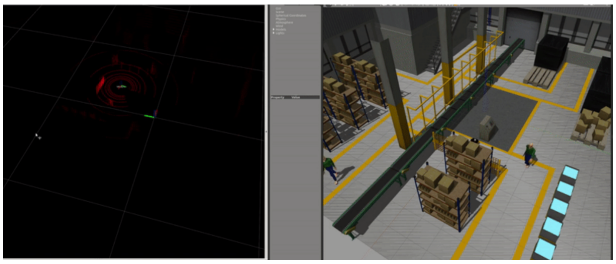
Name of task:use another ROS robot whit SLAM approach to create and save a map.

Path Name: Robot and Artificial Intelligence (Smart Methods)
Trainee name: Nayfa masaud

I was use this to get the code
https://github.com/Amg0z/Task-4

Some pictures to illustrate the task



To do this task i was download

Ubuntu 64-bit 18.04.
ROS Melodic. ROS Installation

ROS Package

```
sudo apt-get install ros-melodic-hector-trajectory-server ros-melodic-slam-gmapping ros-melodic-navigation
```

Build

Clone repository:

```
cd ~/catkin_ws/src
git clone https://github.com/wh200720041/warehouse_navigation.git
cd ..
catkin_make
source ~/catkin_ws/devel/setup.bash
```

Launch ROS

```
roslaunch warehouse_simulation warehouse_simulation.launch
```

Robot Control

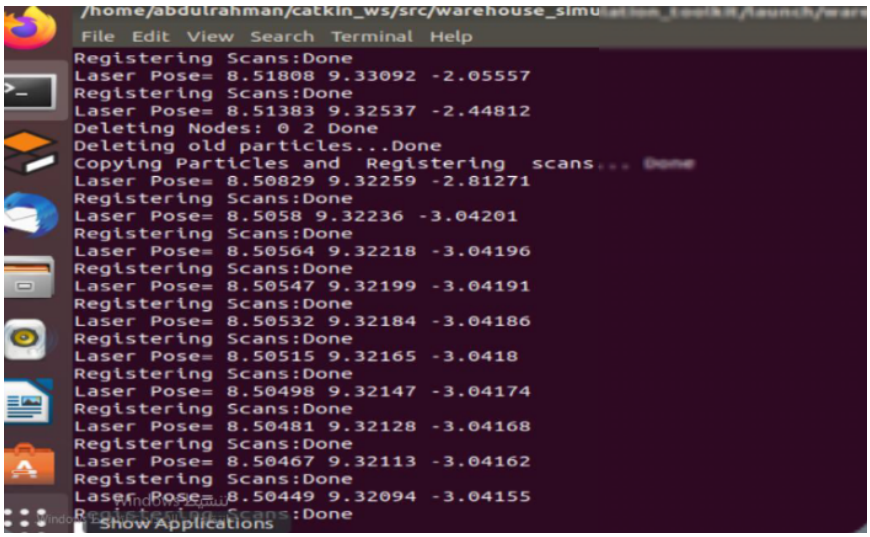
You can use keyboard (arrow keys) to manually control the robot (select cmd window first)

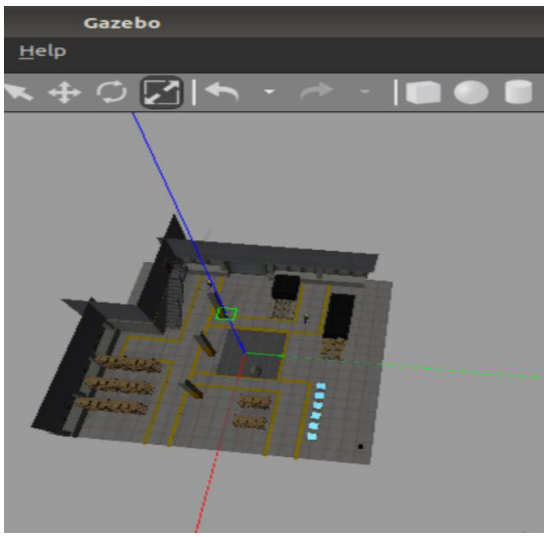
Autonomous Navigation

You may set target points in RVIZ and the robot will navigate to the location in gazebo.

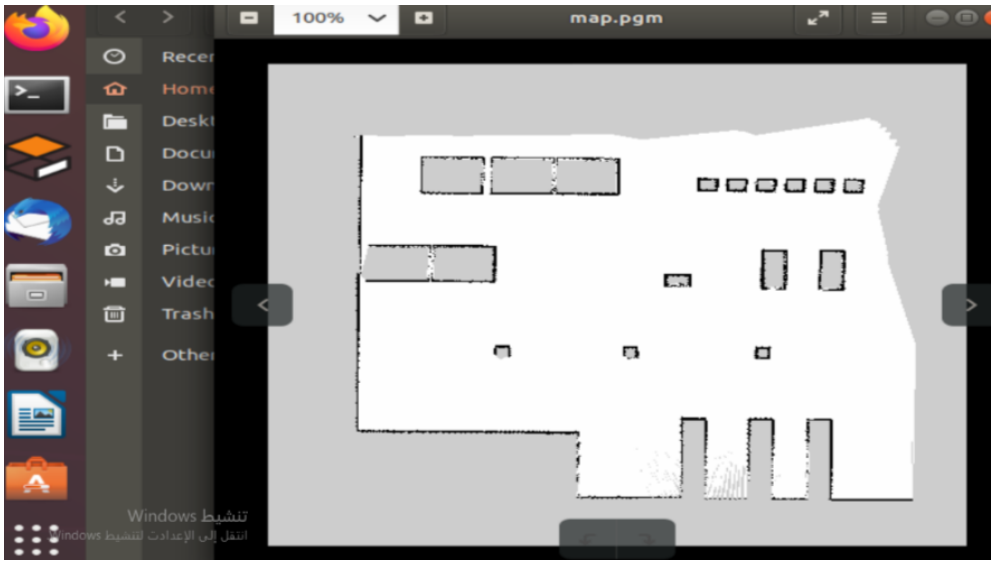
1. click 2d nav goal button on rviz
2. click any points you want on the map

To contact the robot Environment with new robot





The map



The picture of the map