

Here are the commands and output for creating a black square using turtlesim.

```
yahboom@yahboom-virtual-machine:~$ ros2 service call /turtle1/set_pen turtlesim/srv/SetPen "{r: 0, g: 0, b: 0, width: 5}"
requester: making request: turtlesim.srv.SetPen_Request(r=0, g=0, b=0, width=5, off=0)

response:
turtlesim.srv.SetPen_Response()

yahboom@yahboom-virtual-machine:~$ ros2 service call /turtle1/teleport_relative turtlesim/srv/TeleportRelative "{linear: 2.0, angular: 0.0}"
waiting for service to become available...
requester: making request: turtlesim.srv.TeleportRelative_Request(linear=2.0, angular=0.0)

response:
turtlesim.srv.TeleportRelative_Response()

yahboom@yahboom-virtual-machine:~$ ros2 service call /turtle1/teleport_relative turtlesim/srv/TeleportRelative "{linear: 0.0, angular: 1.57079632679}"
waiting for service to become available...
requester: making request: turtlesim.srv.TeleportRelative_Request(linear=0.0, angular=1.57079632679)

response:
turtlesim.srv.TeleportRelative_Response()

yahboom@yahboom-virtual-machine:~$ ros2 service call /turtle1/teleport_relative turtlesim/srv/TeleportRelative "{linear: 2.0, angular: 0.0}"
waiting for service to become available...
requester: making request: turtlesim.srv.TeleportRelative_Request(linear=2.0, angular=0.0)

response:
turtlesim.srv.TeleportRelative_Response()

yahboom@yahboom-virtual-machine:~$ ros2 service call /turtle1/teleport_relative turtlesim/srv/TeleportRelative "{linear: 0.0, angular: 1.57079632679}"
waiting for service to become available...
requester: making request: turtlesim.srv.TeleportRelative_Request(linear=0.0, angular=1.57079632679)

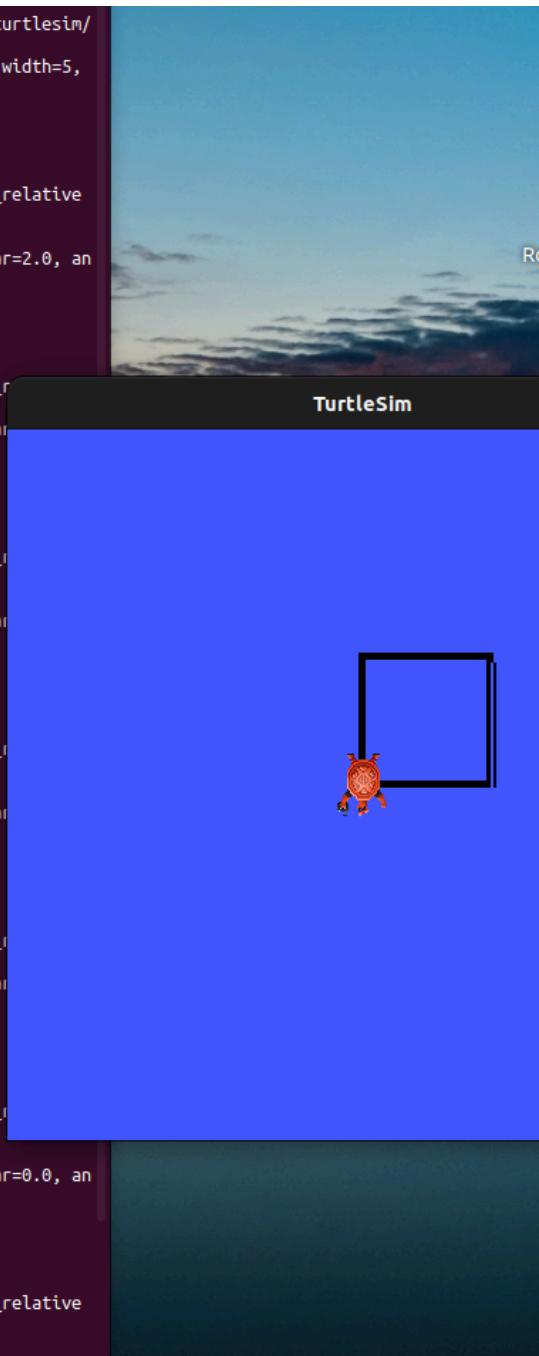
response:
turtlesim.srv.TeleportRelative_Response()

yahboom@yahboom-virtual-machine:~$ ros2 service call /turtle1/teleport_relative turtlesim/srv/TeleportRelative "{linear: 2.0, angular: 0.0}"
waiting for service to become available...
requester: making request: turtlesim.srv.TeleportRelative_Request(linear=2.0, angular=0.0)

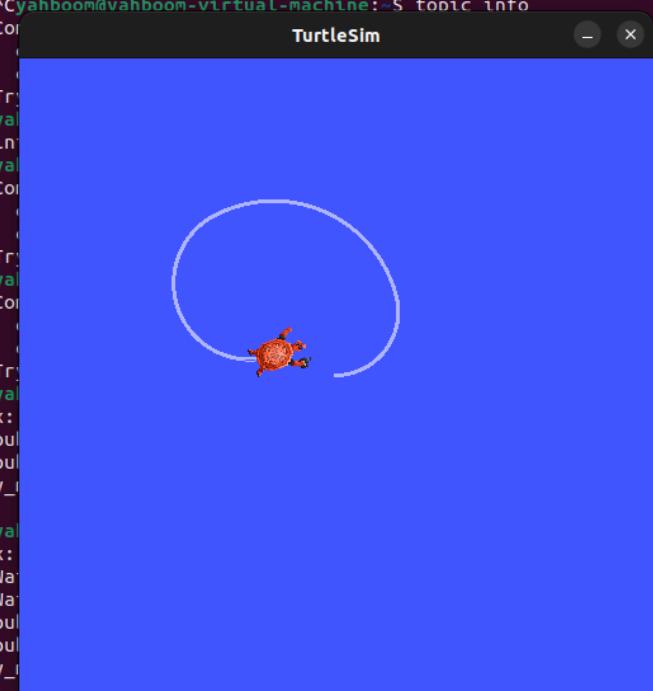
response:
turtlesim.srv.TeleportRelative_Response()

yahboom@yahboom-virtual-machine:~$ ros2 service call /turtle1/teleport_relative turtlesim/srv/TeleportRelative "{linear: 0.0, angular: 1.57079632679}"
waiting for service to become available...
requester: making request: turtlesim.srv.TeleportRelative_Request(linear=0.0, angular=1.57079632679)

response:
turtlesim.srv.TeleportRelative_Response()
```



Here are the commands and output using the provided command.



```
[yahboom@yahboom-virtual-machine:~]$ ros2 topic info /turtle1/cmd_vel
topic: /turtle1/cmd_vel
type: geometry_msgs/msg/Twist
publisher: /yahboom@yahboom-virtual-machine:~$ ros2 topic pub --once /turtle1/cmd_vel geometry_msgs/msg/Twist "{linear: {x: 2.0, y: 0.0, z: 0.0}, angular: {x: 0.0, y: 0.0, z: 1.8}}"
publisher: beginning loop
publishing #1: geometry_msgs.msg.Twist(linear=geometry_msgs.msg.Vector3(x=2.0, y=0.0, z=0.0), angular=geometry_msgs.msg.Vector3(x=0.0, y=0.0, z=1.8))

yahboom@yahboom-virtual-machine:~$ ros2 topic pub --once /turtle1/cmd_vel geometry_msgs/msg/Twist "{linear: {x: 4.0, y: 0.0, z: 0.0}, angular: {x: 0.0, y: 0.0, z: 1.8}}"
publisher: beginning loop
publishing #1: geometry_msgs.msg.Twist(linear=geometry_msgs.msg.Vector3(x=4.0, y=0.0, z=0.0), angular=geometry_msgs.msg.Vector3(x=0.0, y=0.0, z=1.8))

yahboom@yahboom-virtual-machine:~$ ros2 topic pub --once /turtle1/cmd_vel geometry_msgs/msg/Twist "{linear: {x: 4.0, y: 0.0, z: 0.0}, angular: {x: 0.0, y: 0.0, z: 3}}"
publisher: beginning loop
publishing #1: geometry_msgs.msg.Twist(linear=geometry_msgs.msg.Vector3(x=4.0, y=0.0, z=0.0), angular=geometry_msgs.msg.Vector3(x=0.0, y=0.0, z=3))
```

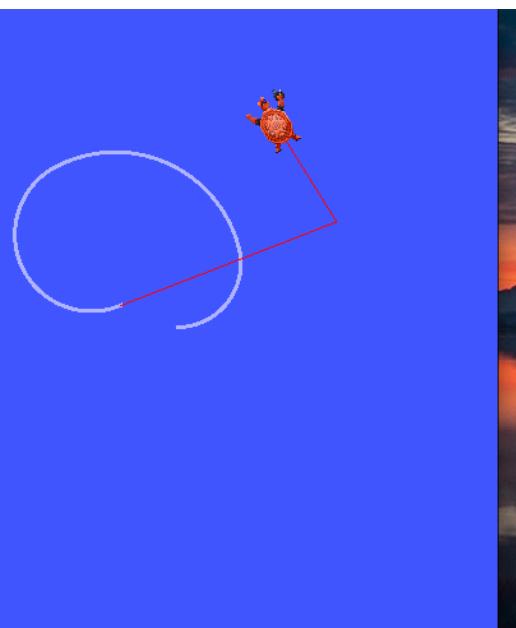
Here is the output of the line being changed to red.

```
[INFO] [1769795764.492325691] [turtlesim]: Spawning
[a=[0.000000]
]
```

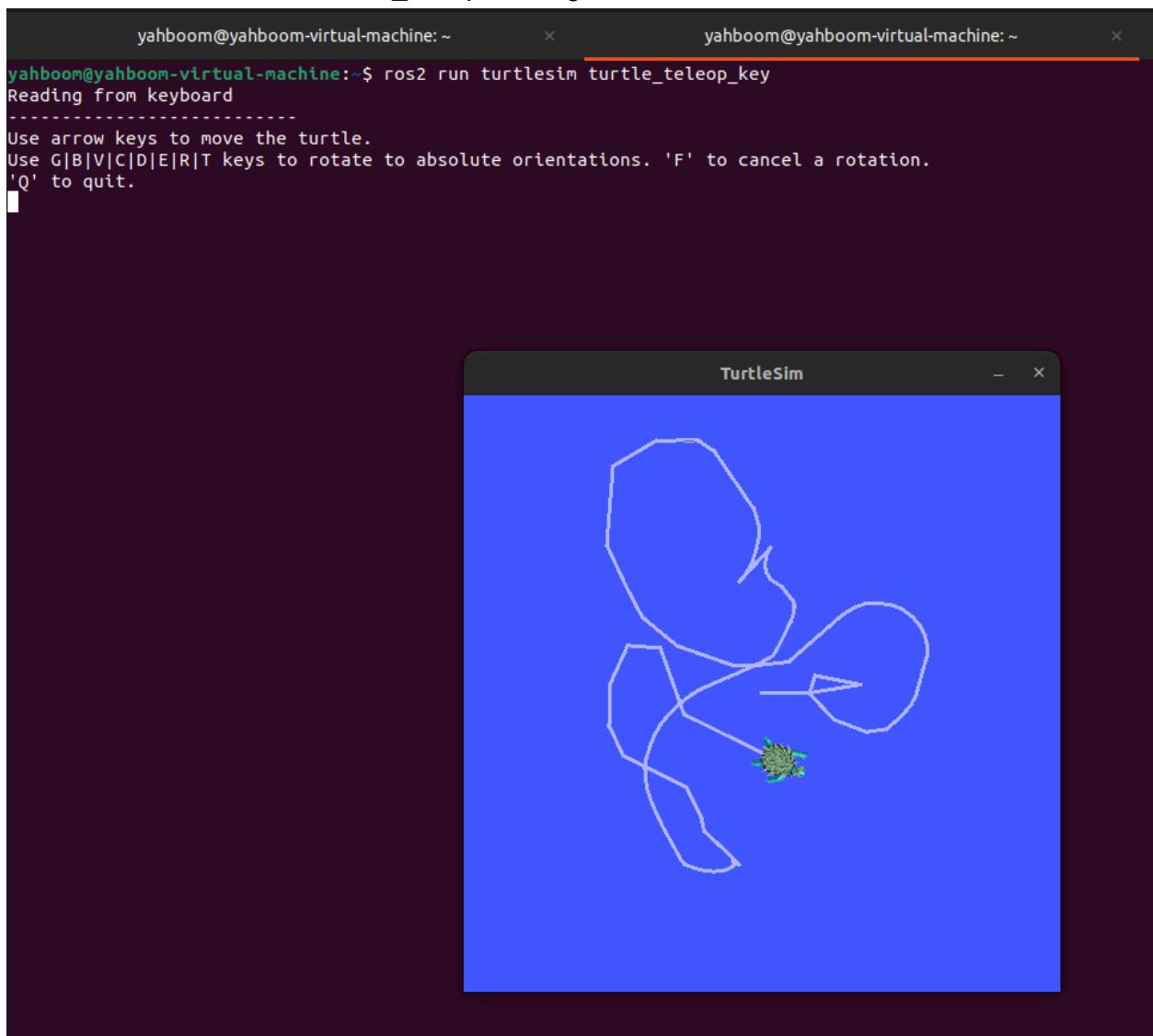
```
publishing #1: geometry_msgs.msg.Twist(linear=ge
ometry_msgs.msg.Vector3(x=4.0, y=0.0, z=0.0), an
gular=geometry_msgs.msg.Vector3(x=0.0, y=0.0, z=
3.0))

yahboom@yahboom-virtual-machine:~$ /turtle1/set_
pen
bash: /turtle1/set_pen: No such file or director
y
yahboom@yahboom-virtual-machine:~$ ros2 service
call /turtle1/set_pen turtlesim/srv/SetPen "r: 2
55"
requester: making request: turtlesim.srv.SetPen_
Request(r=255, g=0, b=0, width=0, off=0)

response:
turtlesim.srv.SetPen_Response()
```



Here is a screenshot of the turtle_teleop working.



Here is the feedback on the position/status of the turtle.

```
yahboom@yahboom-virtual-machine:~$ ros2 action send_goal /turtle1/rotate_absolute turtlesim/action/RotateAbsolute "{theta: 1.57}" --feedback
Waiting for an action server to become available
...
Sending goal:
  theta: 1.57

Feedback:
  remaining: -0.015614628791809082

Goal accepted with ID: 96c5cf6709de4880b0b41533e
b168e97

Result:
  delta: 0.0

Goal finished with status: SUCCEEDED
```

Graph screenshot.

