ROS2 Commands Lab 2

D158B Unix lab2 ROS2 Foxy
Logon (see username and password instructions on screen
Use ROS2 Foxy for Assignments. Run the instructions and send results.

TO START

$ foxy   Source: **source /opt/ros/foxy/setup.bash** for every Terminal

VERSIONS

$ lsb_release -a   (Ubuntu Version)
 (Or Use Gui -   Settings > About)

$ **printenv ROS_DISTRO**
     Expect: foxy

$ **env | grep ROS   (Distro and Version for ROS and Python)**
        (Longer Version)

  1.   **Run the commands and list the versions of Ubuntu and ROS (10 points)**

FIND SOME PACKAGES

$ **ros2 --help**
$ **ros2 pkg --help**

  2.   **Write the terminal command to list the ROS2 packages associated with the name turtle in them and show the results. (10)**

TURTLESIM EXERCISES

ROS2 Basics #2 - Introducing Turtlesim, Command Line Interface and RQt   7:55
https://www.youtube.com/watch?v=X3Cmtg3Tq3Y

https://docs.ros.org/en/foxy/Tutorials/Beginner-CLI-Tools/Understanding-ROS2-Nodes/Understanding-ROS2-Nodes.html

3. Execute the commands and list the output (**20**):   (Remember source foxy for terminals)

$ **ros2 run turtlesim turtlesim_node**

$ **ros2 node info /turtlesim   (Don't include all in result)**
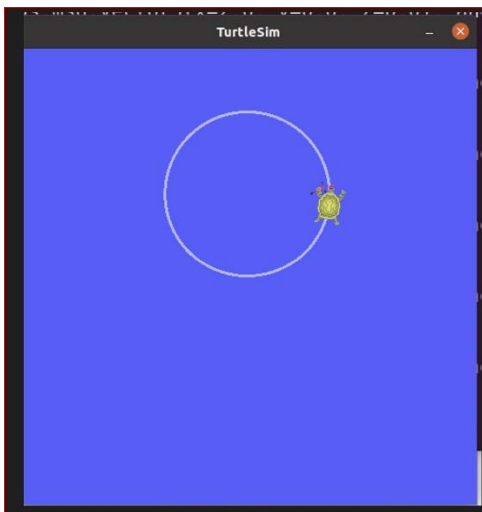
$ `ros2 pkg executables turtlesim`

4. **List the Nodes, Topics with type (-t), Services and Actions for the turtlesim using the command line commands. (20)**:
Hint: `ros2 node info  --help`

5. **Move the turtle in a circle with a command line command. Send results with image. (40)**

Hint: $ ros2 topic pub <rate> <topic> <message> <values>

$ **ros2 interface proto geometry_msgs/msg/Twist (Determine the message format)**

```
$ ros2 interface proto geometry_msgs/msg/Twist
"linear:
 x: 0.0
 y: 0.0
 z: 0.0
angular:
 x: 0.0
 y: 0.0
 z: 0.0
```