

Did you lock the door?

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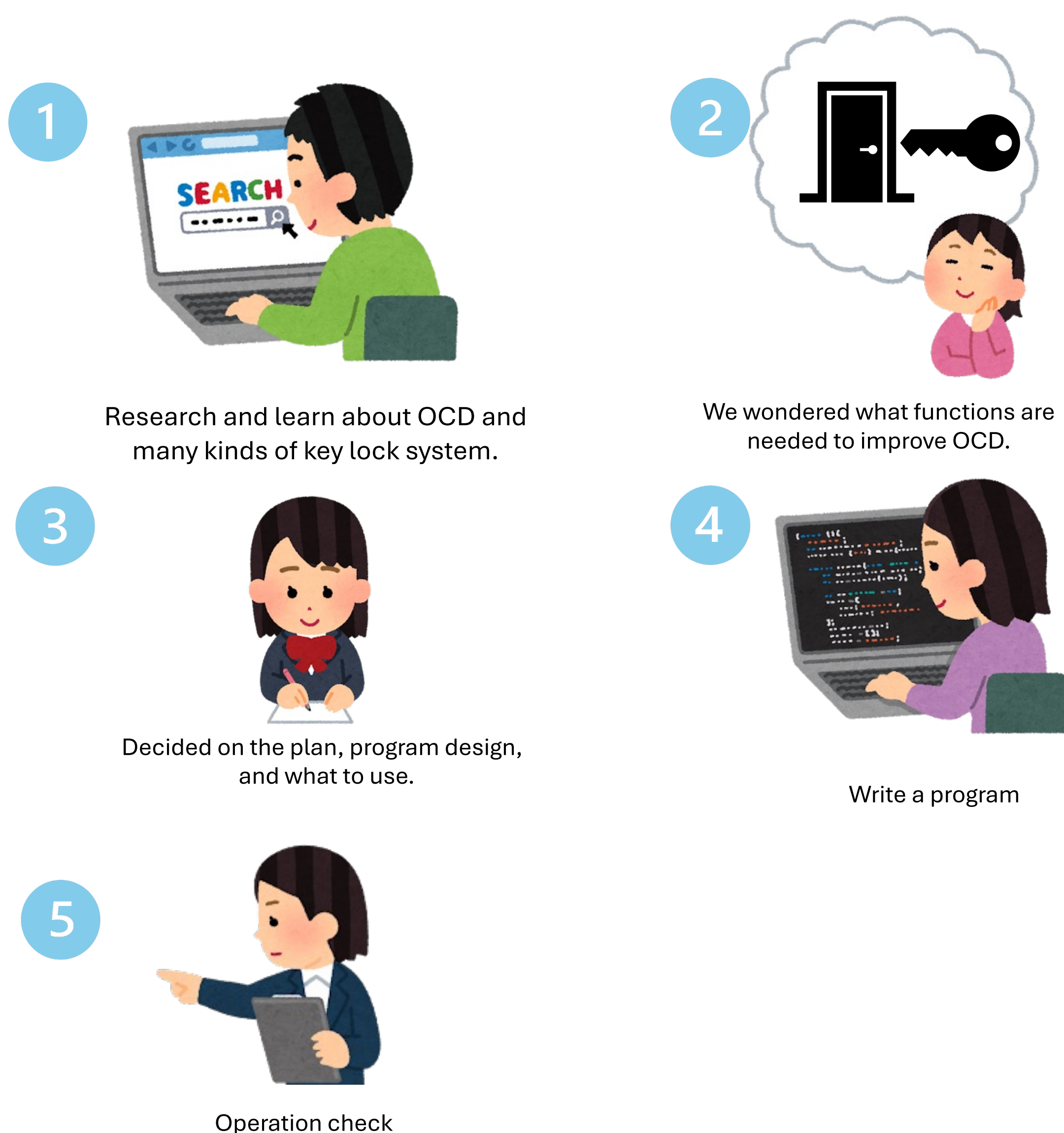
PROBLEM



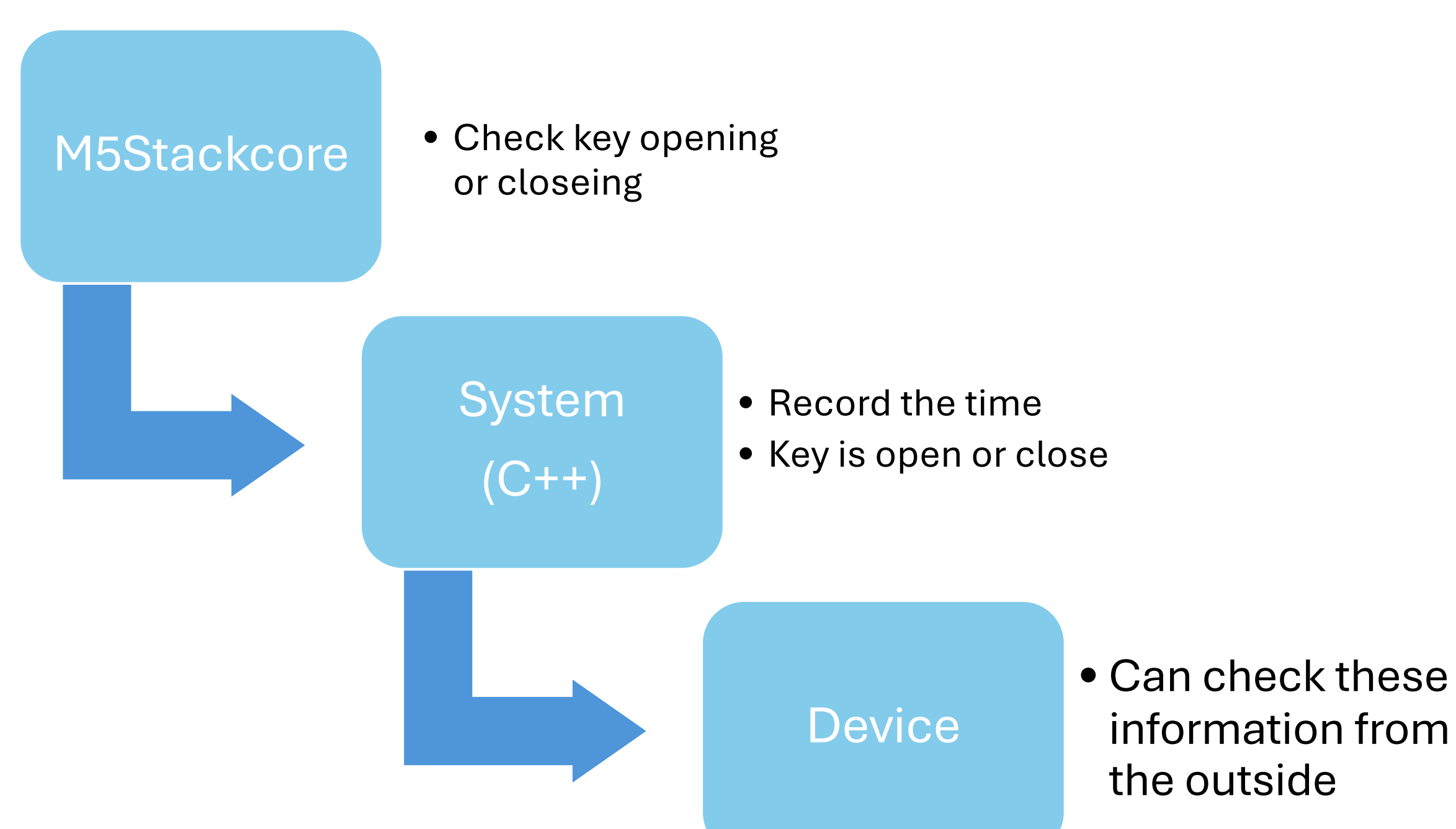
This is a graphic representation of one of the symptoms of OCD (*obsessive compulsive disorder*).

The main symptom of this disease is that the repeated act of checking is difficult to stop. We will develop a system that alleviates the symptom of wondering if the front door is locked.

FRAMEWORK



Flowchart

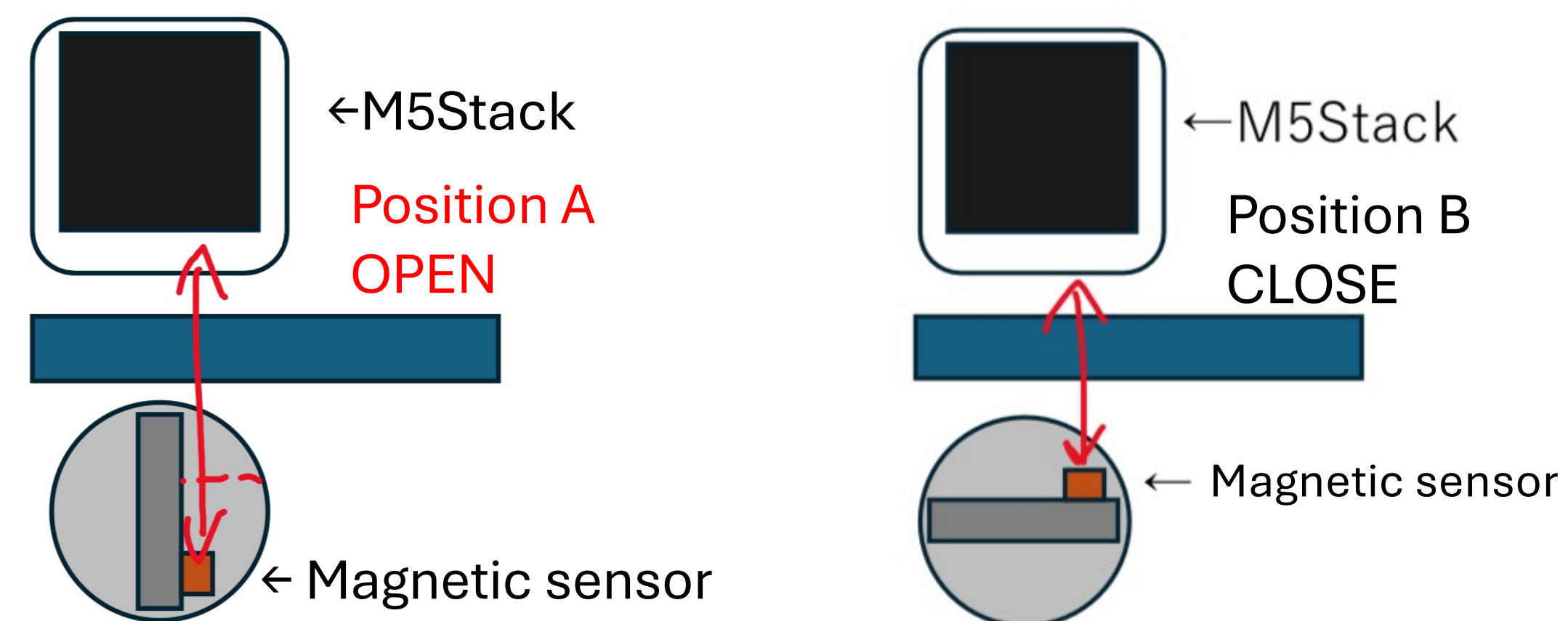


FINDING

The M5Stack and magnetic induction distance sensor were used to record the opening and closing of locks.

Distance between magnetic sensor and M5Stack vs. output value

Position	Distance [cm]	OutPut
A	4.44092	0
B	2.22046	1



Use these results to build a system.

INTERPRETATION AND CONCLUSION

- ◆ In this project, the inside of the front door key is limited to the thumb turn of lock. **The future goal** is to use an external device to create a device that can record the open/close status of a lock regardless of the shape of the lock.
- ◆ Although this study was designed to alleviate symptoms in people with obsessive-compulsive disorder, it can be used **for other people** as well. For example, it can be used as a crime prevention measure, for elderly people who live alone, for those who are concerned about memory loss, etc.

REFERENCE

Ziaoru LI, Review of the Obsessive-Compulsive tendency among non-clinical subjects : Focusing on protection , Bulletin of the Graduate School of Education, the University of Tokyo , 2004 Vol.44, B-4, p198