

Day 1 (5/4/2024):

- We met as a group
- We discussed the project and important features
- Sammy set up a GitHub
- We planned our roles for the project

Day 2 (8/4/2024):

- Terry & Ethan applied Laplace transform to the system equations
- Sammy researched into criteria for our controller

Day 3 (11/4/2024):

- Ethan & Terry began trying to derive transfer functions for the system
- Sammy represented our system dynamics on the state space representation, began the report & updating GitHub

Day 4 (15/4/2024):

- Terry derived an initial transfer function, however after applying impulse and step response, a conclusion came to that the transfer function was unstable.
- Ethan continued to derive a new transfer function
- Sammy continued with the report

Day 5 (16/4/2024):

- Ethan came up with a new transfer function
- Sammy tested if the function was BIBO stable by finding the roots of our transfer function
- Terry applied impulse and step response to the function

Day 6 (17/4/2024):

- Terry designed the block diagram
- Ethan derived a closed loop transfer function
- Terry then tested if the function was BIBO stable using Routh's
- Sammy then started researching the PID controller & continued the report alongside

Day 7 (18/4/2024):

- We all then worked on the PID controller, researching into deriving gain values.
- Sammy continued with our report

Day 8 (19/4/2024):

- We continued with deriving gain values and using Ziegler – Nichols and came up with our final values