% Program to plot PSD and Autocorrelation of White Gaussian Random Process

y=normrnd(0,1,1,200);

Gy=periodogram(y);

Ry=abs(ifft(Gy,256));

Ry=[Ry(130:256)' Ry(1:129)'];

t=-127:1:128;

figure

subplot(1,2,1)

plot(Gy)

xlabel('frequencysamples');

title('PSD')

subplot(1,2,2)

stem(t,Ry)

xlabel('time shift')

title('autocorrelation')