

03.Business layer (2023-2024-S019-S020-S021)

Our motivation

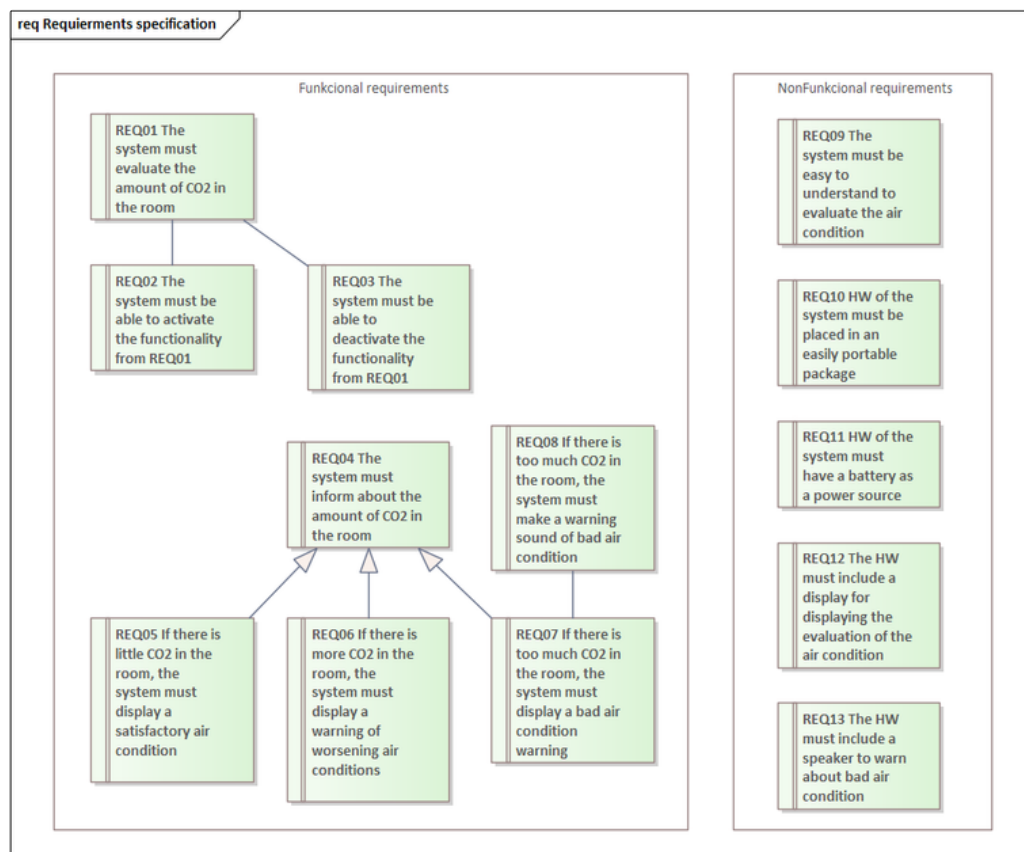
Air quality affects human life. A person cannot exist without oxygen, and smog or other emissions have a negative effect on health. Therefore, we should have a device that evaluates the quality of the air we breathe.

The human brain necessarily needs enough oxygen to be able to work and think creatively. In the study room or in the office, therefore it is very necessary to have a device that evaluates whether there is a sufficient amount of oxygen in the room.

That's why we decided to create a CO2 sensor that evaluates how much CO2 there is in the room. Because the CO2 sensor determines the quality of the air and, at the same time, whether there is more CO2 than oxygen.

This sensor can be utilized by anyone, especially in crowded rooms where there is a potential high CO2 hazard.

The requirements specification



Sketches of the CO2 sensor

The CO2 sensor will be in a box, where the device for measuring CO2 in the room will be inserted. After the measurement, the air in the room is evaluated. We proposed two ways to provide the mentioned information to users.

In the first case, a lightgrid can be used, where a specific icon represents a specific state:

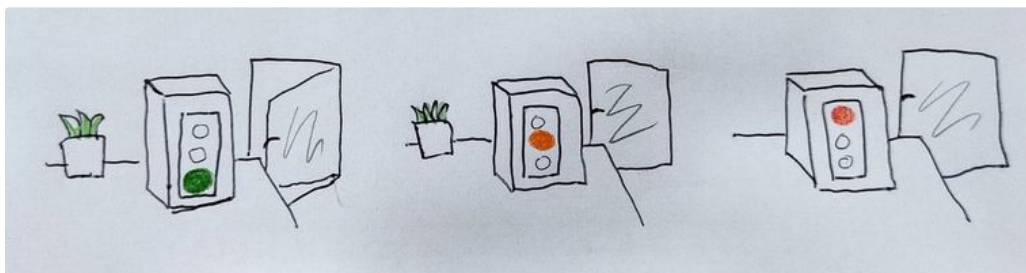
- ✓ the air contains enough oxygen
- ! air contains oxygen, but it also contains a larger amount of CO₂
- ✗ the air contains too much CO₂ and the room should be ventilated



Design 1: display with icons

In another case, a display can be used, where each one LED represents one color of light. In that case, the CO₂ sensor can show:

- air contains enough oxygen for normal functioning
- air contains oxygen, but it also contains a larger amount of CO₂
- the air contains too much CO₂ and the room should be ventilated



Design 2: display with color LEDs