In this step, I will be implementing the thermal exchange between the room and the environment. In order to ensure that the heaters and coolers react appropriately to changes in room temperature, I plan to implement the observer pattern. This will allow us to establish a one-to-many relationship between the room temperature and the heater/cooler objects, enabling them to receive notifications and update their behaviour accordingly.

Room

- heaters: vector<Heater*>
- coolers: vector<Cooler*>

+ add(Heater/Cooler)
+ remove(Heater/Cooler)
+ notify()

Heater

+v update()

Cooler

+v update()