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%%%%%%%%% Math 430 - Homework 6 %%%%%%%%%%%%
%
% MONTES Virginie
% Due October 30
%
%%Problem 2:


clear all
close all

% Solving the ODE I obtain this equation for X: X = K./(1-X0*exp(-r*t)).


M = 2000;



 K = randn(M,1)*0.08 + 1;
 r = randn(M,1)*0.05 + 0.2;
 X0 = randn(M,1)*0.02 + 0.08;

 X = K./(1-X0.*exp(-10*r));

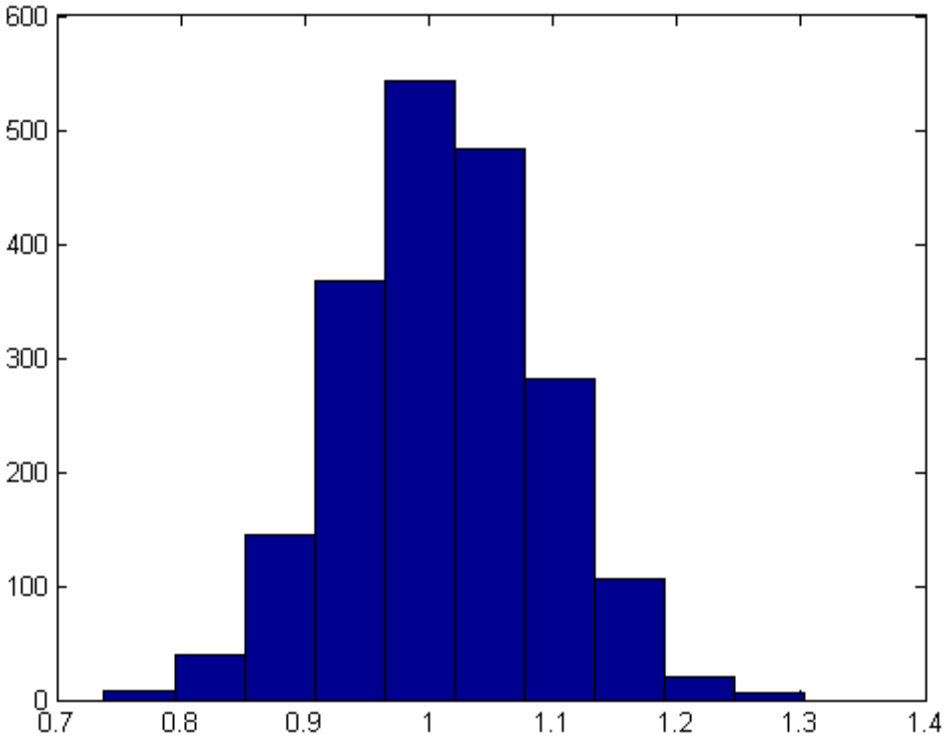

  hist(X)

  mu = mean(X);
  sigma = sqrt(var(X));

  disp(['mean and st.dev. = ', num2str(mu), ', ', num2str(sigma)])


% This distribution appear to be Normal.


mean and st.dev. = 1.0118, 0.080048
```



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