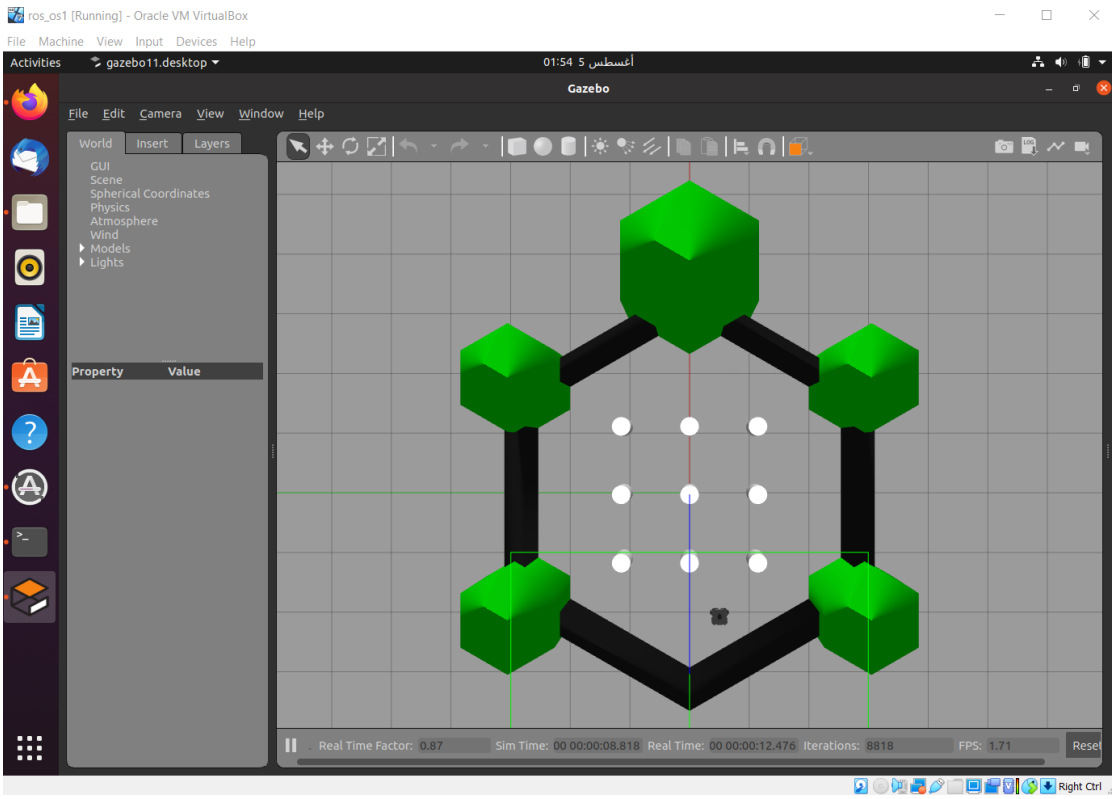
After writing this step

```
$ export TURTLEBOT3_MODEL=waffle
$ roslaunch turtlebot3_gazebo turtlebot3_world.launch
```

The world would launch



And then write this step

```
$ export TURTLEBOT3_MODEL=waffle
$ roslaunch turtlebot3_slam turtlebot3_slam.launch
slam_methods:=gmapping
```

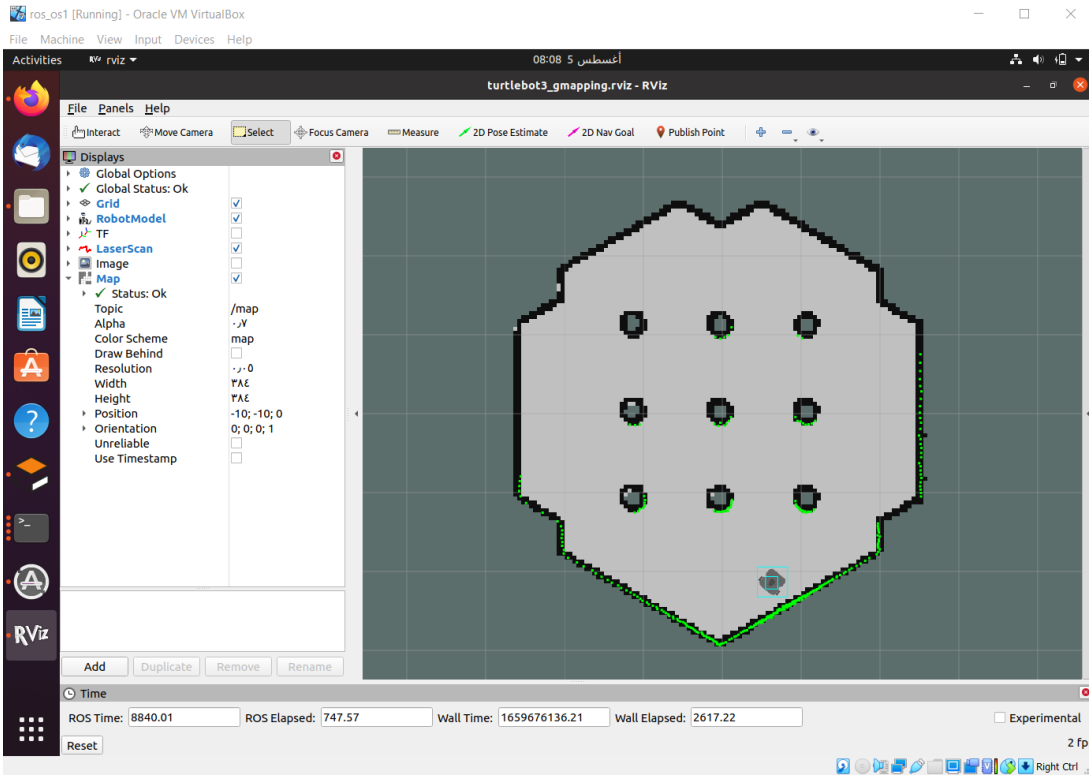
To run the SLAM

We need to move the little car to create the map ,so we need this step

```
$ export TURTLEBOT3_MODEL=waffle
$ roslaunch turtlebot3_teleop turtlebot3_teleop_key.launch
```

```
/
  turtlebot3_teleop_keyboard (turtlebot3_teleop/turtlebot3_teleop_key)

ROS_MASTER_URI=http://localhost:11311

process[turtlebot3_teleop_keyboard-1]: started with pid [55741]

Control Your TurtleBot3!
---------------------------
Moving around:
        w
   a    s    d
        x

w/x : increase/decrease linear velocity (Burger : ~ 0.22, Waffle and Waffle Pi :
 ~ 0.26)
a/d : increase/decrease angular velocity (Burger : ~ 2.84, Waffle and Waffle Pi
 ~ 1.82)

space key, s : force stop

CTRL-C to quit
```

after moving the car the map will be created.



Finally Saving the map.

```
$ rosrun map_server map_saver -f ~/map
```