

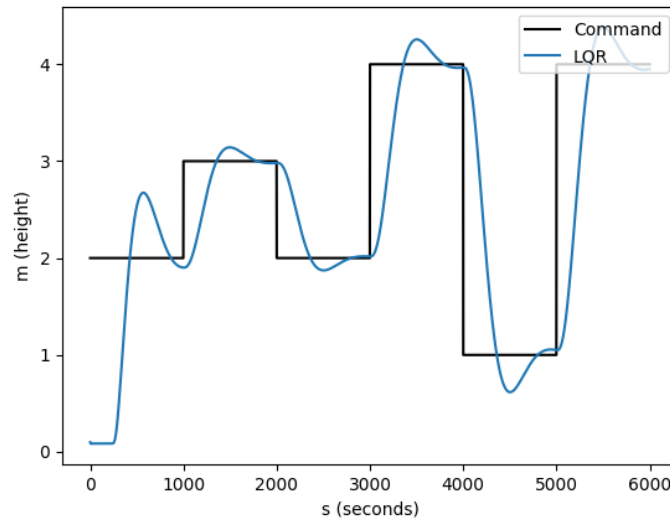
$$y_p = C_p x_p$$

$$\begin{bmatrix} x \\ y \\ z \\ \psi \end{bmatrix}_{4 \times 1} = \begin{bmatrix} 1 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\ 0 & 1 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 1 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & 1 & 0 & 0 & 0 & 0 & 0 & 0 \end{bmatrix}_{4 \times 12}$$

$$\begin{bmatrix} x \\ y \\ z \\ \phi \\ \psi \\ \dot{x} \\ \dot{y} \\ \dot{z} \\ \dot{\phi} \\ \dot{\psi} \\ \ddot{x} \\ \ddot{y} \end{bmatrix}_{12 \times 1}$$

PORJECT – 5

Exercise 1.



Console - All

Time: 59.980000000000004

[69.34920542 69.47646216 69.04866806 69.17648112]

Time: 59.99

[69.34864309 69.47589873 69.04810789 69.17591996]

Time: 60.0

=====YOUR RESULT=====

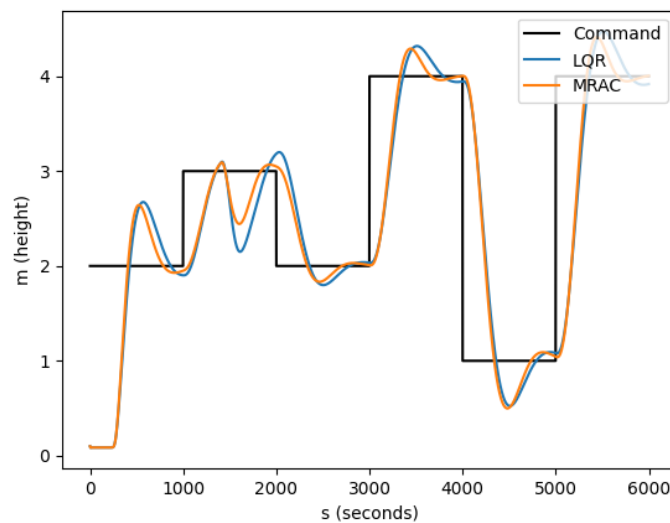
ERROR: 0.204

SCORE: 50.000

INFO: 'ex1_controller' controller exited successfully.

Exercise 2.

1. Loss of thrust = 0.5

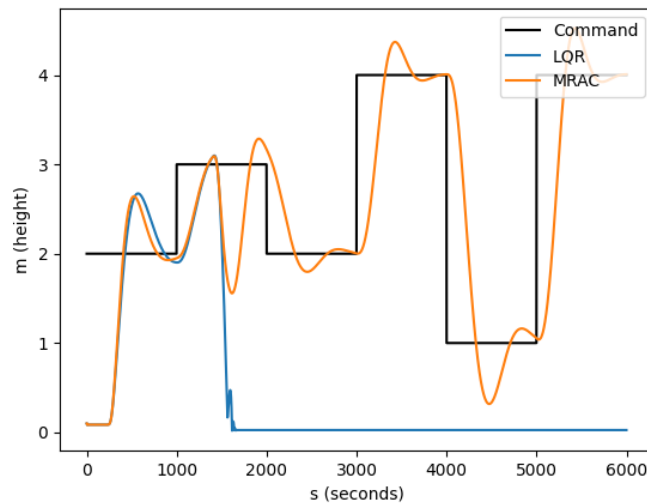


```

Console - All
Time: 59.97
--- Motor Failure ---
Time: 59.980000000000004
--- Motor Failure ---
Time: 59.99
--- Motor Failure ---
Time: 60.0
INFO: 'ex2_controller' controller exited successfully.

```

2. Loss of thrust = 0.7



```

Console - All
Time: 59.97
--- Motor Failure ---
Time: 59.980000000000004
--- Motor Failure ---
Time: 59.99
--- Motor Failure ---
Time: 60.0
INFO: 'ex2_controller' controller exited successfully.

```

Even MRAC failed at loss of thrust = 0.8

