Synchronize Clock - sudo ntpdate ntp.ubuntu.com

Repository - <https://gitlab.cc-asp.fraunhofer.de/dalvi/roomba-slam-navigation>

For building first time

1. cd catkin\_ws

2. catkin\_make

3. source /devel/setup.bash

Each Command needs to run on a new terminal

For Keyboard control of roomba

1. roslaunch ca\_driver create\_2.launch

2. rosrun teleop\_twist\_keyboard teleop\_twist\_keyboard.py

The Keyboard keys for controlling the Roomba will be shown in the terminal when the teleop\_twist\_keyboard.py is run. Speed should be reduced to a very small value when drawing the map to get a clear image.

For SLAM and Map Saving

1. roslaunch ydlidar lidar.launch

2. rosrun gmapping slam\_gmapping scan:=/scan

3. rosrun map\_server map\_saver -f filename\_for\_the\_image

<http://wiki.ros.org/navigation/Tutorials/RobotSetup>

For Navigation

Maps to Use - For the HiWi Room - new\_own\_room.yaml

For VS lab - vs\_lab.yaml

1. roslaunch ca\_driver create\_2.launch

2. roslaunch ydlidar lidar.launch

3. rosrun map\_server map\_server file\_name.yaml

4. roslaunch roomba\_2dnav move\_base.launch

5. rosrun rviz rviz (From Linux system for easier way of moving the robot)