Robotik - exercise 1

Team GIR : Evangelia Koumartzi , Julia Schuch

WiSe 2021/22

Assignment 1-1: ROS Installation

Install the **ROS Noetic** distribution (recommended: together with *Ubuntu 20.04 LTS, better not in a virtual machine but native*). Therefore, the tutorial can be found at: http://wiki.ros.org/noetic/Installation

```
schuch@znote-t420s-02:~$ sudo apt install ros-noetic-desktop-full
Reading package lists... Done
Building dependency tree
Reading state information... Done
ros-noetic-desktop-full is already the newest version (1.5.0-1focal.20211007.220535).
0 upgraded, 0 newly installed, 0 to remove and 0 not upgraded.
schuch@znote-t420s-02:~$
```

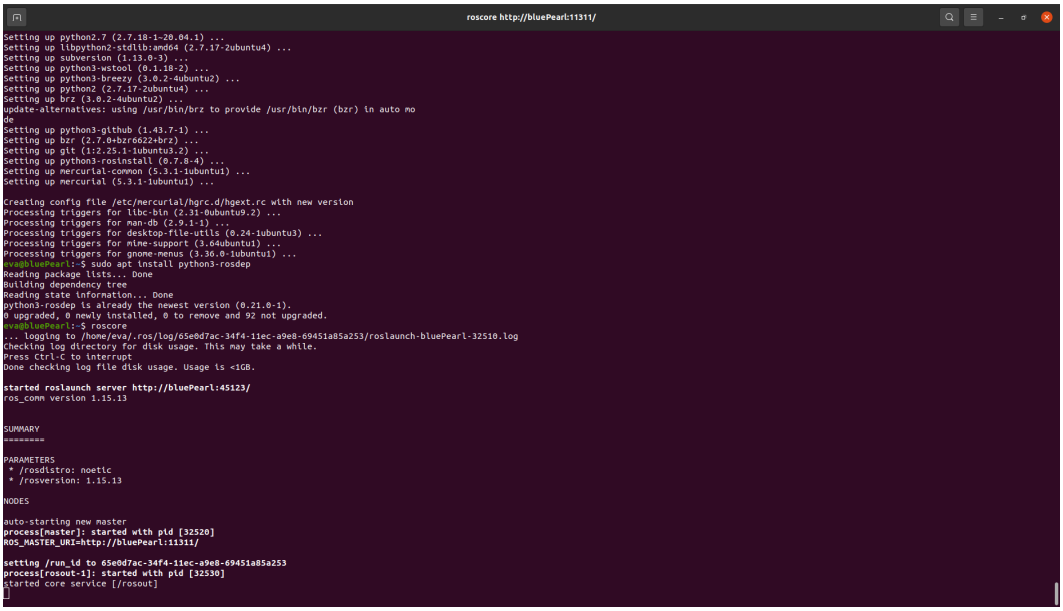
To get a basic understanding of the basic concepts in ROS, read the subsection 1-5 of the tutorial: http://wiki.ros.org/ROS/Tutorials

```
schuch@znote-t420s-02:~$ rosnode list
/my_turtle
/rosout
schuch@znote-t420s-02:~$ rosnode ping my_turtle
rosnode: node is [/my_turtle]
pinging /my_turtle with a timeout of 3.0s
xmlrpc reply from http://znote-t420s-02:34803/  time=0.896692ms
xmlrpc reply from http://znote-t420s-02:34803/  time=1.802921ms
xmlrpc reply from http://znote-t420s-02:34803/  time=0.733614ms
xmlrpc reply from http://znote-t420s-02:34803/  time=1.455545ms
```

Setup your environment variables. Read the section 2 of the tutorial: http://wiki.ros.org/ROS/Tutorials/InstallingandConfiguringROSEnvironment

```
schuch@znote-t420s-02:~$ source /opt/ros/noetic/setup.bash
schuch@znote-t420s-02:~$ printenv | grep ROS
ROS_VERSION=1
ROS_PYTHON_VERSION=3
ROS_PACKAGE_PATH=/opt/ros/noetic/share
ROSLISP_PACKAGE_DIRECTORIES=
ROS_ETC_DIR=/opt/ros/noetic/etc/ros
ROS_MASTER_URI=http://localhost:11311
ROS_ROOT=/opt/ros/noetic/share/ros
ROS_DISTRO=noetic
schuch@znote-t420s-02:~$
```

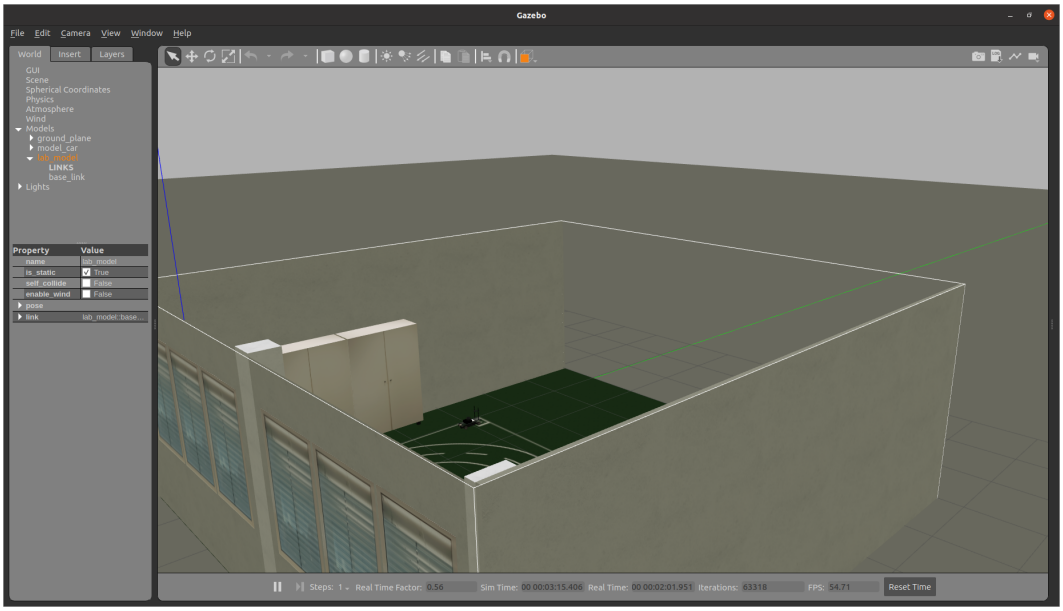
Open a terminal window and run the command roscore.



Assignment 1-2: AutoMiny Installation

Install the AutoMiny software using the tutorial at: https://autominy.github.io/AutoMiny/docs/installation/

Run the simulator after installation using:
`roslaunch autominy Simulated.launch`



Assignment 1-3: Create a repository

Create a ROS workspace named after your teamname like this *catkin_ws_TEAMNAME*. Create a Git repository from your workspace and make it available at a public Git hosting service like GitHub.

https://github.com/evakoumartzi/catkin_ws_GIR.