

Heaven's Light is Our Guide

Rajshahi University of Engineering & Technology



Department of Electrical & Computer Engineering

Course No: ECE 4124

Course Name: Digital Signal Processing Sessional

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Experiment Name : Convolution of two signals using tabular method in matlab

Theory : Convolution is a mathematical way of combining two signals to form a third signal. It is the single most important technique in Digital Signal Processing. Using the strategy of impulse decomposition, systems are described by a signal called the impulse response.

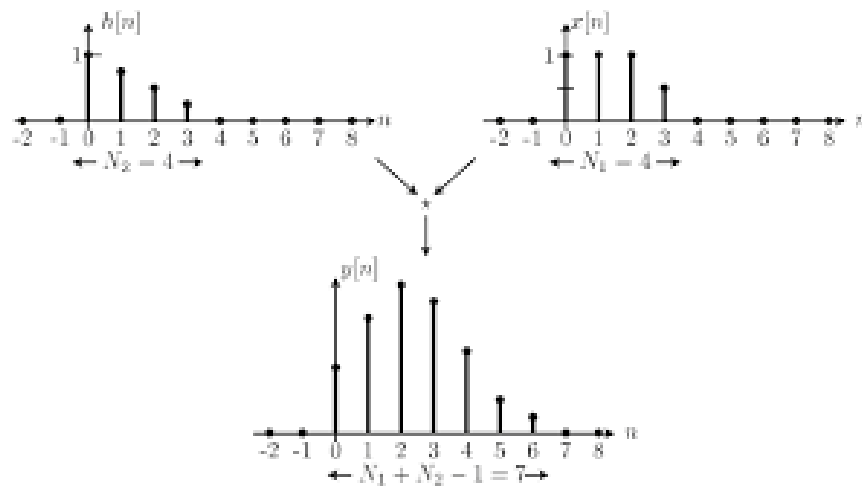


Figure : Convolution of two signals

Code :

```
1. Close all
2. Clc
3.
4. x=input('Enter the first array');
5. h=input('Enter the second array');
6.
7. z=[];
8. for i=1:length(x)
9. g=h.*x(i);
10.z=[z;g];
11.end
12.
13.[r c]=size(z);
14.k=r+c;
15.t=2;
16.y=[];
17.cd=0;
18.while(t<=k)
19.for i=1:r
20.for j=1:c
21.if((i+j)==t)
22.cd=cd+z(i,j);
23.end
24.
25.end
26.end
27.
28.t=t+1;
29.y=[y cd];
30.cd=0;
31.end
32.
33.disp(y);
```

Conclusion : The code ran properly in matlab and showed the expected output of convolution using two signals.