Dokumentasi Perintah ROS dari Chapter 2 hingga 7

Chapter 2

1. Memulai ROS Core:

roscore

2. Menjalankan Publisher dan Subscriber:

rosrun mastering_ros_demo_pkg demo_topic_publisher

rosrun mastering_ros_demo_pkg demo_topic_subscriber

3. Menjalankan Publisher dan Subscriber untuk Message:

rosrun mastering_ros_demo_pkg demo_msg_publisher

rosrun mastering_ros_demo_pkg demo_msg_subscriber

4. Menjalankan Server dan Client untuk Service:

rosrun mastering_ros_demo_pkg demo_service_server

rosrun mastering_ros_demo_pkg demo_service_client

5. Menjalankan Client dan Server untuk Action:

rosrun mastering_ros_demo_pkg demo_action_client 10 1

rosrun mastering_ros_demo_pkg demo_action_server

Chapter 3

1. Melihat Robot dalam RViz:

roslaunch mastering_ros_robot_description_pkg view_demo.launch

roslaunch mastering_ros_robot_description_pkg view_arm.launch

roslaunch mastering_ros_robot_description_pkg view_mobile_robot.launch

Chapter 4

1. Meluncurkan Dunia Gazebo:

roslaunch seven_dof_arm_gazebo seven_dof_arm_world.launch

2. Mengontrol Joint Robot:

rostopic pub/seven_dof_arm/joint4_position_controller/command std_msgs/Float64 "data: 1.0"

Chapter 5

1. Memulai ROS Core:

roscore

2. Mengontrol Joint Robot di CoppeliaSim:

rostopic pub /csim_demo/seven_dov_arm/elbow_pitch/cmd std_msgs/Float32 "data: 1.0"

rostopic echo /csim_demo/seven_dov_arm/elbow_pitch/state

3. Menjalankan Webots:

./webots

4. Memeriksa Topik di CoppeliaSim:

rostopic list

Chapter 6

1. Menyalin dan Membuat Workspace:

cp -r ~/Mastering-ROS-for-Robotics-Programming-Third-edition/Chapter6/*
~/catkin_ws/src/

cd ~/catkin_ws

catkin_make

2. Meluncurkan Demo MoveIt dan Gazebo:

roslaunch seven_dof_arm_config demo.launch

roslaunch seven_dof_arm_gazebo seven_dof_arm_bringup_moveit.launch

3. Meluncurkan Robot Roda di Gazebo:

roslaunch diff_wheeled_robot_gazebo diff_wheeled_gazebo_full.launch

4. Memasang dan Meluncurkan GMapping:

sudo apt install ros-noetic-slam-gmapping

roslaunch diff_wheeled_robot_gazebo gmapping.launch

5. Mengontrol Robot dengan Keyboard:

roslaunch diff_wheeled_robot_control keyboard_teleop.launch

6. Menyimpan Peta:

rosrun map_server map_saver -f willow

7. Meluncurkan AMCL untuk Lokalisasi:

roslaunch diff_wheeled_robot_gazebo amcl.launch

Chapter 7

1. Meluncurkan Demo MoveIt:

```
roslaunch seven_dof_arm_config demo.launch
```

2. Menguji Node Acak:

```
rosrun seven_dof_arm_test test_random_node
```

3. Menambahkan Objek Kolisi:

```
rosrun seven_dof_arm_test add_collision_object
```

4. Menjalankan Pick and Place:

```
rosrun seven_dof_arm_test pick_place
```