



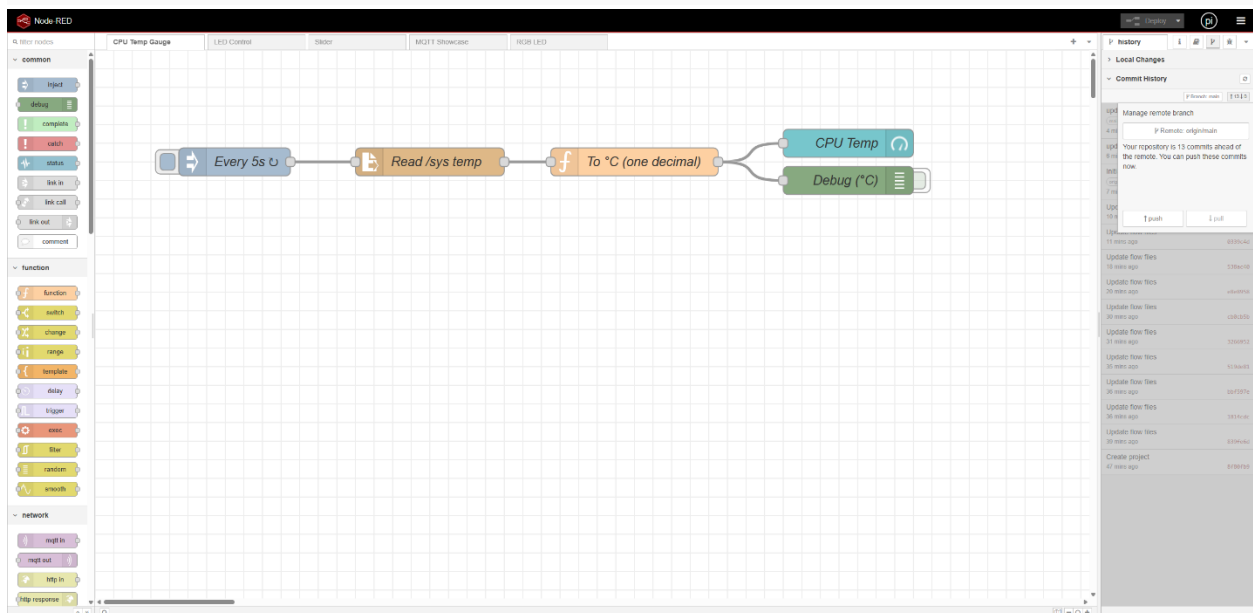
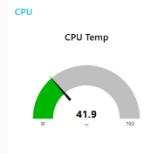
تمرین شماره ۱

میکروپروسسور

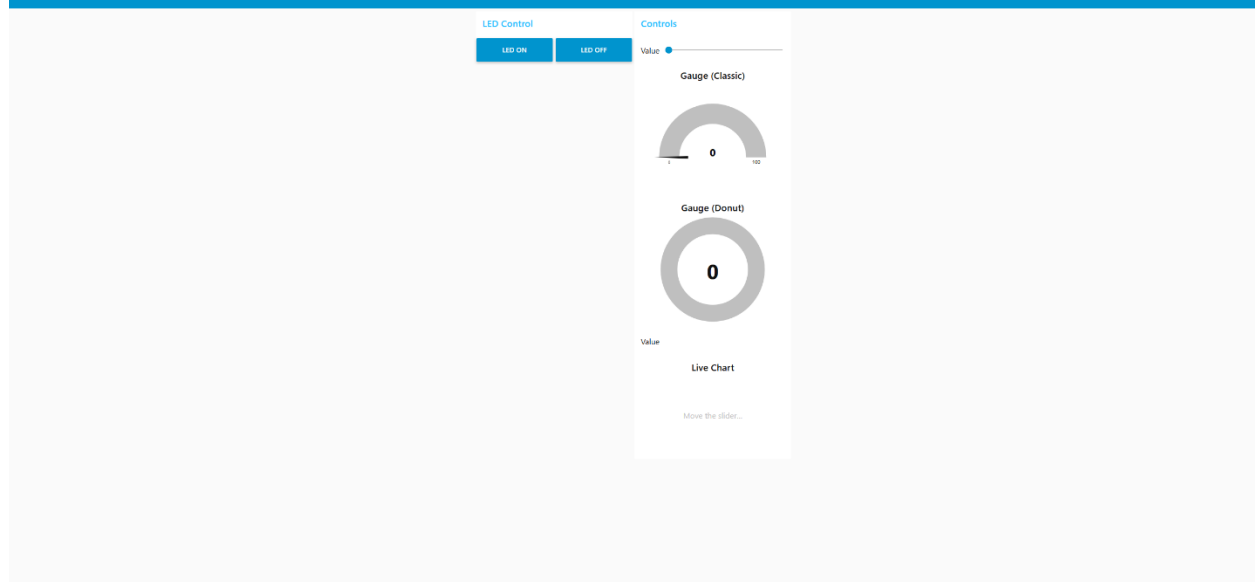
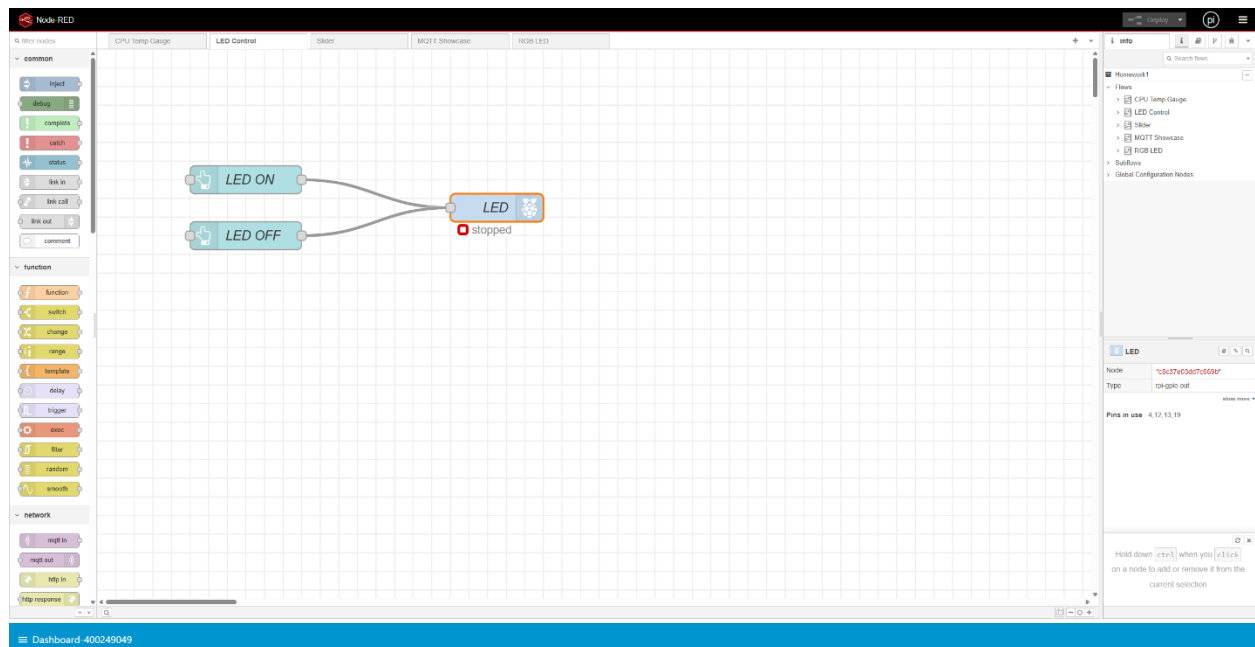
مهرزاد گلابی ۴۰۰۲۴۹۰۴۹

۱. تمرین ۱ خواندن دما CPU

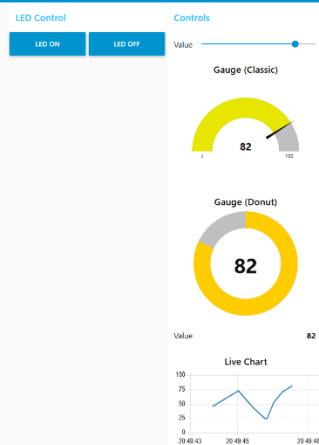
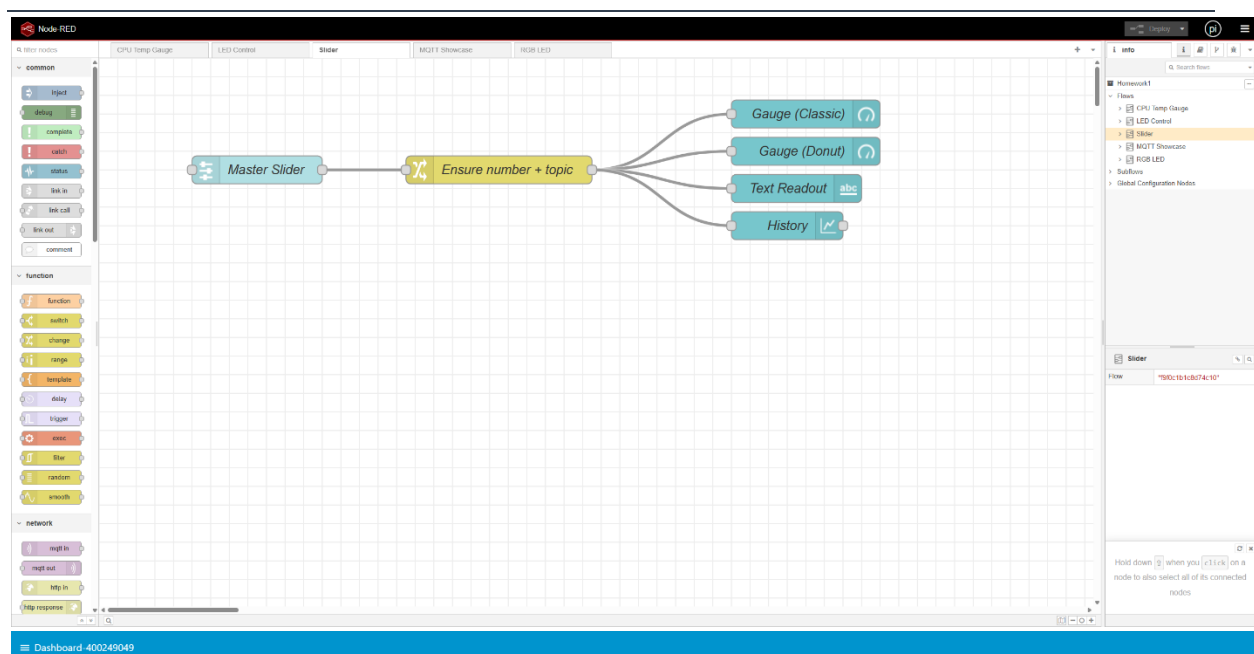
System: 400249049



۲. تمرین شماره ۲ روشن و خاموش کردن LED



۳. تمرین شماره ۳ اسلایدر و گیج



۴. تمرین شماره ۴ پروژه نمایشی با MQTT

ابتدا در hivemq.cloud به عنوان broker برای MQTT یک Cloud plan به صورت Serverless میسازیم. Access Management را تنظیم میکنیم. در Web Client برای مشاهده Message ها با اکانتی که ساختیم وارد میشویم. اطلاعات لازم را در node-red وارد میکنیم.

Edit mqtt out node > **Edit mqtt-broker node**

Delete

Cancel

Update

Properties

Name

HiveMQ Cloud

Connection

Security

Messages

Server

Port

8883

☒ Connect automatically

☒ Use TLS

HiveMQ TLS

Protocol

MQTT V3.1.1

Client ID

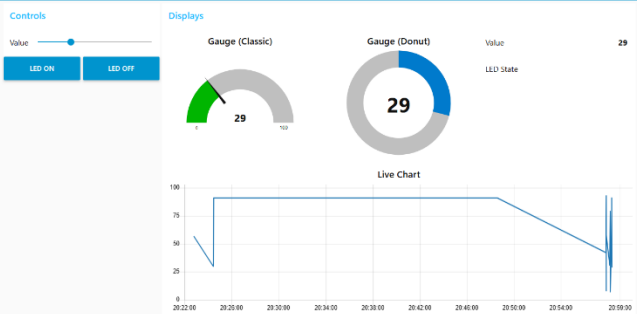
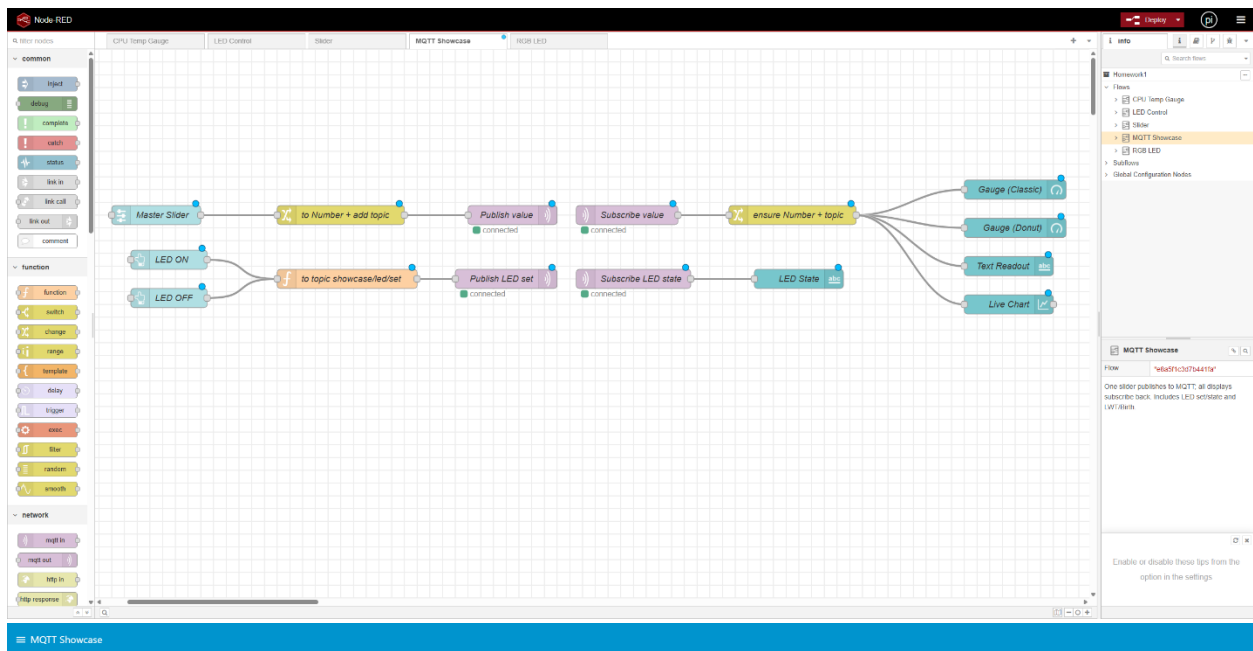
nodered-showcase-{{{random}}}

Keep Alive

60

Session

☒ Use clean session



HiveMQ Cloud

ORGANIZATIONS: SBU

CLUSTERS OVERVIEW: Free #1

Free #1

Overview Access Management Integrations **Web Client** Getting Started

Connection Settings

The WebClient is connected

Connect to your HiveMQ Cloud Cluster with your credentials. Do not worry you can quickly connect with autogenerated credentials.

Username: Password:

Disconnect

Topic Subscriptions

Unsubscribe from all topics

Subscribe to topics to receive messages from the HiveMQ cluster. You can also set the Quality of Service (QoS) for each topic. The higher the QoS, the more reliable the message delivery is. You can always subscribe to the (*) wildcard to receive all messages. Please note that the messages from internal probe topics are not displayed here.

TOPIC	QoS	ACTIONS
<input type="text" value="#"/>	<input type="text" value="QoS: 0"/>	<input type="button" value="Subscribe"/>

Send Message

If you cannot see any messages, make sure you are subscribed to the correct topics. You can always subscribe to the (*) wildcard to receive all messages.

Message

Messages

Clear all messages

#	Topic	showcase/value	QoS: 0
58	Topic: showcase/value	showcase/value	QoS: 0
31	Topic: showcase/value	showcase/value	QoS: 0
79	Topic: showcase/value	showcase/value	QoS: 0
18	Topic: showcase/value	showcase/value	QoS: 0
7	Topic: showcase/value	showcase/value	QoS: 0
22	Topic: showcase/value	showcase/value	QoS: 0
56	Topic: showcase/value	showcase/value	QoS: 0
54	Topic: showcase/value	showcase/value	QoS: 0
ON	Topic: showcase/led/set	showcase/led/set	QoS: 0
79	Topic: showcase/value	showcase/value	QoS: 0
61	Topic: showcase/value	showcase/value	QoS: 0
29	Topic: showcase/value	showcase/value	QoS: 0

برای مشاهده کد Flow ها به گیت‌هاب من مراجعه کنید:

<https://github.com/MehrzadGolabi/Microprocessor-4041>

۵. تمرین اضافی: RGB LED

