|  |
| --- |
| clc  clear all  close all  x=input('enter the frist sequence x(n)=')  h=input('enter the second sequence h(n)=')  lx=length(x)  lh=length(h)  ly=lx+lh-1    %to generate c1    x1=[x';zeros(ly-lx,1)];  x2=x1;    %looping to genetate c    for i=1:lh-1  x2=[0;x2(1:end-1)]  x1=[x1,x2]  end    y=x1\*h';    disp('liner convolution output is=')  disp(y')  disp ('using inbuilt function=')  k=conv(x,h)  disp(k)    %plot    figure(1)  subplot(2,2,1);  stem(0:lx-1,x);  xlabel('n');  ylabel('x(n)');  title('input sequence x(n)');    subplot(2,2,2);  stem(0:lh-1,h);  xlabel('n');  ylabel('h(n)');  title('input sequence h(n)');      subplot(2,2,3:4);  stem(0:ly-1,y);  xlabel('n');  ylabel('y(n)');  title('convolve sequence y(n)');  enter the frist sequence x(n)=[3 2 1 2]  x =  3 2 1 2  enter the second sequence h(n)=[1 2 1 2]  h =  1 2 1 2  lx =  4  lh =  4  ly =  7  x2 =  0  3  2  1  2  0  0  x1 =  3 0  2 3  1 2  2 1  0 2  0 0  0 0  x2 =  0  0  3  2  1  2  0  x1 =  3 0 0  2 3 0  1 2 3  2 1 2  0 2 1  0 0 2  0 0 0  x2 =  0  0  0  3  2  1  2  x1 =  3 0 0 0  2 3 0 0  1 2 3 0  2 1 2 3  0 2 1 2  0 0 2 1  0 0 0 2  liner convolution output is=  3 8 8 12 9 4 4  using inbuilt function=  3 8 8 12 9 4 4  >> |