Report: ROS Lab Sessions 1 & 2

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Lab 1

First Hello World package

For our very first package we decided to follow this tutorial from start to finish.

- Once all files were correctly created, we built the package with this command:

```
lorenz@Legion:~/Documents/ros2_ws$ colcon build --packages-select
cpp_pubsub
Starting >>> cpp_pubsub
Finished <<< cpp_pubsub [0.13s]
Summary: 1 package finished [0.30s]
```

- The build was succesful, our package is ready to be used. To do so we simply had to run the talker and listener in two distinct terminals.

```
#First terminal
lorenz@Legion:~/Documents/ros2_ws$ . install/setup.bash
lorenz@Legion:~/Documents/ros2_ws$ ros2 run cpp_pubsub talker
[INFO] [1731851398.103893880] [minimal_publisher]: Publishing: 'Hello,
world! 0'
[INFO] [1731851398.603926237] [minimal_publisher]: Publishing: 'Hello,
world! 1'
[INFO] [1731851399.104009651] [minimal_publisher]: Publishing: 'Hello,
world! 2'
[INFO] [1731851399.604020636] [minimal_publisher]: Publishing: 'Hello,
world! 3'
[INFO] [1731851400.104067241] [minimal_publisher]: Publishing: 'Hello,
world! 4'
[INFO] [1731851400.604100785] [minimal_publisher]: Publishing: 'Hello,
world! 5'
```

```
#Second terminal
lorenz@Legion:~/Documents/ros2_ws$ . install/setup.bash
lorenz@Legion:~/Documents/ros2_ws$ ros2 run cpp_pubsub listener
[INFO] [1731851398.104100483] [minimal_subscriber]: I heard: 'Hello,
world! 0'
[INFO] [1731851398.604107905] [minimal_subscriber]: I heard: 'Hello,
world! 1'
[INFO] [1731851399.104287497] [minimal_subscriber]: I heard: 'Hello,
world! 2'
[INFO] [1731851399.604303230] [minimal_subscriber]: I heard: 'Hello,
world! 3'
[INFO] [1731851400.104361709] [minimal_subscriber]: I heard: 'Hello,
world! 4'
```

```
[INFO] [1731851400.604389317] [minimal_subscriber]: I heard: 'Hello,
world! 5'
```

Turtlesim

- To find what type of data we need to send to the turtlesim_node to make the turtle move we simply launched this node and the turtle_teleop_key node and used the following bash command :

```
lorenz@Legion:~/Documents/ros2_ws$ ros2 topic list
/parameter_events
/rosout
/turtle1/cmd_vel
/turtle1/color_sensor
/turtle1/pose
```

- zdd