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Exercise 1

Plot:
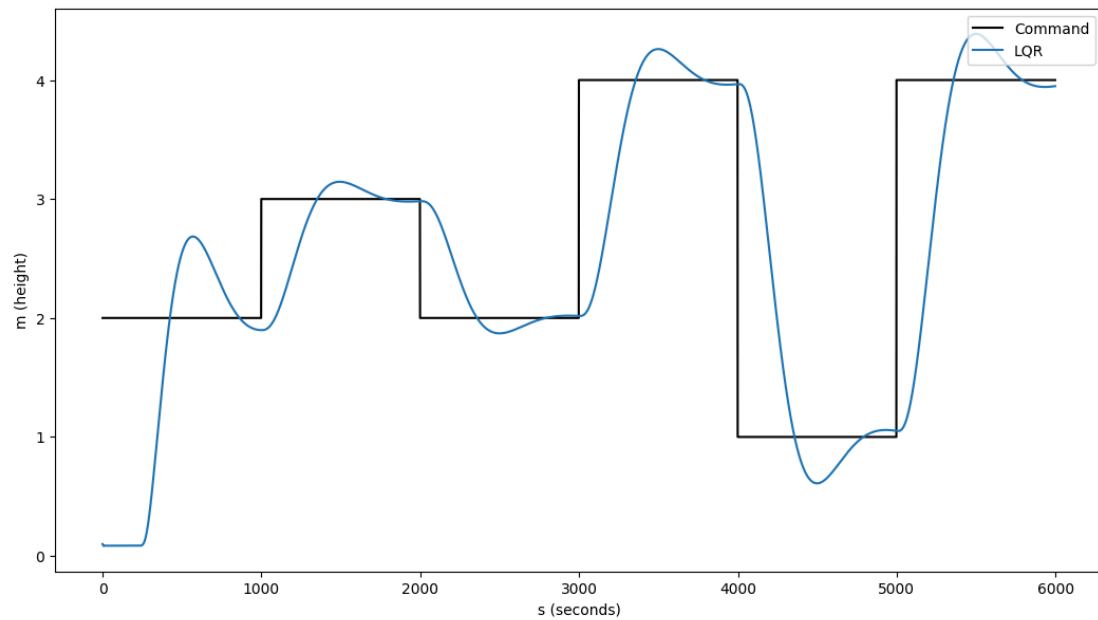
Evaluation:

```
===============YOUR RESULT===============
ERROR: 0.204
SCORE: 50.000
```
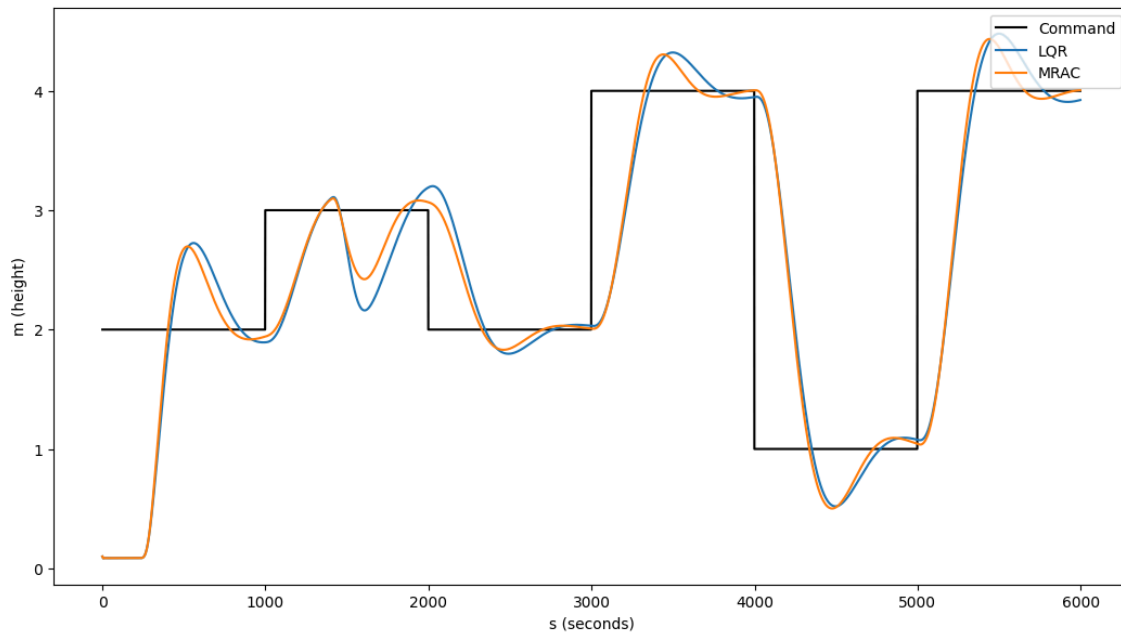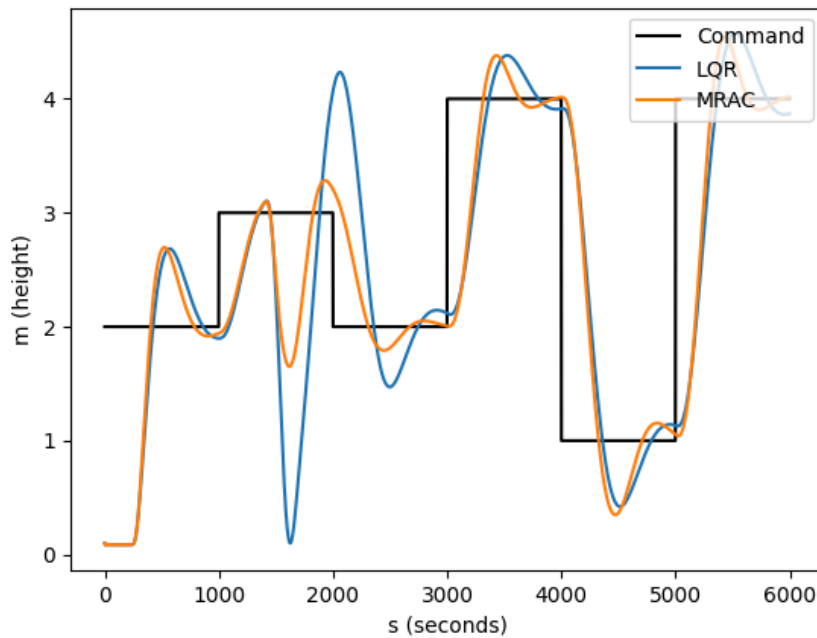
Plot:
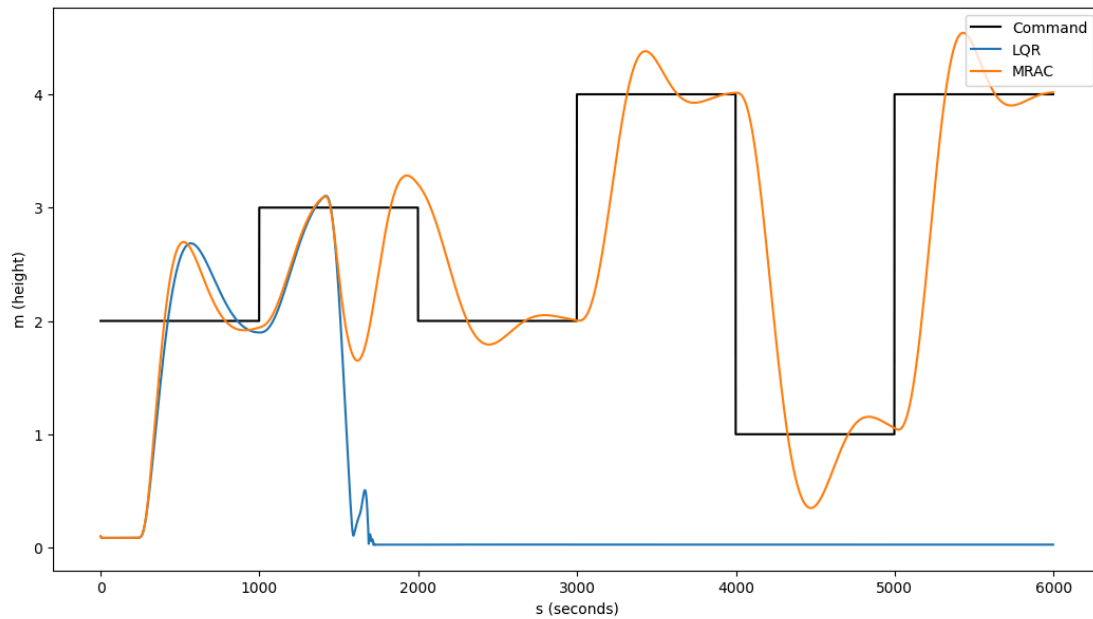**50% loss in thrust**

Point of failure of LQR:
67% loss in thrust:

At 67% loss in thrust, the drone is just able to stay in the air with the LQR controller.

At 68% loss in thrust:

At 68% loss in thrust, the LQR controller fails and the drone hits the ground. However, the MRAC controller is still able to keep the drone stable and track the reference trajectory.