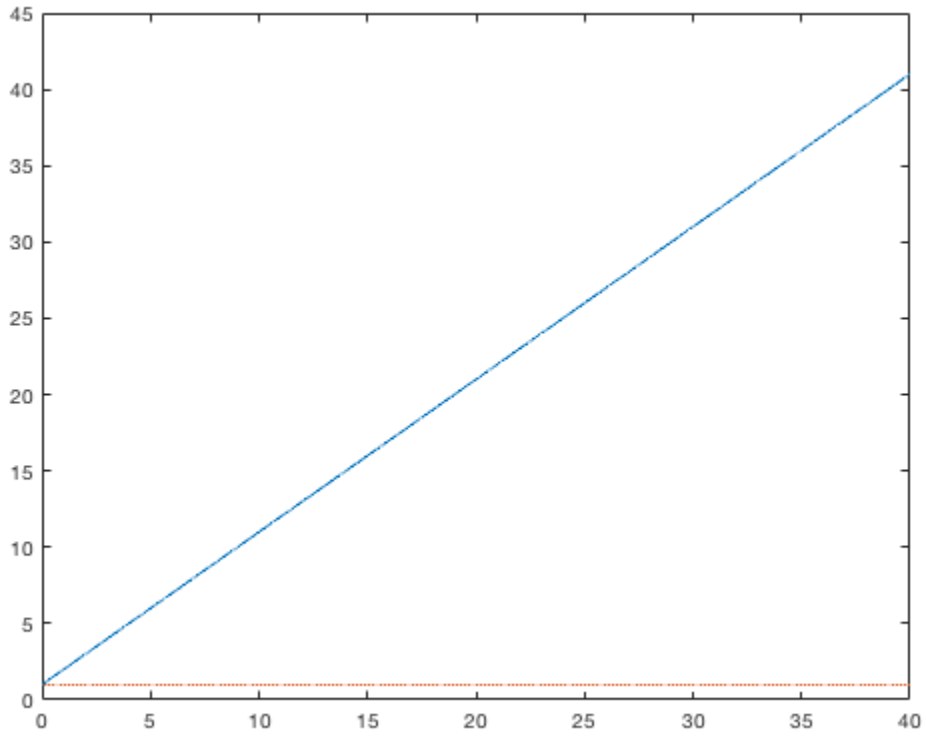
Homework #8 Justin Garcia

Table of Contents

Part Two

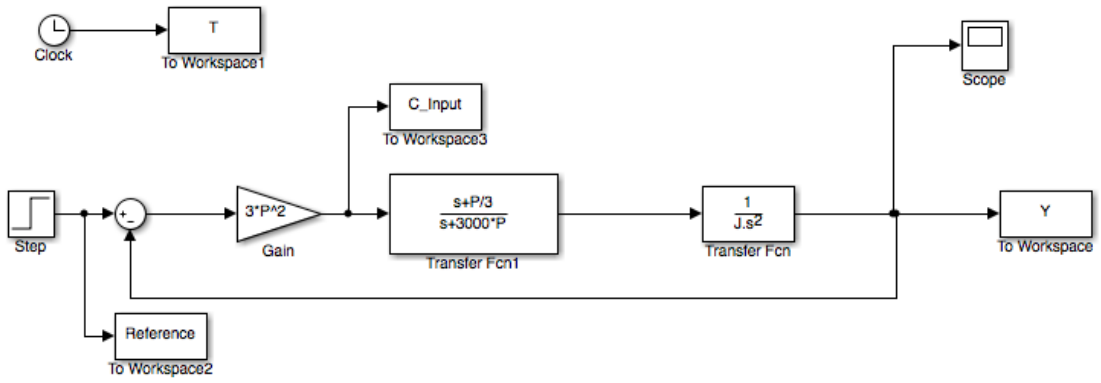
```
x0= [1 1];
J = .001; % Kg-m^2
A = [0,1;0,0];
B = [0;1/J];
C = [1,0;0,0];
D = [0];

SysResponse = ss(A,B,C,D);
[y,t,x] = initial(SysResponse,x0);
plot(t,x)
```

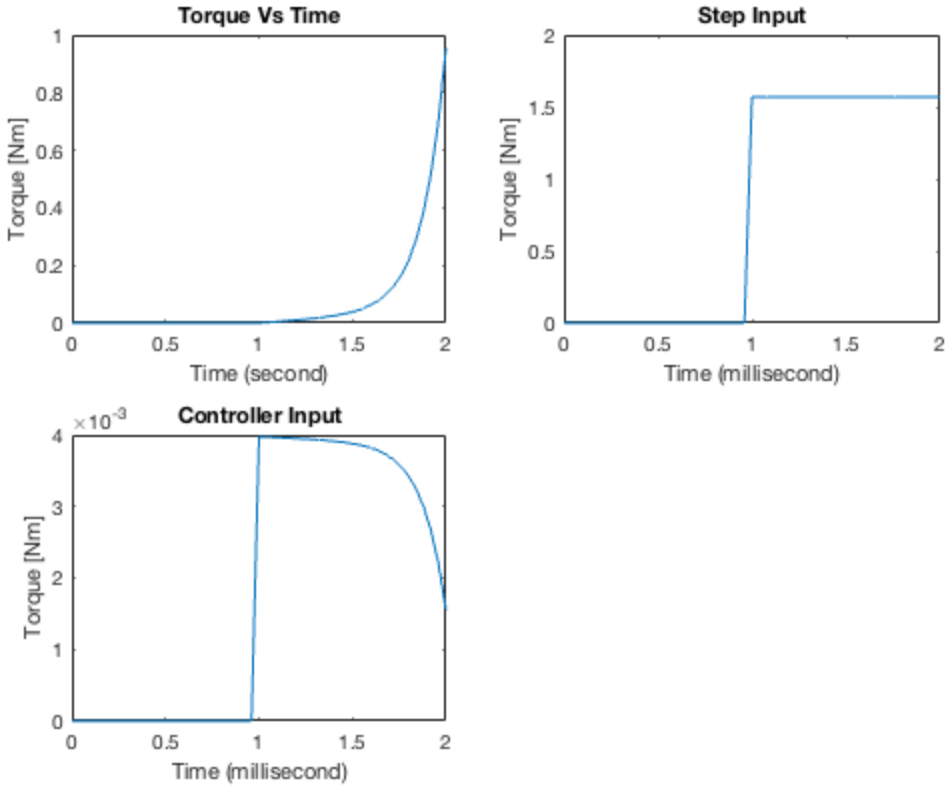


Part Four

```
P = .02905;
```

```
J = .001;
A = P/3;
B = 3000*P;
sim('HW8S')

subplot(2,2,1);
plot(T,Y)
title('Torque Vs Time');
xlabel('Time (second)');
ylabel('Torque [Nm]');

subplot(2,2,2);
plot(T,Reference)
title('Step Input');
xlabel('Time (millisecond)');
ylabel('Torque [Nm]');

subplot(2,2,3);
plot(T,C_Input)
title('Controller Input');
xlabel('Time (millisecond)');
ylabel('Torque [Nm]');

open_system('HW8S')
```





Published with MATLAB® R2016b