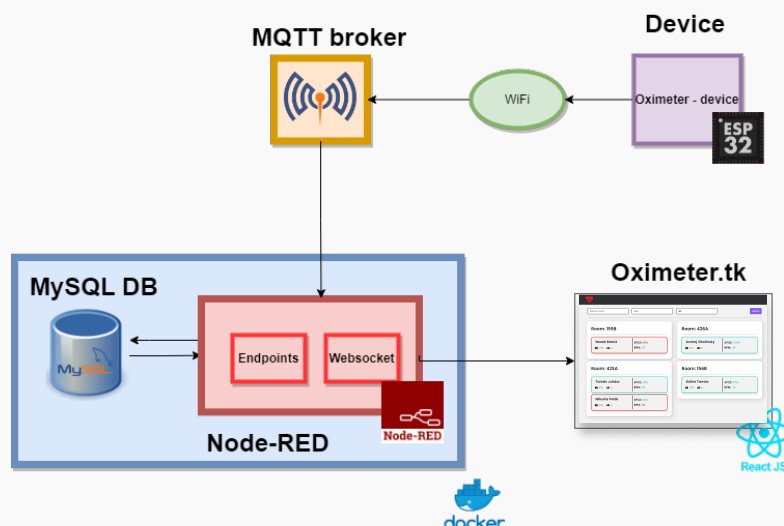


Problem description

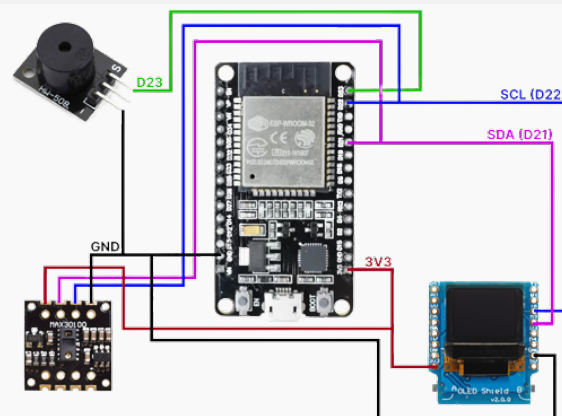
- Nowadays, vascular diseases and disorders are becoming more and more common and represent a serious problem for society. The main problem with heart disease is that it is often difficult to diagnose because one-off measurements in the doctor's office provide little information.
- Problems often appear suddenly, either during the day or while sleeping, and therefore require ongoing measurement.
- Although similar services already exist in some private hospitals, they are all very expensive due to different contracts and lack of competition in the market.

Architecture



How it works?

- After each measurement, the device displays and sends this data to an MQTT broker using the built-in WiFi module.
- With Node-Red, we capture this data from our MQTT broker and store it in a database, and display these values in real time using websockets.
- Previous measured data is displayed on the frontend page, each patient has a "detail page" where they can check all previous measurements.



Solution

- Websocket
- Mosquitto broker server
 - Node-red backend
 - React.js frontend
- IoT device - using ESP32
 - MySQL database

