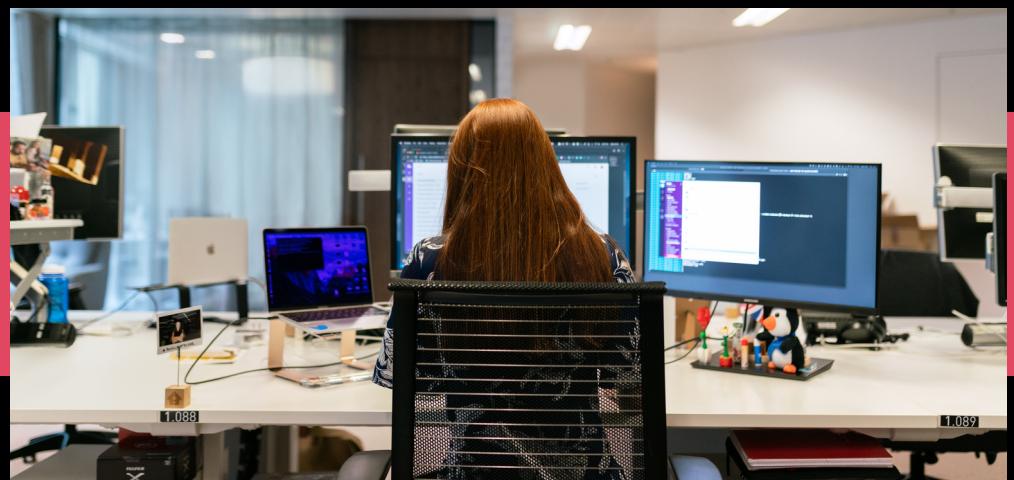
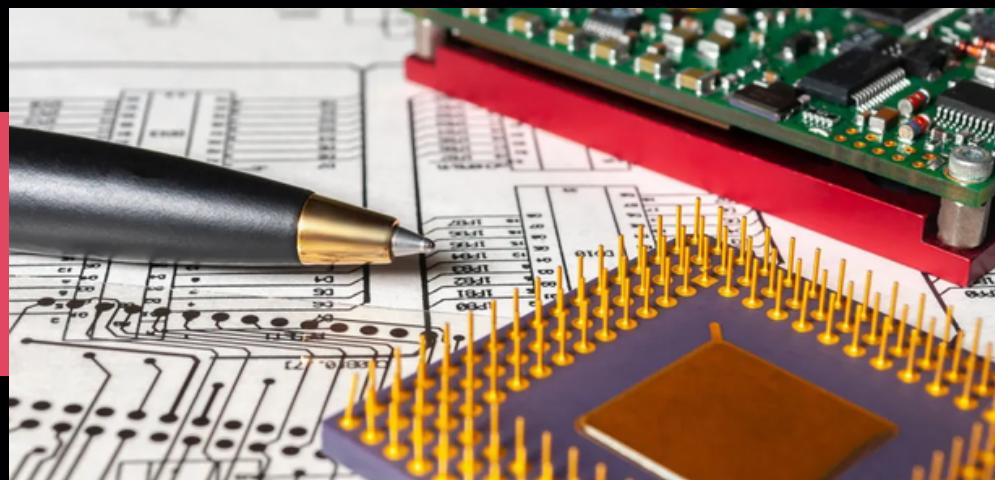
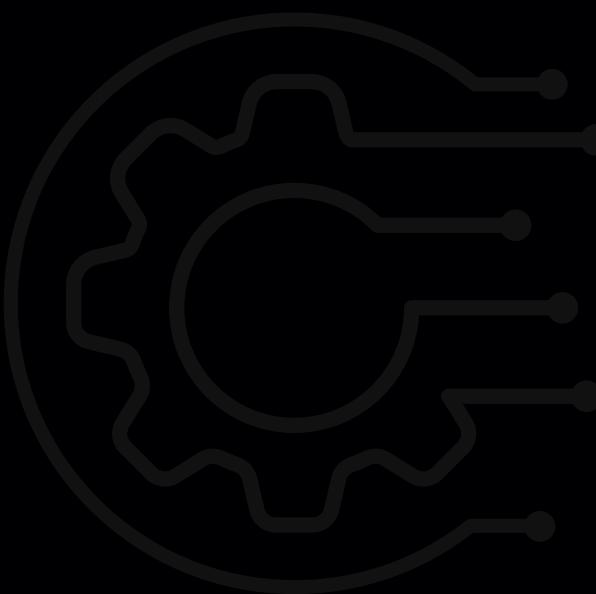


# INC 272

CAPSTONE PROJECT

# INTRODUCTION



## Sensor simulation to embedded system

Using Proteus, reading a sensor and sending the value to an embedded system

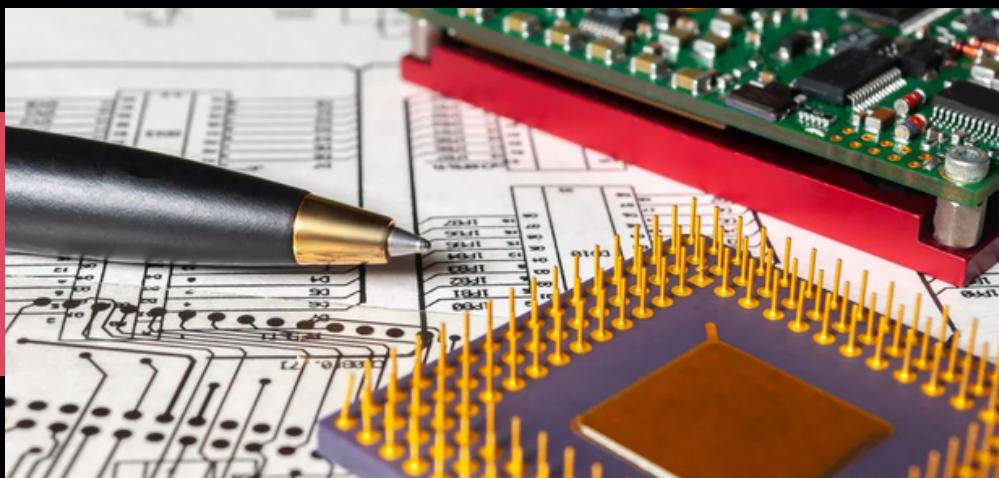
## Programming

Coding for Monitoring and Control in Embedded Systems

## IoT Dashboard Program

Utilizing an IoT dashboard to control and monitor a device

# INTRODUCTION



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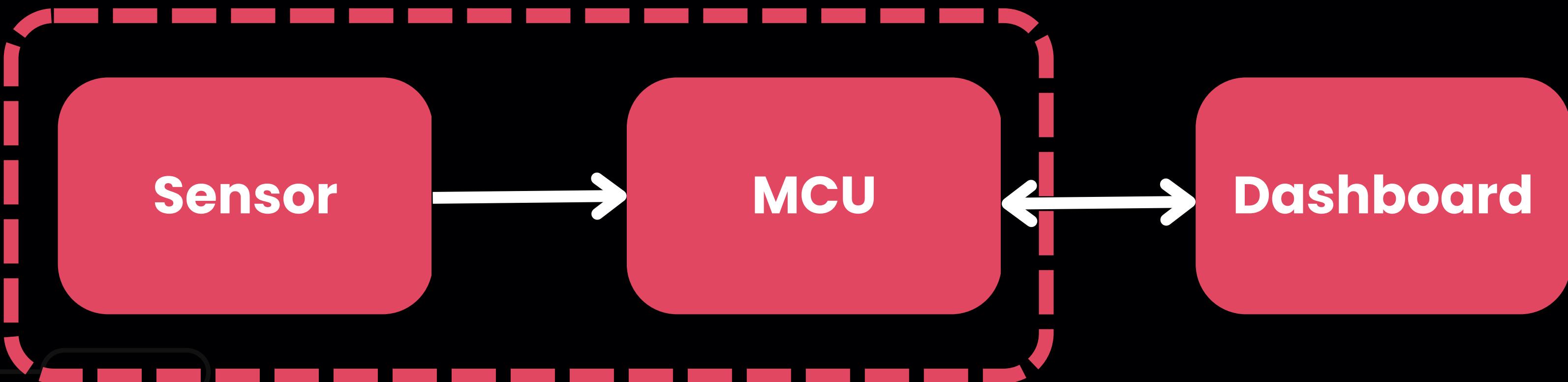
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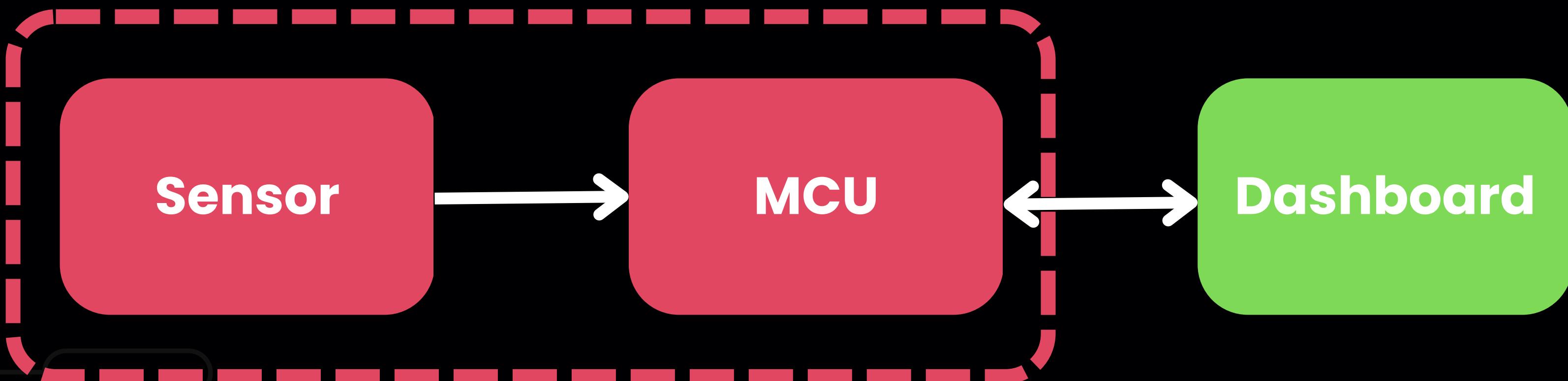
# SYSTEM OVERVIEW



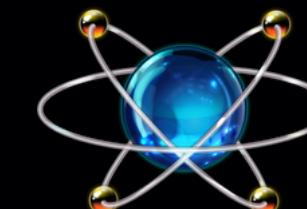
Proteus 8 Professional



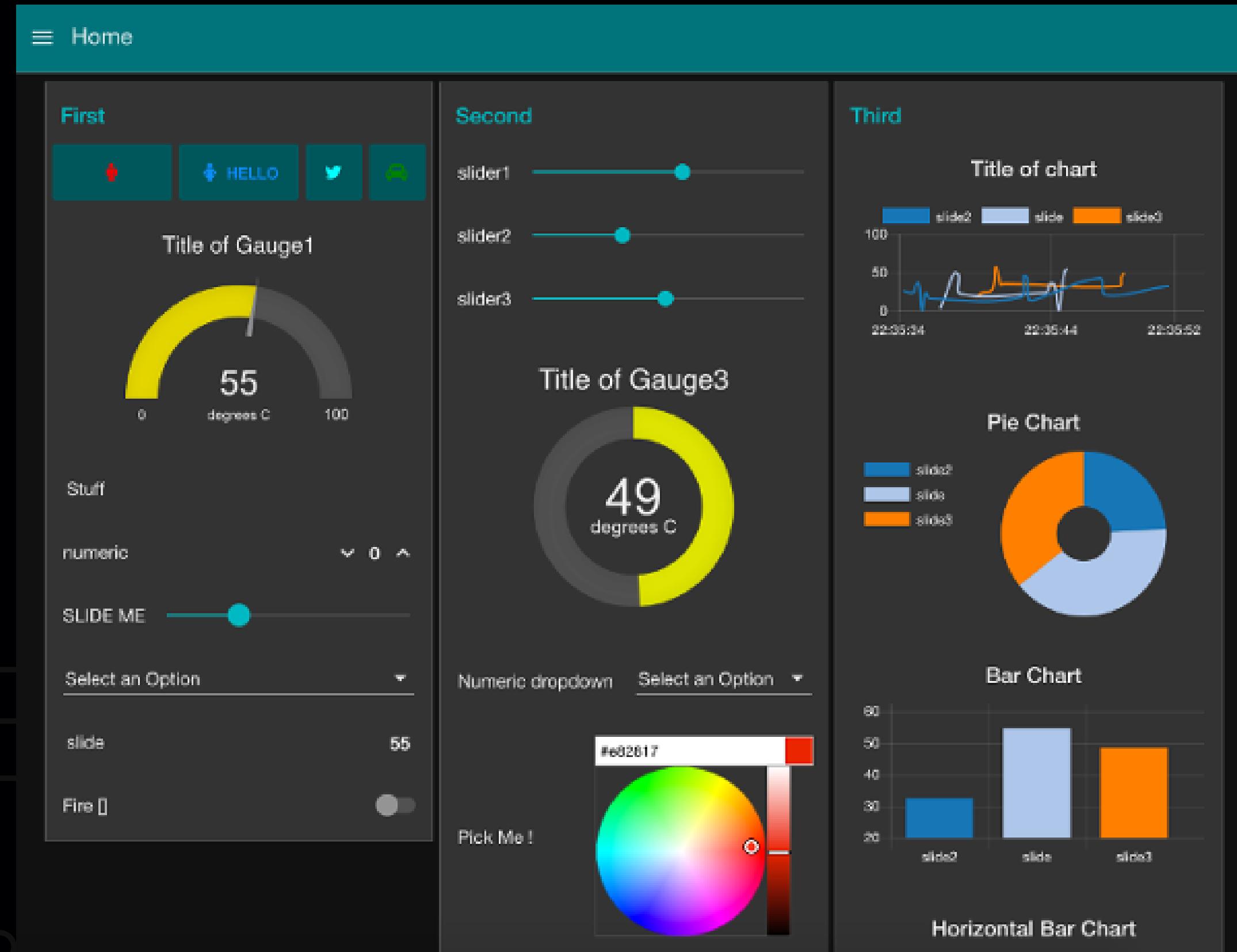
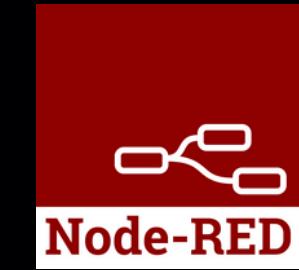
# SYSTEM OVERVIEW



Proteus 8 Professional

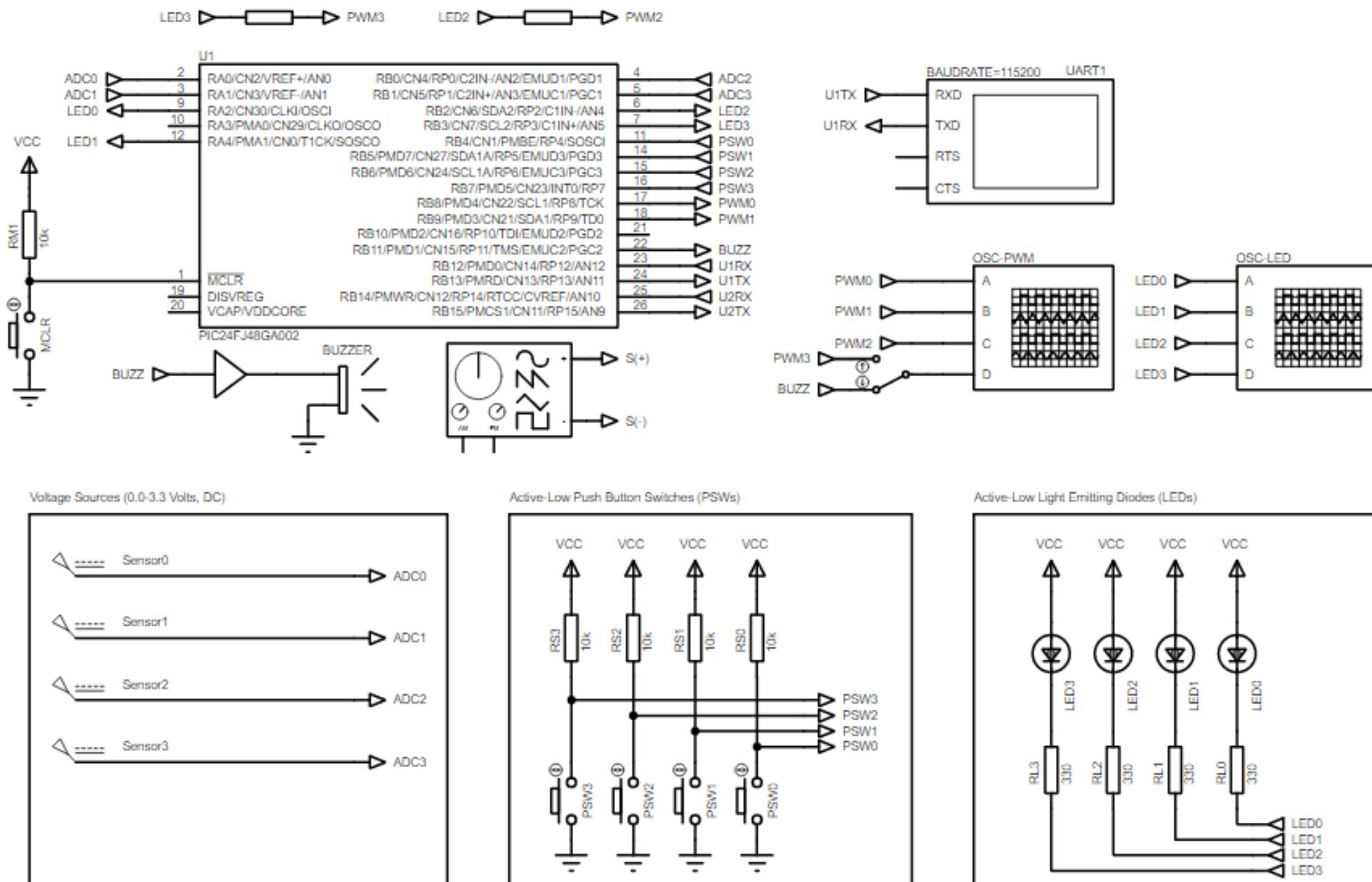


# DASHBOARD (NODE-RED)



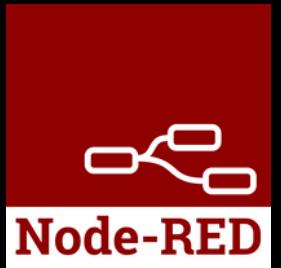
# SIMULATION EMBEDDED BOARD

Microcontroller Circuit used for INC281

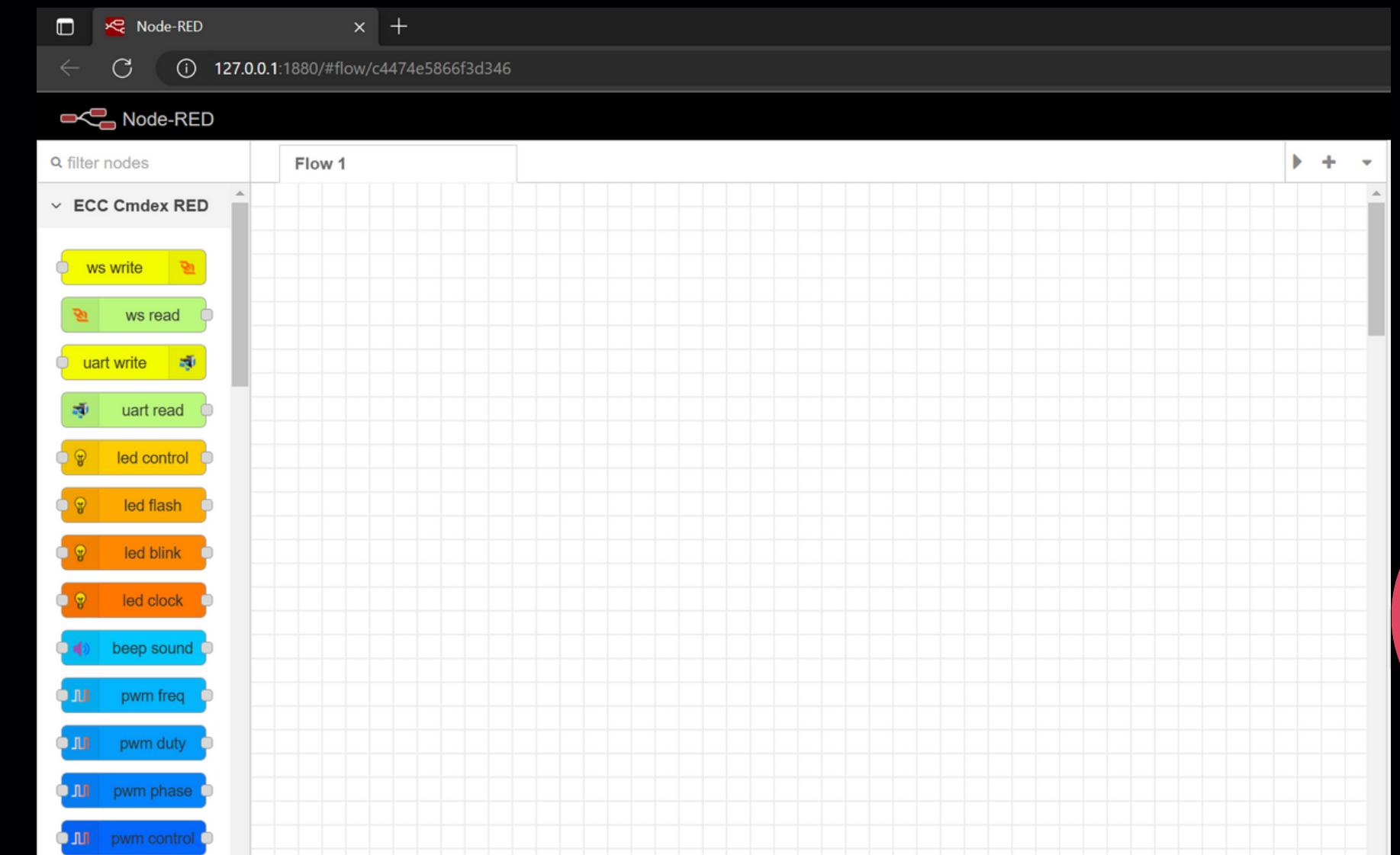


Asst.Prof.Dr.Santi Nuratch  
Embedded Computing and Control Lab.

# OPEN NODE-RED



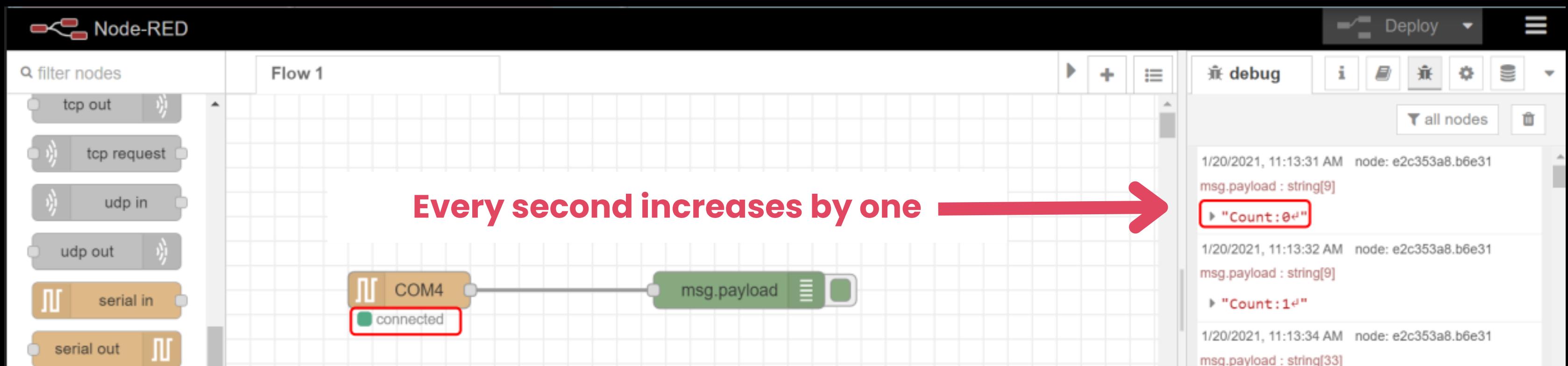
- open Command Prompt.
- Run the **ecc-node-red** using Command Prompt.
- Then open a web browser and give it the link  
<http://127.0.0.1:1880/>



# ASSIGNMENT

## Task 1

The debug window of the Node-RED will show **Counter: xxx** (**xxx** is the number) every one second ,from Proteus .





# ASSIGNMENT

## Task 2

- Connect your signal conditioner to pin A0.
- Write a program so that the value is adjusted to the **real unit**.
- Print the value to debug window show in Node-red Dashboard.



# THANK YOU

I N C 2 7 2

