

# Controlling My Home Sauna Using .NET 5

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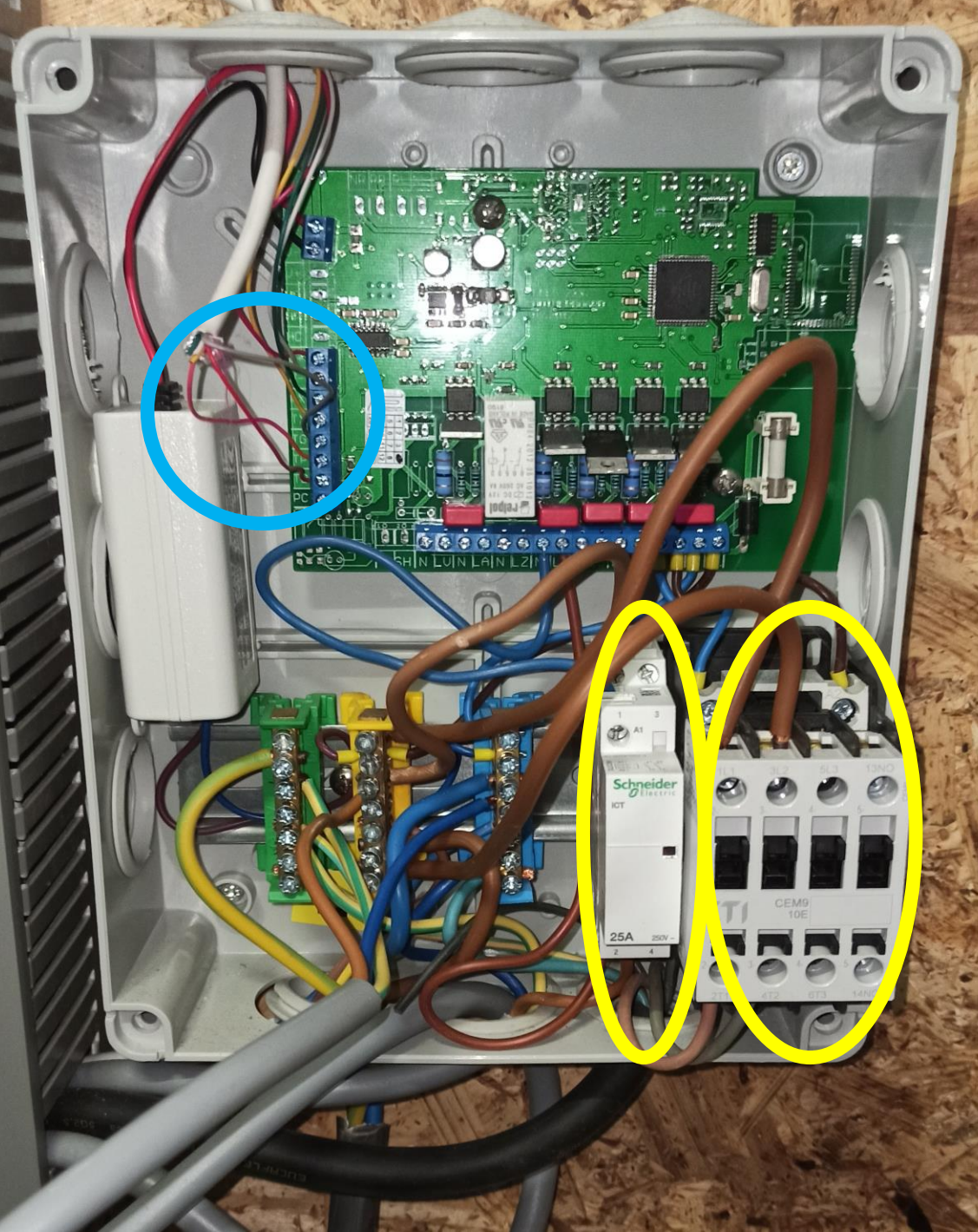
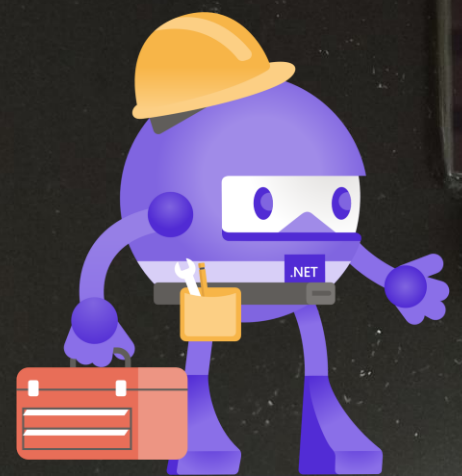
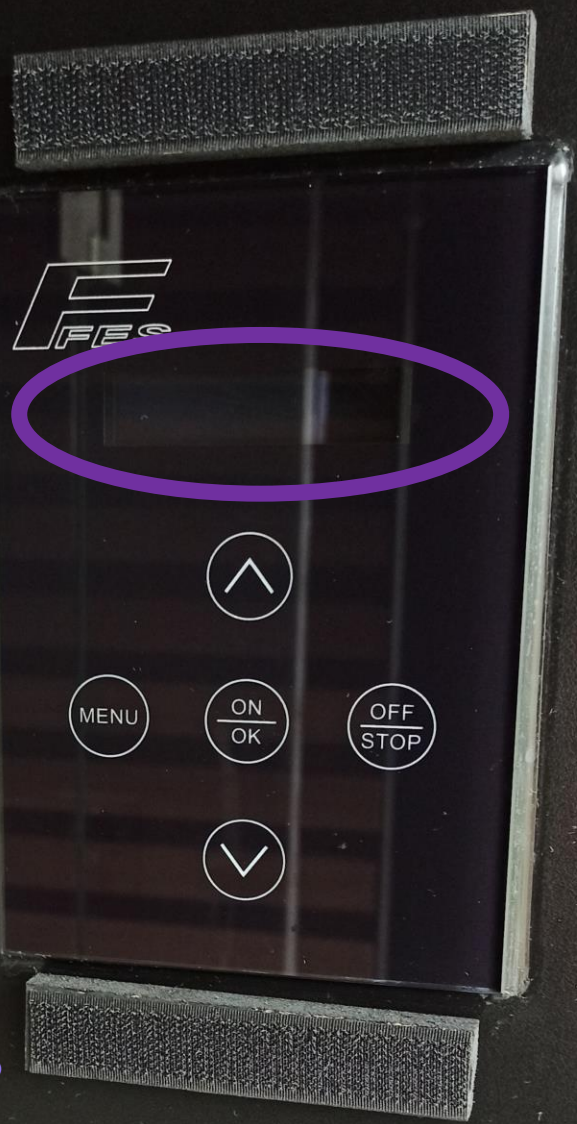


involved











zaterdag 2 mei 2020

17:02

sauna

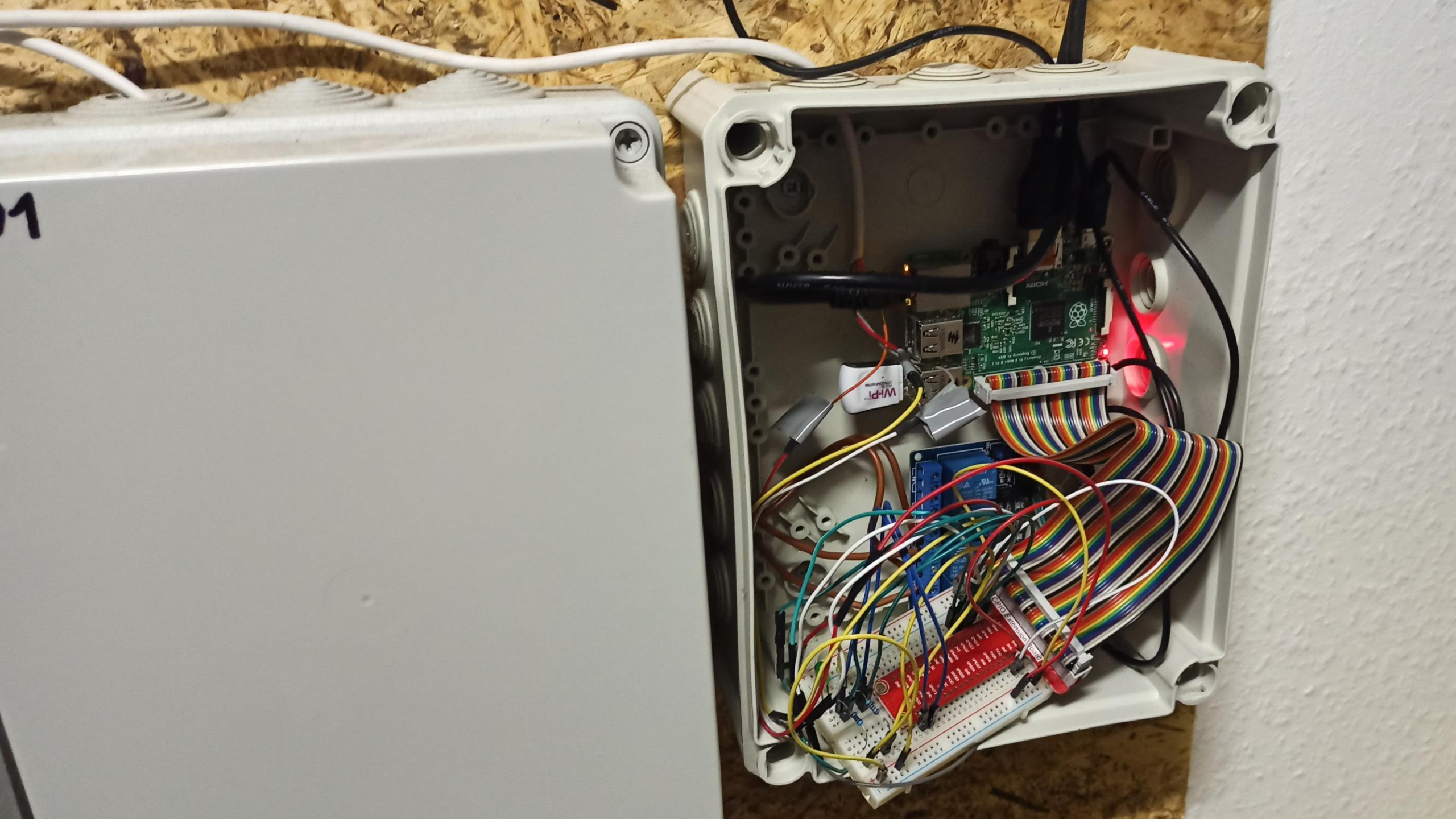
106 °C

52:45

Lenovo







# Architecture



# .NET 5

- You want to connect any device to your server to fetch and provide all kinds of data?
  - ASP.NET WebApi for HTTP API's



# .NET 5

- You want to run a continuous process that is able to read live temperature and react on that?
  - Worker Services for processing (Windows Service or Linux Daemon)

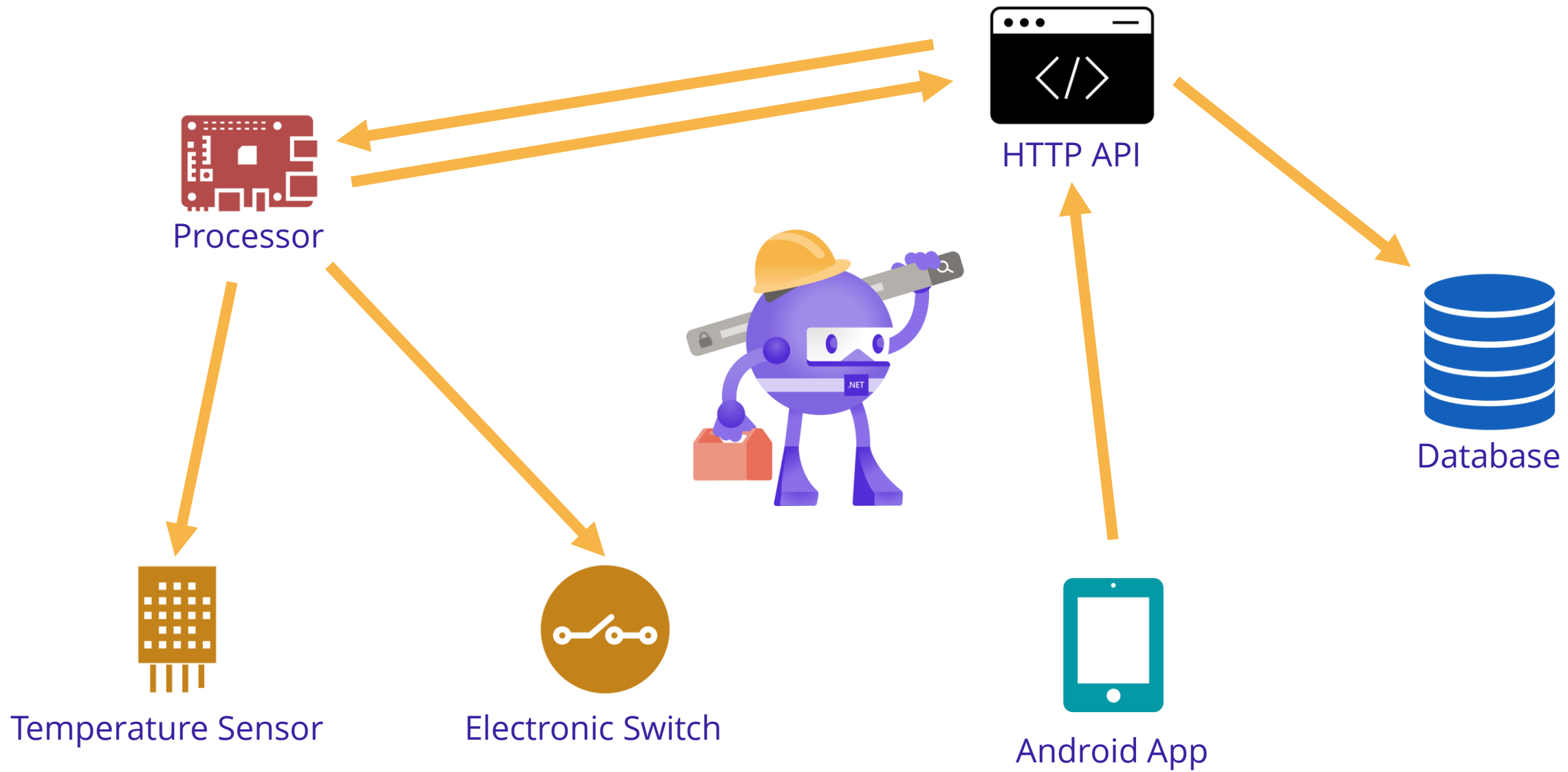
# .NET 5

- You want to read sensors and switch relays?
  - .NET 5 runs on a Raspberry Pi ARM64 with a Linux OS and Gpio support!



# .NET 5

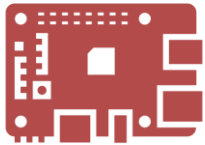
- You want a beautiful app on Android or iOS?
  - Xamarin.Forms, based on the Mono runtime and written using C# and XAML can make that work for you!



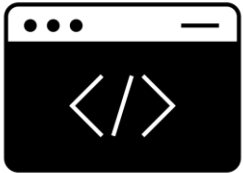


Docker container on Synology NAS

Raspberry Pi 3B+  
Linux Daemon Service



Worker Service  
gRPC Server

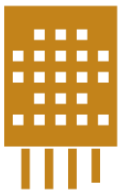


ASP.NET WebApi  
gRPC Client

Docker container on  
Synology NAS



SQL Server



1-Wire bus protocol



Gpio



Xamarin.Forms

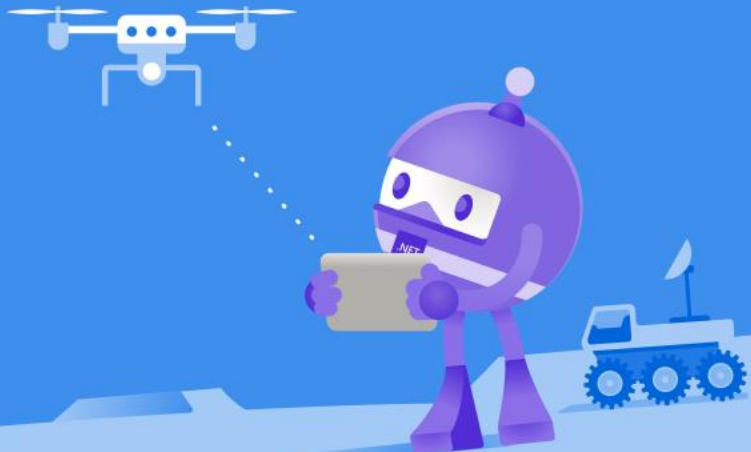
Old Lenovo Android tablet  
running Lineage OS

# Demo & Code





# Deployment



# Azure DevOps and GitHub

- Changes on GitHub
- Pipelines on Azure DevOps
- Deployed on my local network
- Azure DevOps Pipeline Agents

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<https://github.com/Djohnnie/MySauna-DotNetConf-2020>

<https://github.com/Djohnnie/MijnSauna>





# Thanks for joining!

