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1.Scanner la carte avec un ladar :

cd ~/catkin_ws/

source devel/setup.bash

sudo chmod 666 /dev/ttyUSB0

roslaunch rplidar_ros rplidar.launch

open new terminal:
cd ~/catkin_ws/

source devel/setup.bash

roslaunch hector_slam_launch tutorial.launch

save map:
rosrun map_server map_saver -f name

2.Simulation de navigation：

cd ~/catkin_ws/

source devel/setup.bash

export TURTLEBOT3_MODEL=burger

roslaunch turtlebot3_gazebo turtlebot3_world.launch

Open a new terminal:
cd ~/catkin_ws/

source devel/setup.bash

export TURTLEBOT3_MODEL=burger

roslaunch turtlebot3_navigation turtlebot3_navigation.launch map_file:=$HOME/map.yaml

3.Navigation réelle :

1）Configurer le PC：

$ifconfig
Obtenir l'adresse IP : inet 192.168.248.128

$nano ~/.bashrc
Ajouter à la fin :
export ROS_MASTER_URI=http://192.168.248.128:11311
export ROS_HOSTNAME=192.168.248.128

$source ~/.bashrc
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2）Configurer le Turtlebot 3(Raspberry Pi) :
$nano ~/.bashrc
Ajouter à la fin :
export ROS_MASTER_URI=http://192.168.248.128:11311
export ROS_HOSTNAME=192.168.43.35

$source ~/.bashrc

3）Run Navigation Nodes :
$ roscore

Open a new terminal:
$ ssh pi@{192.168.43.35}

$ roslaunch turtlebot3_bringup turtlebot3_robot.launch

Open a new terminal:
$ export TURTLEBOT3_MODEL=burger

$ roslaunch turtlebot3_navigation turtlebot3_navigation.launch map_file:=$HOME/map.yaml

Launch keyboard teleoperation node:
$ roslaunch turtlebot3_teleop turtlebot3_teleop_key.launch