

ECSE-4965

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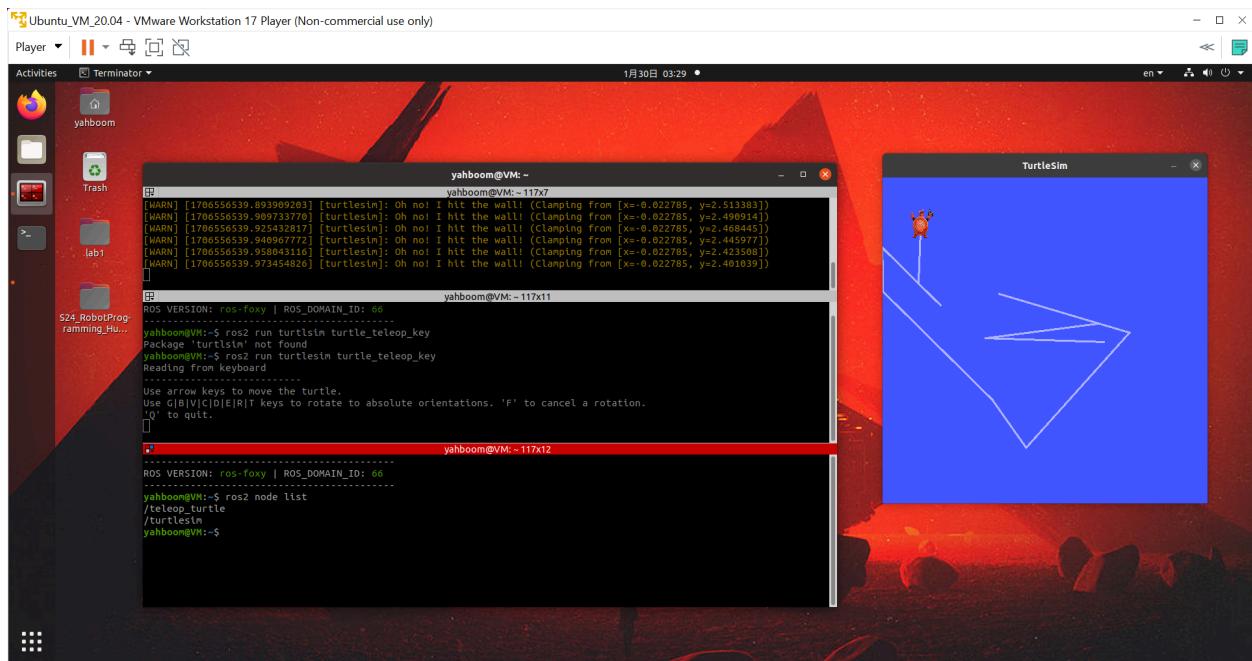
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Lab 2 Deliverables

Task 2

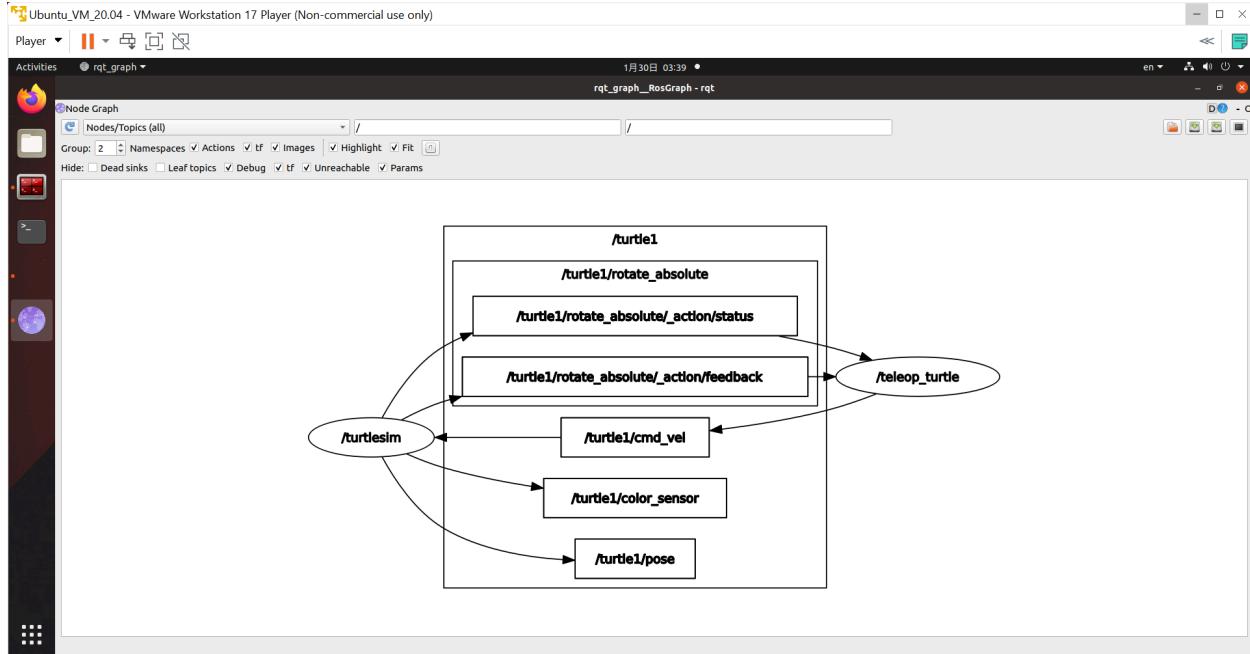
Nodes

Multiple Terminals and List of Nodes



Topics

Step 7: RQT_Graph



Step 21: ros2 topic info, interface show, and topic echo

ros2 topic info /turtle1/pose:

```
yahboom@VM:~$ ros2 topic info /turtle1/pose
Type: turtlesim/msg/Pose
Publisher count: 1
Subscription count: 0
```

ros2 interface show /turtle1/pose:

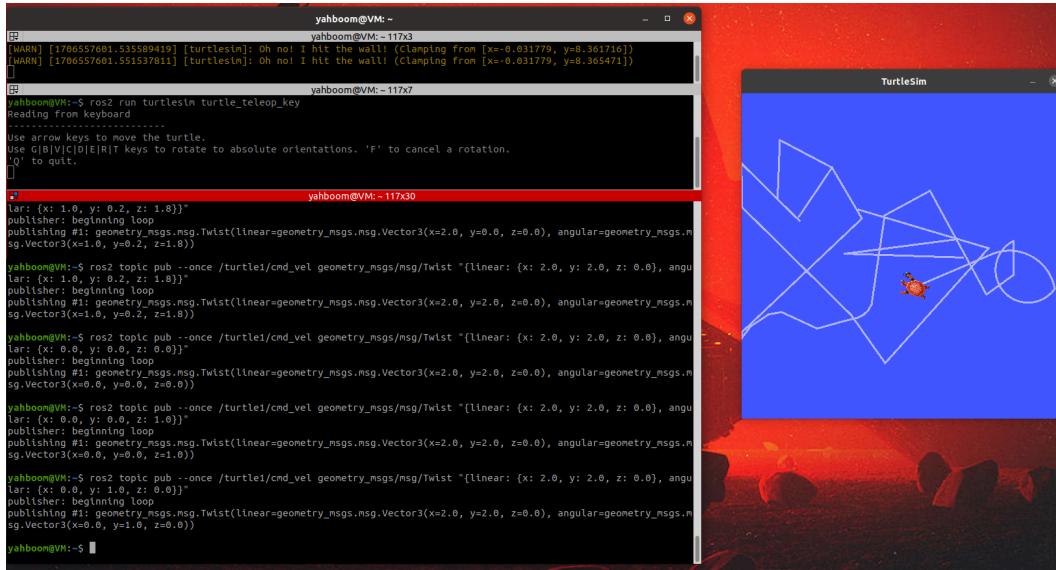
```
yahboom@VM:~$ ros2 interface show /turtle1/pose
Traceback (most recent call last):
  File "/opt/ros/foxy/bin/ros2", line 11, in <module>
    load_entry_point('ros2cli==0.9.13', 'console_scripts', 'ros2')()
  File "/opt/ros/foxy/lib/python3.8/site-packages/ros2cli/cli.py", line 67, in main
    rc = extension.main(parser=parser, args=args)
  File "/opt/ros/foxy/lib/python3.8/site-packages/ros2interface/command/interface.py", line 35, in main
    return extension.main(args=args)
  File "/opt/ros/foxy/lib/python3.8/site-packages/ros2interface/verb/show.py", line 50, in main
    file_path = get_interface_path(args.type)
  File "/opt/ros/foxy/lib/python3.8/site-packages/rosidl_runtime_py/get_interfaces.py", line 173, in get_interface_path
    raise ValueError(f"Invalid name '{interface_name}'. Must not contain empty parts")
ValueError: Invalid name '/turtle1/pose'. Must not contain empty parts
yahboom@VM:~$
```

```
ros2 topic echo /turtle1/pose:
```

Relayed information regarding turtle1's position as it moved

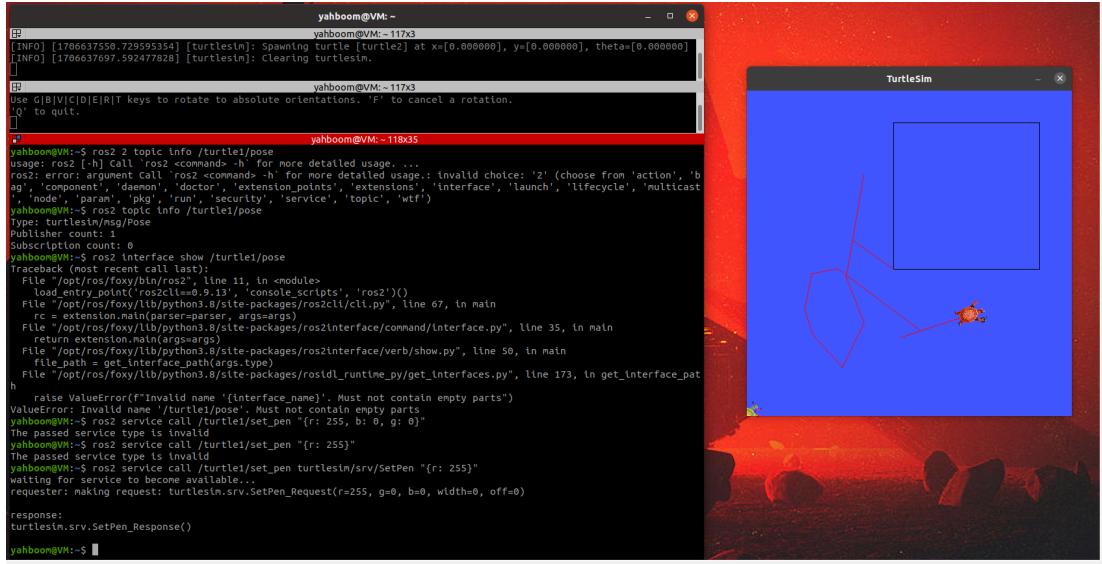
Step 25

Changes the position of the turtle based on the values inputted

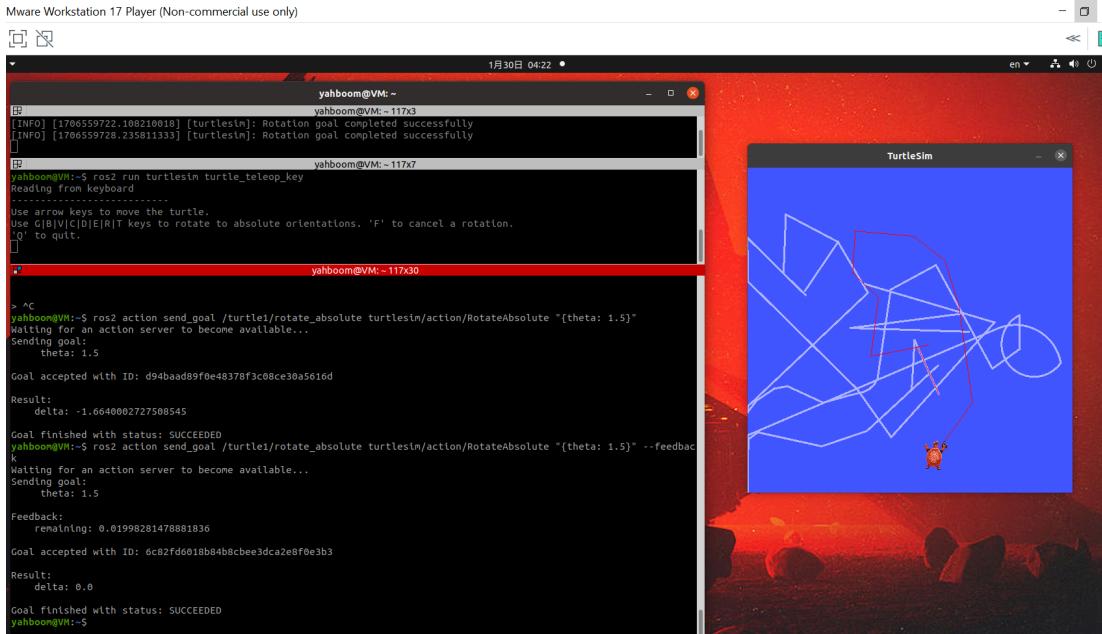


Services

Challenge

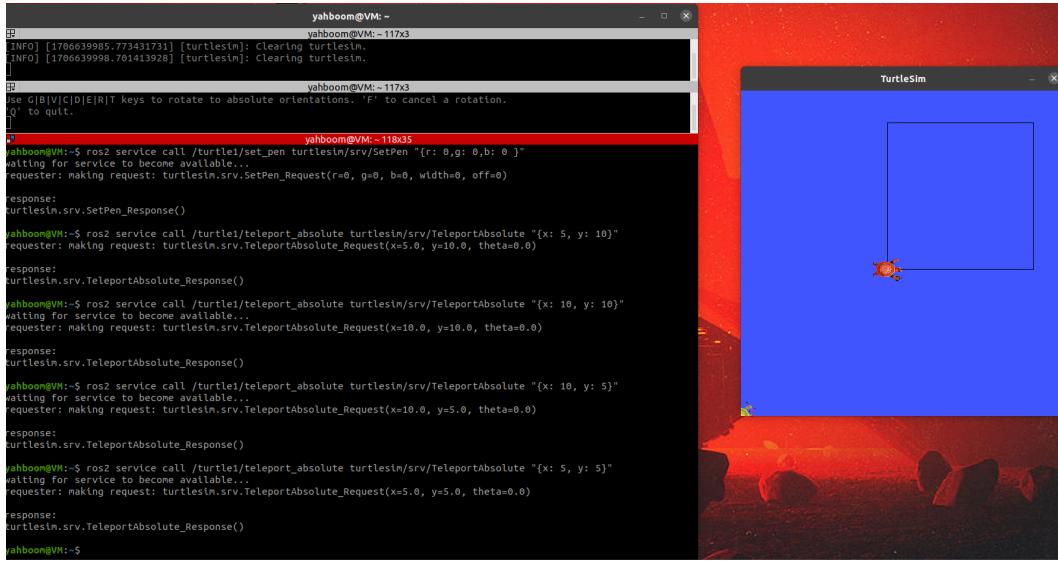


Action



Task 3

Draw a black square



1. Change the pen color to black with
 - a. `ros2 service call /turtle1/set_pen turtlesim/srv/SetPen "{r: 0,g: 0,b: 0 }"`
2. Teleport turtle1 to (5,5) with
 - a. `ros2 service call /turtle1/teleport_absolute turtlesim/srv/TeleportAbsolute "{x: 5, y: 5 }"`
3. Then teleport turtle1 to four other corners ((5,10), (10,10), (10,5), (5,5)) with the same commands changing the *data* portion for each different coordinate.