**Expt. No. : 3**

**Linear Convolution**

**Program:**

clc;

clear all;

close all;

x = input('Enter input sequence x(n) = ');

h = input('Enter impulse response h(n) = ');

nx = input('Enter range of n for X(n) = [-n,n] = ');

nh = input('Enter range of n for H(n) = [-n,n] = ');

ny1 = nx(1) + nh(1);

ny2 = nx(length(x)) + nh(length(h));

y = conv(x,h);

ny = [ny1:ny2]

figure;

subplot(1,3,1);

stem(nx,x);

title('input sequence');

subplot(1,3,2);

stem(nh,h);

title('impulse response');

subplot(1,3,3);

stem(ny,y);

title('convolved sequence');

**Output:**

ny =

 0 1 2 3 4

