= [indexConv ,(indexy(1)+i-1)];

end

figure(3);
stem(indexConv, Conv);
title('Convolution Signal');
xlim([-3 11]);
grid on;
```


input signal
3
2.5
2
1.5
1
0.5
0
-5
-4
-3
-2
-1
0
1
2
3
4
5


impulse response
12
10
8
6
4
2
0
1
2
3
4
5
6
7



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