This folder contains configuration files that define various parameters and settings for the robot's control and simulation in Gazebo.

1. **limo\_ackerman\_control.yaml**:
   * **Purpose**: This YAML configuration file provides settings specific to controlling the Limo robot with Ackerman steering in Gazebo.
   * **Key Parts of the Code**:
     + limo\_state\_controller: Specifies the type of controller (joint\_state\_controller/JointStateController) and its publishing rate.
     + /gazebo\_ros\_control/pid\_gains: Defines the PID gains for each wheel of the robot.
     + limo\_fl\_steering\_hinge\_controller & limo\_fr\_steering\_hinge\_controller: Specifies the type of controller (effort\_controllers/JointPositionController) for the steering hinges and their respective PID values.
   * **Usage**: This file is referenced when initializing the simulation with Ackerman steering to ensure the robot behaves according to the defined parameters.
2. **limo\_four\_diff\_control.yaml**:
   * **Purpose**: This YAML configuration file provides settings specific to controlling the Limo robot with four-wheel differential steering in Gazebo.
   * **Key Parts of the Code**:
     + limo\_state\_controller: Specifies the type of controller (joint\_state\_controller/JointStateController) and its publishing rate.
     + /gazebo\_ros\_control/pid\_gains: Defines the PID gains for each wheel of the robot.
   * **Usage**: This file is referenced when initializing the simulation with four-wheel differential steering to ensure the robot behaves according to the defined parameters.

Both of these configuration files play a pivotal role in defining how the Limo robot behaves in the Gazebo simulation. They provide the necessary parameters for the robot's controllers, ensuring accurate and realistic movement and behavior within the simulation environment.