

GSoC-2021 JdeRobot- Universidad Rey Juan Carlos  
ROS2 Challenge

**Part 1: Introduction to ROS2**

**a. 'Hello! ROS2 is fun'**

- Create a new ROS2 workspace
- Create a ROS2 publisher - subscriber nodes and publish the message 'Hello! ROS2 is fun'
- Build the package using colcon
- Use ROS2 run for executable

**b. Launch your robot**

- Choose a ROS2 robot of your choice, install it's package
- Visualize the robot's laser scan data rviz2

**Part 2: ROS2 Navigation2**

**a. Navigate your turtlebot**

- Install ROS2 Navigation2 and gazebo
- Perform waypoint navigation with turtlebot robot(or any other robot if you wish to). Include at least 3 waypoints in your result video.
- You have freedom to decide how to perform this exercise, bare minimum results are stated above. If you wish to experiment more, it would be great to showcase.

**Instructions:**

1. You have to submit a youtube video containing the results as well as the source code. A nicely documented solution will always be good!
2. It is recommended to use ROS2 Foxy