Follow me behavior (tracking part) tests

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Follow me behavior (perception part): tests

1. Offline tests
2. Tests on robair

Follow me behavior (perception part): Testing

- First, we need to start our nodes and Rviz:
- Open a terminal to run your nodes and Rviz :

```
1. cd ~/ros2_ws/src/follow_me/scripts
   ./start_robair_tracking_only.sh
```

- Open the graphical display in rviz:
  select the graphical marker that you want to see

Follow me behavior (perception part): offline Test

- To test offline (without a robot) :
- Open a terminal to play a rosbag file :

```
cd ~/ros2_ws/data_for_labs/follow_me/tracking/old_laser
```

1. `ros2 bag play <data_file>.bag2`
   - Do not forget you can put your rosbag in pause by pressing the « space » key
   - You can run your rosbag step by step with « -> » key
   - When the rosbag finishes, it is better to KILL all your nodes, and restart them before running `ros2 bag play` again.

Take a look at the different folders under data_for_labs. You will have to use different rosbag files, which represent different scenarios for testing.

In particular, make sure to use some “old_laser” and some “new_laser” files. The laser on your RobAIR robots corresponds to the “new_laser”.

Follow me behavior (perception part): offline Test

- Moreover you can directly debug you tracking_node in vscode:
  - Add breakpoint
  - Look at the value of variables at a given breakpoint

Follow me behavior (perception part): offline Test

- Each rosbag of tracking must be run with your tracking code
- Look carefully at the textual output of your tracking_node and the appropriate graphical marker in rviz
- Your code will be automatically tested for your evaluation
  => make sure to test all the situations

Follow me behavior (perception part): tests

1. Offline tests
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Follow me behavior (perception part): tests on robair (1/3)

- First, we need to start our nodes and Rviz:
- Open a terminal to run your nodes and Rviz :

```
1. cd ~/ros2_ws/src/follow_me/scripts
   ./start_robair_tracking_only.sh
```

  - In the next step, you will use the keyboard keys to drive the robot using the smooth_teleoperation node. You should see it appear when you run the `start_robair_tracking_only` script, it has a red background colour.

- Open the graphical display in rviz:
  select the graphical marker that you want to see

Follow me behavior (perception part): tests on robair (2/3)

1. Check if the person is correctly detected and tracked with Rviz
2. Check if the same person is still tracked even when there are multiple people.
3. Try to follow the tracked person by using the teleoperation node, check the tracking still works while the robot moves.

Follow me behavior (perception part): tests on robair (3/3)

If tracking seems to work well, you can move on to running with the action node that drives towards the tracked person position published by your tracking node.

Stop all nodes by pressing `ctrl c` in the terminal where you ran the `start_robair` script.

Run the new script that launches the action node instead of smooth_teleop :

```
cd ~/ros2_ws/src/follow_me/scripts
./start_robair_tracking_with_action.sh
```

To stop the robot : either push the red button ; or `ctrl c` in the action node terminal (red background), or `ctrl c` in the terminal where you ran the start_robair script.