

**Introduction to Robotics, Prof. Goehring, WS 21/22**  
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## **Aufgabe 1-1**

### *Screenshots der Installation ROS Noetic*

```
Setting up ros-noetic-robot (1.5.0-1focal.20211007.214625) ...
Setting up ros-noetic-rqt-common-plugins (0.4.9-1focal.20211007.220330) ...
Setting up ros-noetic-perception (1.5.0-1focal.20211007.215902) ...
Setting up ros-noetic-viz (1.5.0-1focal.20211007.220408) ...
Setting up ros-noetic-desktop (1.5.0-1focal.20211007.220451) ...
Setting up ros-noetic-simulators (1.5.0-1focal.20211007.220413) ...
Setting up ros-noetic-desktop-full (1.5.0-1focal.20211007.220535) ...
Processing triggers for libc-bin (2.31-0ubuntu9.2) ...
ani@ani-ThinkPad-T470:~$ echo "source /opt/ros/noetic/setup.bash" >> ~/.bashrc
ani@ani-ThinkPad-T470:~$ source ~/.bashrc
```

```
ani@ani-ThinkPad-T470:~$ sudo apt install python3-rosdep
Reading package lists... Done
Building dependency tree
Reading state information... Done
python3-rosdep is already the newest version (0.21.0-1).
0 upgraded, 0 newly installed, 0 to remove and 199 not upgraded.
ani@ani-ThinkPad-T470:~$ sudo rosdep init

Wrote /etc/ros/rosdep/sources.list.d/20-default.list
Recommended: please run

    rosdep update

ani@ani-ThinkPad-T470:~$ rosdep update
reading in sources list data from /etc/ros/rosdep/sources.list.d
```

### *Screenshots des Durchführens der Tutorials & Festlegen von Umgebungsvariablen*

```
ani@ani-ThinkPad-T470:~$ 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
```

```
ani@ani-ThinkPad-T470:~$ mkdir -p ~/catkin_ws/src
ani@ani-ThinkPad-T470:~$ cd ~/catkin_ws/
ani@ani-ThinkPad-T470:~/catkin_ws$ catkin_make
Base path: /home/ani/catkin_ws
Source space: /home/ani/catkin_ws/src
Build space: /home/ani/catkin_ws/build
Devel space: /home/ani/catkin_ws/devel
Install space: /home/ani/catkin_ws/install
```

```
ani@ani-ThinkPad-T470:~/catkin_ws$ . ~/catkin_ws/devel/setup.bash
ani@ani-ThinkPad-T470:~/catkin_ws$ rospack depends1 beginner_tutorials
roscpp
rospy
std_msgs
ani@ani-ThinkPad-T470:~/catkin_ws$ roscd beginner_tutorials
ani@ani-ThinkPad-T470:~/catkin_ws/src/beginner_tutorials$ cat package.xml
<?xml version="1.0"?>
<package format="2">
  <name>beginner_tutorials</name>
  <version>0.0.0</version>
  <description>The beginner tutorials package</description>
```



## Ausführen von roscore

```
ani@ani-ThinkPad-T470:~$ roscore
... logging to /home/ani/.ros/log/c6fbaba6-336a-11ec-99d6-e9b2
Checking log directory for disk usage. This may take a while.
Press Ctrl-C to interrupt
Done checking log file disk usage. Usage is <1GB.

started roslaunch server http://ani-ThinkPad-T470:42469/
ros_comm version 1.15.13

SUMMARY
=====

PARAMETERS
* /rostdistro: noetic
* /rosversion: 1.15.13

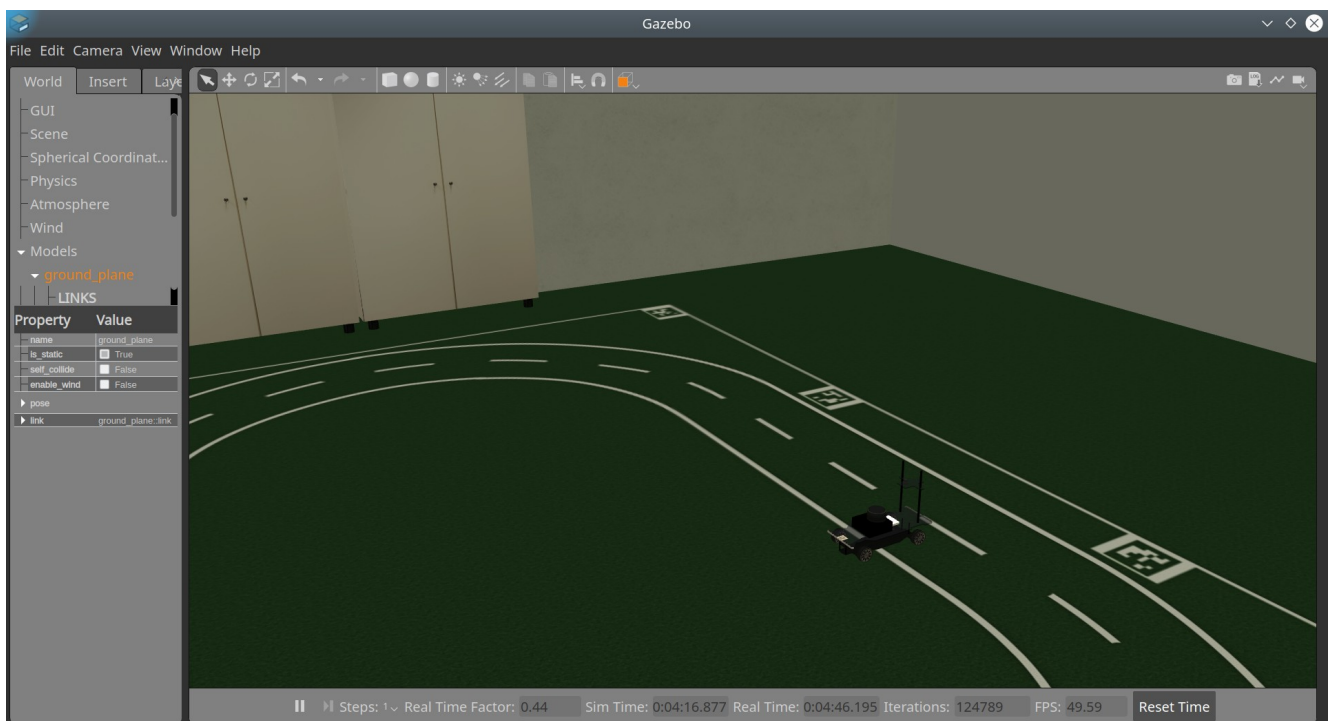
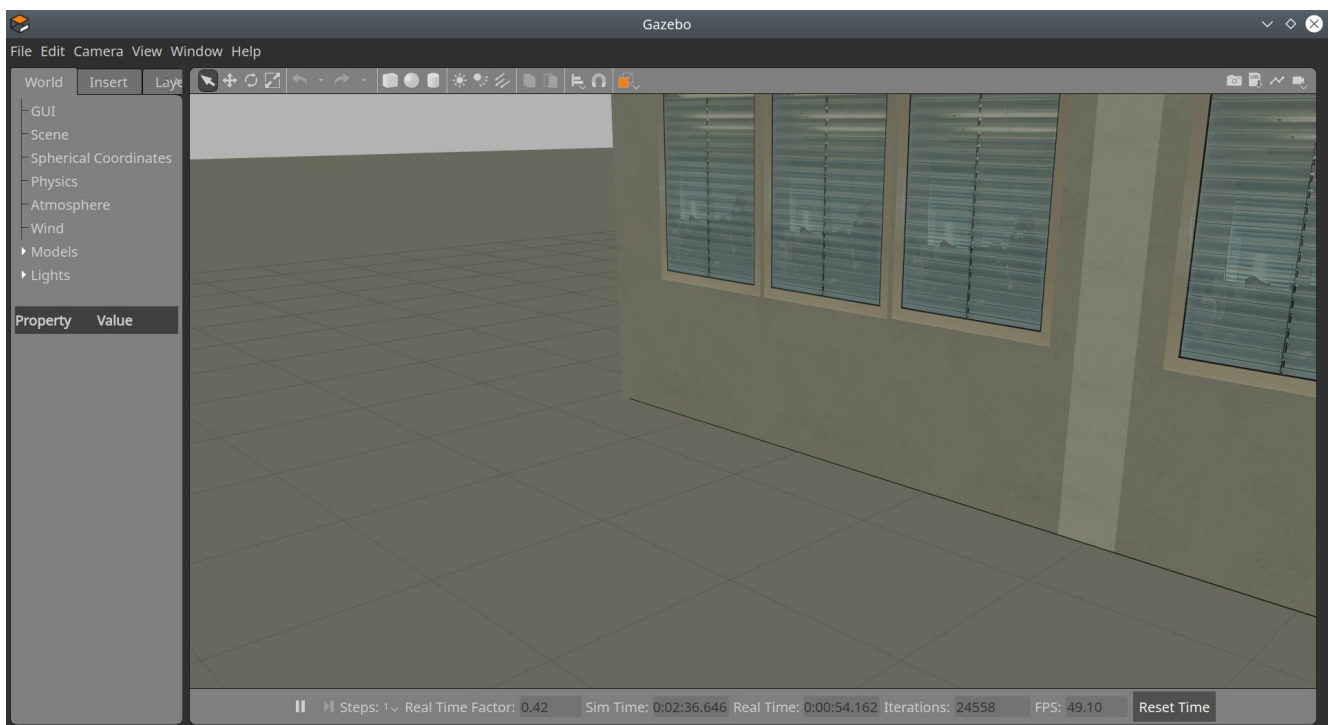
NODES

auto-starting new master
process[master]: started with pid [55680]
ROS_MASTER_URI=http://ani-ThinkPad-T470:11311/

setting /run_id to c6fbaba6-336a-11ec-99d6-e9b2e03889ab
process[rosout-1]: started with pid [55693]
started core service [/rosout]
```

## Aufgabe 1-2

### Screenshots des Simulators



## Aufgabe 1-3

<https://git.imp.fu-berlin.de/thob97/thornavid>