



eYRC 2021-22: Agri Bot (AB)

echo

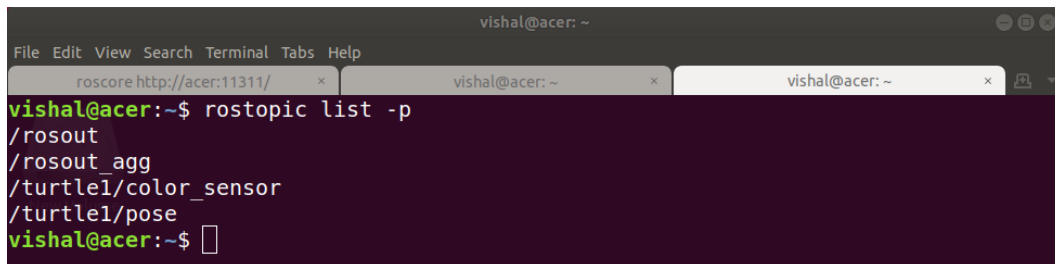
- `rostopic echo` shows the data published on a topic.
- Usage:

```
rostopic echo [topic]
```



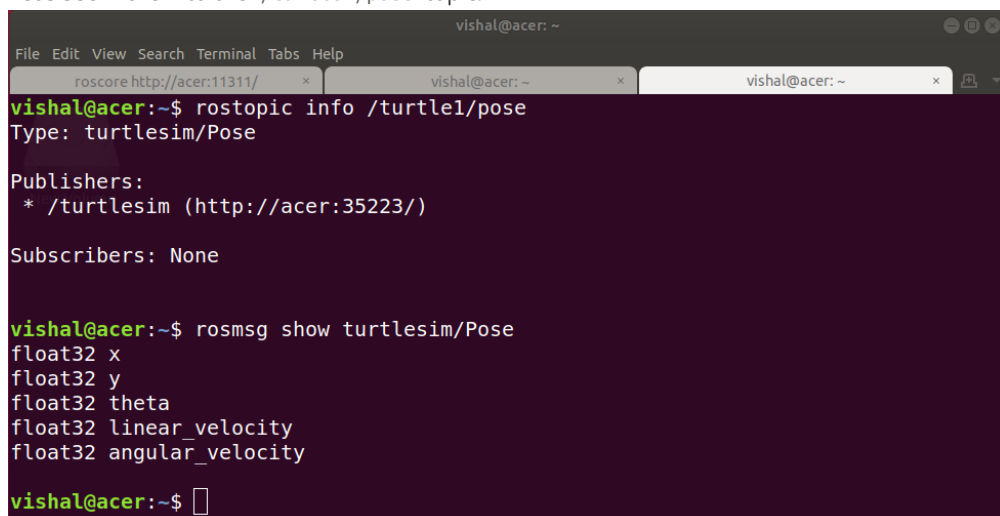
- In the earlier section, at the end, we used `-r` argument to keep its rotation at an angular velocity of 0.5 units. But what if the velocity is unknown and we need this information as feedback to control the motion of turtle???
- Our desire here is to get the *pose* information or simply one or all of the turtle's x,y, and z values w.r.t to the world.
- But let's see if there is any data being published by the turtlesim node in the first place. To do so, we'll use the following command...

```
rostopic list -p
```



```
vishal@acer: ~  
File Edit View Search Terminal Tabs Help  
roscore http://acer:11311/ x vishal@acer: ~ x vishal@acer: ~ x  
vishal@acer:~$ rostopic list -p  
/rosout  
/rosout_agg  
/turtle1/color_sensor  
/turtle1/pose  
vishal@acer:~$
```

- From the `-p` we know 2 topics are being published
 - `/turtle1/color_sensor`
 - `/turtle1/pose`
- Let's see more into the `/turtle1/pose` topic.



```
vishal@acer: ~  
File Edit View Search Terminal Tabs Help  
roscore http://acer:11311/ x vishal@acer: ~ x vishal@acer: ~ x  
vishal@acer:~$ rostopic info /turtle1/pose  
Type: turtlesim/Pose  
  
Publishers:  
* /turtlesim (http://acer:35223/)  
  
Subscribers: None  
  
vishal@acer:~$ rosmmsg show turtlesim/Pose  
float32 x  
float32 y  
float32 theta  
float32 linear_velocity  
float32 angular_velocity  
vishal@acer:~$
```

- Luckily the pose information of turtle from the turtlesim is being published on the topic `/turtle1/pose`.
- To display the pose data, enter the following command...

```
rostopic echo /turtle1/pose
```



The screenshot shows a terminal window titled 'vishal@acer: ~' with four tabs. The first tab is 'roscorehttp://acer:11311/'. The terminal output shows the following data for the /turtle1/pose topic:

```
y: 5.544444561
theta: 1.20836746693
linear_velocity: 0.0
angular_velocity: 0.5
---
x: 5.544444561
y: 5.544444561
theta: 1.21636748314
linear_velocity: 0.0
angular_velocity: 0.5
---
x: 5.544444561
y: 5.544444561
theta: 1.22436749935
linear_velocity: 0.0
angular_velocity: 0.5
---
x: 5.544444561
y: 5.544444561
theta: 1.23236751556
linear_velocity: 0.0
angular_velocity: 0.5
---
█
```

To the right of the terminal is a window titled 'TurtleSim' showing a blue square environment with a small orange and black robot icon in the center.

