

# Remote keyless entry system

## **Abstract**

As the demand for vehicles grows, so does the number of thefts, making it necessary to secure our vehicles against theft. This resulted in the development of an effective technology known as "Remote Keyless Entry[RKE]," which uses a remote control to lock and unlock the vehicle door. This system is more convenient to use and it gives better security. Remote keyless(entry). This system is used for locking,unlocking,alarm activation/deactivation and light approach if any one occurs.

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# Introduction

## Identifying Features

- If we click Button for once the door will lock
- If we click the Button for Twice, the door will unlock.
- If we click the Button three times it will activate the alarm.
- If we click the Button for Four times then it will activate if it approaches the light .

# Requirements

## High Level Requirements

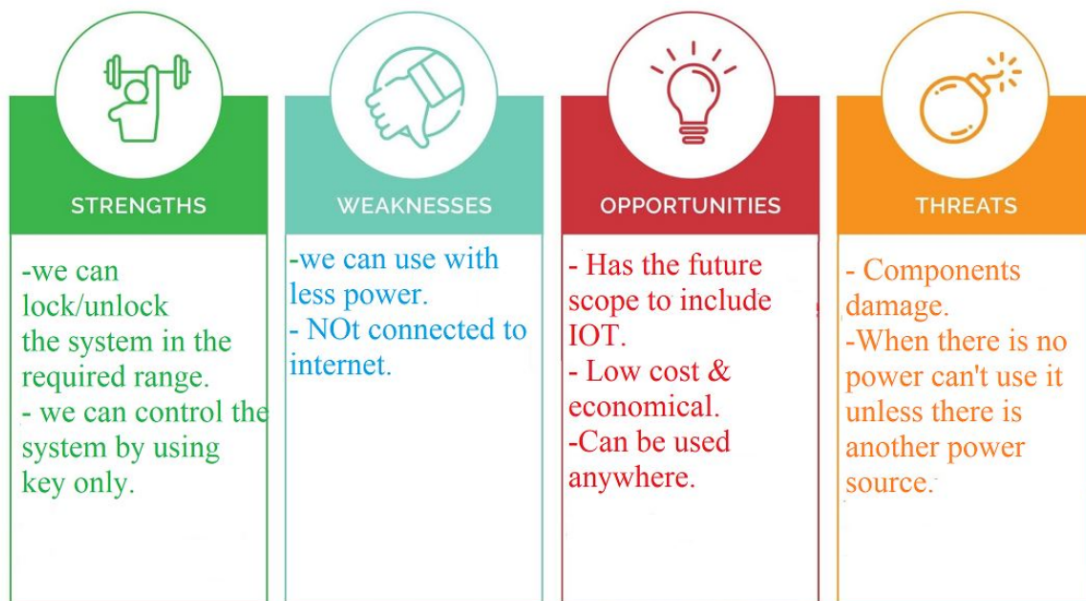
ID	DESCRIPTION
HLR01	The system shall lock the door
HLR02	It shall unlock the door
HLR03	It shall activate/deactivate the alarm
HLR04	It shall approach the light

## Low level requirements

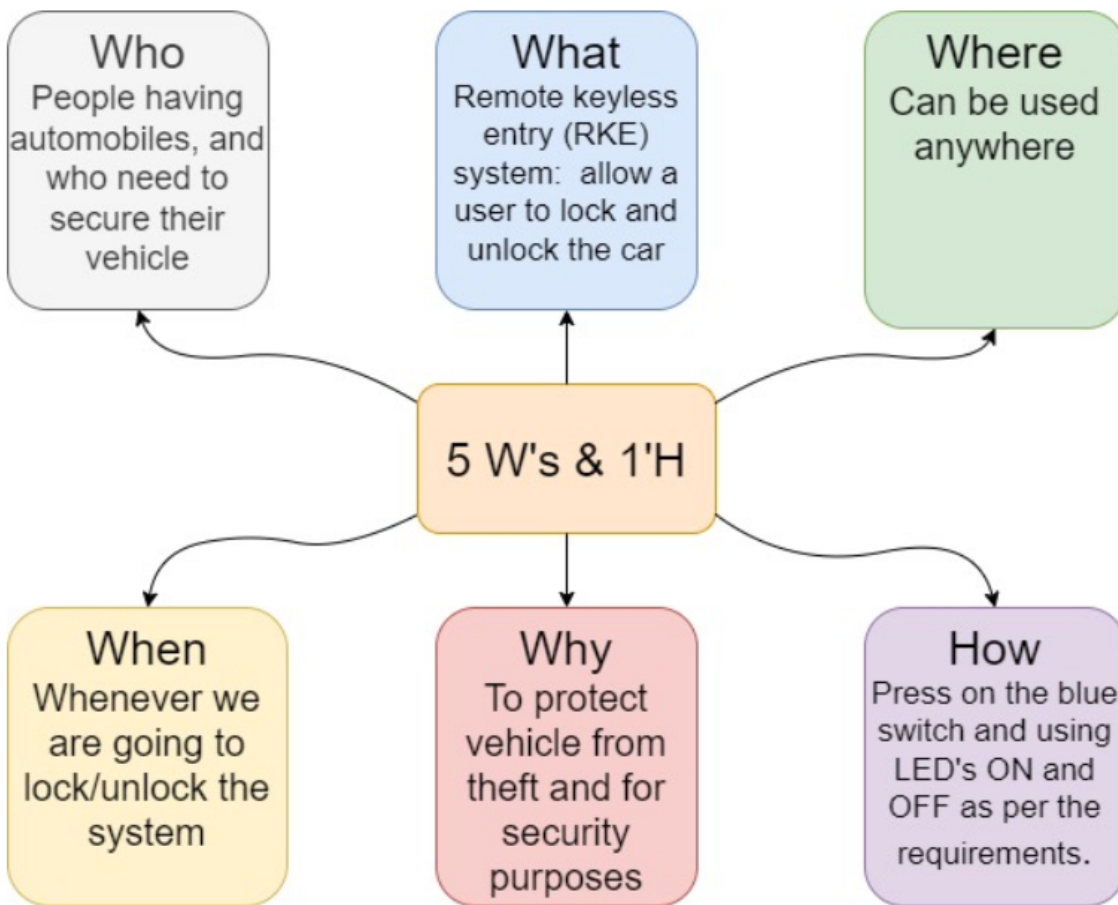
ID	DESCRIPTION
LLR01	The system should lock the door when blue switch is pressed once
LLR02	The system should unlock the door when the blue switch is pressed twice
LLR03	The system should activate the alarm when the blue switch is pressed three times
LLR04	The system should approach the light when the blue switch is pressed four times

## SWOT analysis

# SWOT ANALYSIS

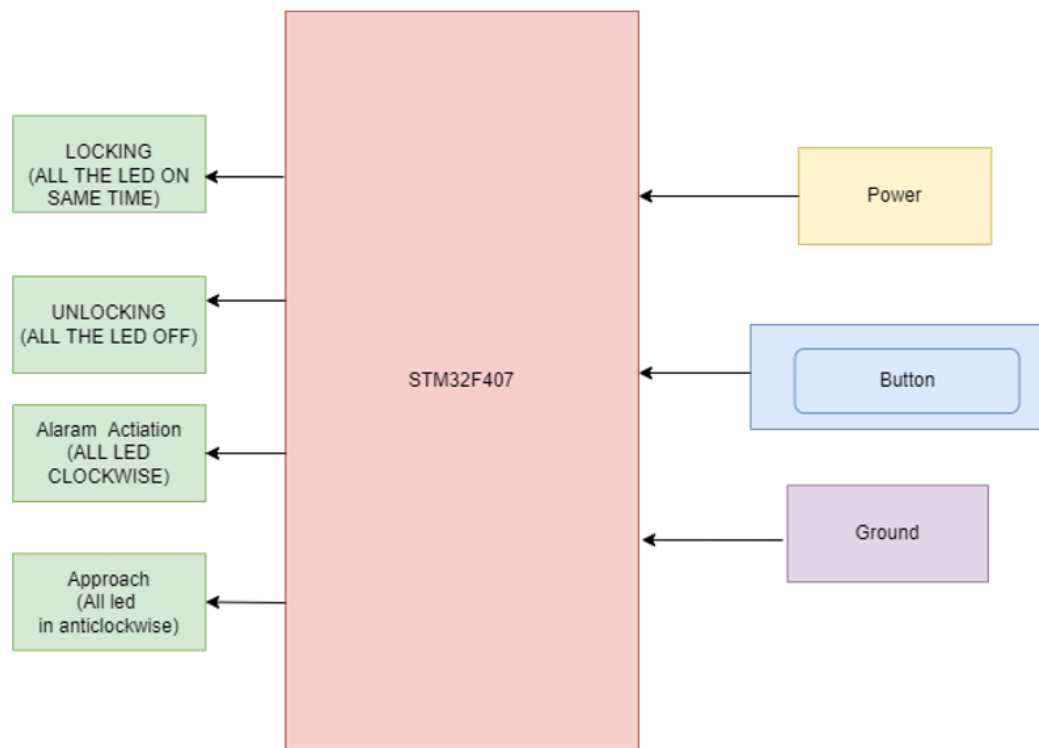


## 5 W's and 1H



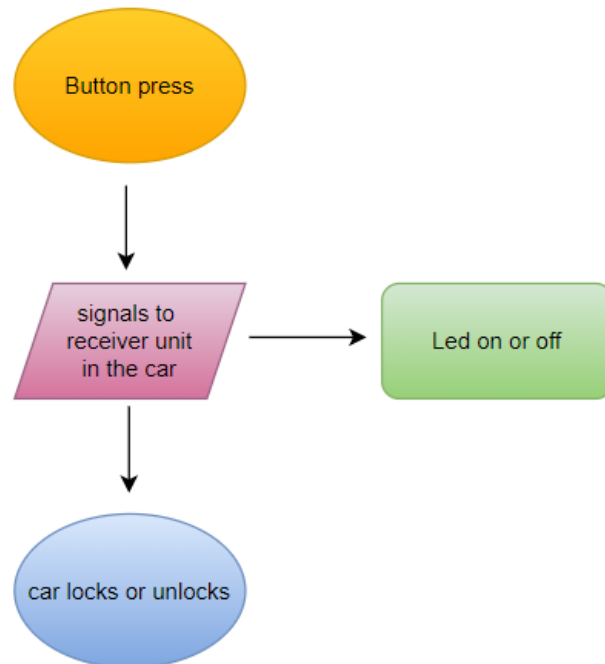
## Architecture

### Block diagram

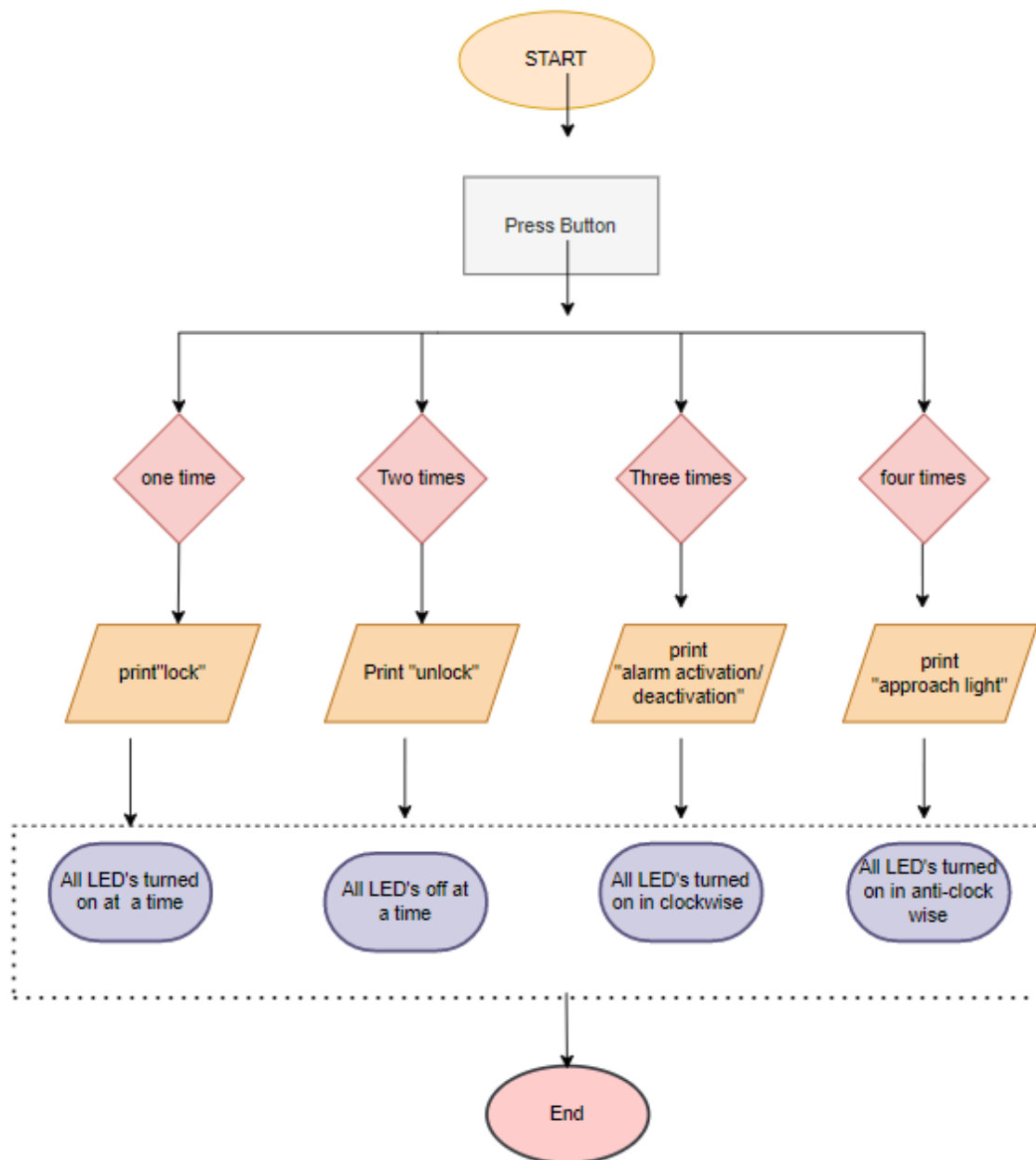


## UML Diagrams

### Behavioral Diagram



## Structural Diagram



## Implementation





# Test plan and output

## High level test plan

Test ID	Description	Input	Expected output	Actual output	status
TID_01	Car lock	Press button one time	lock	lock	done
TID_02	Car unlock	Press button two times	unlock	unlock	done
TID_03	Alarm activation/de activation	Press button three times	Alarm activation/de activation	Alarm activation/de activation	done
TID_04	Approach light	Press button four times	Approach light	Approach light	done

## Low level test plan

Test ID	Description	Input	Expected output	Actual output	status
TID_01	Car lock	Press button one time	All leds on	All Led on	Done
TID_02	Car unlock	Press button two times	All leds off	All Led off	Done
TID_03	Alarm activation/de activation	Press button three times	All led's on clockwise	All Led on clockwise	Done
TID_04	Approach light	Press button four times	All led's on anticlockwise	All Led on anti-clockwise	Done

# Applications

- The point of the project is to use a wireless key to control the system.
- Machine security, as well as when users want to secure their cars, will be aided by wireless keys.
- We can make use of vehicle parking spaces.
- RKEs are also used to control entry to premises and specific areas of buildings, such as garages.