

Lab 1 supplemental materials

Tips for section 1

- You can type the following command:

```
$ echo "source ~/catkin_ws/devel/setup.bash" >> ~/.bashrc
```

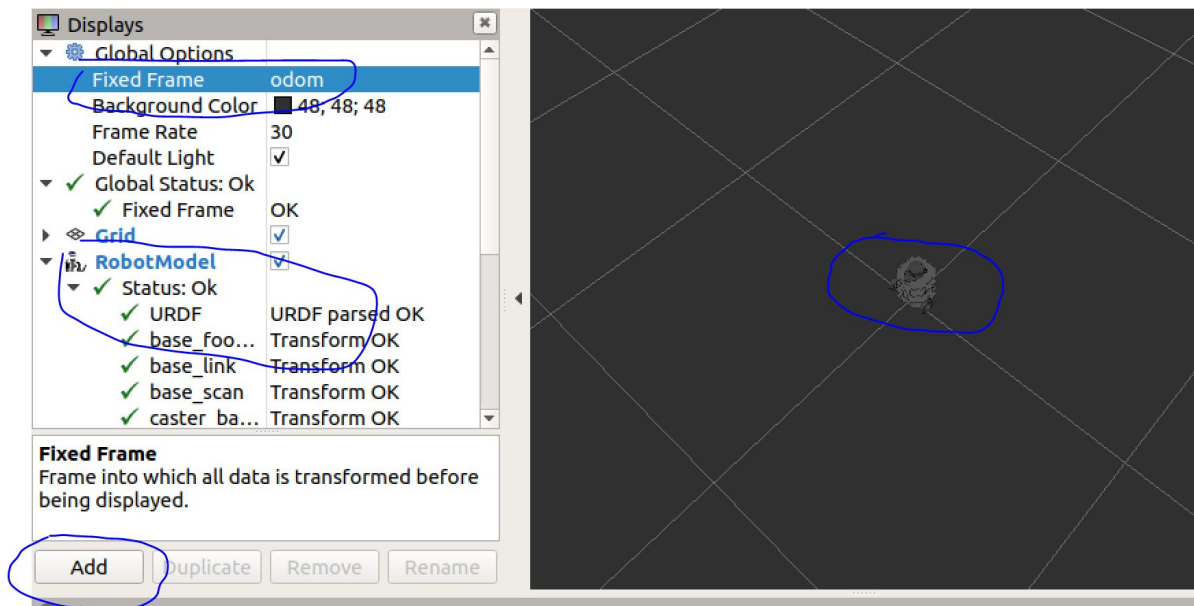
Then you don't need to source the setup.bash everytime when you open a new terminal.

And in the section one 1.1, if you copy paste the command "`roslaunch gazebo_ros spawn_model -urdf -file turtlebot3_burger.urdf.xacro -x 0 -y 0 -z 1 -model TURTLEBOT3_MODEL`", it is highly likely that you will have an error, which is because "`xacro -x`" is shown as "`xacro-x`" where the space disappears, so you know the space is important in the command.



Tips for section 2.

If your rviz visualization has no robot, you can change the fixed frame to "odom" and add the robot model, the RViz visualization should be complete.



Tips for section 3.

Make the beginning part of section 3 more clear.

3 Running turtlebot3 examples

You have spawned the robot in a Gazebo simulation, just in case you closed them, you need to open two terminals and type:

For one terminal:

```
$ roslaunch turtlebot3_gazebo turtlebot3_stage_1.launch
```

For another terminal:

```
$ roslaunch turtlebot3_bringup turtlebot3_remote.launch
```

Then explore the different examples available from the turtlebot3 metapackage. Additional information can be found in this link: https://emanual.robotis.com/docs/en/platform/turtlebot3/basic_examples/#basic-examples

Tips for section 3.

Previously:

1. Move using Interactive Markers: this example uses input coming from rviz. An overlaid marker consisting of arrows and a ring surrounding the robot's position are used to modify the cmd_vel topic with linear and angular velocity changes.

```
$ roslaunch turtlebot3_example interactive_markers.launch  
$ rosrun rviz rviz -d 'rospack find turtlebot3_example'/rviz/turtlebot3_interactive
```

Now:

```
$ roslaunch turtlebot3_example interactive_markers.launch  
$ rosrun rviz rviz -d 'rospack find turtlebot3_example'/rviz  
/turtlebot3_interactive.rviz
```

