

task1

1.Gzclient/Gzserver:

Running the **gazebo** command starts two programmes, namely the *gzserver* and the *gzclient*. The *gzserver* is responsible for doing most of the 'processing' part, i.e., doing all the calculations for the simulation, sensor data generation, basically all the backend processing. The *gzclient* is responsible for generating the user interface. It provides a nice visualization of simulation, and convenient controls over various simulation properties.

2.odometry:

An odometry sensor is a device used to estimate the change in position over time of a vehicle, like a car or a robot, based on data from its own sensors.

3.Wheel encoder:

Located directly behind each motor is a wheel encoder. Each wheel encoder is used to count the number of times the motor (left or right) has rotated. This can be used to calculate the distance that the robot has driven or turned

4.urdf:

Unified Robotics Description Format, URDF, is an XML specification used in academia and industry to model multibody systems such as robotic

5.Xacro:

Xacro is an Xml macro that introduce the use of macros in an urdf file. It allow the use of variables, math and macros. And let us divide the robot model in different files.