

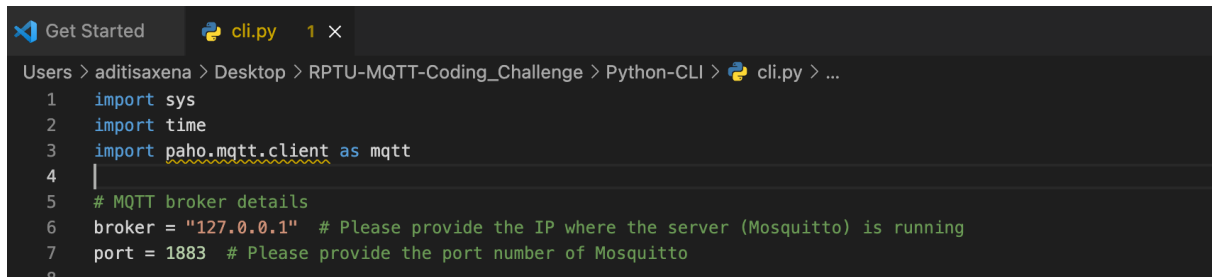
Documentation RPTU-MQTT-Coding Challenge

Prerequisite

- Kindly setup Mosquitto/ MQTT broker: <https://mosquitto.org/download/>
- Python
- Unity

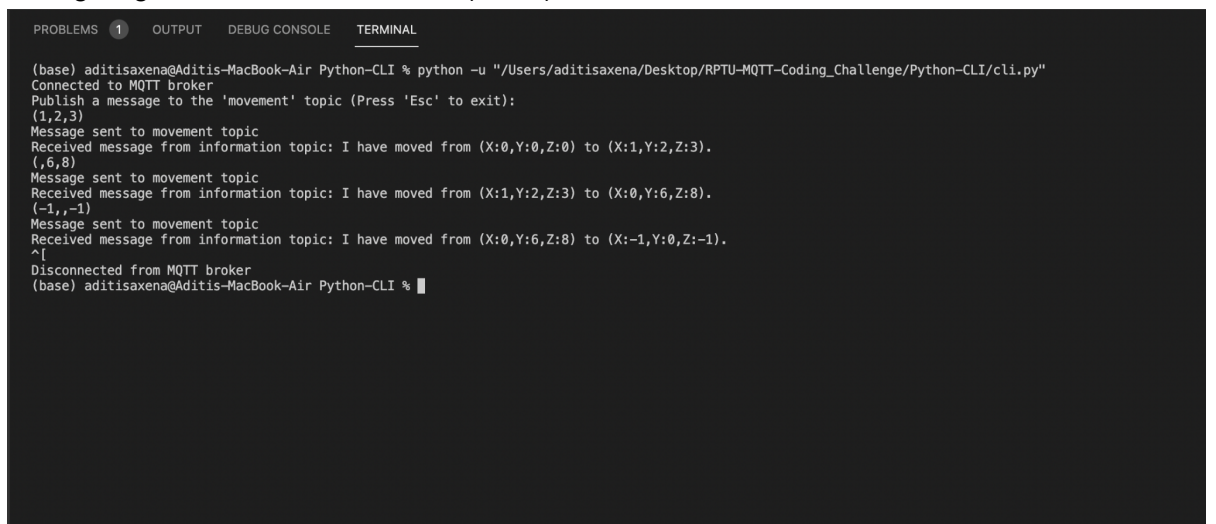
To use CLI:

- Give `pip install -r requirements.txt` to install dependencies of the project. Make sure to run this command from the Python folder of the project. Command : `pip3 install -r requirements.txt`
- As of now, IP Address and port of MQTT broker is hardcoded in cli.py file. Please change it according to your local system.



```
Get Started cli.py 1 x
Users > aditisaxena > Desktop > RPTU-MQTT-Coding_Challenge > Python-CLI > cli.py > ...
1 import sys
2 import time
3 import paho.mqtt.client as mqtt
4
5 # MQTT broker details
6 broker = "127.0.0.1" # Please provide the IP where the server (Mosquitto) is running
7 port = 1883 # Please provide the port number of Mosquitto
8
```

- After making the above changes and installing the dependencies, run cli.py file from terminal.
- Start giving coordinates in the form (X,Y,Z).

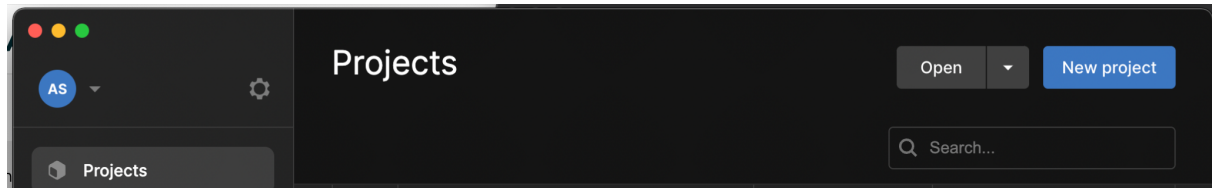


```
PROBLEMS 1 OUTPUT DEBUG CONSOLE TERMINAL
(base) aditisaxena@Aditis-MacBook-Air Python-CLI % python -u "/Users/aditisaxena/Desktop/RPTU-MQTT-Coding_Challenge/Python-CLI/cli.py"
Connected to MQTT broker
Publish a message to the 'movement' topic (Press 'Esc' to exit):
(1,2,3)
Message sent to movement topic
Received message from information topic: I have moved from (X:0,Y:0,Z:0) to (X:1,Y:2,Z:3).
(,6,8)
Message sent to movement topic
Received message from information topic: I have moved from (X:1,Y:2,Z:3) to (X:0,Y:6,Z:8).
(-1,-1)
Message sent to movement topic
Received message from information topic: I have moved from (X:0,Y:6,Z:8) to (X:-1,Y:0,Z:-1).
^C
Disconnected from MQTT broker
(base) aditisaxena@Aditis-MacBook-Air Python-CLI %
```

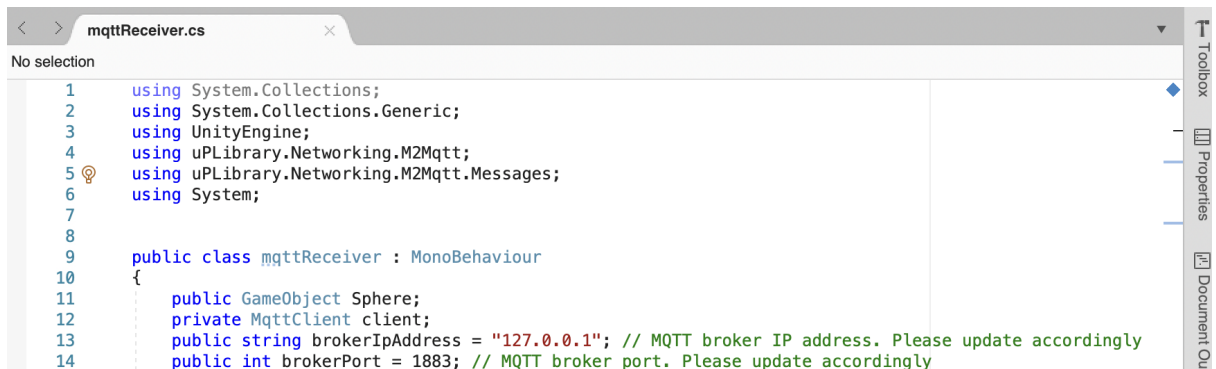
- Press the Esc button to disconnect from the server.

Start the Unity:

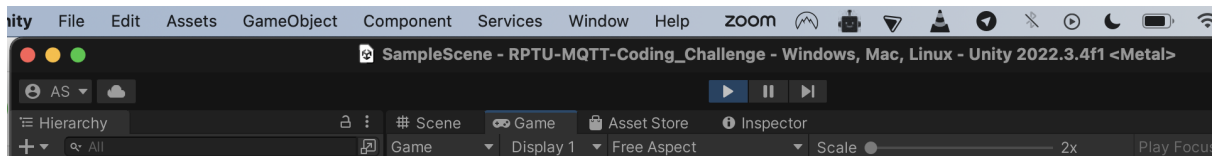
- Please open the project folder from Unity.



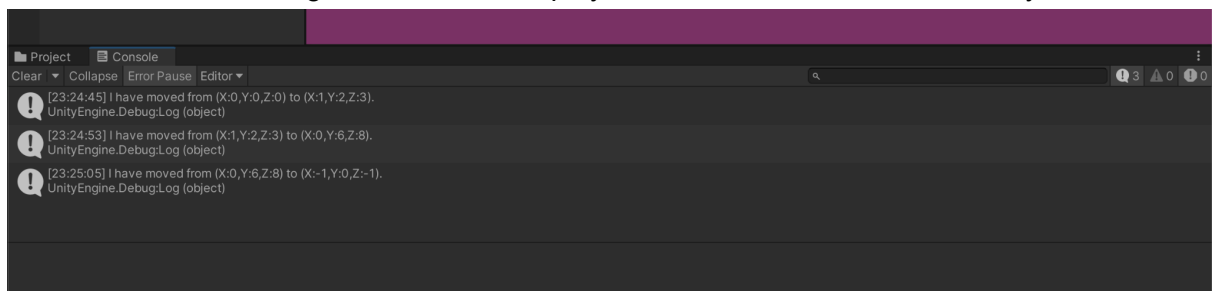
- Please change the IP address and port number of mosquitto/ MQTT broker according to your system in C# file(mqttReceiver.cs).



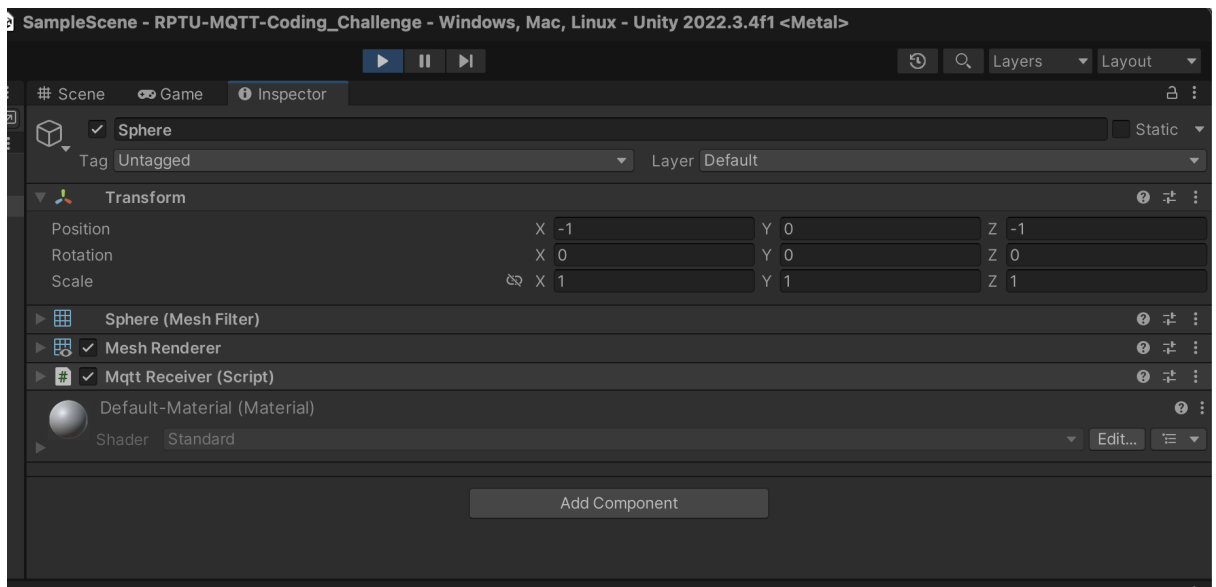
- The C# script only takes coordinates in the form of (X,Y,Z). It will handle missing coordinates.
- Start the game/Play button.



- As the coordinates start coming from the broker, the sphere will move to those coordinates and messages will also be displayed in the console window of Unity.



- You can keep a check on the coordinates of the ball from the inspector window.



- Same message will be sent to mosquitto topic and displayed on CLI.
- Press the Stop/Play button to stop the game.