

PROGRAM :**AUTO CORRELATION :**

```
close();
clear();
x = input("Enter the input sequence : ");
[z, lag] = xcorr(x);
disp(z);
subplot(2,1,1);
stem(x);
xlabel('n');
ylabel('x[n]');
title('Input Sequence');
subplot(2,1,2);
stem(lag,z);
xlabel('n');
ylabel('x[n]');
title('Auto-Correlated Sequence');
```

CROSS CORRELATION :

```
close();
clear();
x = input("Enter the first input sequence : ");
y = input("Enter the second input sequence : ");
[z, lag] = xcorr(x, y);
disp(z);
subplot(3,1,1);
stem(x);
xlabel('n');
ylabel('x[n]');
title('First Input Sequence');
subplot(3,1,2);
stem(y);
xlabel('n');
ylabel('y[n]');
title('Second Input Sequence');
subplot(3,1,3);
stem(lag,z);
xlabel('n');
ylabel('x[n]');
title('Cross-Correlated Sequence');
```

OUTPUT :

AUTO CORRELATION :

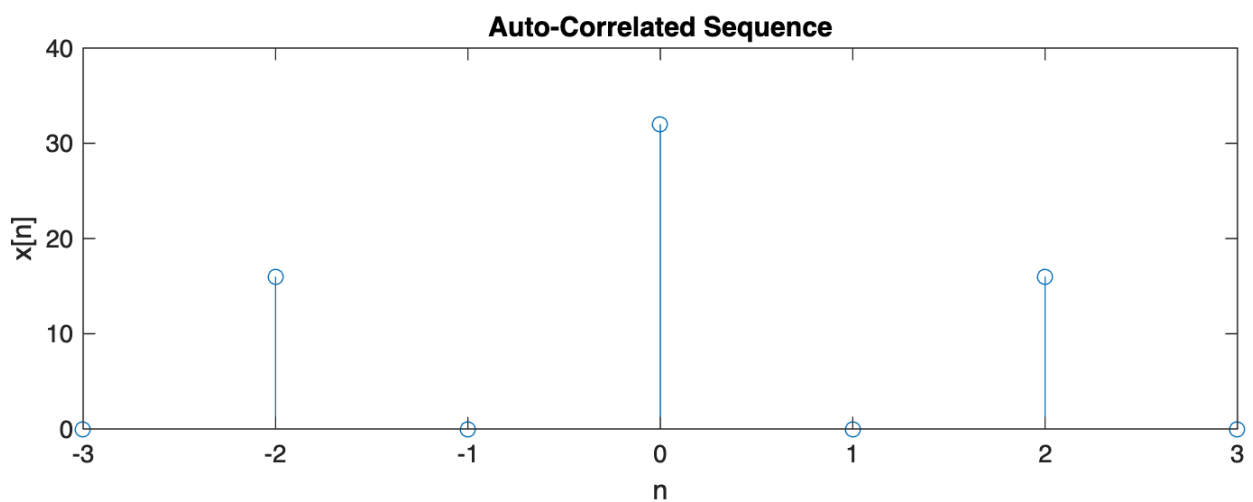
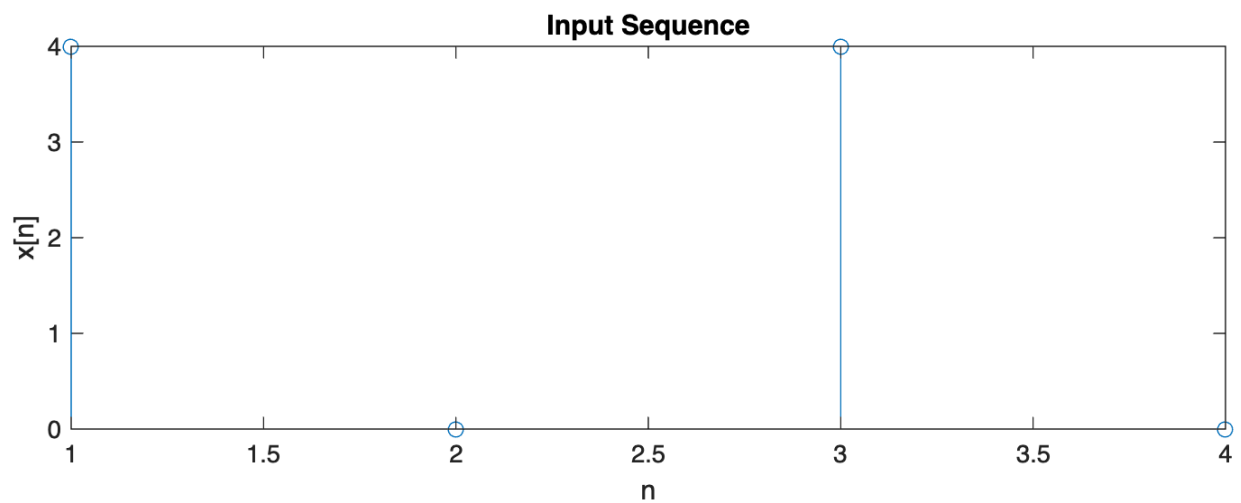
```
>> DSPEXP2
```

```
Enter the input sequence :
```

```
[4,0,4,0]
```

```
      0      16      0      32      0      16      0
```

```
>> |
```



CROSS CORRELATION :

```
>> DSPEXP2_2
```

```
Enter the first input sequence :
```

```
[1,0,1,0]
```

```
Enter the second input sequence :
```

```
[2,0,2,0]
```

```
0      2      0      4      0      2      0
```

```
>>
```

