

Autocorrelation

```
x=input('Enter sequence x(n)=');  
rxx= conv(x,flipr(x));  
disp('rxx=');  
disp(rxx);  
figure(1);  
stem(rxx,'filled');  
title('Autocorrelation output');  
xlabel('lag index');  
ylabel('amplitude');
```

Result:

Enter sequence x(n)=[1 2 3 4]

rxx=
4 11 20 30 20 11 4

Cross Correlation

```
x=input('Enter sequence x(n)=');  
y=input('Enter sequence y(n)=');  
rxy= conv(x,flipr(y));  
disp('rxy=');  
disp(rxy);  
figure(1);  
stem(rxy,'filled');  
title('cross correlation output');  
xlabel('lag index');  
ylabel('amplitude');
```

Result:

Enter sequence x(n)=[1 2 3 4]

Enter sequence y(n)=[4 3 2 1]

rxy=
1 4 10 20 25 24 16