

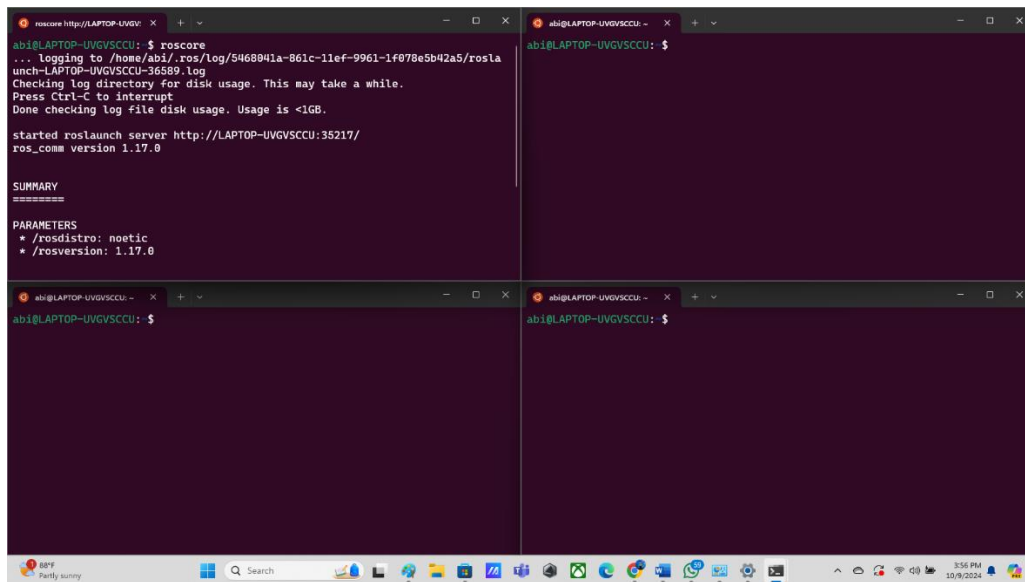
Langkah-Langkah Pengerjaan ROS Tutorial 2 (ROS1)

Nama : Ketut Satria Wibisana

NIM : 1103213148

Kelas : TK-45-G09

1. Masukkan syntax **roscore** untuk menjalankan komunikasi antar node ROS

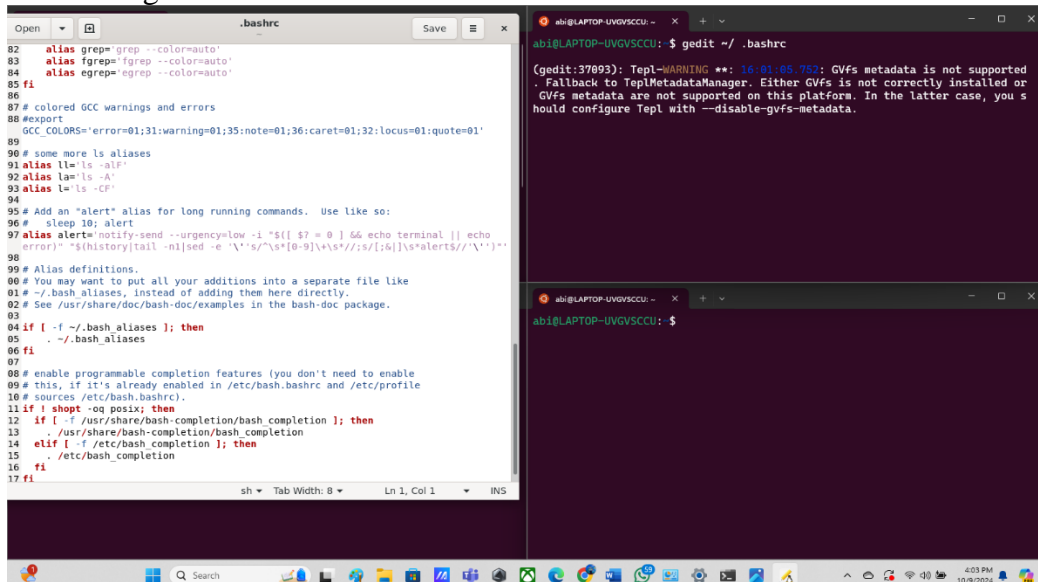


```
abi@LAPTOP-UVGVSCCU: ~$ roscore
... logging to /home/abi/.ros/log/5468841a-861c-11ef-9961-1f078e5b42a5/ros1a
unch-LAPTOP-UVGVSCCU-36589.log
Checking log directory for disk usage. This may take a while.
Press Ctrl-C to interrupt
Done checking log file disk usage. Usage is <1GB.

started roslaunch server http://LAPTOP-UVGVSCCU:35217/
ros_comm version 1.17.0

SUMMARY
=====
PARAMETERS
 * /rostdistro: noetic
 * /rosversion: 1.17.0
```

2. Masukkan Syntax **gedit ~/.bashrc** dan tambahkan **source/opt/res/noetic/setup.bash** untuk menginisialisasi environment ROS



```
abi@LAPTOP-UVGVSCCU: ~$ gedit ~/.bashrc
(gedit:37893): Tepl-WARNING **: 16:01:05.752: GVfs metadata is not supported.
Fallback to TeplMetadataManager. Either GVfs is not correctly installed or
GVfs metadata are not supported on this platform. In the latter case, you s
hould configure Tepl with --disable-gvfs-metadata.
```

3. Masukkan Syntax **roslaunch rospy_tutorials talker** untuk menjalankan node talker.

```
abi@LAPTOP-UVGVSCCU: ~$ roslaunch rospy_tutorials talker
[INFO] [1728464983.768325]: hello world 1728464983.7682512
[INFO] [1728464983.868659]: hello world 1728464983.8685236
[INFO] [1728464983.968684]: hello world 1728464983.9685441
[INFO] [1728464984.068520]: hello world 1728464984.0684354
[INFO] [1728464984.168663]: hello world 1728464984.1685243
[INFO] [1728464984.268718]: hello world 1728464984.2685769
[INFO] [1728464984.368678]: hello world 1728464984.3685225
[INFO] [1728464984.468754]: hello world 1728464984.4686893
[INFO] [1728464984.568660]: hello world 1728464984.5685114
[INFO] [1728464984.668708]: hello world 1728464984.668554
[INFO] [1728464984.768753]: hello world 1728464984.7685752
[INFO] [1728464984.868685]: hello world 1728464984.8684545
[INFO] [1728464984.968722]: hello world 1728464984.9685795
[INFO] [1728464985.068722]: hello world 1728464985.0685754
[INFO] [1728464985.168768]: hello world 1728464985.1686249
[INFO] [1728464985.268683]: hello world 1728464985.268537
[INFO] [1728464985.368683]: hello world 1728464985.3685312
```

```
Summary
=====
PARAMETERS
* /rostdistro: noetic
* /rosversion: 1.17.0

NODES

auto-starting new master
process[roscpp-1]: started with pid [37130]
ROS_MASTER_URI=http://LAPTOP-UVGVSCCU:11311/

setting /run_id to cafa3c32-861d-11ef-9961-1f078e5b42a5
process[rosout-1]: started with pid [37140]
started core service [/rosout]
```

4. Masukkan Syntax **rqt_graph** untuk menampilkan diagram hubungan antar node.

```
abi@LAPTOP-UVGVSCCU: ~$ rqt_graph
[INFO] [1728465247.843984]: hello world 1728465247.8438437
[INFO] [1728465247.943966]: hello world 1728465247.9438245
[INFO] [1728465248.043983]: hello world 1728465248.043767
[INFO] [1728465248.143965]: hello world 1728465248.1438265
[INFO] [1728465248.243959]: hello world 1728465248.2438192
[INFO] [1728465248.343871]: hello world 1728465248.343785
[INFO] [1728465248.443976]: hello world 1728465248.443836
[INFO] [1728465248.543964]: hello world 1728465248.5438058
[INFO] [1728465248.643950]: hello world 1728465248.6438086
[INFO] [1728465248.743899]: hello world 1728465248.7437384
[INFO] [1728465248.843884]: hello world 1728465248.8437302
[INFO] [1728465248.943877]: hello world 1728465248.943739
[INFO] [1728465249.043812]: hello world 1728465249.0436635
[INFO] [1728465249.143922]: hello world 1728465249.1437887
[INFO] [1728465249.243998]: hello world 1728465249.2438402
[INFO] [1728465249.343905]: hello world 1728465249.3437486
[INFO] [1728465249.443894]: hello world 1728465249.443746
```

```
Summary
=====
PARAMETERS
* /rostdistro: noetic
* /rosversion: 1.17.0

NODES

auto-starting new master
process[roscpp-1]: started with pid [37256]
ROS_MASTER_URI=http://LAPTOP-UVGVSCCU:11311/

setting /run_id to 95cf2b2a-861e-11ef-9961-1f078e5b42a5
process[rosout-1]: started with pid [37266]
started core service [/rosout]
```

```
rqt_graph_RosGraph - rqt
Node Graph
Nodes only
Group: 2
Namespaces: Actions, tf, Images, Highlight, Fit
Hide: Dead sinks, Leaf topics, Debug, tf, Unreachable, Params
talker_37274_1728465203423
```

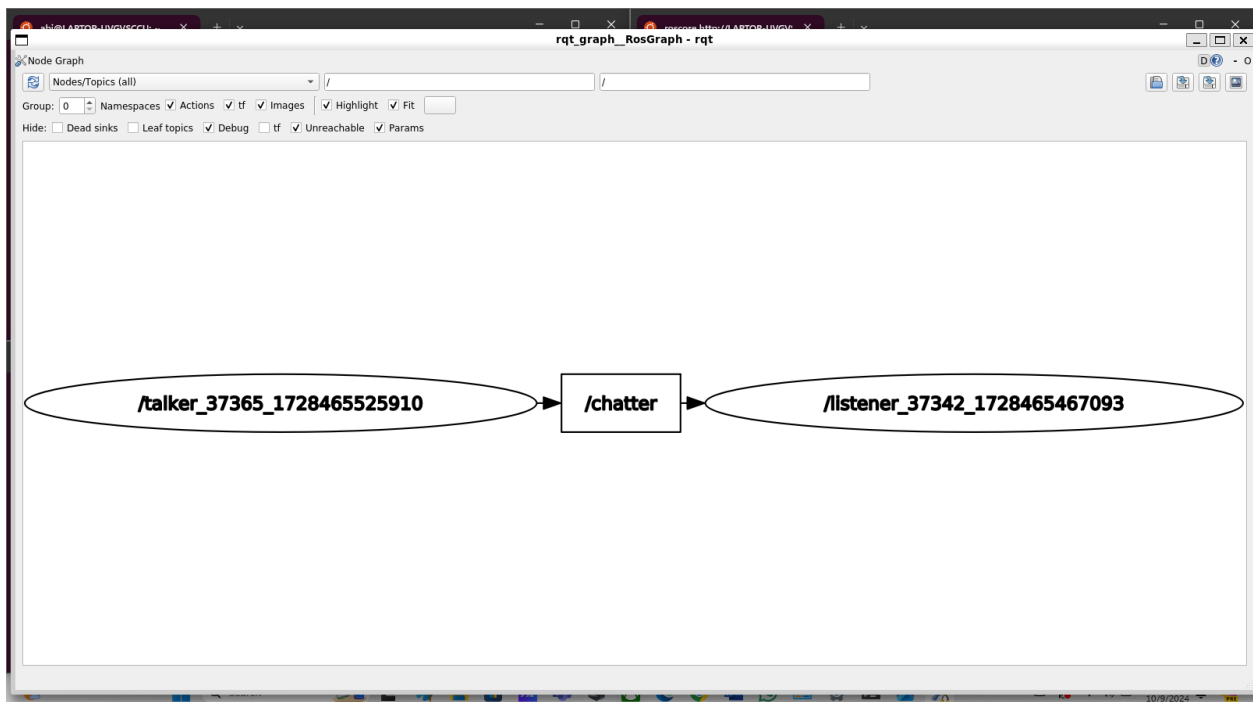
5. Masukkan Syntax **rospy_tutorials listener** untuk menjalankan node listener

The screenshot displays four terminal windows from a ROS environment. The top-left window shows the output of the `rospy_tutorials listener` node, which repeatedly prints "hello world" with timestamps. The top-right window shows the output of the `roscore` command, displaying the ROS master's status and parameters. The bottom-left window shows the output of the `rospy_tutorials listener` node, which repeatedly prints "heard hello world" with timestamps. The bottom-right window shows the output of the `rqt_graph` command, which displays the ROS graph.

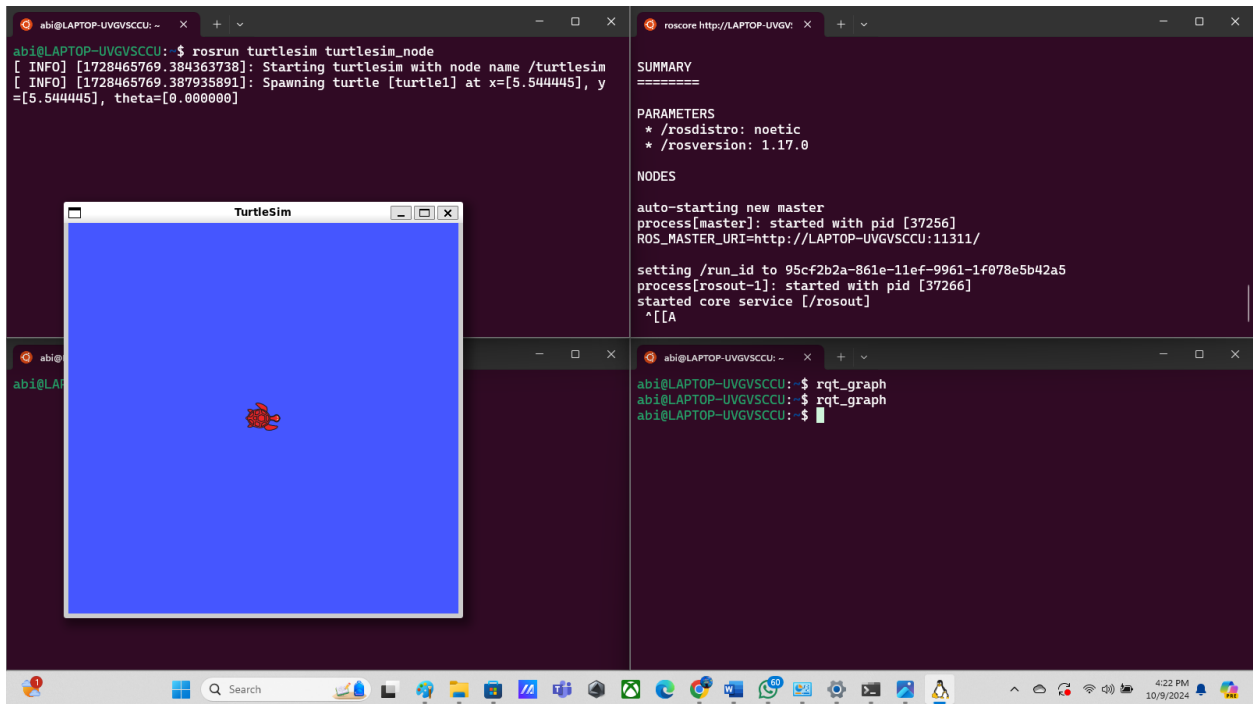
```
abi@LAPTOP-UVGVSCCU: ~$ rosrun rospy_tutorials listener
[INFO] [1728465469.062019]: hello world 1728465469.061876
[INFO] [1728465469.162012]: hello world 1728465469.1618621
[INFO] [1728465469.262073]: hello world 1728465469.261926
[INFO] [1728465469.362077]: hello world 1728465469.3619223
[INFO] [1728465469.462109]: hello world 1728465469.4619544
[INFO] [1728465469.562121]: hello world 1728465469.5619721
[INFO] [1728465469.662333]: hello world 1728465469.6621482
[INFO] [1728465469.762044]: hello world 1728465469.761898
[INFO] [1728465469.862137]: hello world 1728465469.8619982
[INFO] [1728465469.962081]: hello world 1728465469.9619236
[INFO] [1728465470.062061]: hello world 1728465470.061917
[INFO] [1728465470.162117]: hello world 1728465470.1619534
[INFO] [1728465470.262112]: hello world 1728465470.261964
[INFO] [1728465470.362243]: hello world 1728465470.3619962
[INFO] [1728465470.462188]: hello world 1728465470.4620364
[INFO] [1728465470.562086]: hello world 1728465470.561941
[INFO] [1728465470.662198]: hello world 1728465470.6619496

abi@LAPTOP-UVGVSCCU: ~$ rqt_graph
abi@LAPTOP-UVGVSCCU: ~$
```

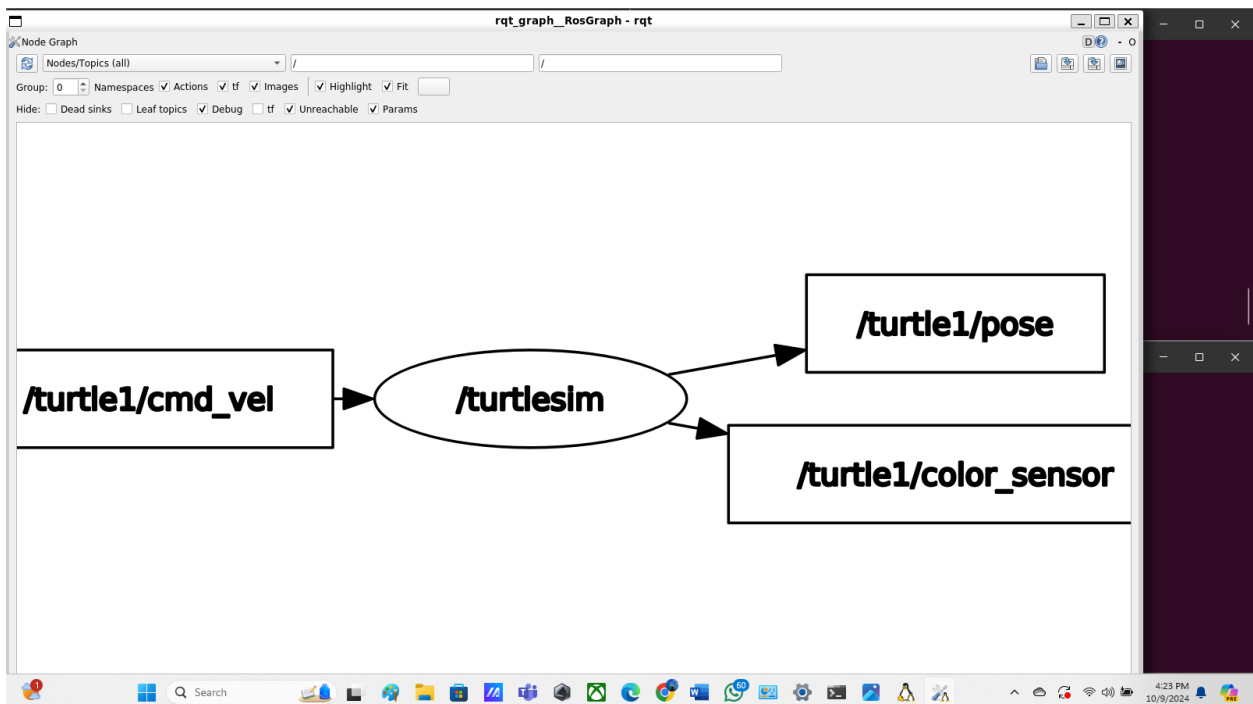
6. Masukkan syntax **rqt_graph** untuk melihat bagaimana node listener dapat terhubung dengan node talker.



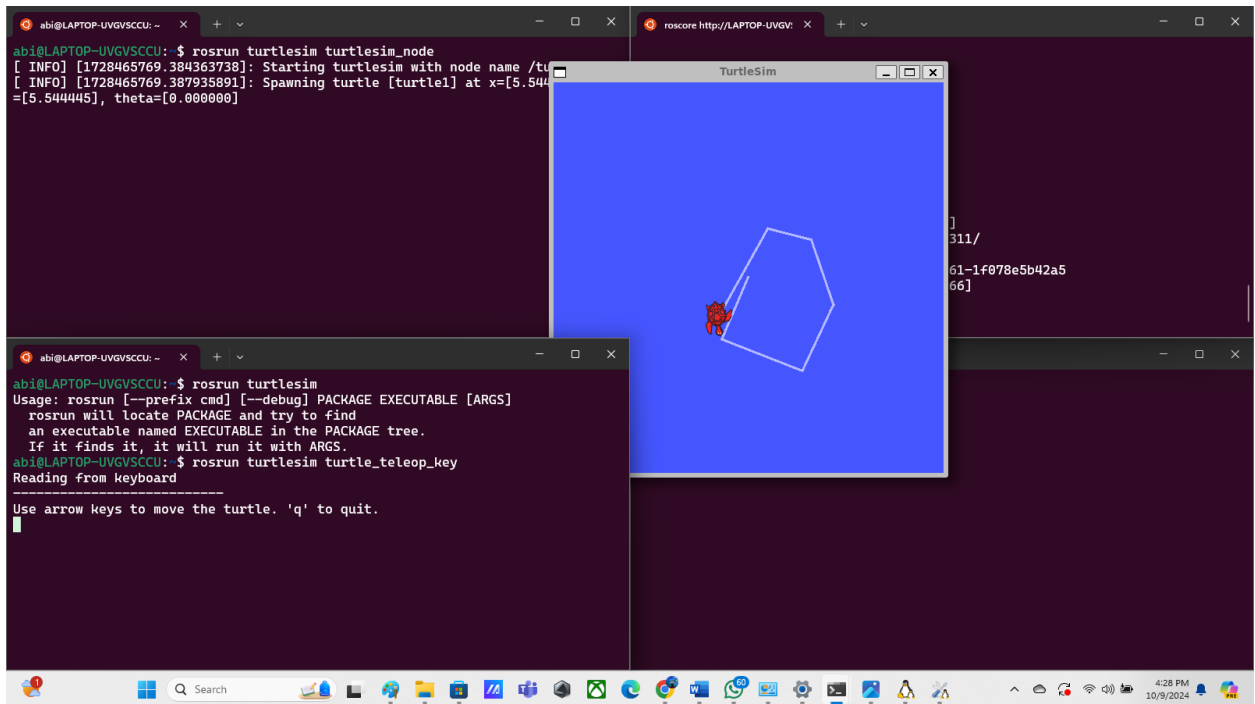
7. Masukkan syntax **roslaunch turtlesim turtlesim_node** untuk menjalankan simulasi turtlesim



8. Masukkan syntax **rqt_graph** untuk melihat node turtlesim_node



9. Masukkan syntax **roslaunch turtlesim turtle_teleop_key** untuk mengendalikan kura-kura menggunakan keyboard



10. Masukkan syntax **rqt_graph** untuk melihat bagaimana node turtle_teleop_key terhubung dengan turtlesim_node

