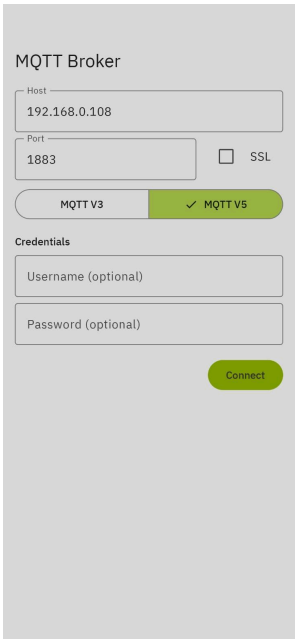
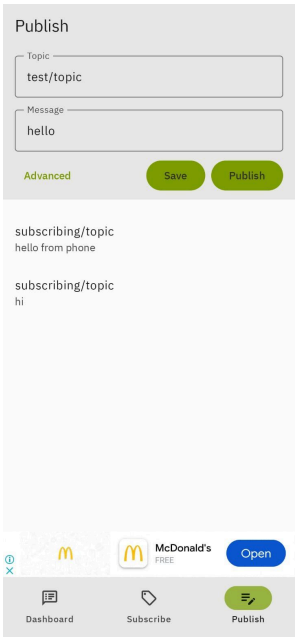
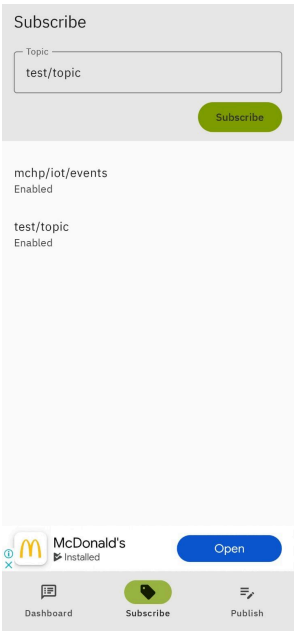
M2M Communication between two mobiles

Aim: To run Mosquitto Broker in your laptop and connect two mobiles to that broker and transmit data (in the form of text) from one device to another.

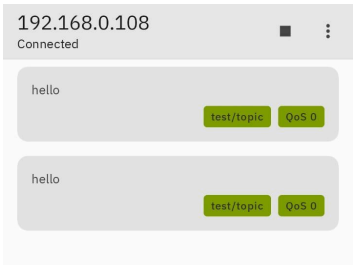
1. Download and Install the MyMQTT app in two mobiles.
2. Also set up the Mosquitto Broker in your laptop as instructed in the Lab Manual.
3. Connect all the three devices under the **same wifi network** (Personal Hotspot is preferred over IITM Wifi).
4. Now launch the Mosquitto Broker in your laptop as instructed in the Lab Manual.
5. Find the Broker address of the Mosquitto Broker (which is basically your PC's ipv4 address, which can be found by typing 'ipconfig' in your cmd terminal for Windows).
6. Now enter the Broker Address in the MyMQTT apps of both the mobiles in the Host textbox and leave other settings to default.
7. Now once all the devices are set up and ready. We can Publish a message from one mobile (on a topic, say "test/topic" and Message, say "Hello")
8. For the second mobile to receive the message, it should subscribe to the same topic on which the first mobile is publishing too.
9. So make sure you ensure that as shown in the below images.







10. Now once you hit publish in the first mobile, you should see that message received in the second mobile in the dashboard section. (After you have subscribed to the same topic). [The second Mobile's dashboard screen is shown below]



Think about it: Analyze the logfiles of the Mosquitto Broker which appear in your Command Prompt window on each action you do in the mobiles… (A sample is attached for your reference).

```
C:\Program Files\mosquitto>mosquitto -v -c mosquitto.conf
1725716988: mosquitto version 2.0.18 starting
1725716988: Config loaded from mosquitto.conf.
1725716988: Opening websockets listen socket on port 9001.
1725716988: Opening ipv6 listen socket on port 1883.
1725716988: Opening ipv4 listen socket on port 1883.
1725716988: mosquitto version 2.0.18 running
1725717030: New connection from 192.168.0.112:56198 on port 1883.
1725717030: New client connected from 192.168.0.112:56198 as mymqtt-185328865038661 (p5, c0, k60).
1725717030: No will message specified.
1725717030: Sending CONNACK to mymqtt-185328865038661 (0, 0)
1725717030: Received SUBSCRIBE from mymqtt-185328865038661
1725717030:     mchp/iot/events (QoS 2)
1725717030: mymqtt-185328865038661 2 mchp/iot/events
1725717030:     test/topic (QoS 2)
1725717030: mymqtt-185328865038661 2 test/topic
1725717030: Sending SUBACK to mymqtt-185328865038661
1725717047: Received PUBLISH from mymqtt-185328865038661 (d0, q0, r0, m0, 'test/topic', ... (5 bytes))
1725717047: Sending PUBLISH to mymqtt-185328865038661 (d0, q0, r0, m0, 'test/topic', ... (5 bytes))
1725717049: Received PUBLISH from mymqtt-185328865038661 (d0, q0, r0, m0, 'test/topic', ... (5 bytes))
1725717049: Sending PUBLISH to mymqtt-185328865038661 (d0, q0, r0, m0, 'test/topic', ... (5 bytes))
```

Note: In case while launching the Mosquitto Broker on your PC, if your broker fails to start, you can go to Task Manager and End Task - mosquitto (which may be already running from your previous attempt).