

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.

Table of contents

Introduction	2
Requirements	2
High Level Requirements	2
Low level requirements	2
SWOT analysis	3
5 W's and 1H	4
Architecture	4
Block diagram	4
UML Diagrams	5
Behavioral Diagram	5
Structural Diagram	7
Implementation	8
Test plan and output	8
High level test plan	8

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 Button for Four times the it will activate if approach 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

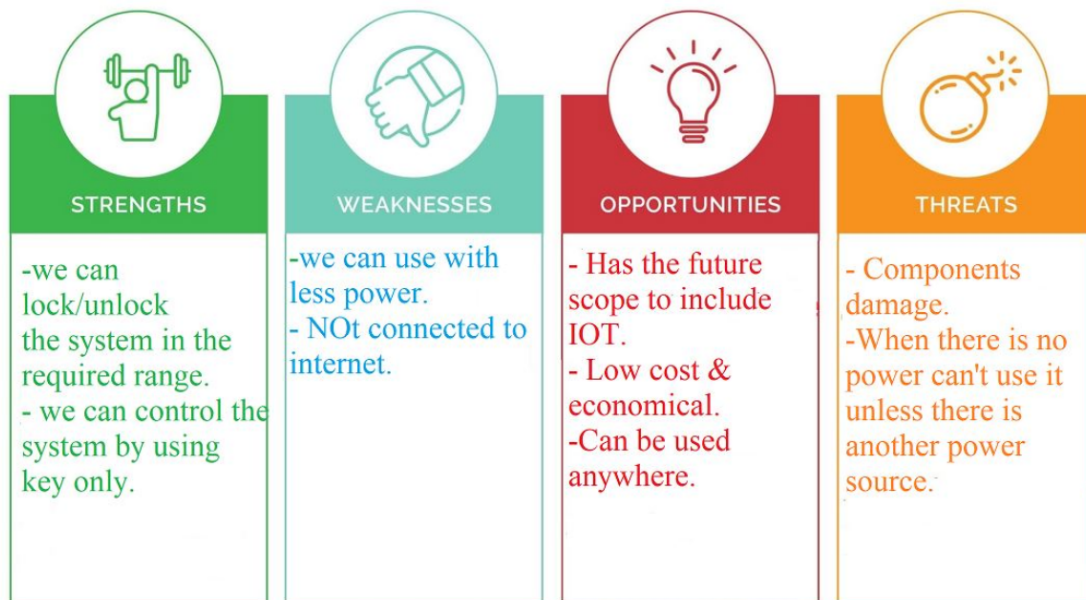
Low level requirements

ID	DESCRIPTION
LLR01	The system should lock the door when blue switch is pressed once

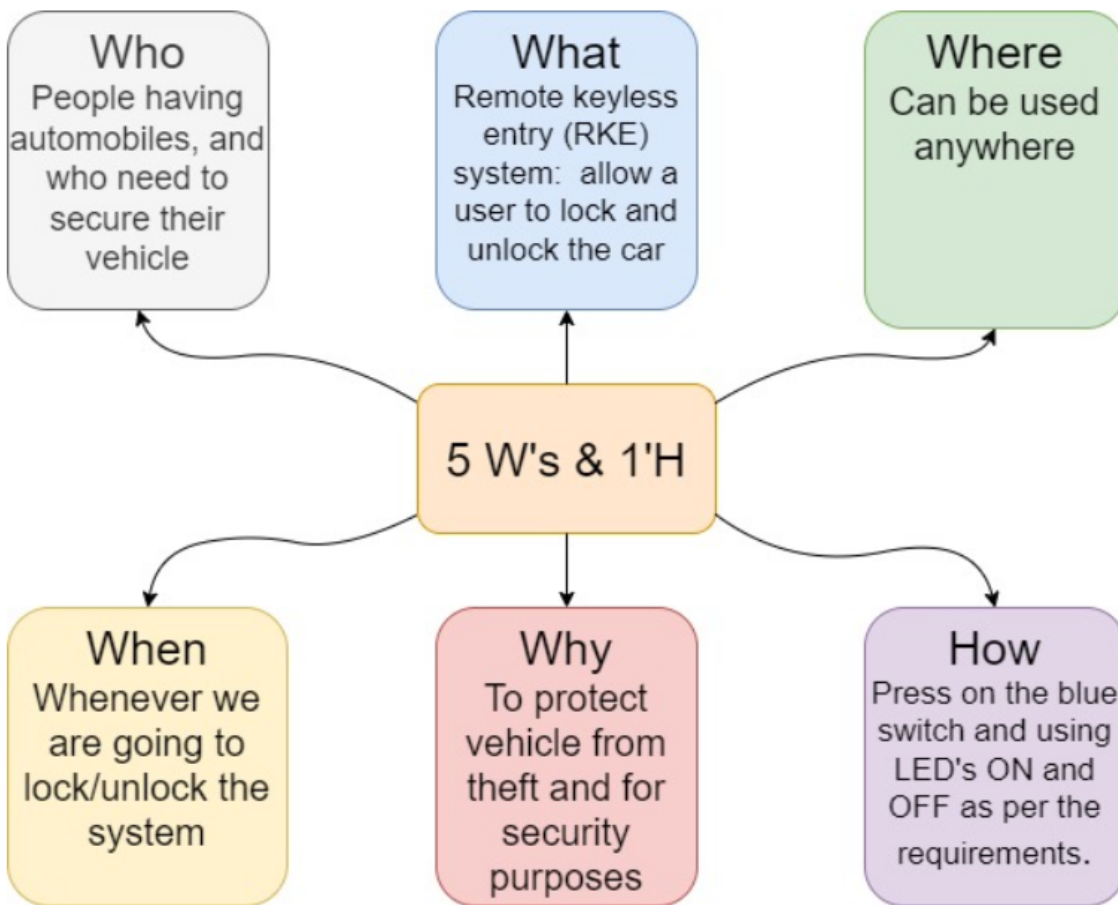
LLR02	The system should unlock the door when the blue switch is pressed twice
LLR03	The system should activate the alarm when the blue switch is pressed three times
LLR04	The system should approach the light when the blue switch is pressed four times

SWOT analysis

SWOT ANALYSIS

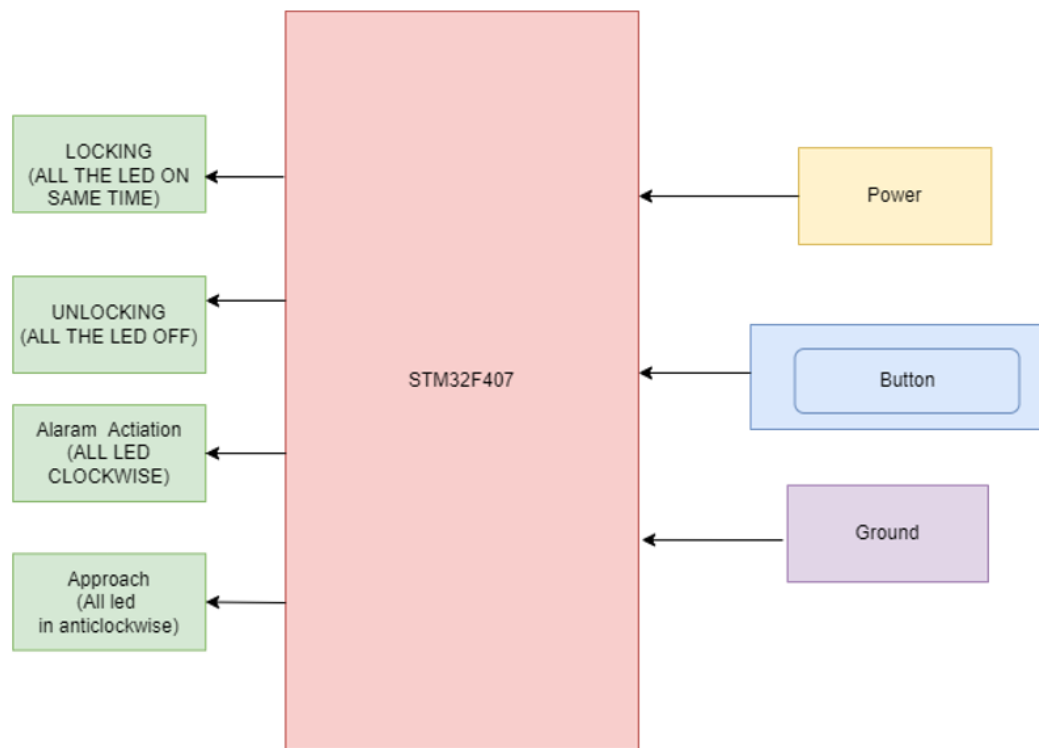


5 W's and 1H



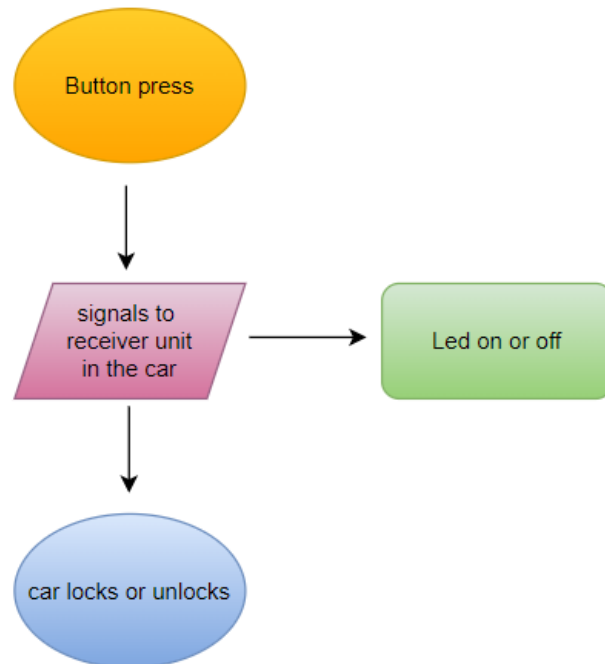
Architecture

Block diagram

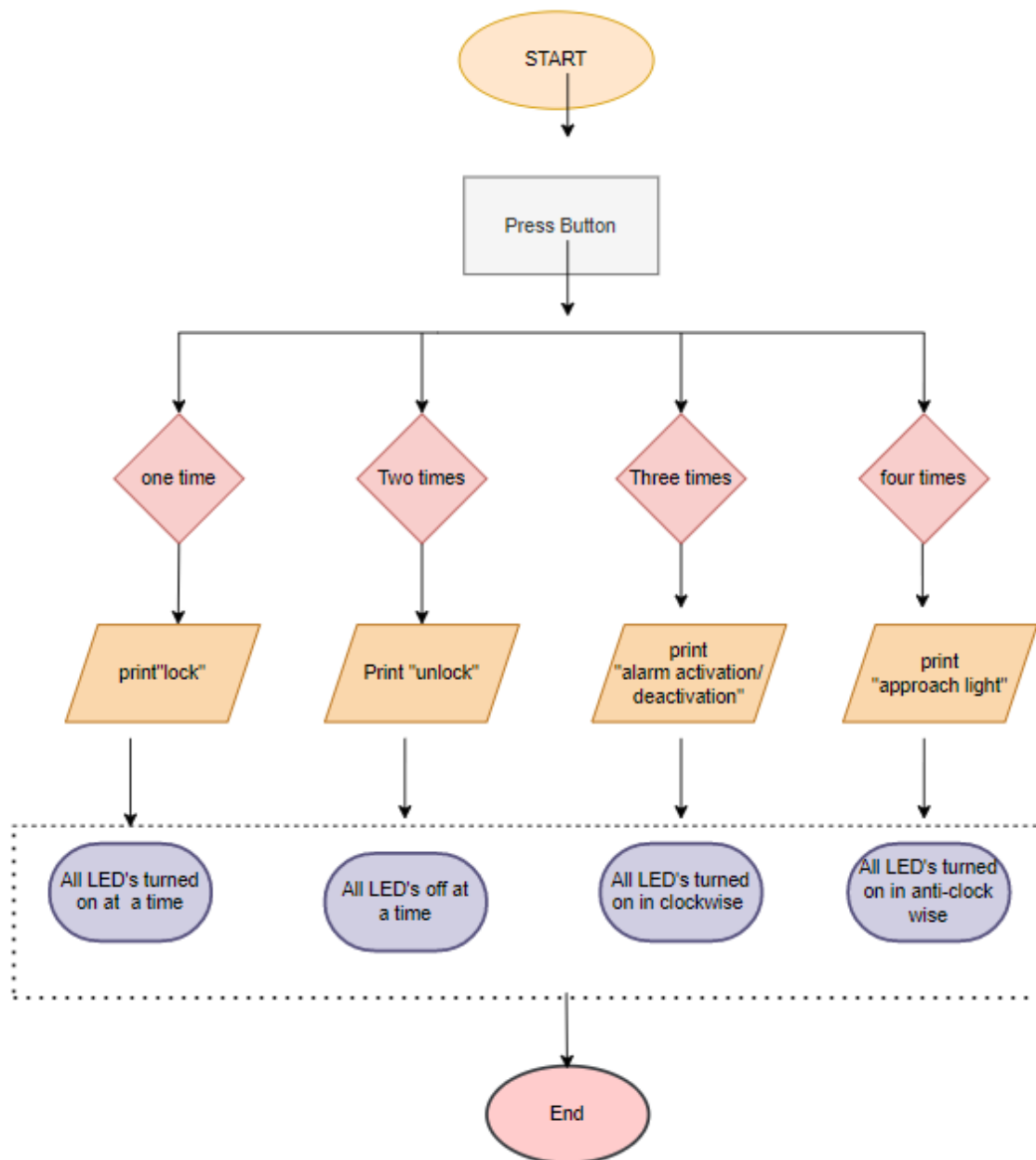


UML Diagrams

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's on	Done: white_check_ mark
TID_02	Car unlock	Press button two times	All leds off	All led's off	Done: white_check_ mark
TID_03	Alarm activation/de	Press button three times	All led's on clockwise	All led's on clockwise	Done: white_check_ mark

	activation				mark
TID_04	Approach light	Press button four times	All led's on anticlockwise	All led's on anti-clockwise	Done: white_check_ mark