Robotics Lab - 221 LIA 001

Assignment 4
Due: December 6, 2022, 11.30 pm IST
Submission via Github class

Realize the ROS nodes and messages in python script as shown in the figure 1 below

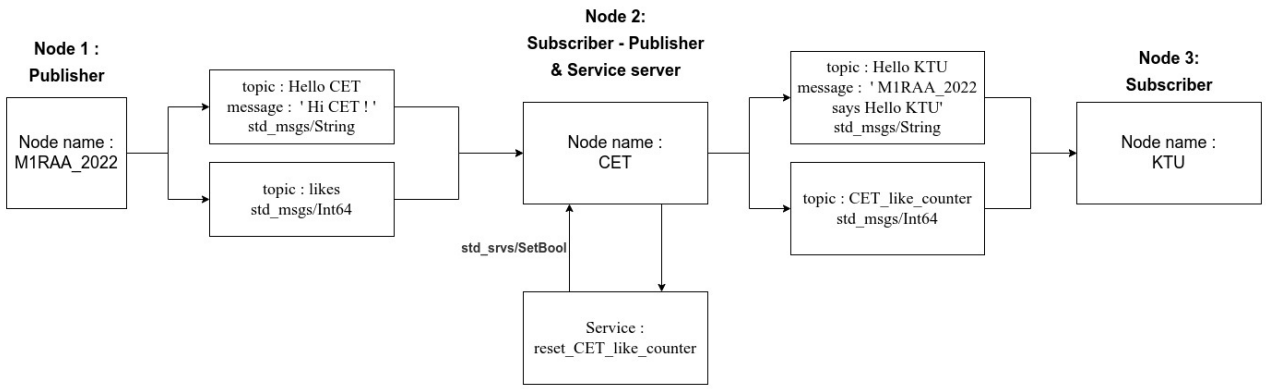

Figure 1: Illustration of nodes and messages for assignment 4 question

This question is an extension of assignment 2 with the following additional elements

node1:(M1RAA_2022) : Here the second topic 'likes' of (M1RAA_2022) node are the likes given to CET by the M1RAA students. We assume that all students give a like of 5 to CET, this is published as a message of type std_msgs/Int64.

node2:CET : The node CET subscribes to the topic 'likes' and increments a counter that accumulates the likes given by M1RAA students. This count is published on the topic 'CET_like_counter' as a message of type std_msgs/Int64.
Node 2 also runs a service server that resets the like counter when it receives a request of type std_srvsSetBool. Print a message on the terminal if the counter reset is successful.

There is no need to place counter reset request via a separate service client. The request can be placed via the ros command rosservice

Run the code for the nodes and answer the questions below. Type down the questions and answers in the a text file "<your name>assign4_answers.txt and commit to assignment git.

1. List the currently running nodes
2. List the currently running topics
3. List the currently running services
4. Run the rqt_graph tool and save the node graph as 'assign4_rosgraph'
5. Are running services shown on rqt_graph. What is your observation on this.
6. Screencast the terminals, save the screencast as 'assign4.webm' and commit to git