2. Handheld Radar Mapping

This function requires launching a program from the slam_gmapping package, the source code of which is located in the 【ydlidar_ros2_ws】source code. This guide uses the accompanying virtual machine to illustrate how to launch the program. If you want to run it on your own motherboard, place ydlidar_ros2_ws in the root directory and compile it.

2.1. Activate the radarTerminal input

```
ros2 launch ydlidar_ros2_driver ydlidar_launch.py
```

2.2 Publish static odom conversions

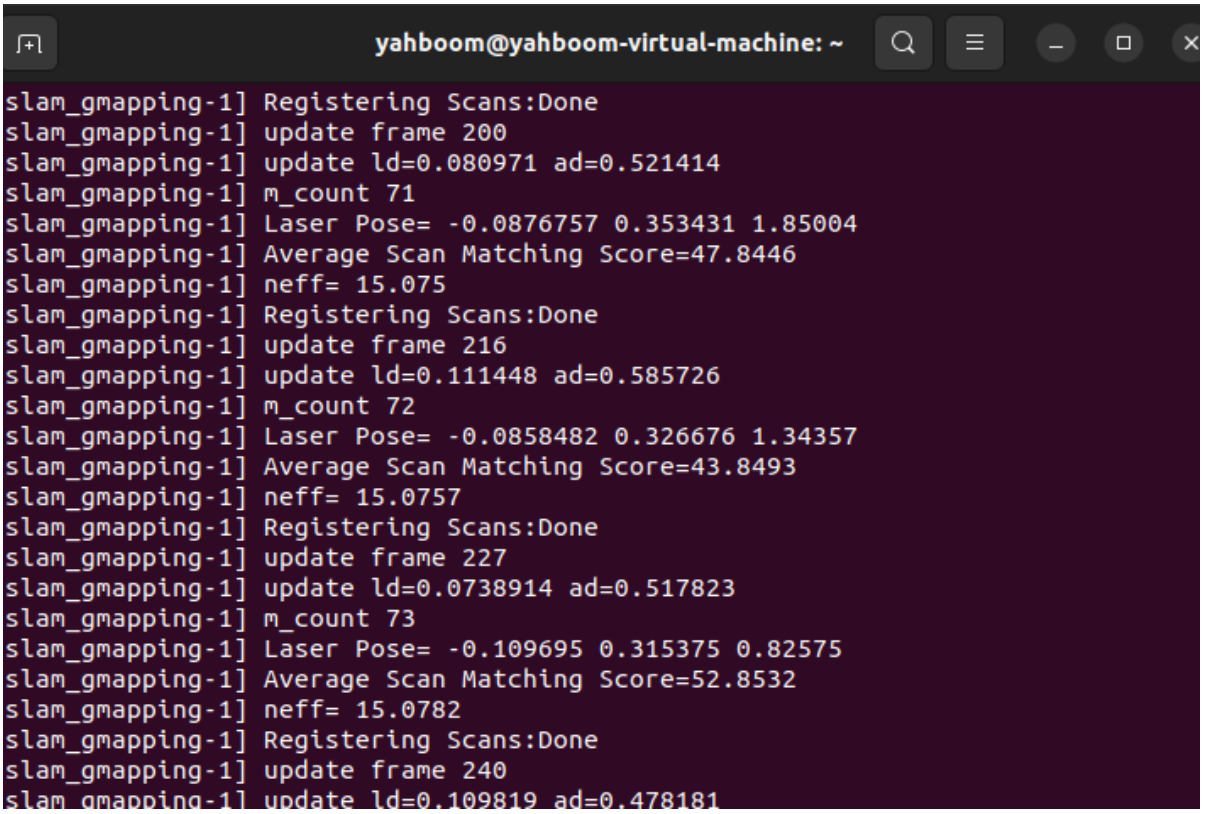
Terminal input

```
ros2 launch rf2o_laser_odometry rf2o_laser_odometry.launch.py
```

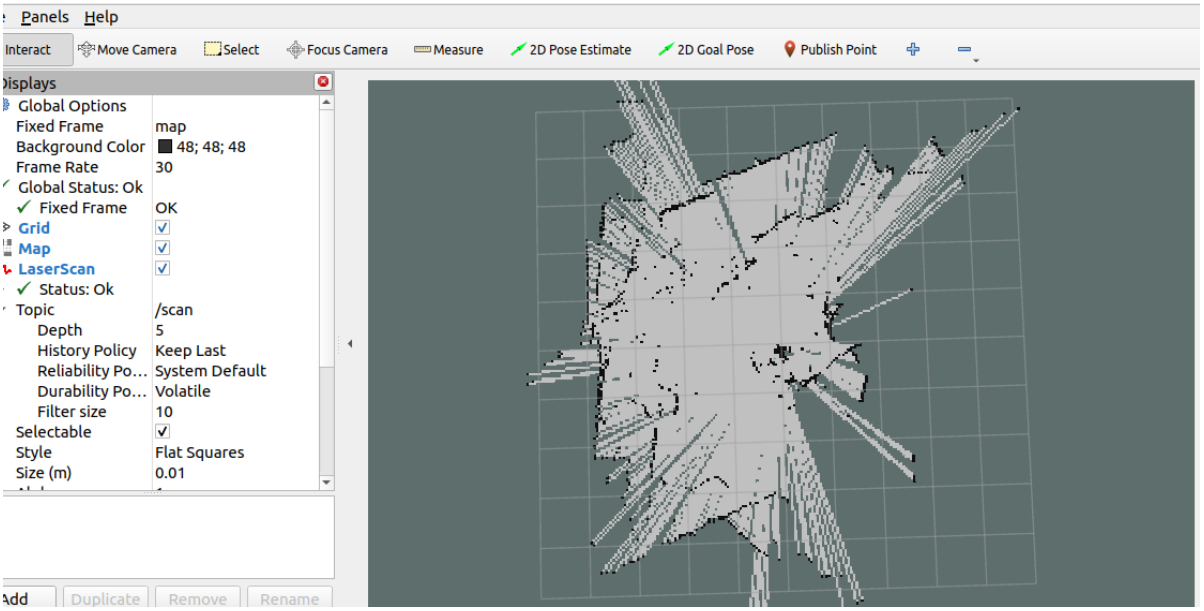
2.3. Start gmapping for mapping

Terminal input

```
ros2 launch slam_gmapping slam_gmapping.launch.py
```



rviz displays the following:



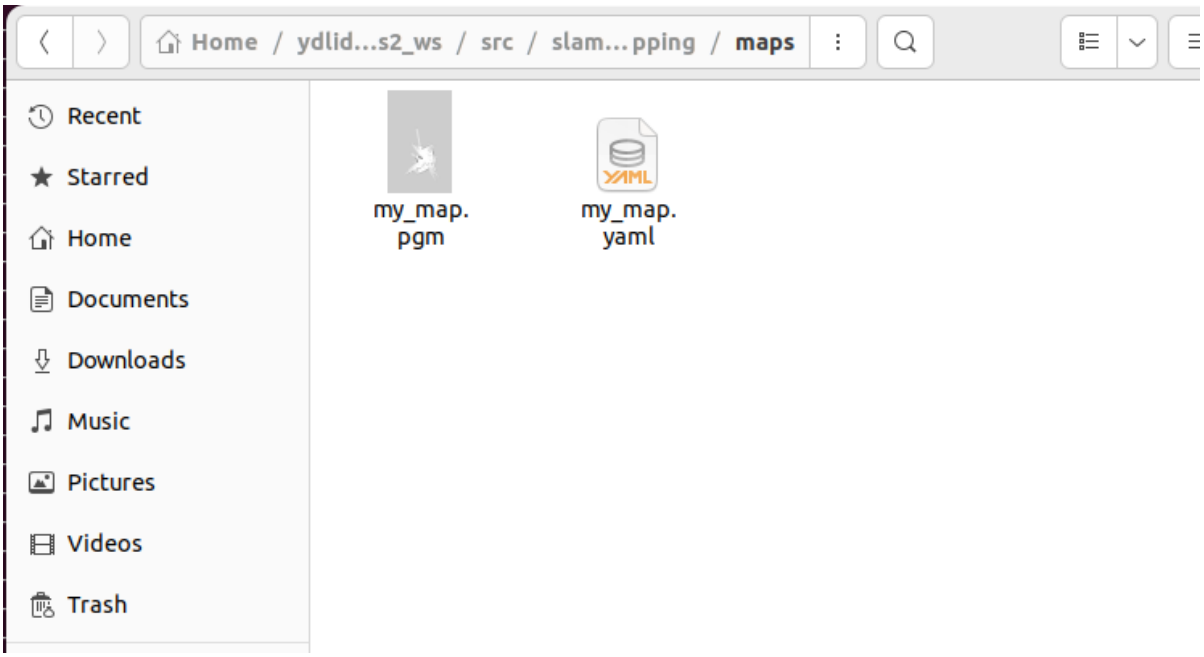
2.4 Saving the Map

Terminal input,

```
ros2 run nav2_map_server map_saver_cli -f
~/ydlidar_ros2_ws/src/slam_gmapping/maps/my_map
```

```
yahboom@yahboom-virtual-machine:~$ ros2 run nav2_map_server map_saver_cli -f ~/y
dlidar_ros2_ws/src/slam_gmapping/maps/my_map
[INFO] [1764593460.400443034] [map_saver]:
        map_saver lifecycle node launched.
        Waiting on external lifecycle transitions to activate
        See https://design.ros2.org/articles/node_lifecycle.html for more inform
ation.
[INFO] [1764593460.400770673] [map_saver]: Creating
[INFO] [1764593460.400903451] [map_saver]: Configuring
[INFO] [1764593460.402731840] [map_saver]: Saving map from 'map' topic to '/home
/yahboom/ydlidar_ros2_ws/src/slam_gmapping/maps/my_map' file
[WARN] [1764593460.402763980] [map_saver]: Free threshold unspecified. Setting i
t to default value: 0.250000
[WARN] [1764593460.402779162] [map_saver]: Occupied threshold unspecified. Setti
ng it to default value: 0.650000
[WARN] [1764593460.416484370] [map_io]: Image format unspecified. Setting it to:
 pgm
[INFO] [1764593460.416570197] [map_io]: Received a 384 X 608 map @ 0.05 m/pix
[INFO] [1764593460.481334569] [map_io]: Writing map occupancy data to /home/yahb
oom/ydlidar_ros2_ws/src/slam_gmapping/maps/my_map.pgm
[INFO] [1764593460.482997098] [map_io]: Writing map metadata to /home/yahboom/yd
lidar_ros2_ws/src/slam_gmapping/maps/my_map.yaml
[INFO] [1764593460.483137792] [map_io]: Map saved
```

Then you can find the map file we saved in the file path mentioned above.


Home / ydlid...s2_ws / src / slam... pping / maps
Recent
Starred
Home
Documents
Downloads
Music
Pictures
Videos
Trash
my_map.
pgm
my_map.
yaml