Linux mint 20 에 ROS Noetic 깔기

하 될줄 알고 했다가 안됨...

http://wiki.ros.org/noetic/Installation/Ubuntu

https://pinkwink.kr/1181

https://emanual.robotis.com/docs/en/platform/turtlebot3/getting_started/#about-turtlebot3

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Linux mint 20 은 Ubuntu Focal 20.04 을 바탕으로 만든 것이기 때문에

ROS noetic을 사용한다

ROS Installation Options

There is more than one ROS distribution supported at a time. Some are older releases with long term support, making them more stable, while others are newer with shorter support life times, but with binaries for more recent platforms and more recent versions of the ROS packages that make them up. See the Distributions page for more details. We recommend one of the versions below:

ROS Kinetic Kame
Released May, 2016
LTS, supported until April, 2021
This version isn't recommended for new installs.

ROS Melodic Morenia
Released May, 2018
LTS, supported until May, 2023
Recommended for Ubuntu 18.04

ROS Noetic Ninjemys
Released May, 2020
Latest LTS, supported until May, 2025
Recommended for Ubuntu 20.04

https://emanual.robotis.com/docs/en/platform/turtlebot3/getting_started/#about-turtlebot3

http://wiki.ros.org/noetic/Installation/Ubuntu

Turtlebot3 는 ros-kinetic을 기반으로 만들었고, 아래 wget으로 한번에 설치 가능하다

```
$ sudo apt-get update
$ sudo apt-get upgrade
$ wget https://raw.githubusercontent.com/ROBOTIS-GIT/robotis_tools/master/install_ros_kinetic.sh && chmod 755 ./install_ros_kinetic.sh && bash ./install_ros_kinetic.sh
```

하지만 kinetic이 곧 지원안되기 때문에, 굳이 새로 ubuntu 16.04를 깔고 ros-kinetic을 깔진 않겠다... 문제 안 생기겠지

http://wiki.ros.org/noetic/Installation/Ubuntu

위의 위키가 친절하게 설치 안내를 해주는데 굳이 따로 설치에 대해서 하는 거는 linux mint에서 위에 제시된 방법으로 깔다가는 에러가 생기기 때문!

http://wiki.ros.org/noetic/Installation/Ubuntu

1.1 Configure your Ubuntu repositories

Configure your Ubuntu repositories to allow "restricted," "universe," and "multiverse." You can follow the Ubuntu guide for instructions on doing this.

안해도 된다 기본 설정이다

http://wiki.ros.org/noetic/Installation/Ubuntu

1.2 Setup your sources.list

Setup your computer to accept software from packages.ros.org.

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

Mirrors Source Debs are also available

얘만 바꿔주면 되는데

```
•sudo sh -c 'echo "deb http://packages.ros.org/ros/ubuntu focal main" > /etc/apt/souces.list.d/ros-latest.list'
```

이렇게 바꿔준다

https://emanual.robotis.com/docs/en/platform/turtlebot3/getting_started/#about-turtlebot3

따라하다가 ros-noetic 패키지 관련해서는
turtlebot3 에 필요한 것들을 받는다

```
$
apt-get
ros-kinetic-joy ros-kinetic-teleop-twist-joy ros-kinetic-teleop-twist-keyboard ros-kinetic-laser-proc ros-kinetic-rgbd-launch ros-kinetic-depthimage-to-laserscan ros-kinetic-rosserial-arduino ros-kinetic-rosserial-python ros-kinetic-rosserial-server ros-kinetic-rosserial-client ros-kinetic-rosserial-msgs ros-kinetic-amcl ros-kinetic-map-server ros-kinetic-move-base ros-kinetic-urdf ros-kinetic-xacro ros-kinetic-compressed-image-transport ros-kinetic-rqt-image-view ros-kinetic-gmapping ros-kinetic-navigation ros-kinetic-interactive-markers
```

이렇게 있는데, ros-noetic에서는 없는 패키지 이름이 있다. 해당 패키지들 때문에 다음과 같이 바꿨다.

ros-kinetic-depthimage-to-laserscan

ros-kinetic-rosserial-server → ros-kinetic-rosserial

```
$
apt-get
ros-kinetic-joy ros-kinetic-teleop-twist-joy ros-kinetic-teleop-twist-keyboard ros-kinetic-laser-proc ros-kinetic-rgbd-launch ros-kinetic-depthimage-to-laserscan ros-kinetic-rosserial-arduino ros-kinetic-rosserial-python ros-kinetic-rosserial ros-kinetic-rosserial-client ros-kinetic-rosserial-msgs ros-kinetic-amcl ros-kinetic-map-server ros-kinetic-move-base ros-kinetic-urdf ros-kinetic-xacro ros-kinetic-compressed-image-transport ros-kinetic-rqt-image-view ros-kinetic-gmapping ros-kinetic-navigation ros-kinetic-interactive-markers
```

http://wiki.ros.org/noetic/Installation/Ubuntu

1.5 Environment setup

You must source this script in every **bash** terminal you use ROS in.

```
source /opt/ros/noetic/setup.bash
```

It can be convenient to automatically source this script every time a new shell is launched. These commands will do that for you.

Bash

If you have more than one ROS distribution installed, ~/.bashrc must only source the setup.bash for the version you are currently using.

```
echo "source /opt/ros/noetic/setup.bash" >> ~/.bashrc
source ~/.bashrc
```

zsh

```
echo "source /opt/ros/noetic/setup.zsh" >> ~/.zshrc
source ~/.zshrc
```

Zsh 관련해서는 안한다

http://wiki.ros.org/noetic/Installation/Ubuntu

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Zsh 관련해서는 안한다

https://emanual.robotis.com/docs/en/platform/turtlebot3/getting_started/#about-turtlebot3

```
$  ~/catkin_ws/src/
$ git clone https://github.com/ROBOTIS-GIT/turtlebot3_msgs.git
$ git clone -b kinetic-devel https://github.com/ROBOTIS-GIT/turtlebot3.git
$ ~/catkin_ws && catkin_make
```

turtlebot3_simulations 도 필요

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$  ~/catkin_ws/src/
$ git clone https://github.com/ROBOTIS-GIT/turtlebot3_msgs.git
$ git clone https://github.com/ROBOTIS-GIT/turtlebot3_simulations.git
$ git clone -b kinetic-devel https://github.com/ROBOTIS-GIT/turtlebot3.git
$ ~/catkin_ws && catkin_make
```