AUTO AND CROSS CORRELATION

clc;

clear all;

close all;

%n1 sequence

n1 = input('enter the sequence of n1');

x = length(n1);

subplot(2,2,1);

N1 = 0:1:x-1;

stem(N1,n1);

title('n1 sequence');

xlabel('frequency');

ylabel('amplitude');

display(n1);

% n2 sequence

n2 = input('enter the sequence of n2');

subplot(2,2,2);

N2 = 0:1:length(n2)-1;

stem(N2,n2);

title('n2 sequence');

xlabel('frequency');

ylabel('amplitude');

display(n2);

% cross corelation

subplot(2,2,3);

c = xcorr(n1,n2);

c1 = 0:1:length(n2)+x-2;

stem(c1,c);

title('cross correlation');

xlabel('frequency');

ylabel('amplitude');

display(c);

% auto corelation

subplot(2,2,4);

d = xcorr(n1,n1);

d1 = 0:1:x+x-2;

stem(d1,d);

title('auto correlation');

xlabel('frequency');

ylabel('amplitude');

display(d);

