Jagadeeshan S CS20B1013

Problem Set

1) In ROS, the basic function unit is called node, the communication between them is nothing but the communication in ROS. This communication is facilitated by ROS master(roscore) which has a track of nodes and subscribers and publishers.

2) i) Publisher and subscriber

- Used to communicate gps data
- Used to communicate encoded data of wheel rotation

ii) Server and client

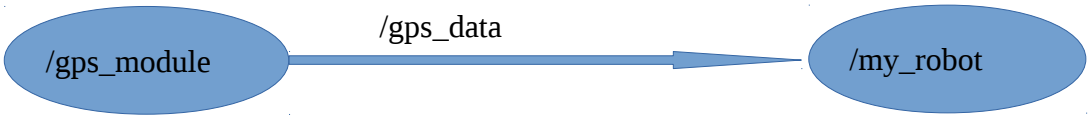
- Used to request calculation from server
- Used to get the initial parameter from server

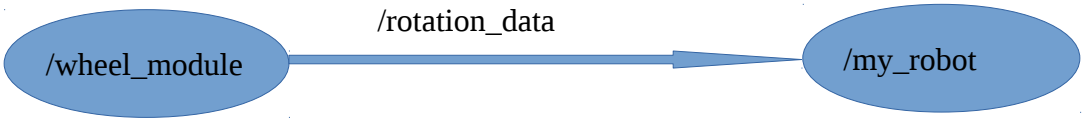
iii) Action server and action client(using takes long time)

- Used to request calculation from server
- Used to get the initial parameter from server

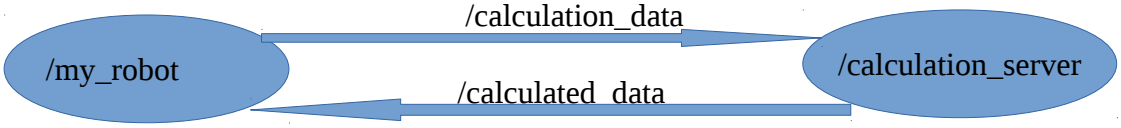
3)

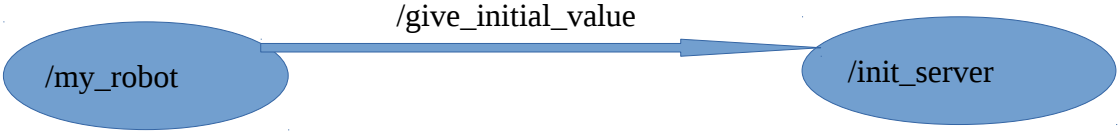
i)



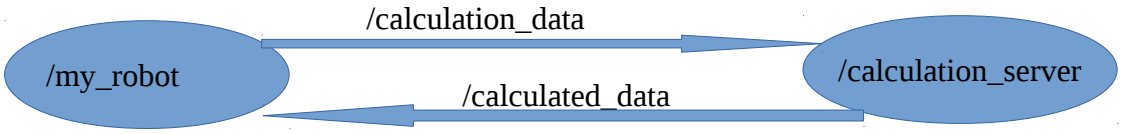


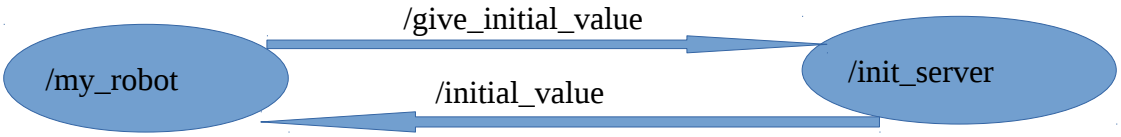
ii)





iii) If exceeds timeout time,cancels the request, and gives the feedback

- 

- 

4) Yes, there is a way to generate the node communication visually, using rqt_graph

5)Sensors: Camera, GPS sensor
Actuators: Robotic arm,Motors for wheel