The requirement for box parking simulation

NON-FUNCTIONAL REQUIREMENTS:

1. The code you presented shall make car running in openDavinci simulation environment. (see enclosed the OpenDavinci tutorial material)

2. Be familiar with time trigger method in opendavinci

3. The Docker - Compose shall be operating in ubuntu16.04 environment.

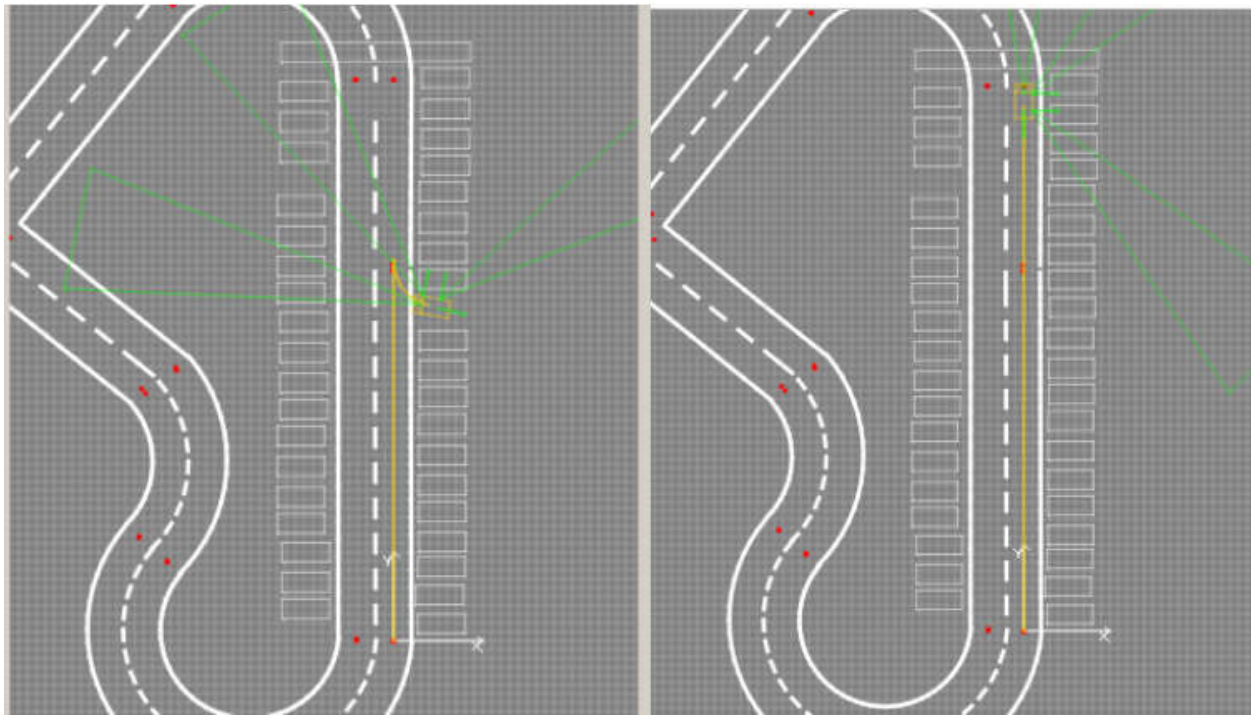
4. Please find and re-edit .yml file for docker-compose in order make it run in the simulator as we intend.

5. Code shall be written entirely in C++.

6. Please go through attached sample code for box parker then make changes on it accordingly.

7. Please use Scenario Editor to edit the scenario like figure below:

http://opendavinci.cse.chalmers.se/www/products/ScUI/index.html



FUNCTIONAL REQUIREMENTS:

1. Your code should guarantee the car to move forward in simulation environment.

2. The car uses its both front right IR sensor and rear right sensor to detect the parking spot with right size on its right hand side parking lots.

3. When the front ultrasonic sensor (ID=3) detected obstacles ahead, the car should automatically stop.

4. Next, the car should make “U” turn (180 degree turn) then continue search parking spots on its right hand side like the figure depicted above.

5. When the parking spot with right size is found, the vehicle control unit will trigger the box parking procedure to drive the car right into the found spot.

4. Sample code link:
https://github.com/CarGroup3/opendlv.scaledcars/blob/edaa3de800e25c9b7db81eb39bb47cc9fcc7c6d3/code/boxparker/src/BoxParker.cpp