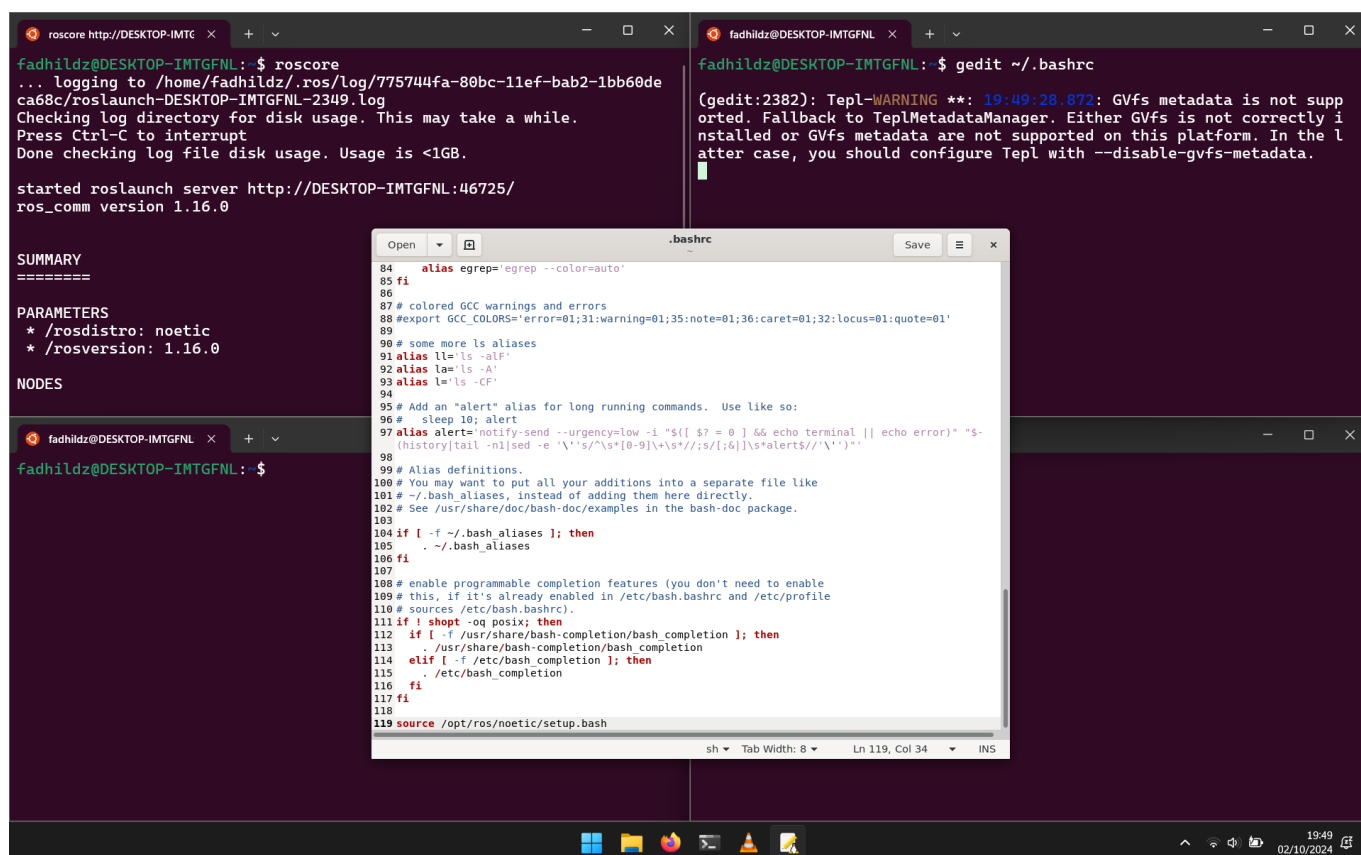


Kelas : TK-45-G09



3. Jalankan **roslaunch rospy_tutorials talker** untuk menjalankan node **talker**.

```
roslaunch http://DESKTOP-IMTGC x + v
fadhildz@DESKTOP-IMTGFNL:~$ roscore
... logging to /home/fadhildz/.ros/log/775744fa-80bc-11ef-bab2-1bb60de
ca68c/roslaunch-DESKTOP-IMTGFNL-2349.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://DESKTOP-IMTGFNL:46725/
ros_comm version 1.16.0

SUMMARY
=====

PARAMETERS
* /rostdistro: noetic
* /rosversion: 1.16.0

NODES
```

```
fadhildz@DESKTOP-IMTGFNL:~$ roslaunch rospy_tutorials talker
[INFO] [1727873947.547403]: hello world 1727873947.547226
[INFO] [1727873947.647830]: hello world 1727873947.6475961
[INFO] [1727873947.747963]: hello world 1727873947.7476275
[INFO] [1727873947.847687]: hello world 1727873947.847488
[INFO] [1727873947.947950]: hello world 1727873947.9476268
[INFO] [1727873948.047980]: hello world 1727873948.0476172
[INFO] [1727873948.147883]: hello world 1727873948.1475973
[INFO] [1727873948.247934]: hello world 1727873948.2475953
[INFO] [1727873948.347950]: hello world 1727873948.347608
[INFO] [1727873948.447918]: hello world 1727873948.447625
[INFO] [1727873948.547941]: hello world 1727873948.5475967
[INFO] [1727873948.647917]: hello world 1727873948.6476192
[INFO] [1727873948.747885]: hello world 1727873948.7475827
[INFO] [1727873948.847682]: hello world 1727873948.8475046
[INFO] [1727873948.947748]: hello world 1727873948.94751
[INFO] [1727873949.047860]: hello world 1727873949.0475478
[INFO] [1727873949.147953]: hello world 1727873949.1476083
[INFO] [1727873949.247780]: hello world 1727873949.247531
```

```
fadhildz@DESKTOP-IMTGFNL:~$
```

4. Jalankan **rqt_graph** untuk menampilkan diagram hubungan antar node.

```
roslaunch http://DESKTOP-IMTGC x + v
fadhildz@DESKTOP-IMTGFNL:~$ roscore
... logging to /home/fadhildz/.ros/log/775744fa-80bc-11ef-bab2-1bb60de
ca68c/roslaunch-DESKTOP-IMTGFNL-2349.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://DESKTOP-IMTGFNL:46725/
ros_comm version 1.16.0

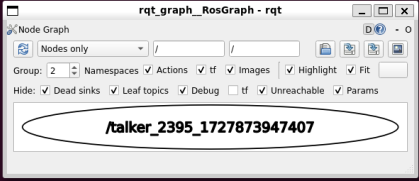
SUMMARY
=====

PARAMETERS
* /rostdistro: noetic
* /rosversion: 1.16.0

NODES
```

```
fadhildz@DESKTOP-IMTGFNL:~$ roslaunch rospy_tutorials talker
[INFO] [1727873947.547403]: hello world 1727873947.547226
[INFO] [1727873947.647830]: hello world 1727873947.6475961
[INFO] [1727873947.747963]: hello world 1727873947.7476275
[INFO] [1727873947.847687]: hello world 1727873947.847488
[INFO] [1727873947.947950]: hello world 1727873947.9476268
[INFO] [1727873948.047980]: hello world 1727873948.0476172
[INFO] [1727873948.147883]: hello world 1727873948.1475973
[INFO] [1727873948.247934]: hello world 1727873948.2475953
[INFO] [1727873948.347950]: hello world 1727873948.347608
[INFO] [1727873948.447918]: hello world 1727873948.447625
[INFO] [1727873948.547941]: hello world 1727873948.5475967
[INFO] [1727873948.647917]: hello world 1727873948.6476192
[INFO] [1727873948.747885]: hello world 1727873948.7475827
[INFO] [1727873948.847682]: hello world 1727873948.8475046
[INFO] [1727873948.947748]: hello world 1727873948.94751
[INFO] [1727873949.047860]: hello world 1727873949.0475478
[INFO] [1727873949.147953]: hello world 1727873949.1476083
[INFO] [1727873949.247780]: hello world 1727873949.247531
```

```
fadhildz@DESKTOP-IMTGFNL:~$ rqt_graph
```



The screenshot shows the **rqt_graph** window titled **rqt_graph_RosGraph - rqt**. It displays a single node in a graph, represented by an oval labeled **/talker_2395_1727873947407**. The window includes a search bar, a group selector (set to 2), and various checkboxes for filtering the graph (Namespaces, Actions, tf, Images, Highlight, Fit, Hide, Dead sinks, Leaf topics, Debug, Unreachable, Params).

5. Jalankan **roslaunch rospy_tutorials listener** untuk menjalankan node **listener**.

The screenshot shows two terminal windows. The left window displays the output of `roslaunch` for the `rospy_tutorials` package, showing the launch of the `listener` node. The right window shows the output of `roslaunch` for the `rospy_tutorials` package, showing the launch of the `listener` node. The output shows the listener node receiving messages from the `talker` node.

```
fadhildz@DESKTOP-INTGFL:~$ roslaunch rospy_tutorials listener
... logging to /home/fadhildz/.ros/log/775744fa-80bc-11ef-bab2-1bb60de
ca68c/roslaunch-DESKTOP-INTGFL-2349.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://DESKTOP-INTGFL:46725/
ros_comm version 1.16.0

SUMMARY
=====
PARAMETERS
* /rostdistro: noetic
* /rosversion: 1.16.0

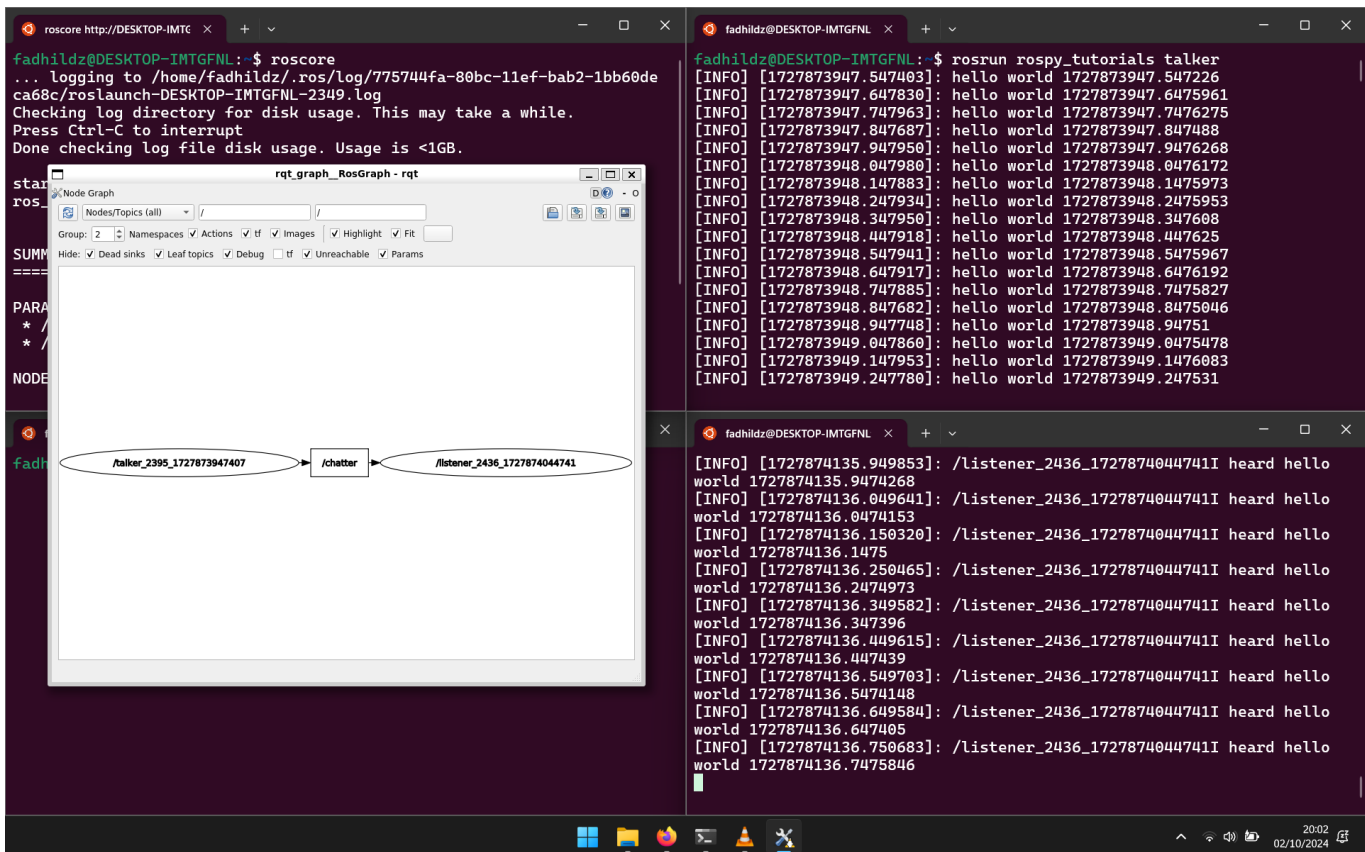
NODES

```

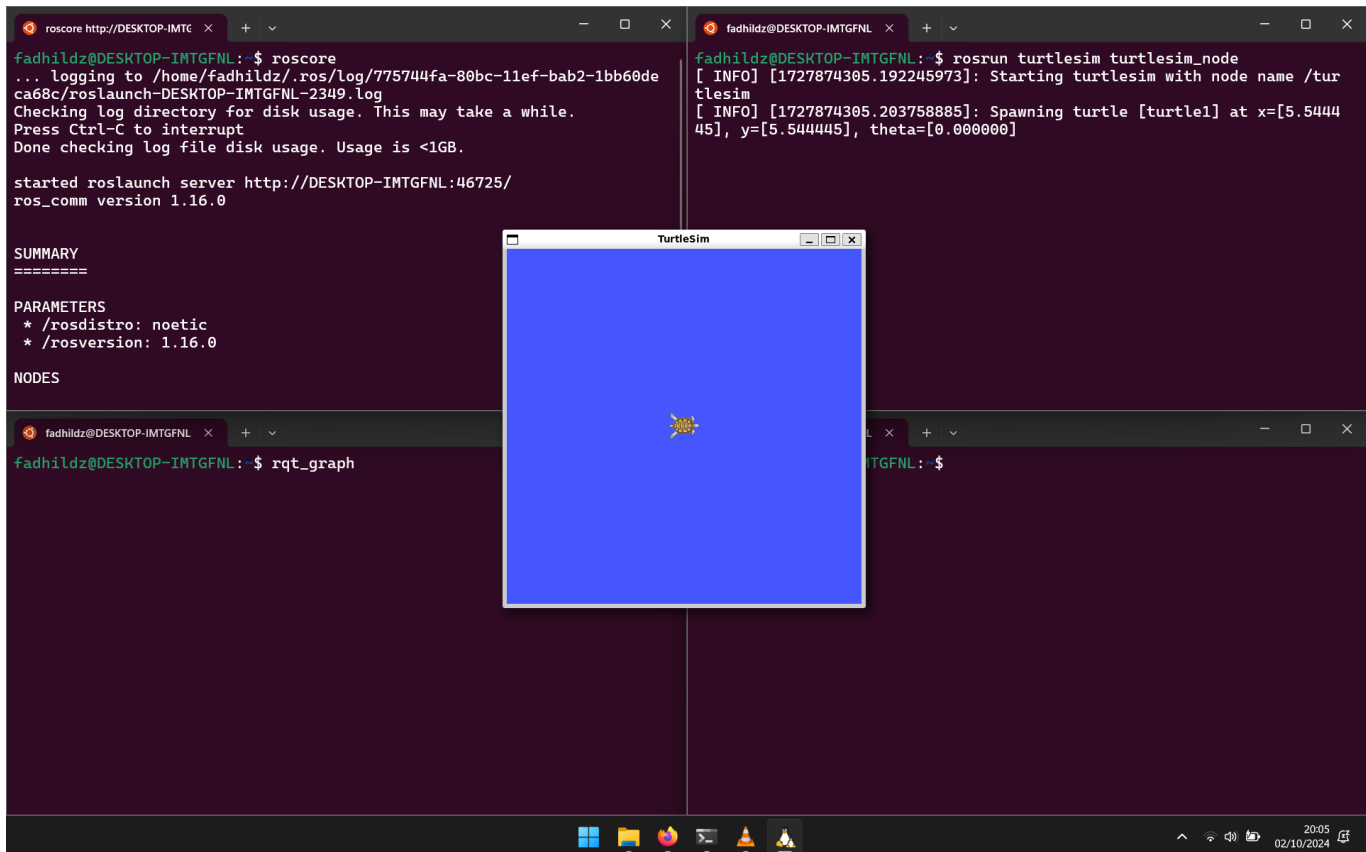
```
fadhildz@DESKTOP-INTGFL:~$ roslaunch rospy_tutorials listener
[INFO] [1727873947.547403]: hello world 1727873947.547226
[INFO] [1727873947.647830]: hello world 1727873947.6475961
[INFO] [1727873947.747963]: hello world 1727873947.7476275
[INFO] [1727873947.847687]: hello world 1727873947.847488
[INFO] [1727873947.947950]: hello world 1727873947.9476268
[INFO] [1727873948.047980]: hello world 1727873948.0476172
[INFO] [1727873948.147883]: hello world 1727873948.1475973
[INFO] [1727873948.247934]: hello world 1727873948.2475953
[INFO] [1727873948.347950]: hello world 1727873948.347608
[INFO] [1727873948.447918]: hello world 1727873948.447625
[INFO] [1727873948.547941]: hello world 1727873948.5475967
[INFO] [1727873948.647917]: hello world 1727873948.6476192
[INFO] [1727873948.747885]: hello world 1727873948.7475827
[INFO] [1727873948.847682]: hello world 1727873948.8475046
[INFO] [1727873948.947748]: hello world 1727873948.94751
[INFO] [1727873949.047860]: hello world 1727873949.0475478
[INFO] [1727873949.147953]: hello world 1727873949.1476083
[INFO] [1727873949.247780]: hello world 1727873949.247531

```

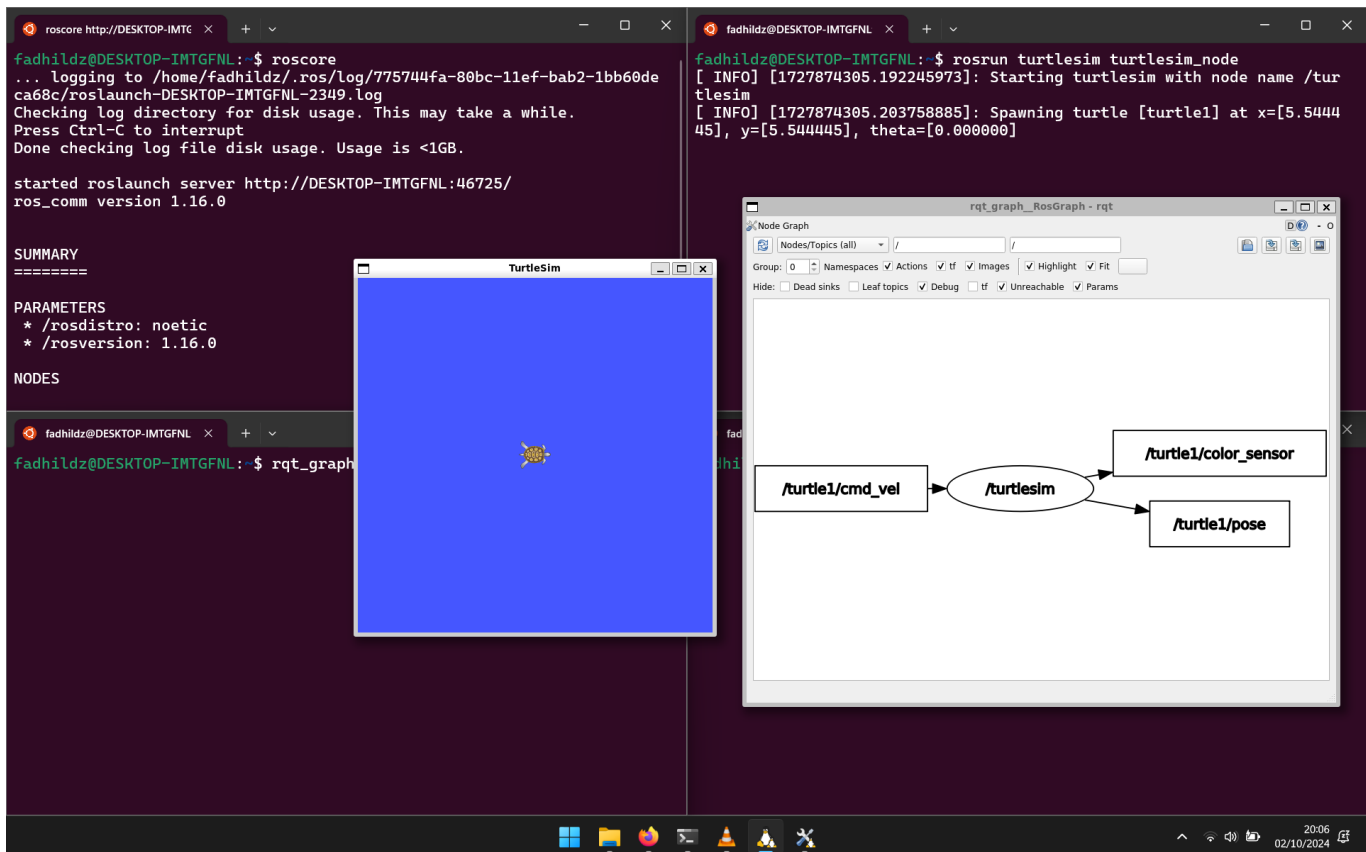
6. Jalankan lagi **rqt_graph** untuk melihat bagaimana node **listener** terhubung dengan node **talker**.



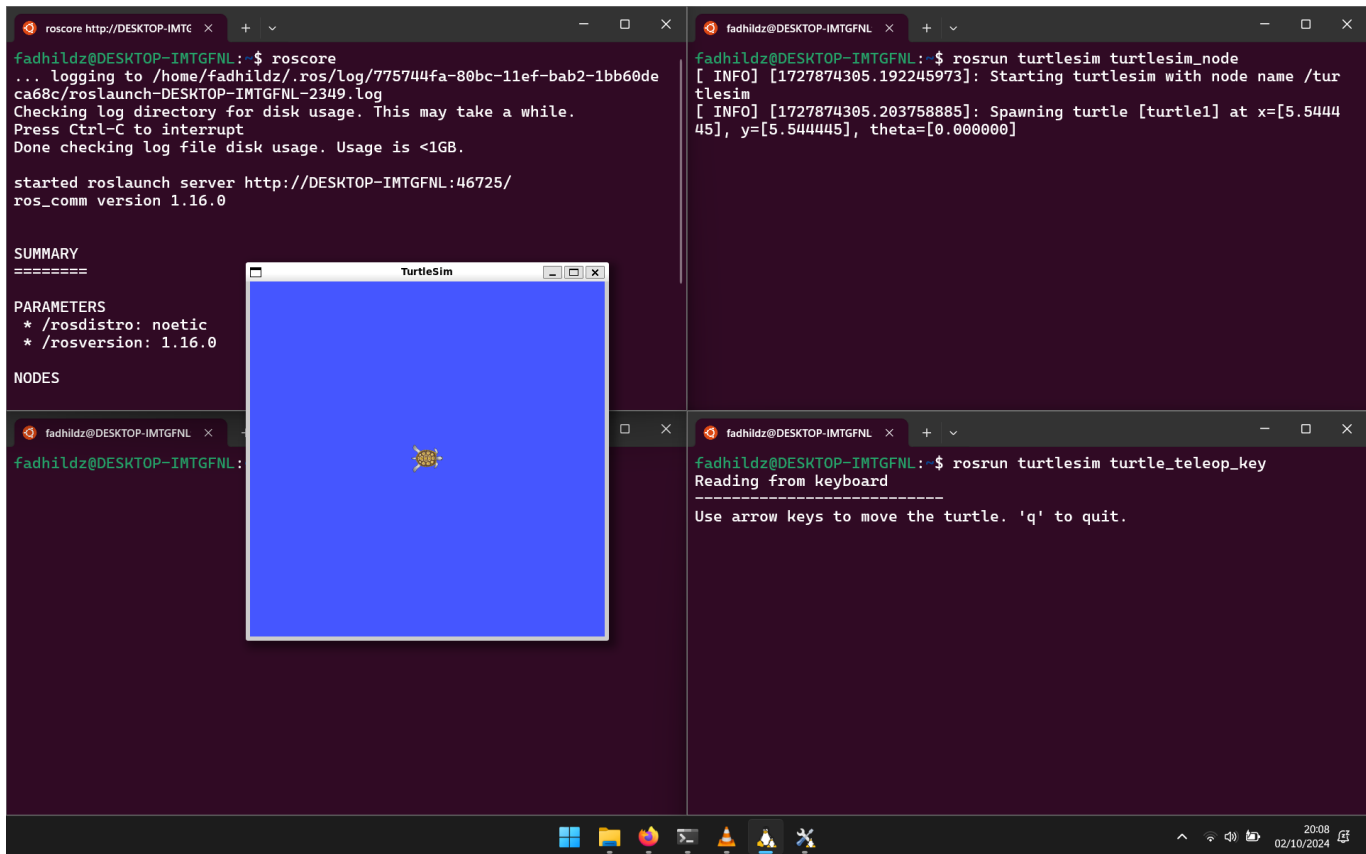
7. Jalankan `roslaunch turtlesim turtlesim_node` untuk menjalankan simulasi `turtlesim`



8. Jalankan `rqt_graph` lagi untuk melihat node `turtlesim_node`



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



10. Jalankan lagi **rqt_graph** untuk melihat bagaimana node **turtle_teleop_key** terhubung dengan **turtlesim_node**.

