

RBE 500 Group Assignment #1

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Problem 1

Create ROS Package for PD Controller

Before creating the ROS package for the PD controller we performed some reconnaissance.

When we executed `ros2 topic list`, we saw that the `/forward_effort_controller/commands` topic was part of it. We then executed the following command in an attempt to move the joints.

```
1      ros2 topic pub --once /forward_effort_controller/commands ...  
      std_msgs/msg/Float64MultiArray "{data: [1, 1, 1]}"
```

However, this took no effect. We remember from the last group assignment (Part 1) that we executed a very similar command to make the joints move to a specific position, except in that case the topic we published to was `/forward_position_controller/commands`. This gave us a hint to the fact that Gazebo was preferring the position controller over the effort controller. Upon discovering the `controller_switch.cpp` file in the `rrbot` simulation files, we realized that we must ‘activate’ the effort controller in order to use it.