



**MOODIFY™**

# The presentation in 3 parts

## 001

What is the Moodify  
& why do I want it?

## 002

Timeline & Future  
Improvements

## 003

Testing &  
Communication



# The presentation in 3 parts

## 001

What is the Moodify  
& why do I want it?



# What is the Moodify™?

Covid: Everyone is indoors,  
but is there enough light?



- Multifunctional light source
- Change the atmosphere of your home
- Improve your mood
- Must-have!

# Features

Abundant  
Options of  
Colours

Fashionable  
Web  
Interface

Variable  
Intensity

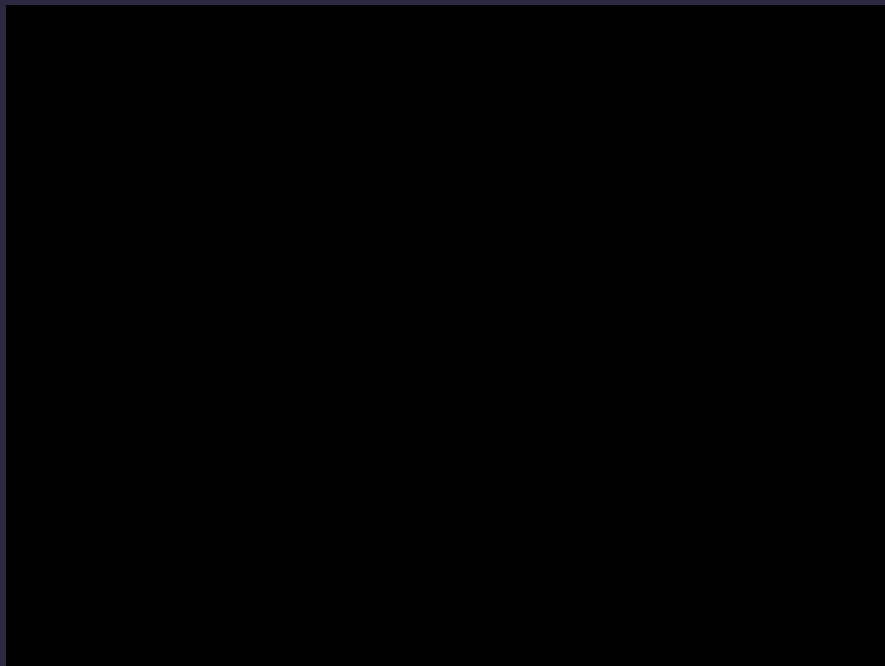


Bluetooth  
Connectivity

Automated  
Functionality

Vivid  
Music  
Mode

# PRODUCT DEMO



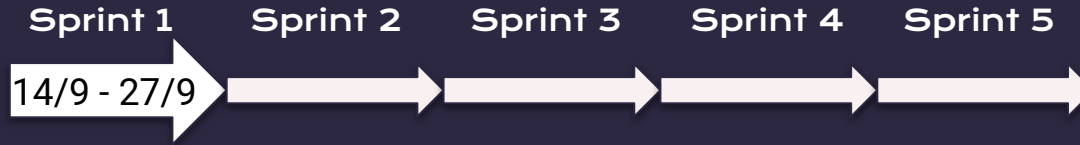
The presentation  
in 3 parts

# 002

## Timeline & Future Improvements



# Overview of Progress



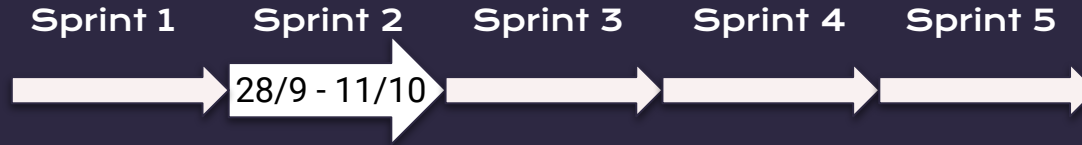
- Get to know our team
- Idea & Scope (Initial Plans)



# Initial Plans

- Different functionalities & Modes ✓✓
- Automatically turns on/off ✓
- The user can turn the light on/off ✓
- Alarm clock with light AND sound ✗ (F)
- Lights change acc. To music ✓
- Adaptive brightness ✓
  - ◆ But only at the times you want to ✗
- Colour options ✓✓
- Web interface ✓✓

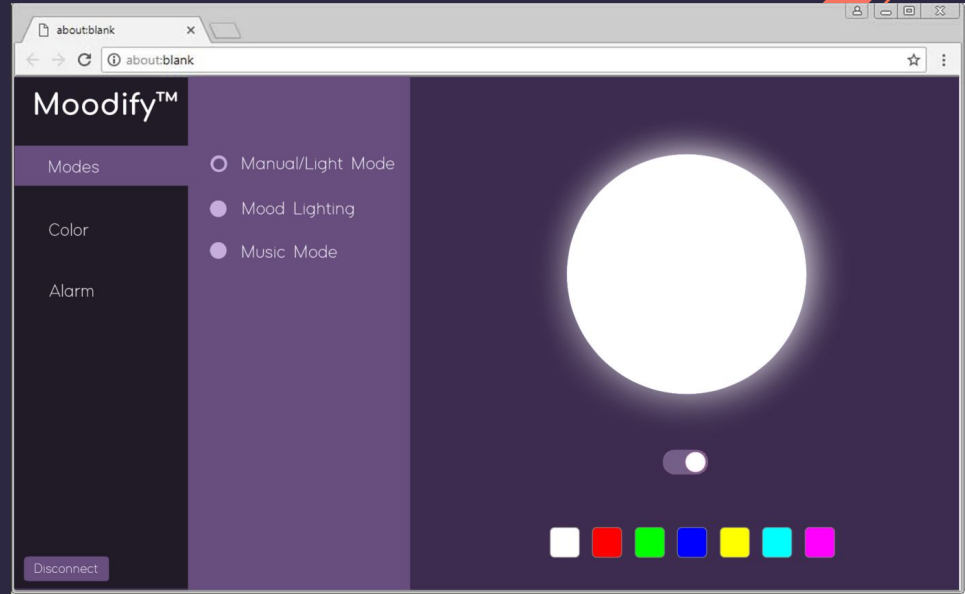
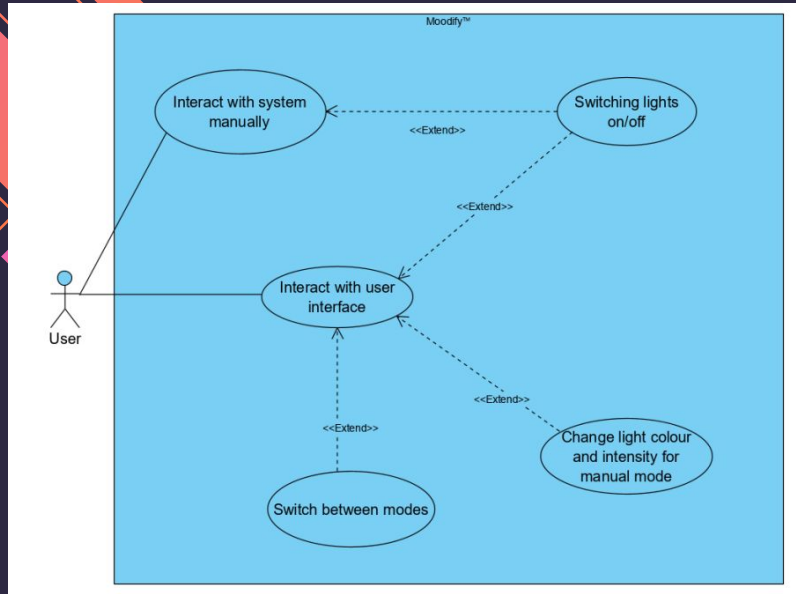
# Overview of Progress



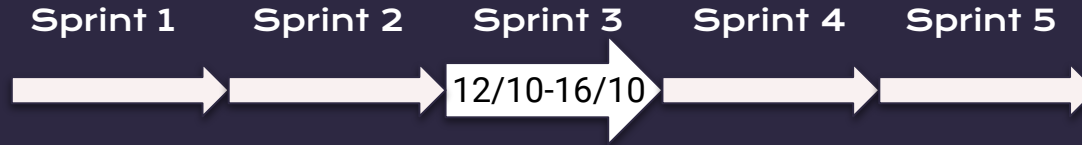
## → Libraries

- ◆ **W3Schools library (CSS)**
- ◆ **Web Bluetooth API** (interaction; calls & requests)
- ◆ **BLE-GATT Server (Server)**
- ◆ **Ws281\_x new Pixel Library**  
(bit stream to light)
- ◆ **PyAudio** (read sound into buffer; chunks)
- ◆ **SciPy** (filtering tools for mic input)
- ◆ **(NumPy** (Base library; dependencies))

# Design

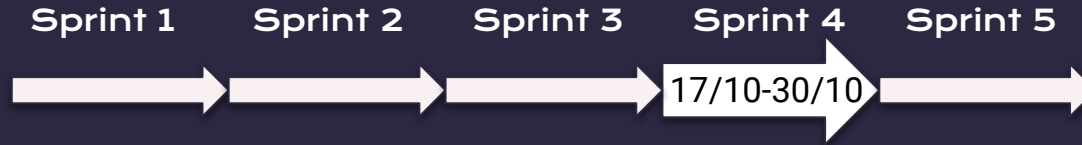


# Overview of Progress



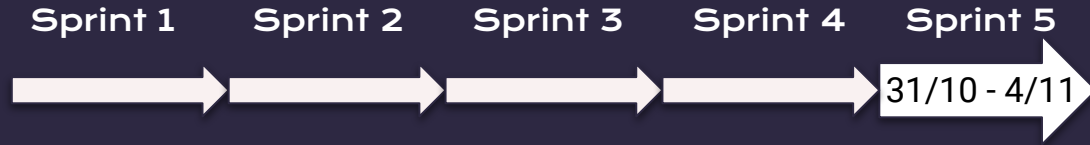
- **Web Interface**
  - ◆ Looked like mockup
  - ◆ Light Intensity (W.I. only)
- **Connectivity**
- **2 modes**
  - ◆ Manual Mode
  - ◆ Automatic Mode
- **Colour options (W.I. only)**

# Overview of Progress



- **Improved Web Interface**
  - ◆ RGB Colour Picker (impl.)
  - ◆ Polishing the W.I. (buttons, scroll bar, footer)
- **Light Intensity Implemented**
- **Music Mode (colour & intensity)**
- **Compatibility check** (bluetooth; OS, browser type/version)

# Overview of Progress



- **Improved Music Mode (F)**  
(Frequency analysis vs Octave analysis)
- **Physical Switch**

# Overview of Progress

## Future plans



- Turn on/off automatically @specific times only
- Wake up mode (w. alarm)
- Customer Service

The presentation  
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# 003

## Testing & Communication





# TESTING

```
4 Using Kubernetes namespace: gitlab-runner
5 Using Kubernetes executor with image python:3.7 ...
6
7 Preparing environment 00:05
8 Waiting for pod gitlab-runner/runner-kr4wmtyz-project-664-concurrent-08xm8x to be running, status is Pending
9 Running on runner-kr4wmtyz-project-664-concurrent-08xm8x via gitlab-ci-runner-1...
10
11 Getting source from Git repository 00:01
12 Fetching changes with git depth set to 50...
13 Initialized empty Git repository in /builds/cs20-8/moodify/.git/
14 Created fresh repository.
15 Checking out 774f0254 as master...
16 Skipping Git submodules setup
17
18 Executing "step_script" stage of the job script 00:01
19 $ cd ./moodify-raspi/gpioprogramming
20 $ python3 decodeTest.py
21 .....Brightness: 0.132435
22 Brightness: 1.0000
23 Brightness: 000000
24 manualLED: False, autoLDR: False, musicMode:False
25 manualLED: False, autoLDR: False, musicMode:True
26 manualLED: False, autoLDR: True, musicMode:False
27 manualLED: True, autoLDR: False, musicMode:False
28 New Colour: 122,133,144
29 New Colour: 0,0,0
30 ...
31 -----
32 Ran 13 tests in 0.001s
33 OK
34
35 Job succeeded
```

Duration: 7 seconds

Timeout: 1h (from project) ?

Runner: gitlab-ci-runner-1 (#25)

## Job artifacts

These artifacts are the latest. They will not be deleted (even if expired) until newer artifacts are available.

Commit 774f0254 

Merge branch 'docs\_and\_refactor' of <https://gitlab.utwente.nl/cs20-8/moodify> into docs\_and\_refactor

🔄 Pipeline #1646 for master

test ▼

→ 🔄 test

# GITLAB



# Communication





# THANKS!

Do you have any questions?