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# Lab 0 report.

for this report you will need three files: 1.) LabReport0.m (this file) 2.) StepResponseMetrics.m (a file you will edit to show  $M_p$ ,  $t_r$ , and  $t_{ss}$ ) 3.) controllerlab0.mdl (A simulink model) All three files must be saved in the save directory. You must submit a printout showing  $M_p$ ,  $t_r$ , and  $t_{ss}$ , as found in StepResponseMetrics.m

```
clc
format compact

% variables:
UnitStepVal = 2.0;
%CHANGE total_time TO ZOOM IN ON THE 'INTERESTING' PART OF THE RESPONSE
total_time = 20.0; %seconds

% run the controller by using the command 'sim'
sim('controllerlab0')
y1 = y;
tout1 = tout;
```

## figure out $M_p$ , $t_r$ , $t_s$ and make snazzy plots

```
clc
[C1_Mp, C1_tr, C1_ts] = StepResponseMetrics(y1,tout1, 1, UnitStepVal);
```

