Instructions on how to run our project

Step 1. Please create a new work space and place our code in the Src of your workspace. Please make sure that you are not sourcing any workspace in the bash script. If so please comment that part

Step 2. Please run the command “ifconfig” in your terminal and note down the IP Address of your computer.

Step 3:- Make Sure you update the IP Address in ROS settings and ROS communication plugins in Unity.

Step 4: Navigate inside the Src—>Gopher-ROS-Unity—>Gopher-Unity-endpoint—>Launch. Please update the IP address in the below 3 launch files.
gopher_presence_server_baseline.launch
gopher_presence_server_Soc.launch
gopher_presence_server_dwa.launch

Please look at 4th line and change the default IP Address to your IP Address

Step 5: Once you have successfully changed the IP address, make sure that a connection is established between ROS(Noetic) and Unity 3D. The indication is there will be a blue light blinking in the game window. Once the connection is established, please use the following Commands to launch different pair of algorithms

For baseline approach
roslaunch gopher_unity_endpoint gopher_presence_server_baseline.launch

For Social Navigation Approach
roslaunch gopher_unity_endpoint gopher_presence_server_Soc.launch

For A* and DWA approach,
roslaunch gopher_unity_endpoint gopher_presence_server_dwa.launch

Step 6:-Localize the robot by clicking on the green arrow and you will be able to see the pose array

Step 7:-Once the Robot is localized, Give a goal pose in the mapped region by clicking on 2DNavGoal (violet color)

Step 8:- Please choose appropriate topics for paths generated.

Step 9: By now you would be able to see the robot moving in the hospital environment

Step 10: - Have Fun in Experimenting!