%% stock data

stock1 = 100;

stock2 = 100;

%% create return and sigma

%% matrices

Return = diag([0.03 0.01]);

Sigma = [0.2 0.4; 0.30 0.24];

%% 2-dimentional

correlation = [1 0.2; 0.2 1];

stocks = gbm(Return, Sigma,...

'StartState' ,[100; 100],...

'correlation', correlation);

%% simulations!

DeltaTime = 1/360;

nobs = 360;

nTrials = 20;

ss = simulate(stocks,nobs, ...

'DeltaTime', DeltaTime,...

'nTrials', nTrials);

%% extract stocks

s1 = squeeze(ss(:,1,:));

s2 = squeeze(ss(:,2,:));