

## تمرین 1

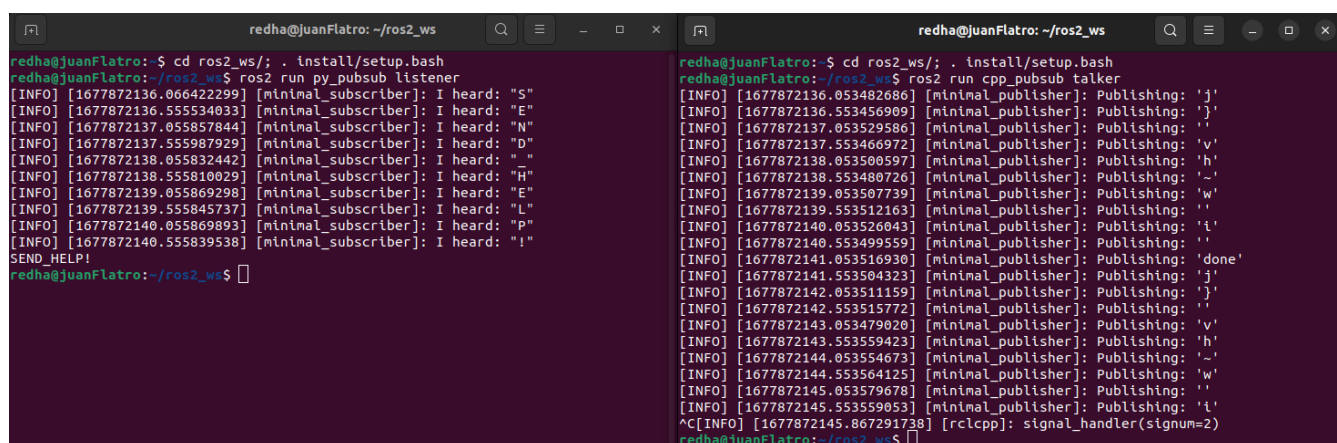
- a)  
`ros2 run turtlesim turtlesim_node --ros-args --remap __node:=my_turtle01`
- b)  
`ros2 topic pub --rate 2 robot/pose geometry_msgs/msg/Pose "{Point position: {x: 2.0, y: 0.0, z: 0.0}, Quaternion orientation: {x: 0.0, y: 0.0, z: 0.0, w: 1.0}}"`
- c)  
`ros2 service call /turtle1/set_pen turtlesim/srv/SetPen "{r: 200, g: 0, b: 0, width: 4}"`
- d)

خبر با اینکه actionها بر اساس topicها و serviceها ساخته شده اند. قادر هستند تا چندین بازخورد و یک نتیجه را نسبت به یک درخواست ارسال کنند برخلاف serviceها که تنها یک بازخورد را برمیگردانند. همچنین یک action میتواند متوقف شود

e)

به طور پیش فرض level log روی سطح Info قرار گرفته است تا به غیر از سطح Debug که جزئیات مرحله به مرحله هر دستور را نمایش میدهد، سطوح بالاتر Warn, Error, Fatal که حاوی اطلاعات مهمتری از روند اجرای دستورات هستند برای نمایش پوشش داده شود

## تمرین 2



```
redha@JuanFlatro: ~/ros2_ws
redha@JuanFlatro:~$ cd ros2_ws/; . install/setup.bash
redha@JuanFlatro:~/ros2_ws$ ros2 run py_pubsub listener
[INFO] [1677872136.066422299] [minimal_subscriber]: I heard: "S"
[INFO] [1677872136.555534033] [minimal_subscriber]: I heard: "E"
[INFO] [1677872137.055857844] [minimal_subscriber]: I heard: "N"
[INFO] [1677872137.555987929] [minimal_subscriber]: I heard: "D"
[INFO] [1677872138.055832442] [minimal_subscriber]: I heard: " "
[INFO] [1677872138.555810029] [minimal_subscriber]: I heard: "H"
[INFO] [1677872139.055869298] [minimal_subscriber]: I heard: "E"
[INFO] [1677872139.555845737] [minimal_subscriber]: I heard: "L"
[INFO] [1677872140.055869893] [minimal_subscriber]: I heard: "P"
[INFO] [1677872140.555839538] [minimal_subscriber]: I heard: "!"
SEND_HELP!
redha@JuanFlatro:~/ros2_ws$

redha@JuanFlatro:~/ros2_ws
redha@JuanFlatro:~$ cd ros2_ws/; . install/setup.bash
redha@JuanFlatro:~/ros2_ws$ ros2 run cpp_pubsub talker
[INFO] [1677872136.053482686] [minimal_publisher]: Publishing: 'j'
[INFO] [1677872136.553456909] [minimal_publisher]: Publishing: '}'
[INFO] [1677872137.053529586] [minimal_publisher]: Publishing: ' '
[INFO] [1677872137.553466972] [minimal_publisher]: Publishing: 'v'
[INFO] [1677872138.053500597] [minimal_publisher]: Publishing: 'h'
[INFO] [1677872138.553480726] [minimal_publisher]: Publishing: '~'
[INFO] [1677872139.053507739] [minimal_publisher]: Publishing: 'w'
[INFO] [1677872139.553512163] [minimal_publisher]: Publishing: ' '
[INFO] [1677872140.053526043] [minimal_publisher]: Publishing: 'i'
[INFO] [1677872140.553499559] [minimal_publisher]: Publishing: ' '
[INFO] [1677872141.053516930] [minimal_publisher]: Publishing: 'done'
[INFO] [1677872141.553504323] [minimal_publisher]: Publishing: 'j'
[INFO] [1677872142.053511159] [minimal_publisher]: Publishing: '}'
[INFO] [1677872142.553515772] [minimal_publisher]: Publishing: ' '
[INFO] [1677872143.053479020] [minimal_publisher]: Publishing: 'v'
[INFO] [1677872143.553559423] [minimal_publisher]: Publishing: 'h'
[INFO] [1677872144.053554673] [minimal_publisher]: Publishing: '~'
[INFO] [1677872144.553564125] [minimal_publisher]: Publishing: 'w'
[INFO] [1677872145.053579678] [minimal_publisher]: Publishing: ' '
[INFO] [1677872145.55359053] [minimal_publisher]: Publishing: 'i'
^C[INFO] [1677872145.867291738] [rclcpp]: signal_handler(signum=2)
redha@JuanFlatro:~/ros2_ws$
```