BICOM SYSTEM

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1 REQUIREMENTS

1.1 BICOM SYSTEM

1.1.1 DESCRIPTION

Bi-Com system is an extension of uni-directional Remote Keyless Entry(RKE) to bi-directional RKE. Remote Bi-Com is an electronic access system that is used to perform specific functions and require the end user to initiate an action. Here, the communication is not only from key fob to car but also from car to key fob. Some of the additional features supported in Bi-com are to get the information about status of car which includes window status, alarm status, battery information and door status.

1.1.2 IDENTIFYING FEATURES

By pressing the button:

- It prints the window status whether it is on or off.
- It also prints/displays about the alarm status.
- It also displays about the car battery information.
- It also shows the door status of a car whether opens or not.

2.1 REQUIREMENTS

2.1.1.High Level Requirements

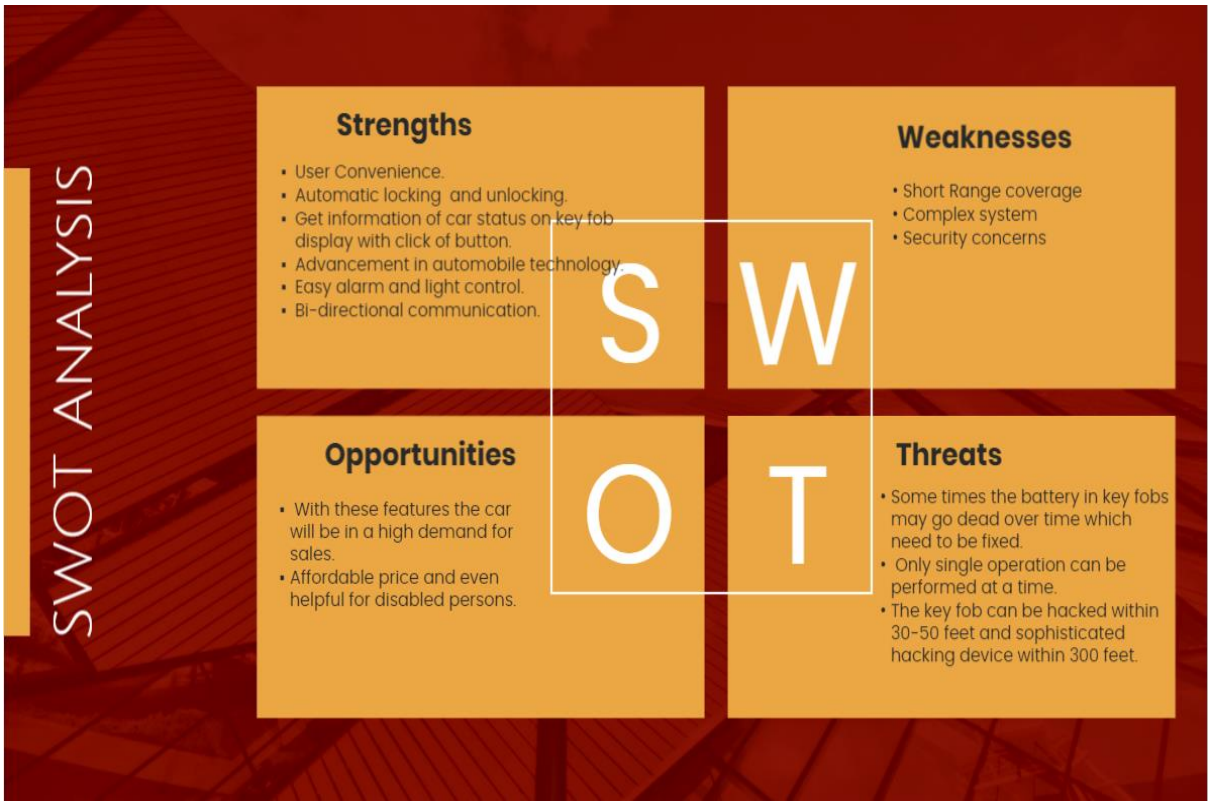
High Level Requirement ID	Description
HLR_1	Get the status of car windows
HLR_1	Get the status of car alarm
HLR_1	Get the information about car battery
HLR_1	Get the status of car door

2.1.2 Low Level Requirements

ID	Low Level Requirements for HL_1		ID	Low Level Requirements for HL_2
LLR_1.1	Check if button is pressed once		LLR_2.1	Check if button is pressed twice
LLR_1.2	Clear the state of LEDs		LLR_2.2	Clear the state of LEDs
LLR_1.3	Switch ON all LEDs at the same time		LLR_2.3	Switch OFF all LEDs at the same time

ID	Low Level Requirements for HL_3		ID	Low Level Requirements for HL_4
LLR_1.1	Check if button is pressed thrice.		LLR_2.1	Check if button is pressed four times.
LLR_1.2	Clear the state of LEDs		LLR_2.2	Clear the state of LEDs
LLR_1.3	Switch ON all LEDs in clockwise pattern		LLR_2.3	Switch ON all LEDs in anti-clockwise direction.

3.1 SWOT ANALYSIS



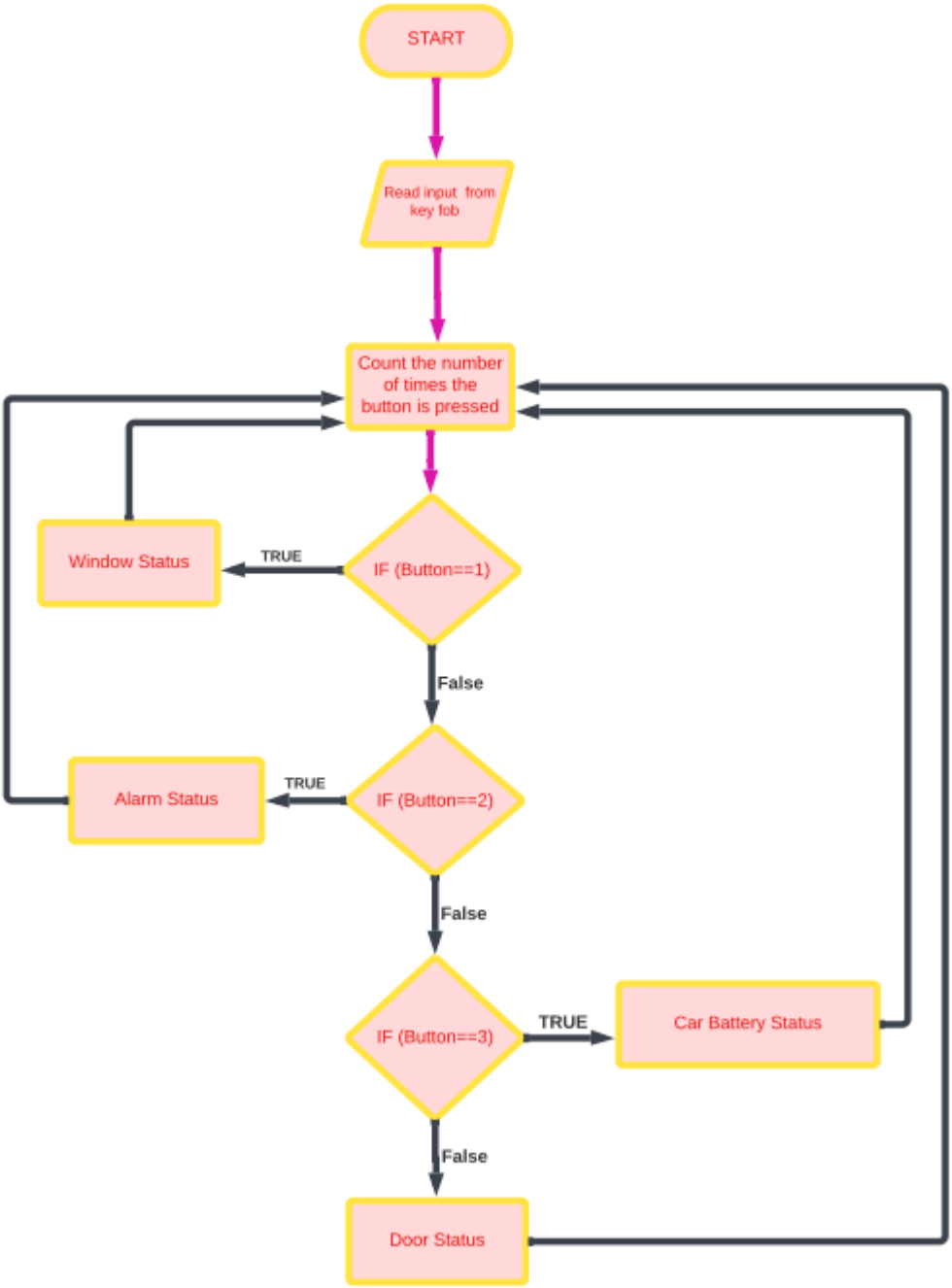
4.1 5W's 1H

- What - Bi-Directional system which support information exchange and control from key fob to car or car to key fob.
- Why - For easy accessibility of the features without the physical contact.
- Where - Anywhere when user wishes.
- When - Anytime in a day when he wants to get information of car status or control car.
- Who - Person who has a car.
- How - By using the keyfob a remote controlled device.

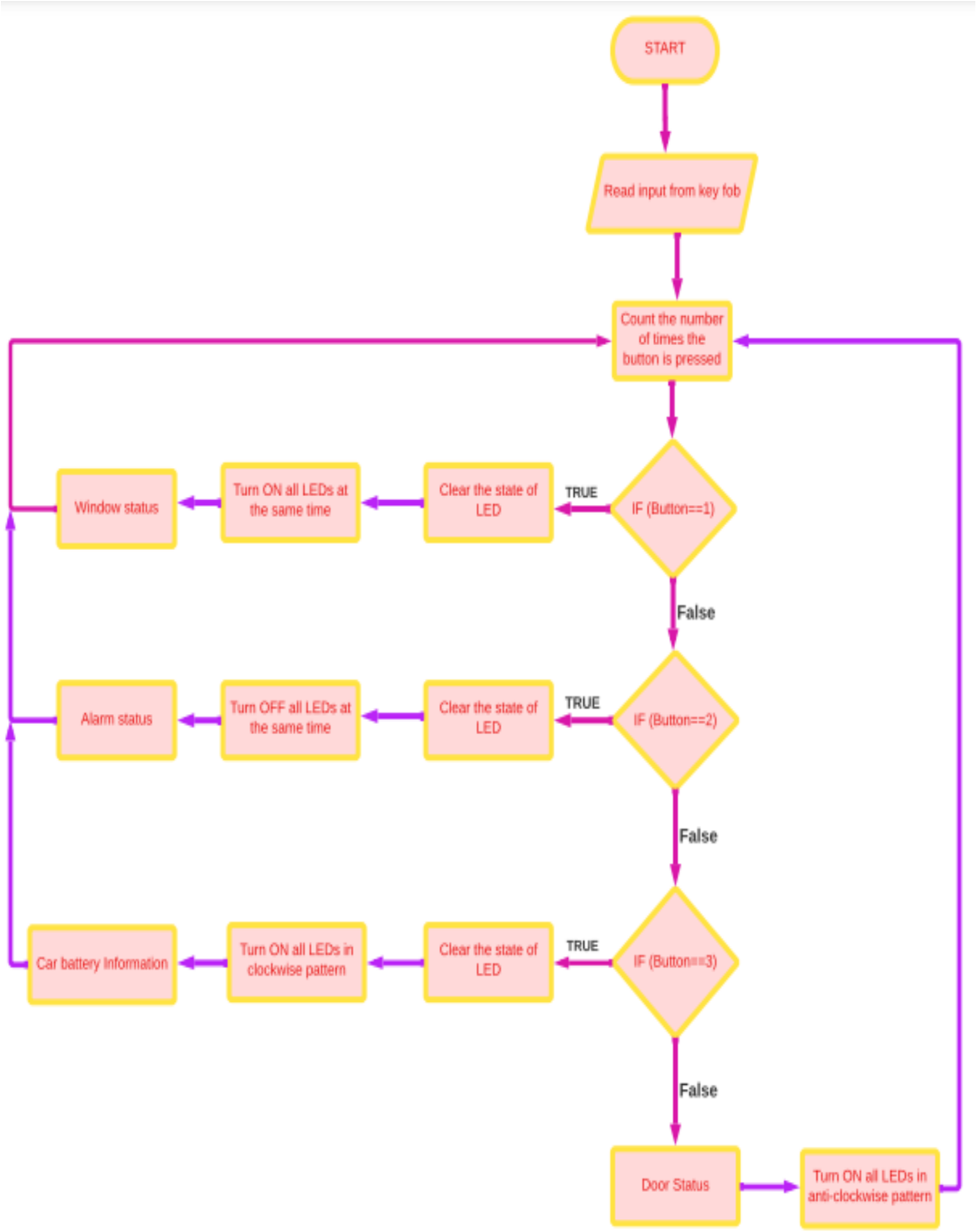
2 ARCHITECTURE

2.1 Behavioural Diagram

2.1.1 High Level Diagram

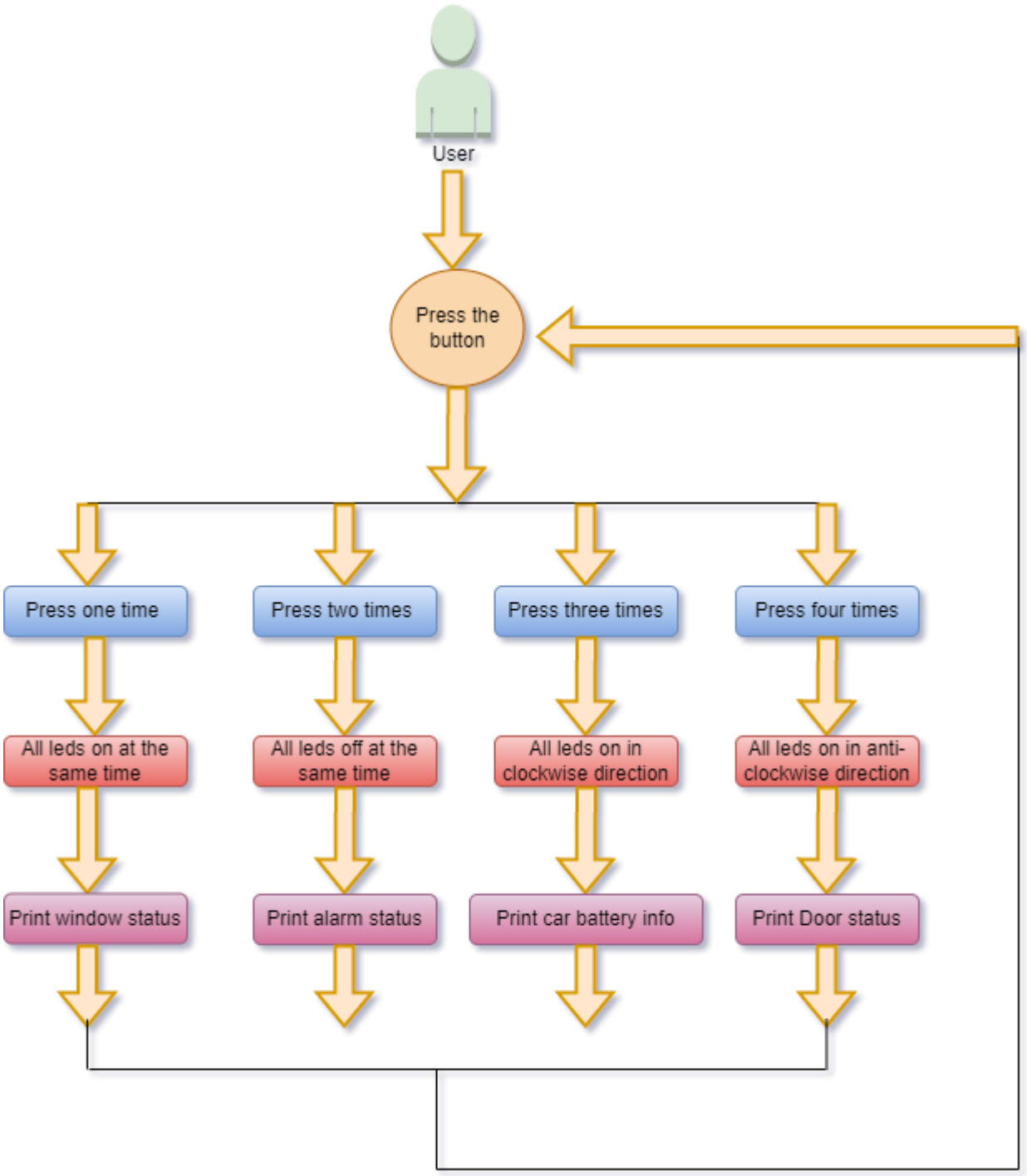


1.2 Low Level Diagram

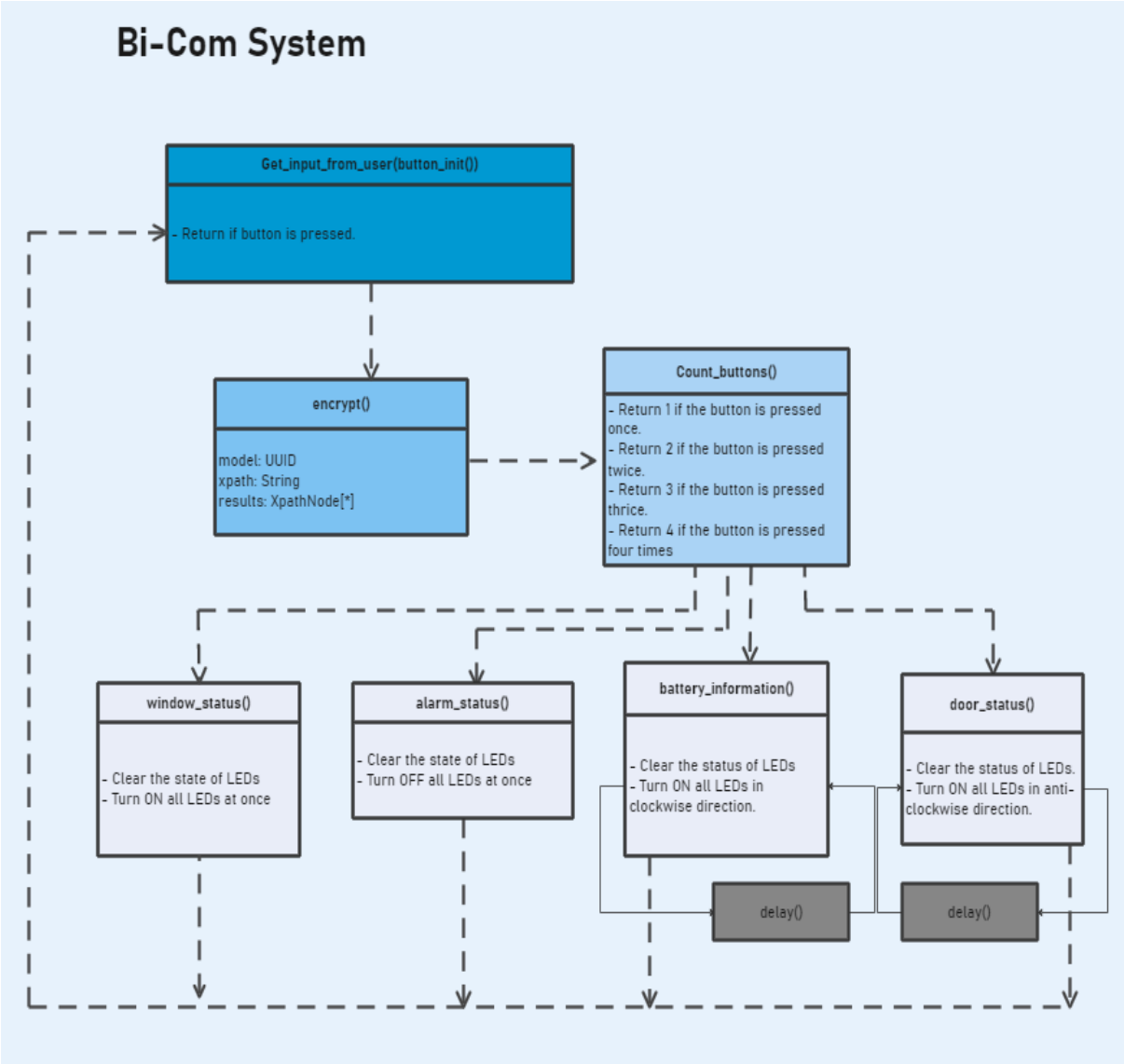


2.2 Structural Diagrams

2.2.1 High Level Diagram



2.2.2 Low Level Diagram



5 APPLICATIONS

- Small household devices that need a remote control, such as garage door openers, are another popular application for remote key fobs.
- Key fobs are also a great way to create controlled access in commercial and industrial facilities.
- One common application for open-access key fobs is creating secure access systems for buildings without requiring the use of physical keys.
- A key fob can serve for controlling vehicle systems.