# MOODIFY™

Team 08

# TABLE OF CONTENTS

# Programming

## librosa-python

For Sound analysis and extracting relevant information. For such functions python is a better choice as opposed to JAVA

## Web Crypto API-JS

World Wide Web Consortium's recommendation for a low-level interface for cryptographic functions

## Web Bluetooth-JS

We will be using Web Bluetooth API, to connect to our raspberry pi directly from the web browser

## gpiozero-python

A standard python library that is also recommended by the raspberry pi official website for using gpio pins on the pi

# Security

**Bluetooth has poor built in authentication encryption**

## User-Credentials

Same idea as raspberry pi. The user will be needed to be authenticated by setting a password at the first time.

For next connections, this password will be used for later authentication.

## Raspberry Pi-Public Private Key encryption

Raspberry Pi will have a generated public-private key set, and the public key will be sent as it is in public-key encryption, and the communication messages will be encrypted using this, and messages from pi

# Extra LIMITATION

**Browser compatibility**

Update compatibility data on GitHub

| | Chrome | Edge | Firefox | Internet Explorer | Opera | Safari | Android webview | Chrome for Android | Firefox for Android | Opera for Android | Safari on iOS | Samsung Internet |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bluetooth | 56 ★ | ≤79 ★ | No | No | 43 ★ | No | No | 56 | No | 43 | No | 6.0 |
| getAvailability | 56 ★ | ≤79 ★ | No | No | 43 ★ | No | No | 56 | No | 43 | No | 6.0 |
| onavailabilitychanged | 56 ★ | ≤79 ★ | No | No | 43 ★ | No | No | 56 | No | 43 | No | 6.0 |
| referringDevice | 56 ★ | ≤79 ★ | No | No | 43 ★ | No | No | 56 | No | 43 | No | 6.0 |
| requestDevice | 56 ★ | ≤79 ★ | No | No | 43 ★ | No | No | 56 | No | 43 | No | 6.0 |

What are we missing?

Will be usable only with Google Chrome, Opera, and Edge on both mobile phone and computers and also Samsung Internet on the mobile phones.

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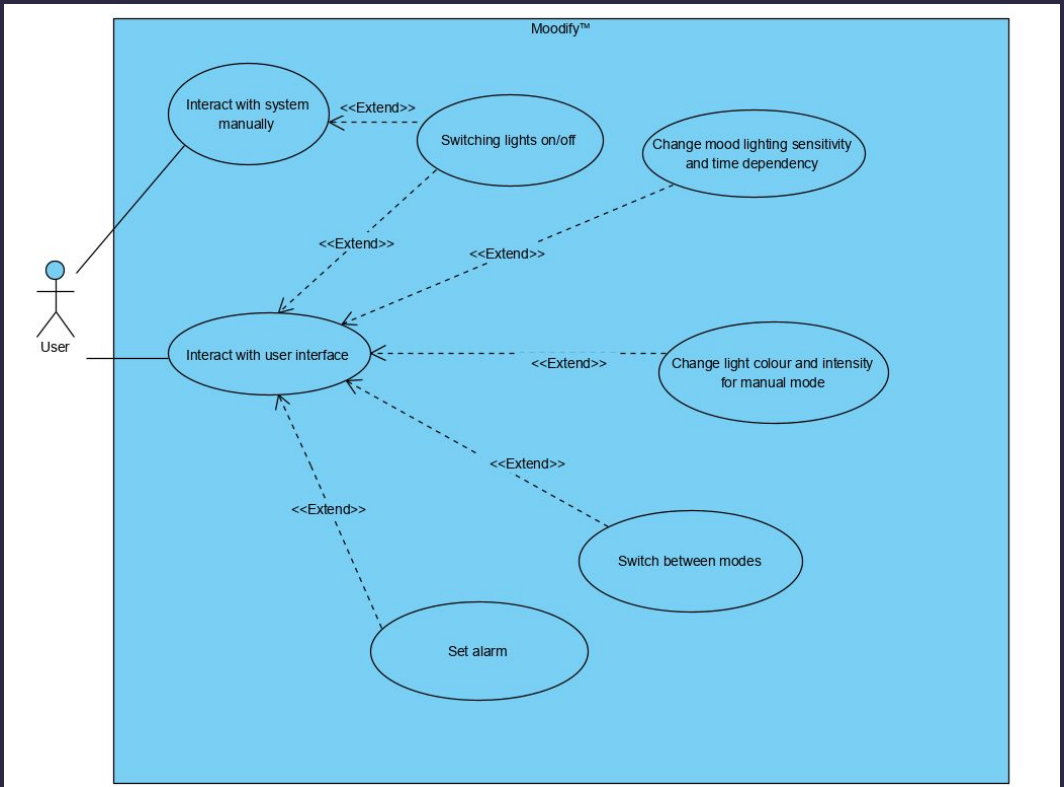
| requestDevice | 56 ★ | ≤79 ★ | No | No | 43 ★ | No | No | 56 | No | 43 | No | 6.0 |

What are we missing?

GITLAB

# UML DIAGRAM


Moodify™
Interact with system manually
<<Extend>>
Switching lights on/off
Change mood lighting sensitivity and time dependency
<<Extend>>
<<Extend>>
User
Interact with user interface
<<Extend>>
Change light colour and intensity for manual mode
<<Extend>>
<<Extend>>
Switch between modes
Set alarm

# DEMO

## Web Interface

# For next time

## Sprint 3

- For sprint 3 our main focus is now on the MVP
- Implementing the MVP compliant Web-Interface for the project
- Communication between Web interface and Pi

## Sprint 4

- For sprint 4, we will complete all the functionalities of lamp.
- If all goes well in Sprint 3, we might add functionality to reduce our previous limitations

# Future

Sprint 5

- Closure, no new functionalities to be added
- Full product delivery after making tweaks according to feedback.

# Communication

## Within Team

- Discord
- WhatsApp
- Google Drive
- Face-to-face meetings

## With TAs

- Zulip
- Jitsi
- Microsoft Teams

# THANKS!

Do you have any questions?