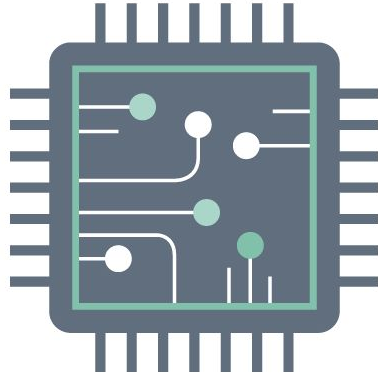# Smart Heat Volume Meter

Prepared by:

Yaroslav Morozevych
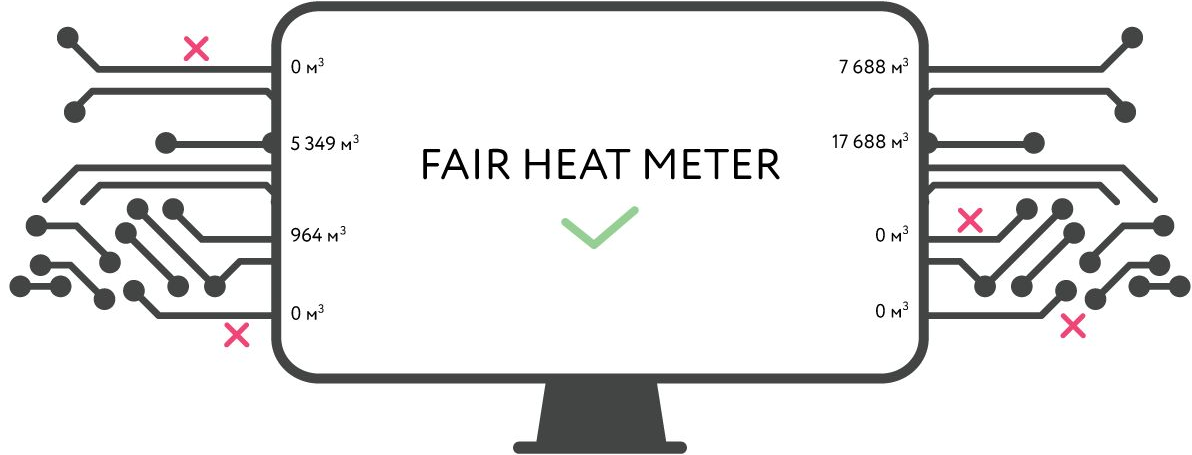
Sofiia Myntiuk

Yana Muliarska
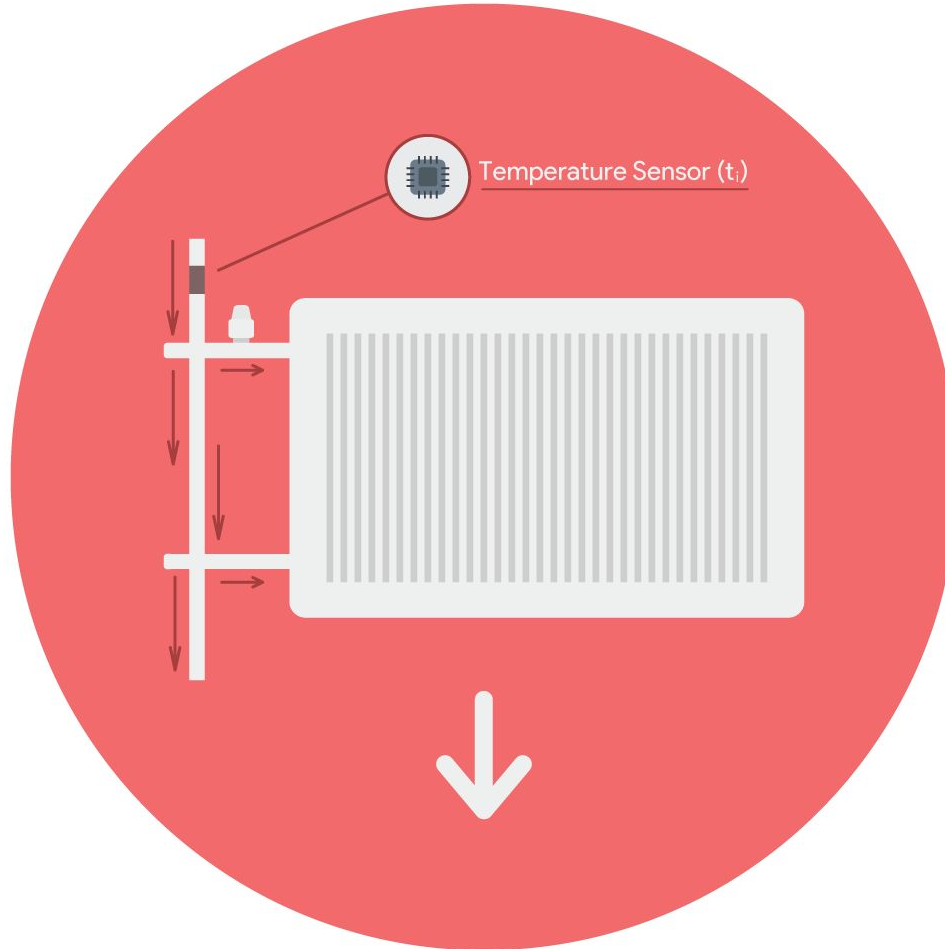
Problem of centralization

TOTAL AMOUNT:
448 639 837 м^3 🚫
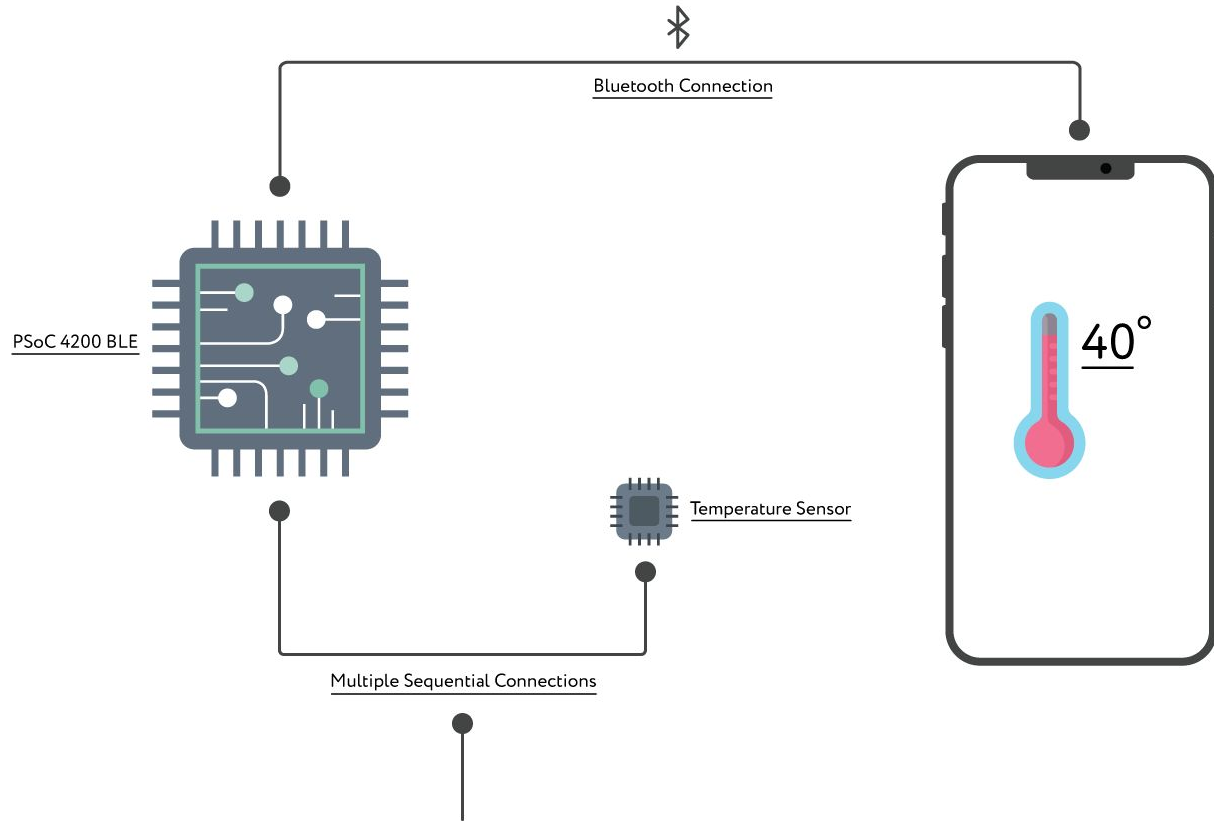
Problem solution

Heat Amount

Temperature Sensor (t_i)

$$Q_i = cm * \triangle t_i$$
$$\downarrow$$
$$\frac{Q_i}{Q} = \frac{cm * \triangle t_i}{cm * \triangle t} = \frac{\triangle t_i}{\triangle t}$$

Project Scheme

Bluetooth Connection

PSoC 4200 BLE

Temperature Sensor

40°

Multiple Sequential Connections

9th FLOOR — 40°

2nd FLOOR — 30°

1st FLOOR — 20°

WHOLE SYSTEM

based on

BLE MESH

$$[\ 25, 31, 15, 0 \ ]$$

Role

Peripheral → Central

$$[\ 25, 31, 0, 0 \ ]$$

Role

Peripheral → Central

$$[\ 25, 0, 0, 0 \ ]$$
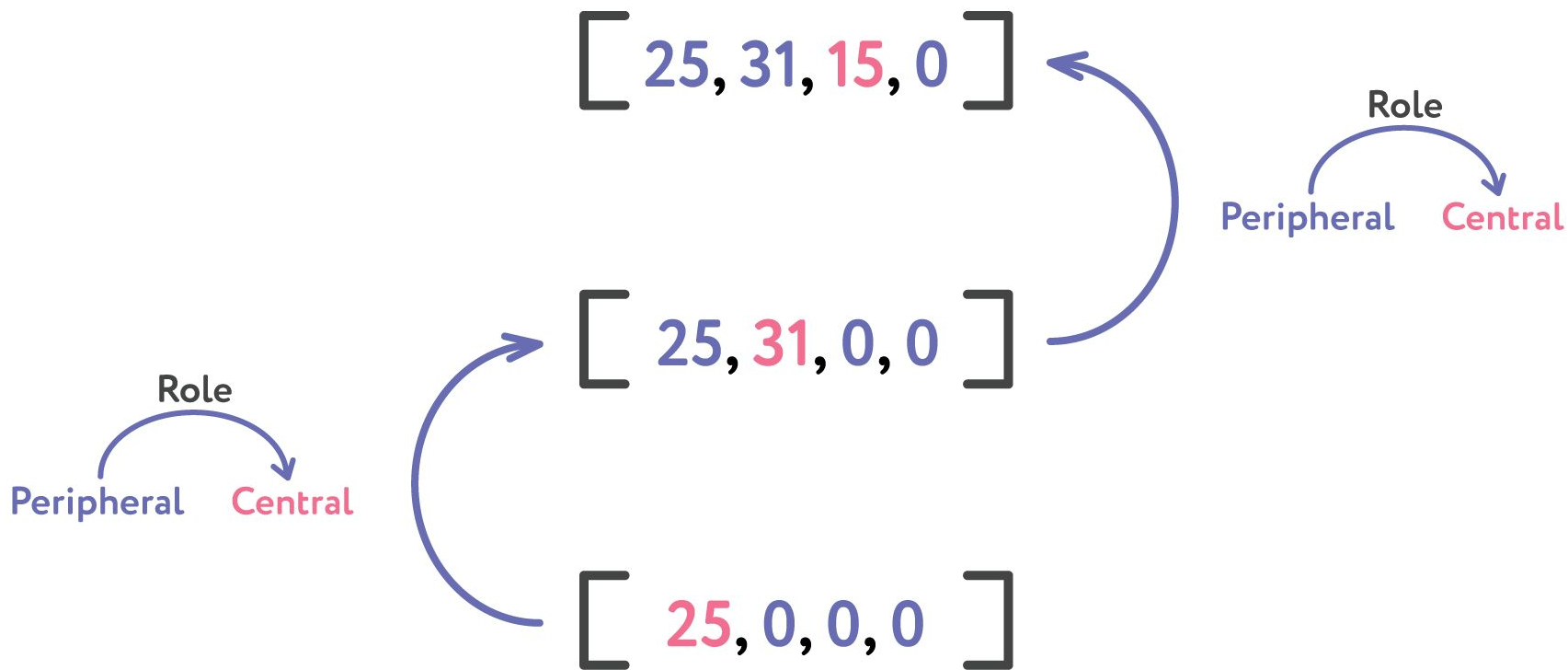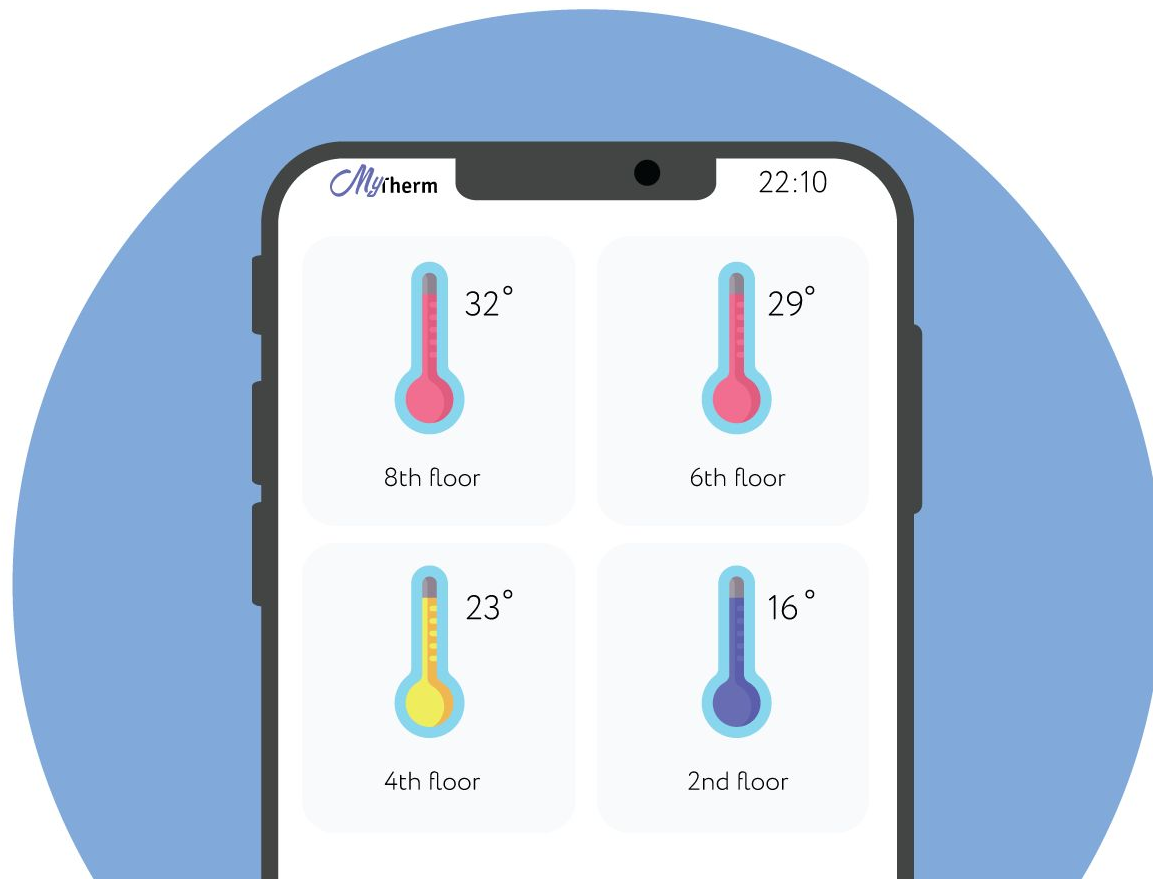
User Experience

What we have done:

- ✓ Connected device to smartphone
- ✓ Connected a heat sensor to the board
- ✓ Rewrote and refactored almost all the code
- ✓ Found the way to measure heat amount
- ✓ Created a system of devices using Mesh

What we need to do:

- ○ Write an app for our device
- ○ Create a shape for our device

Any questions?