JasonLLLL-第四章作业

1. 创建learning_launch功能包

1.1. 进入catkin_ws/src/

1.2. 创建功能包

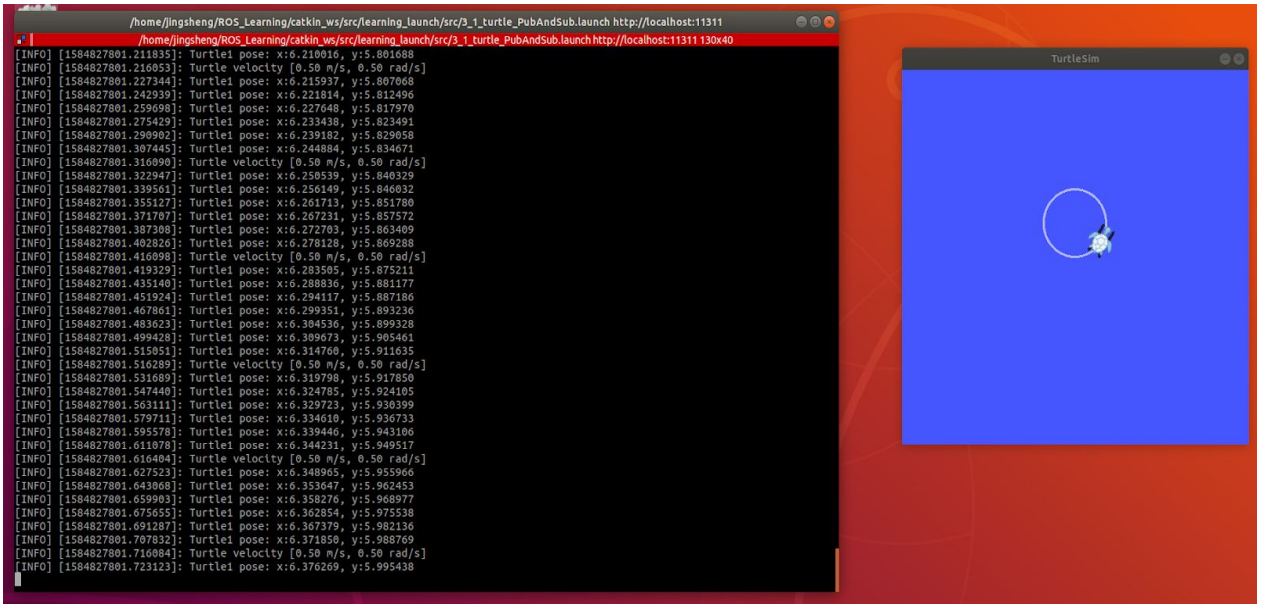
1.2.1. catkin_create_pkg learning_launch rospy roscpp std_msgs std_srvs

1.3. 创建3.1的launch文件

1.3.1. touch 3_1_turtle_PubAndSub.launch

1.3.2. 代码见learning_launch功能包的3_1_turtle_PubAndSub.launch

1.3.3. 结果如图

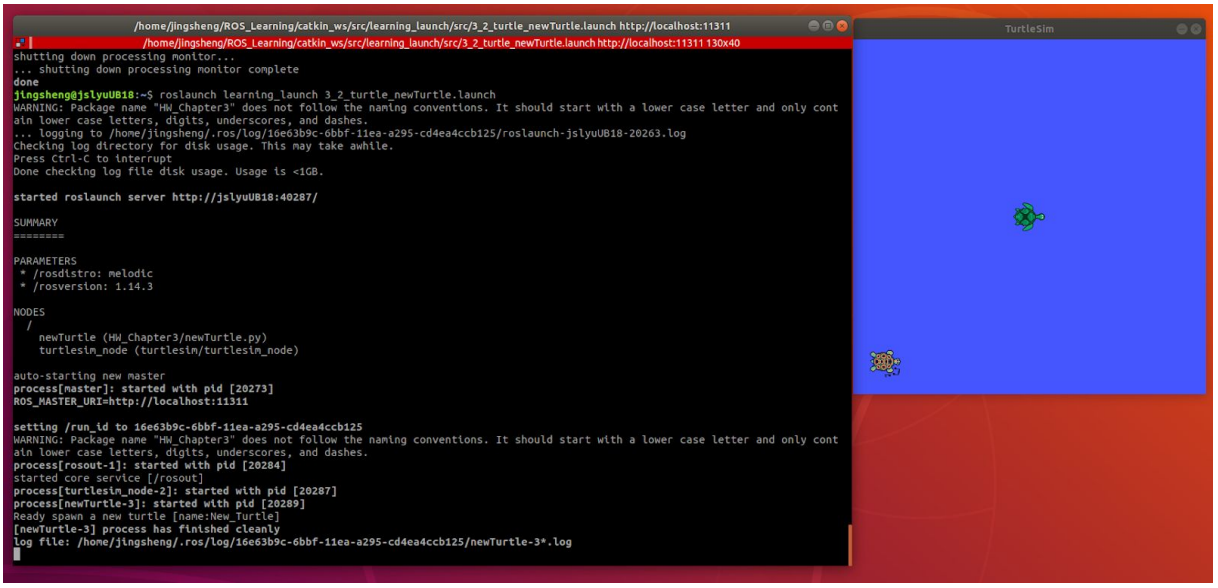


1.4. 创建3.2的launch文件

1.4.1. touch 3_2_turtle_newTurtle.launch

1.4.2. 代码见learning_launch功能包的3_2_turtle_newTurtle.launch

1.4.3. 结果如图

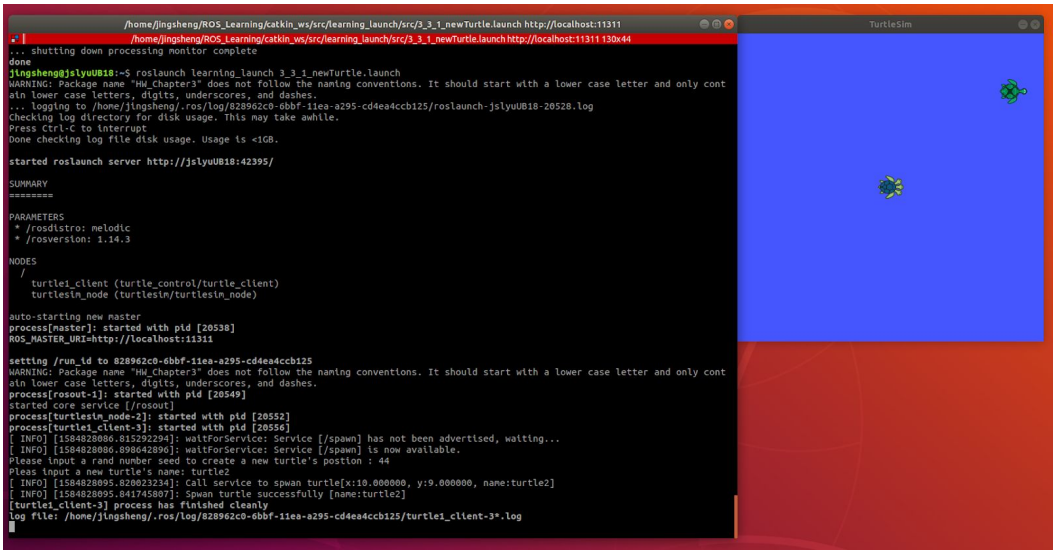


1.5. 创建3.3.1的launch文件

1.5.1. touch 3_3_1_newTurtle.launch

1.5.2. 代码见learning_launch功能包的3_3_1_newTurtle.launch

1.5.3. 结果如图



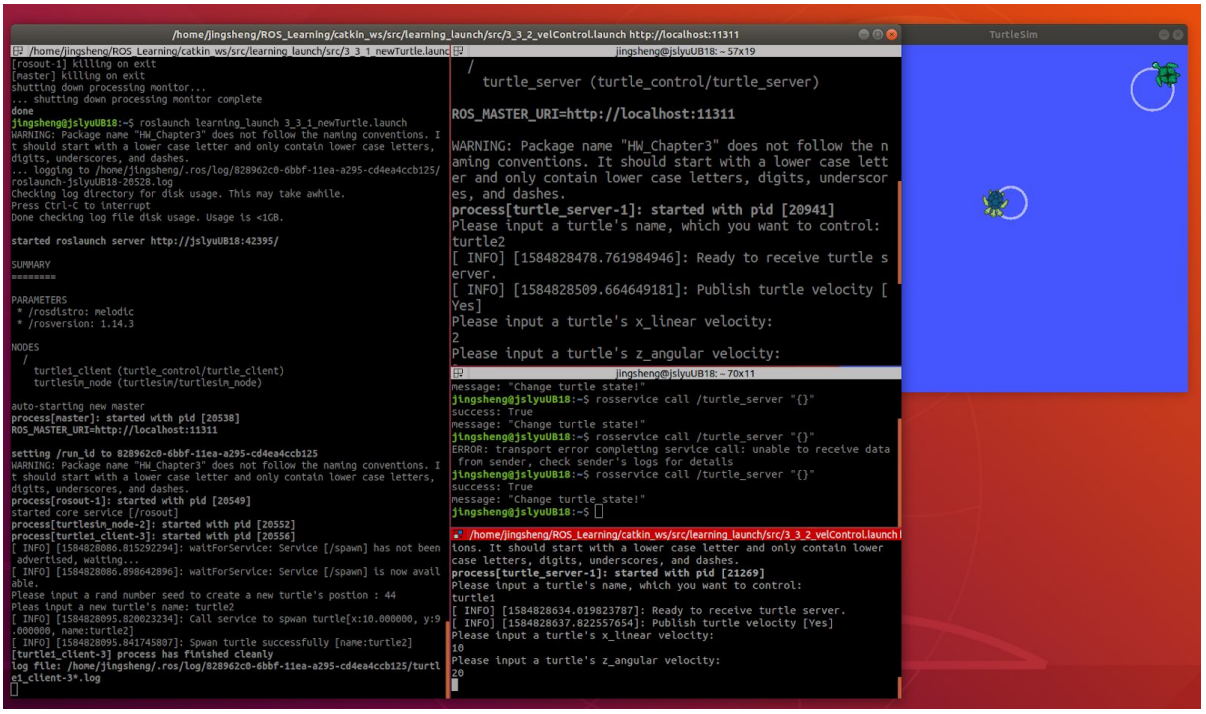
1.5.4.

1.6. 创建3.3.2的launch文件

1.6.1. touch 3_3_2_velControl.launch

1.6.2. 代码见learning_launch功能包的3_3_2_velControl.launch

1.6.3. 结果如图



2. 下载Gazebo，并运行

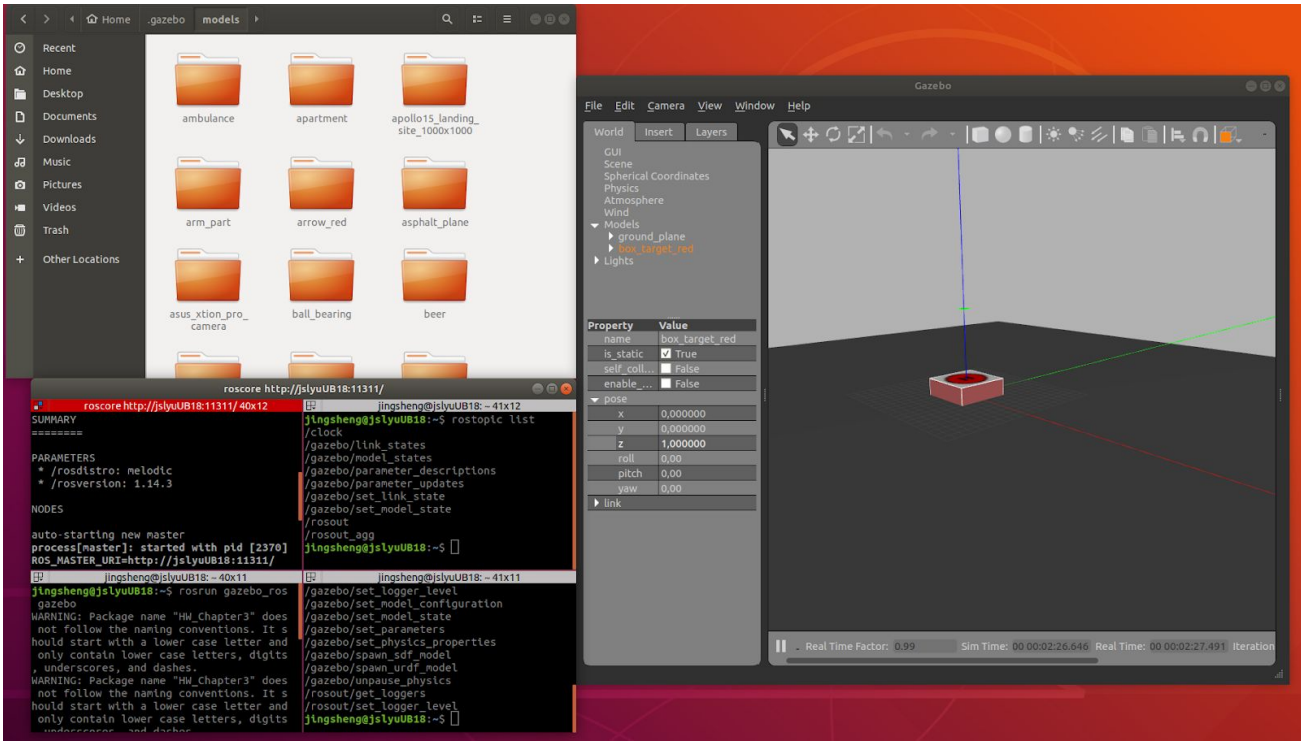
2.1. 运行roscore

2.2. rosrun gazebo_ros gazebo

2.3. 检查rostopic list

2.4. 检查rosservice list

2.5. 结果如图



3. 创建learning_tf功能包

3.1. cd ~/catkin_ws/src/

3.2. catkin_create_pkg learning_tf roscpp rospy tf geometry_msgs

3.3. 编写tf_broadcaster.cpp

3.3.1. 见 tf_broadcaster.cpp

3.3.2. pwd: /catkin_ws/src/learning_tf/src

3.4. 编写tf_listener.cpp

3.4.1. 见 tf_listener.cpp

3.4.2. pwd: /catkin_ws/src/learning_tf/src

3.5. 编译CMakelists.txt

3.5.1. add_executable(tf_broadcaster src/tf_broadcaster.cpp)

3.5.2. add_executable(tf_listener src/tf_listener.cpp)

3.5.3. target_link_libraries(tf_broadcaster ${catkin_LIBRARIES})

3.5.4. target_link_libraries(tf_listener ${catkin_LIBRARIES})

3.6. 回到catkin_ws，catkin_make编译

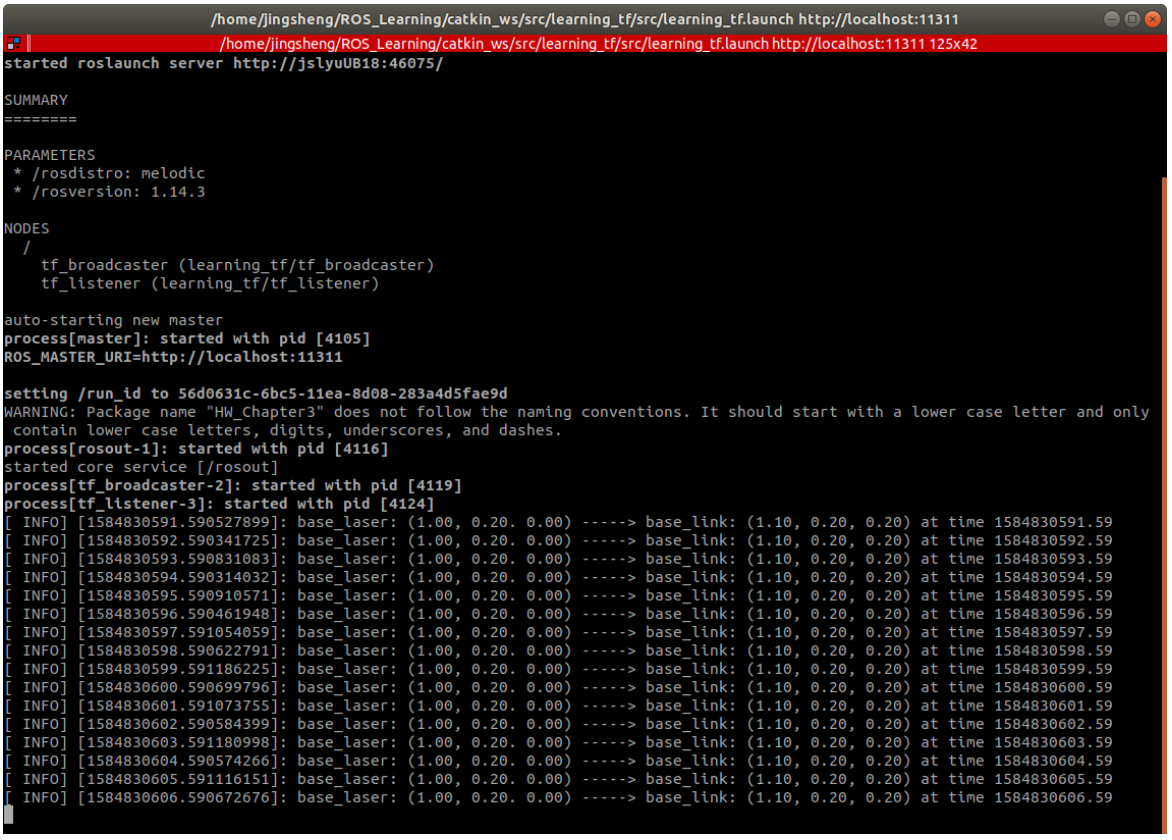
3.7. 编写launch文件

3.7.1. 见 learning_tf.launch

3.7.2. pwd: /catkin_ws/src/learning_tf/src

3.8. roslaunch learning_tf learning_tf.launch

3.9. 结果如图



4. Reference

4.1. 胡春旭 《ROS机器人开发实践》

4.2. ROS wiki

4.2.1. http://wiki.ros.org/roslaunch

4.2.2. http://wiki.ros.org/tf

4.3. 古月居 《ROS探索总结二十二》