Bara Khrisna 110321051

Chapter 1

```
sudo sh -c 'echo "deb http://packages.ros.org/ros/ubuntu $(lsb_release -sc) main" > /etc/apt/sources.list.d/ros-latest.list'
```

```
sudo apt install curl
```

```
curl -s https://raw.githubusercontent.com/ros/rosdistro/master/ros.asc | sudo apt-key add -
```

```
sudo apt update
```

```
sudo apt install ros-noetic-desktop-full
```

```
sudo apt install ros-noetic-desktop
```

```
sudo apt install ros-noetic-ros-base
```

```
sudo apt install ros-noetic-PACKAGE
```

Chapter 2
```
source /opt/ros/noetic/setup.bash
Sudo apt update
sudo apt clean
sudo rm -rf /var/lib/apt/lists/*
sudo apt update
sudo apt install git python3-pip python3-rosdep python3-catkin-tools
```

```
sudo rosdep init

rosdep update

sudo rm /etc/ros/rosdep/sources.list.d/20-default.list

sudo rosdep init

rosdep update

cd ~/Downloads

git clone https://github.com/PacktPublishing/Mastering-ROS-for-Robotics-Programming-Third-edition.git repository

cd ~/Downloads/repository

ls # Pastikan folder Chapter2 ada

mkdir src

mv Chapter2 src/

rosdep install --from-paths src --ignore-src -r -y

catkin_make

source devel/setup.bash

Roscore

source ~/Downloads/repository/devel/setup.bash

rosrun mastering_ros_demo_pkg demo_topic_publisher

source ~/Downloads/repository/devel/setup.bash

rosrun mastering_ros_demo_pkg demo_topic_subscriber

Lalu rosrun mastering_ros_demo_pkg demo_msg_publisher

rosrun mastering_ros_demo_pkg demo_msg_subscriber

rosrun mastering_ros_demo_pkg demo_service_server

rosrun mastering_ros_demo_pkg demservice_client

Rosrun mastering_ros_demo_pkg demo_action_server

Rosrun mastering_ros_demo_pkg demo_action_client
```