Problem Report

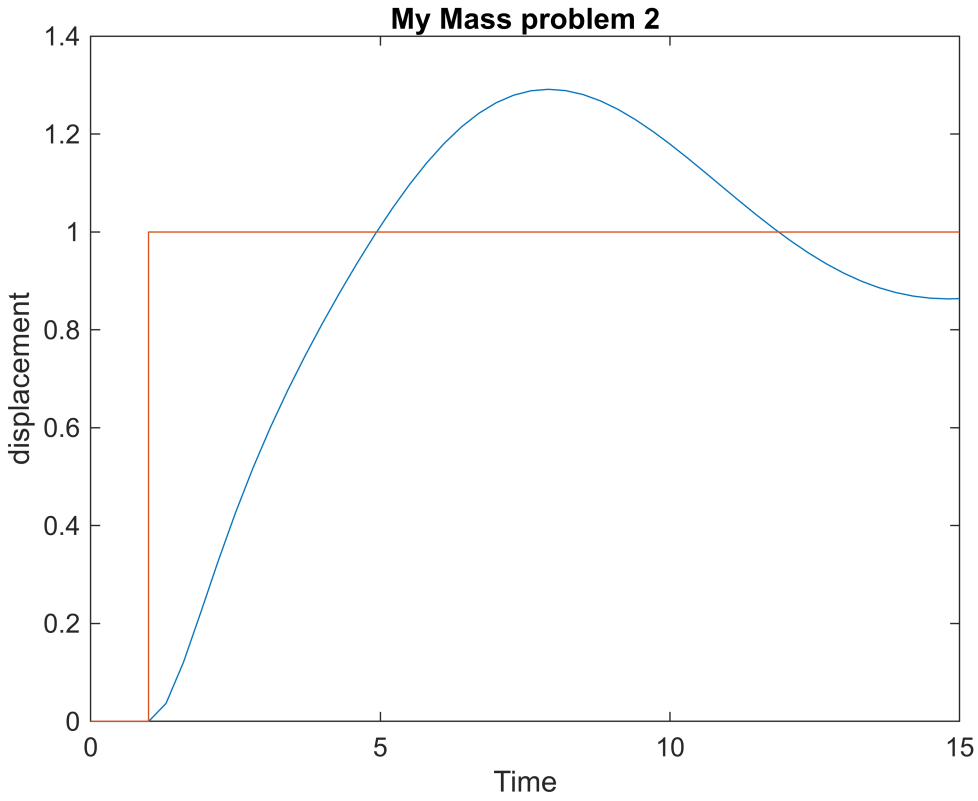
This is the problem were we attach another mass to the first one

start by initiating variables

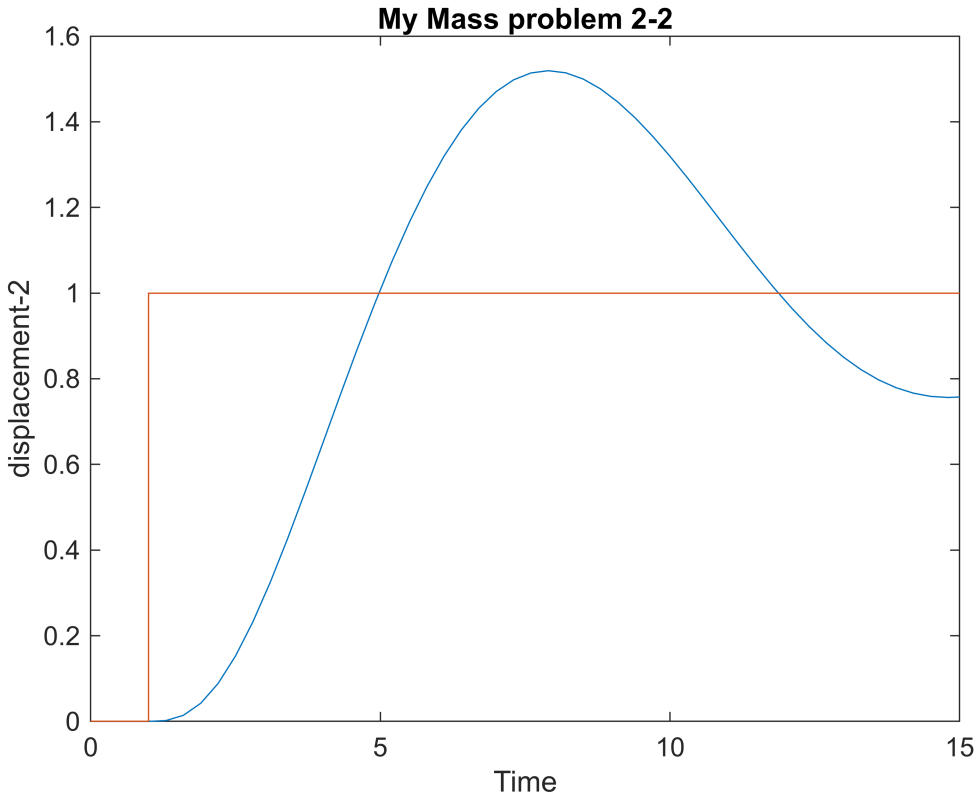
```
sim_time = 15;

%properties of part 1
k = 1;
b = 1;
m = 1;
F = 1;

%properties of part 2
k2 = 1;
m2 = 2;
b2 = 1;
sim("Mass2.slx");
```

Now we will plot the results

```
figure
plot(ans.X)
hold on
plot(ans.F)
ylabel("displacement")
xlabel("Time")
title("My Mass problem 2")
```

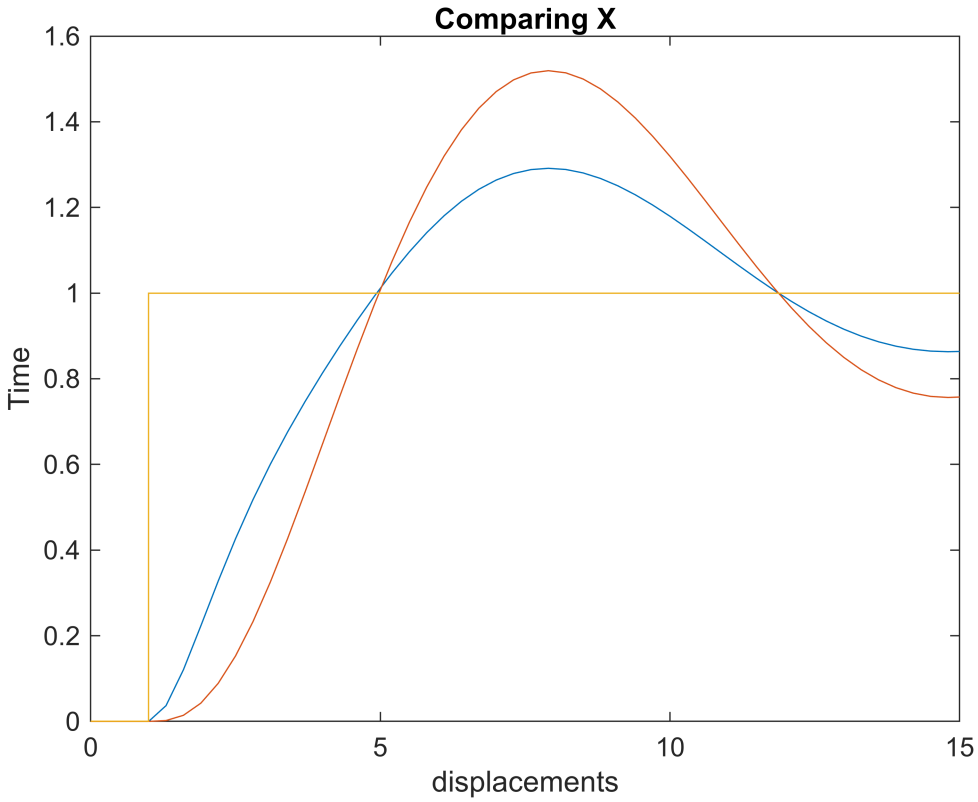



```
%trying  for part 2 plot
figure
plot(ans.X2)
hold on
plot(ans.F)
ylabel("displacement-2")
xlabel("Time")
title("My Mass problem 2-2")
```



Now lets make the same plot for comparing the 2

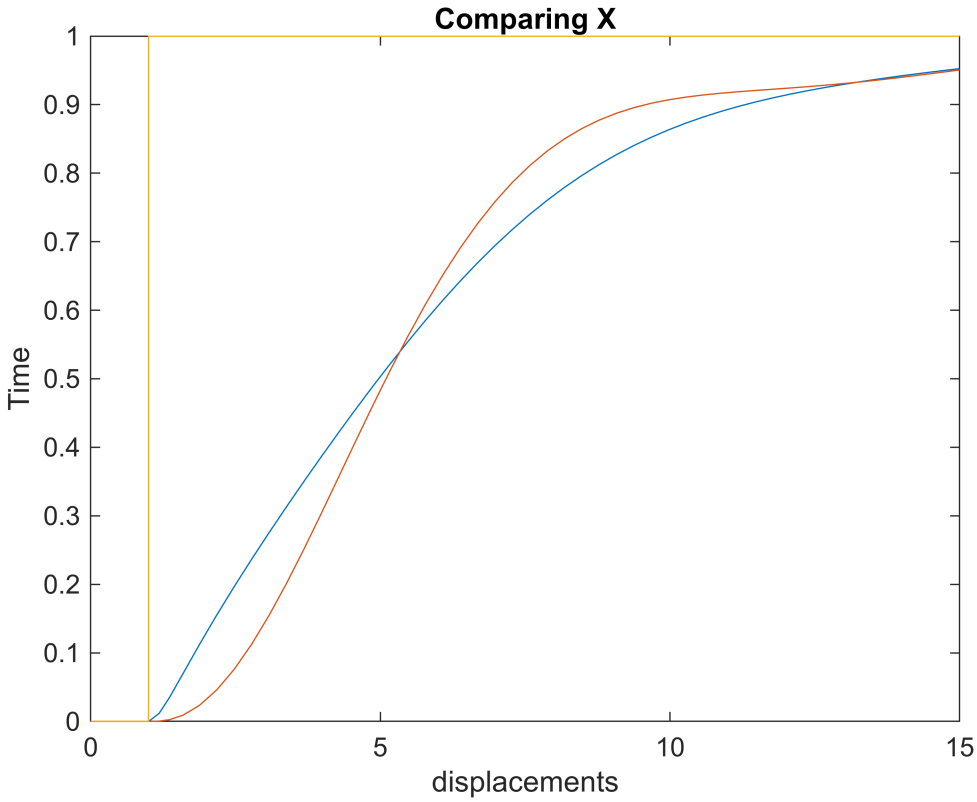
```
figure
plot(ans.X)
hold on
plot(ans.X2)
hold on
plot(ans.F)
xlabel("displacements")
ylabel("Time")
title("Comparing X")
```



We can observe that the second red curve hase more displacement that the first one

now lets change b to 5 and observe

```
b = 5;
sim("Mass2.slx");
figure
plot(ans.X)
hold on
plot(ans.X2)
hold on
plot(ans.F)
xlabel("displacements")
ylabel("Time")
title("Comparing X")
```



We can see the delay and hard curve with a lot of friction from the damper