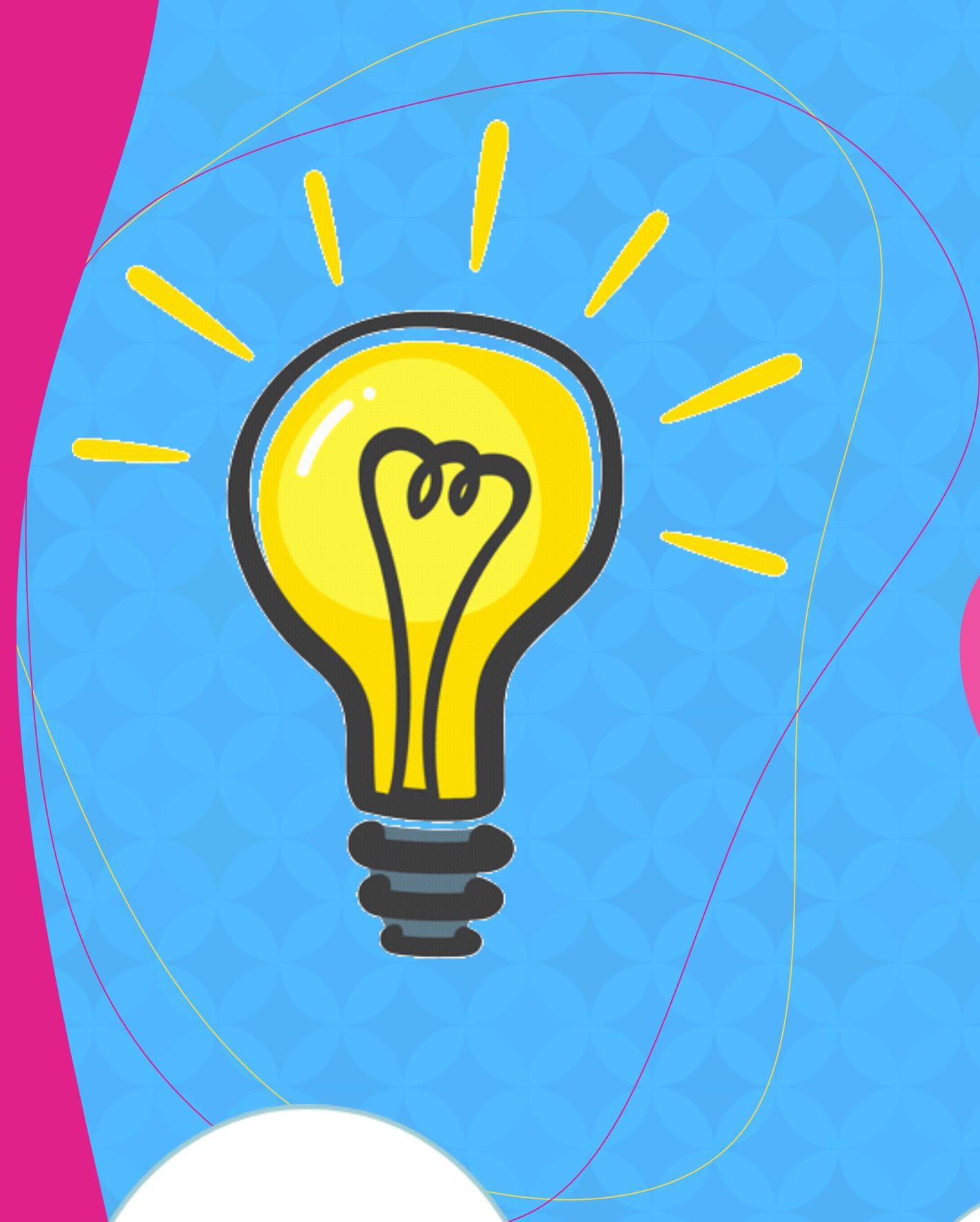


Light Motion Sensor

with Manual Override

Ate Co.



About this project

This project aims to assist in illuminating areas automatically or manually based on the user's preference and records data each time the LDR (Light Dependent Resistor) detects a change in light levels.

Functions and Features



- Manual or automatic operation of LED.
- Automatically turns on LED when change in light levels is detected by the light sensor.
- Manual overriding of lights to either turn on or off.
- Counter for alarm LED and buzzer

- Data Logging of:
 - date when the LED was triggered
 - triggering of alarm
 - manual and automatic status

Devices and Applications Used

- Wemos D1 board
- Light Dependent Resistor
- Potentiometer
- Relay Switch
- SPDT Switch
- LEDs
- Buzzer

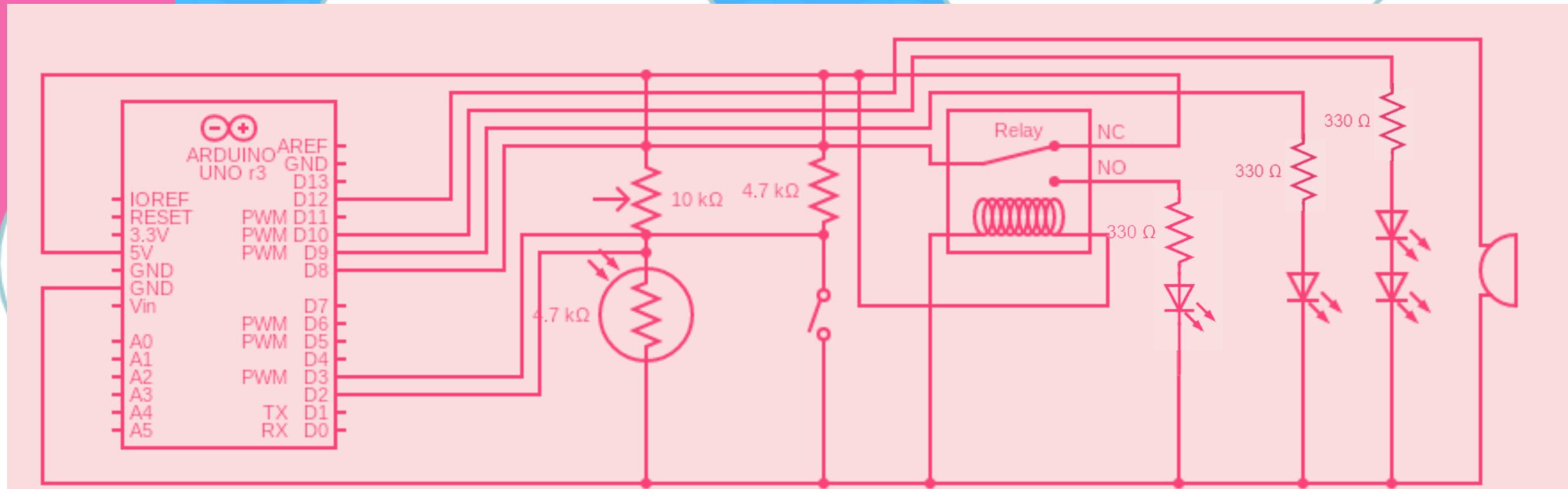
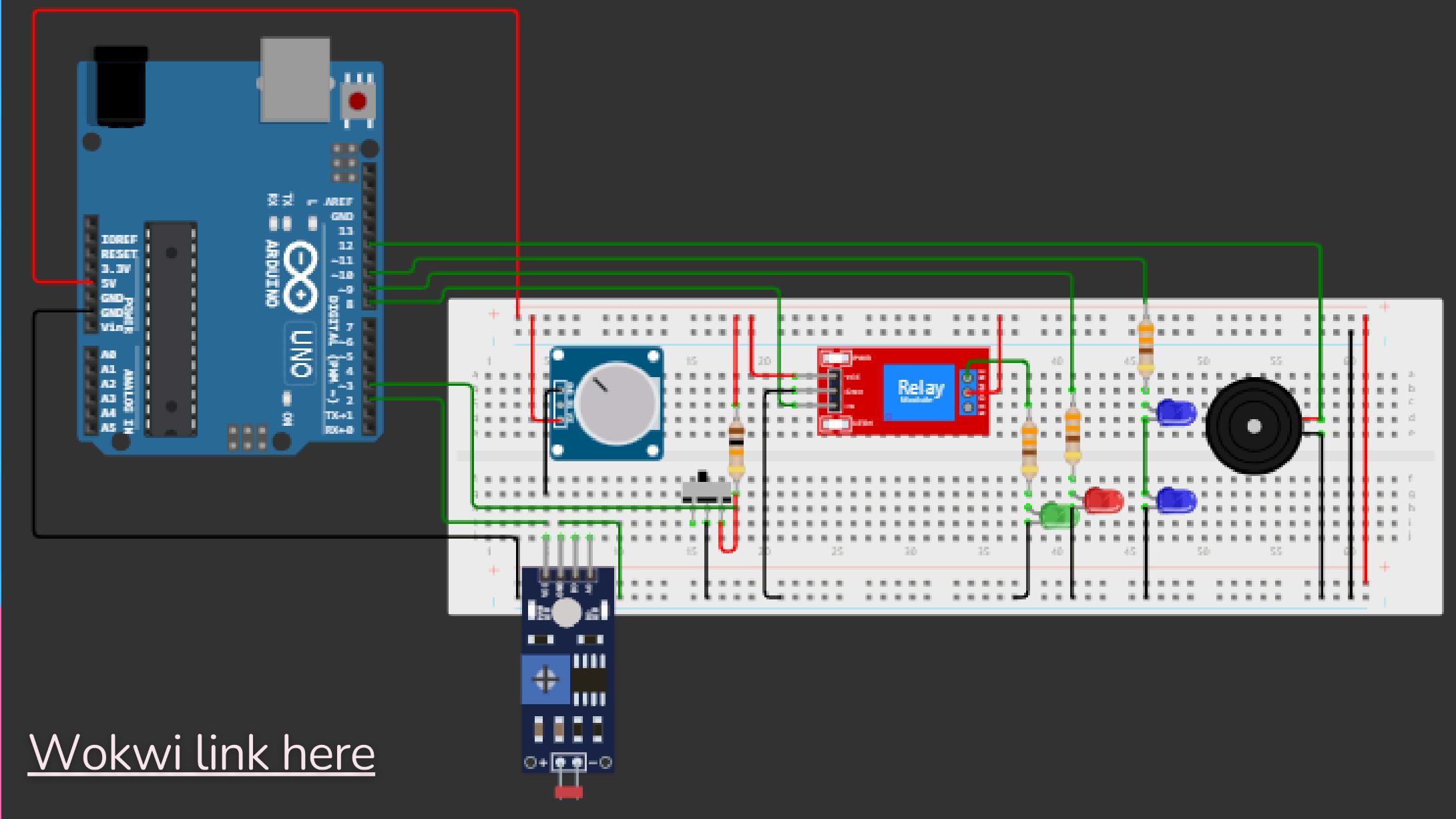
- Visual Studio 2022 (C#)
- PHP
- MySQL
- XAMPP
- Arduino IDE



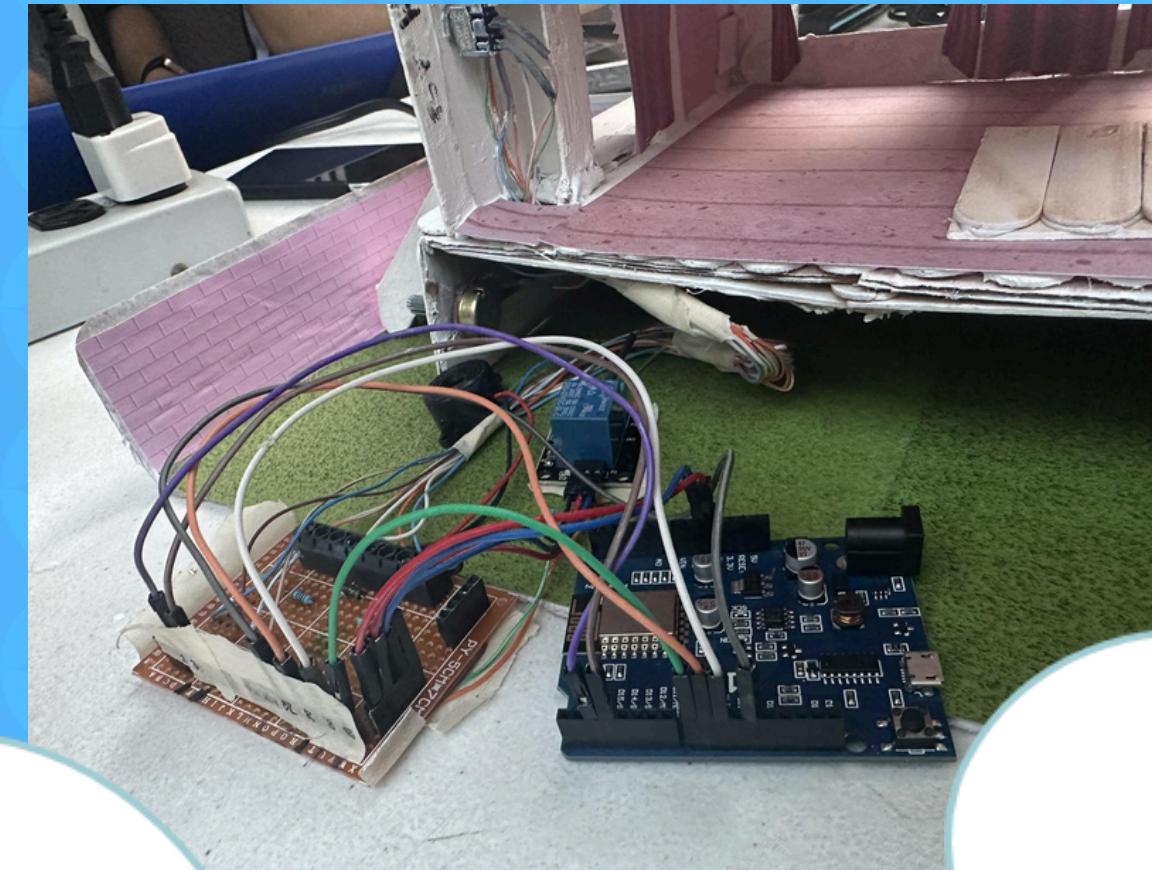
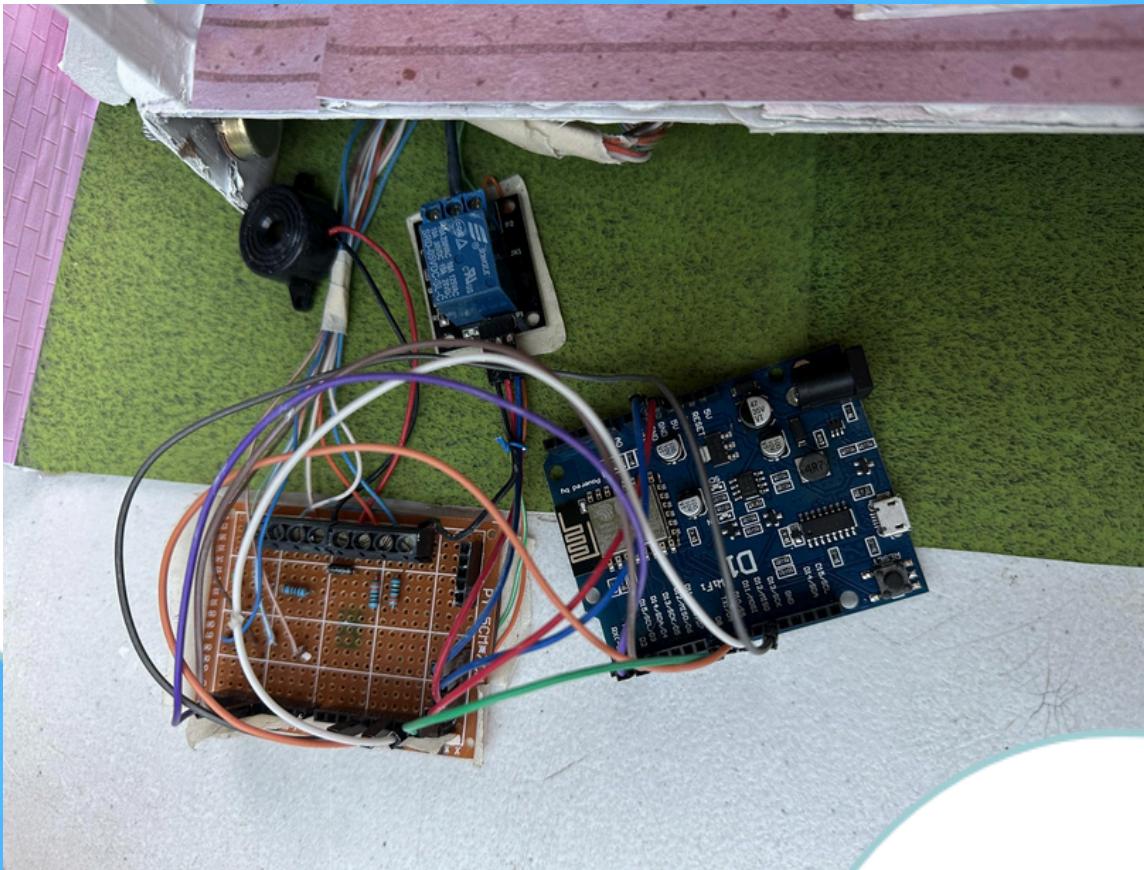
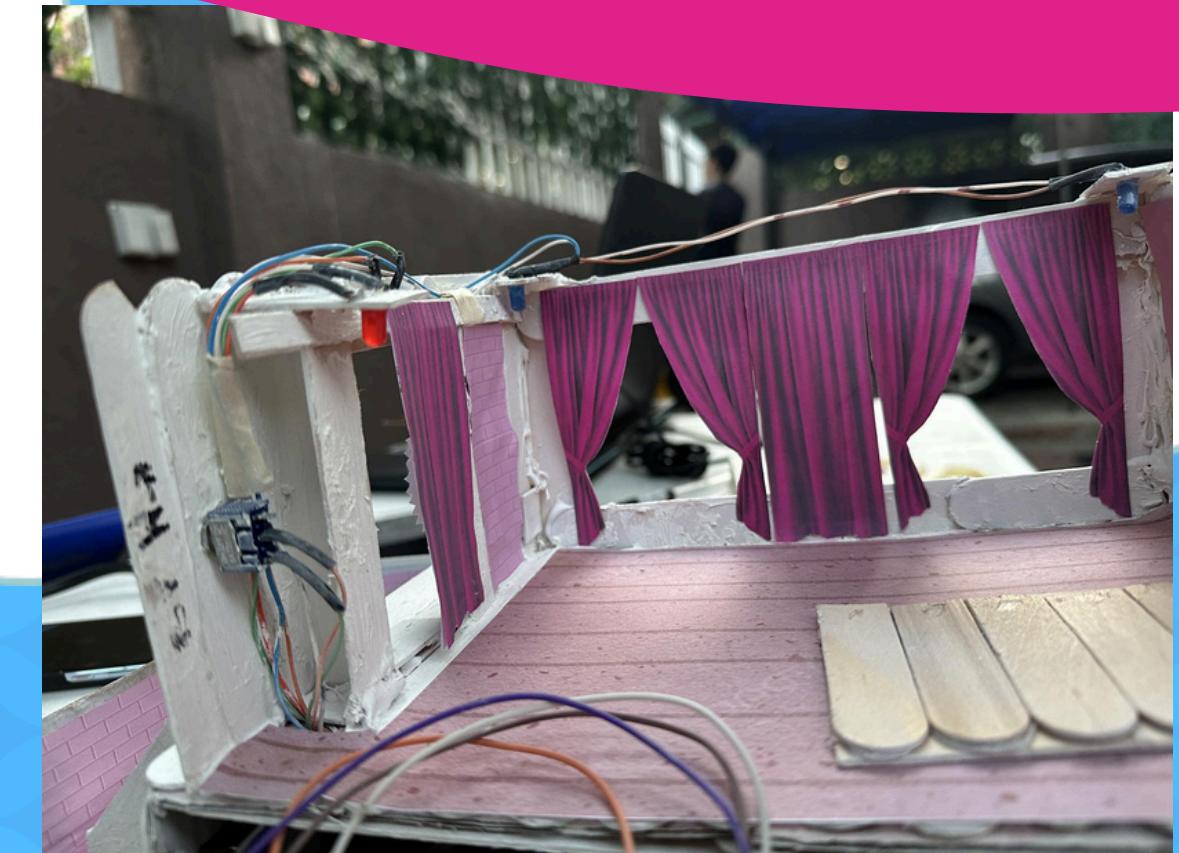
Circuit & Pictorial Diagram

○ - ○ - ○ - ○ - ○

- D2 - Light dependent resistor
- D3 - SPDT switch
- D8 - Green LED
- D9 - Red LED
- D10 - Blue LEDs
- D12 - Buzzer



Actual Circuit



A screenshot of a web browser window titled "Ate Co. - Light Motion Sensor" showing a log page. The URL is "localhost:44309/LogPage.aspx". The page has a pink header and a pink footer. The main content area is a table with a pink border and pink rows. The table has columns for Date, Time, Mode, and Alarm. The table shows a series of log entries from March 22, 2024, at 14:24:03 to March 21, 2024, at 19:27:02. Some entries have "Alert" in the Alarm column, while others have "--". A "LOG" button is visible on the left side of the table.

Date	Time	Mode	Alarm
03/22/2024	17:08:44	Manual	--
03/22/2024	16:39:25	Automatic	Alert
03/22/2024	16:39:18	Automatic	--
03/22/2024	16:38:55	Automatic	Alert
03/22/2024	15:20:24	Automatic	Alert
03/22/2024	14:39:43	Automatic	Alert
03/22/2024	14:33:39	Automatic	Alert
03/22/2024	14:33:30	Automatic	Alert
03/22/2024	14:33:23	Automatic	--
03/22/2024	14:33:19	Automatic	--
03/22/2024	14:33:00	Automatic	Alert
03/22/2024	14:27:39	Automatic	Alert
03/22/2024	14:27:33	Automatic	--
03/22/2024	14:24:31	Automatic	Alert
03/22/2024	14:24:23	Automatic	--
03/22/2024	14:24:03	Automatic	Alert
03/21/2024	19:27:02	Automatic	--
03/21/2024	19:22:51	Automatic	--

Database Preview

The image shows two separate instances of the phpMyAdmin web interface, each displaying a different database table.

Left Instance (localhost / ate_co / logs):

- Table: logs**
- Structure:** logs_pk, month, day, year, log_time, mode_status, alarm_status
- Data:**

logs_pk	month	day	year	log_time	mode_status	alarm_status
2	03	20	2024	17:21:05	1	1
3	03	20	2024	17:21:16	1	0
4	03	20	2024	17:21:26	1	1
5	03	20	2024	17:45:52	1	1
6	03	20	2024	17:46:05	1	0
7	03	20	2024	17:50:16	1	0
8	03	20	2024	17:51:23	1	1
9	03	20	2024	17:51:38	1	1

- Console:** Shows executed SQL queries related to the power table.

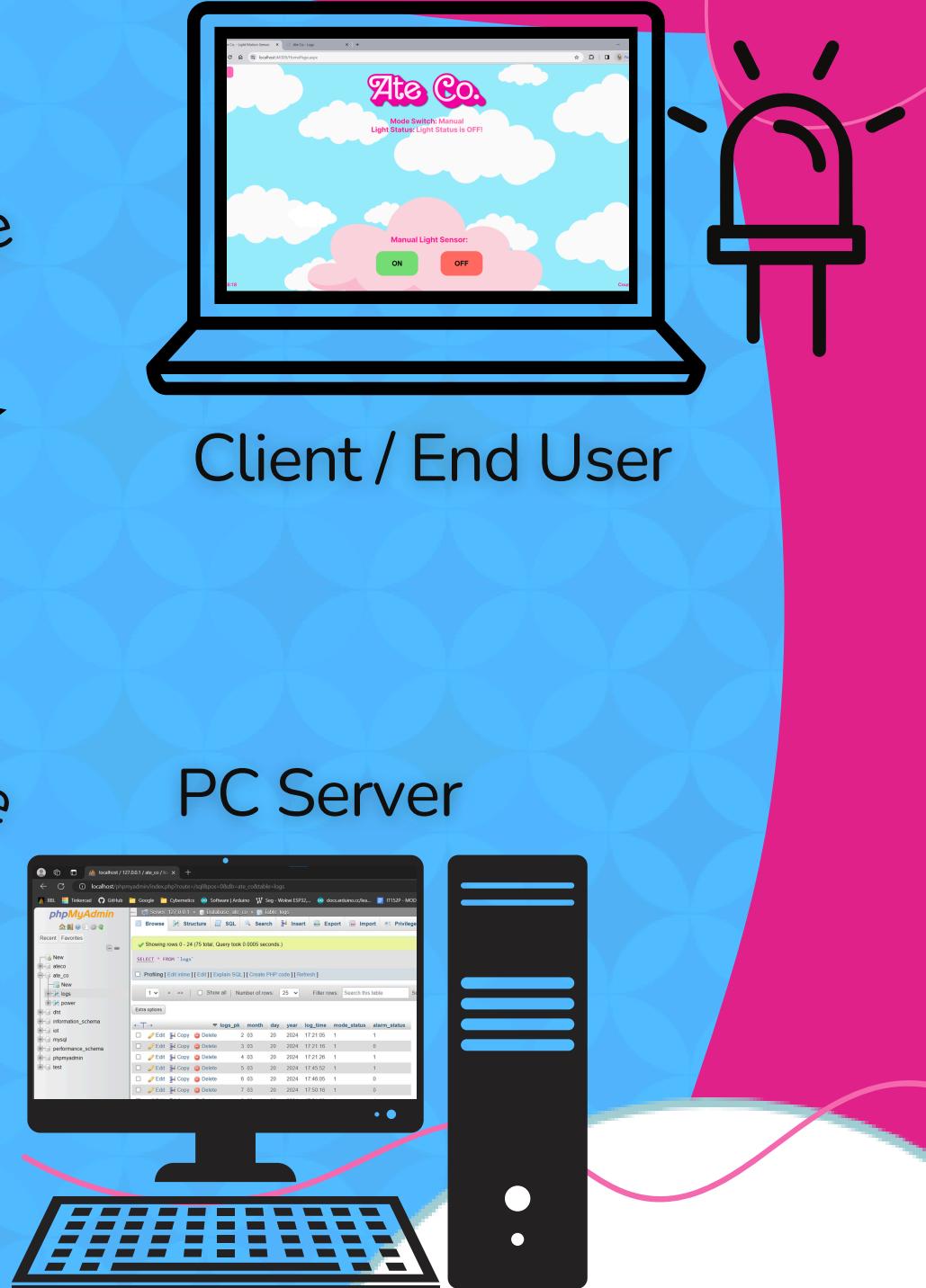
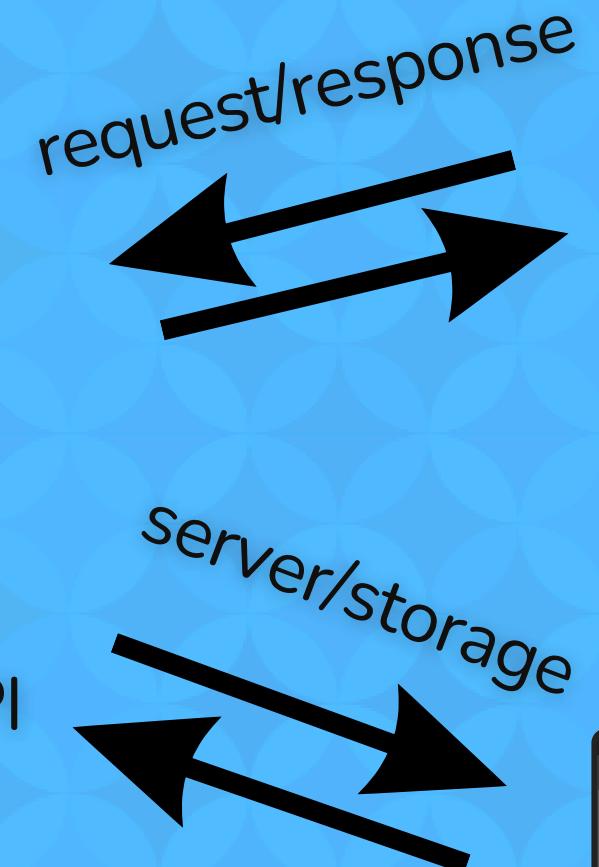
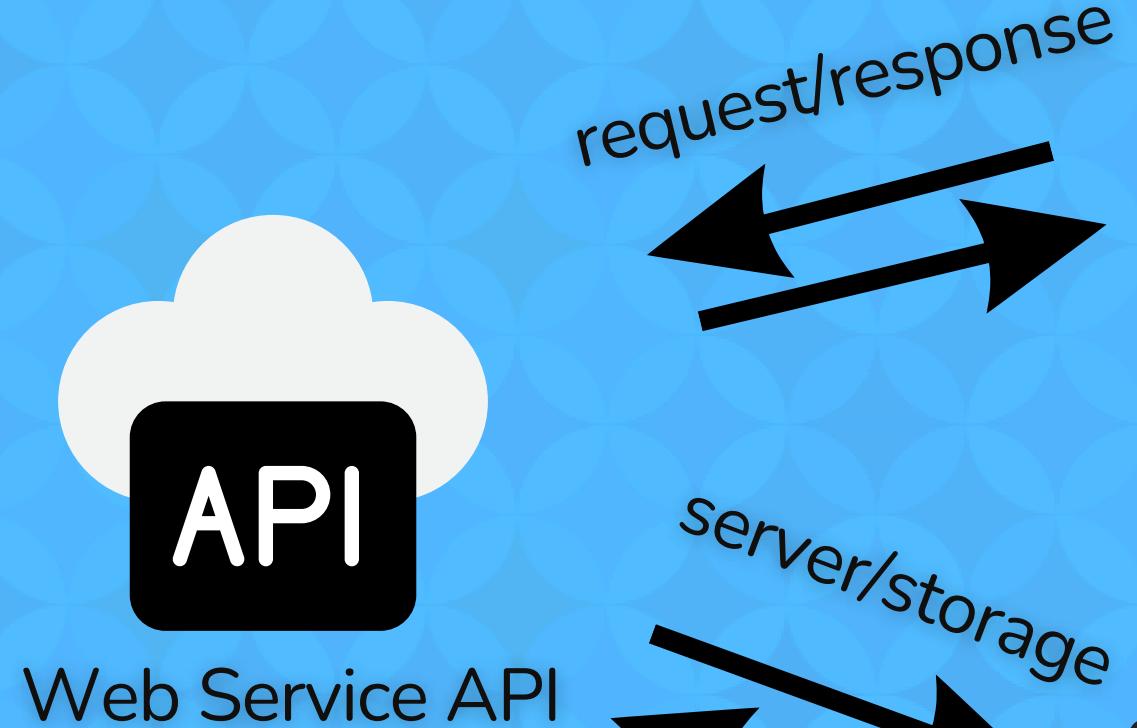
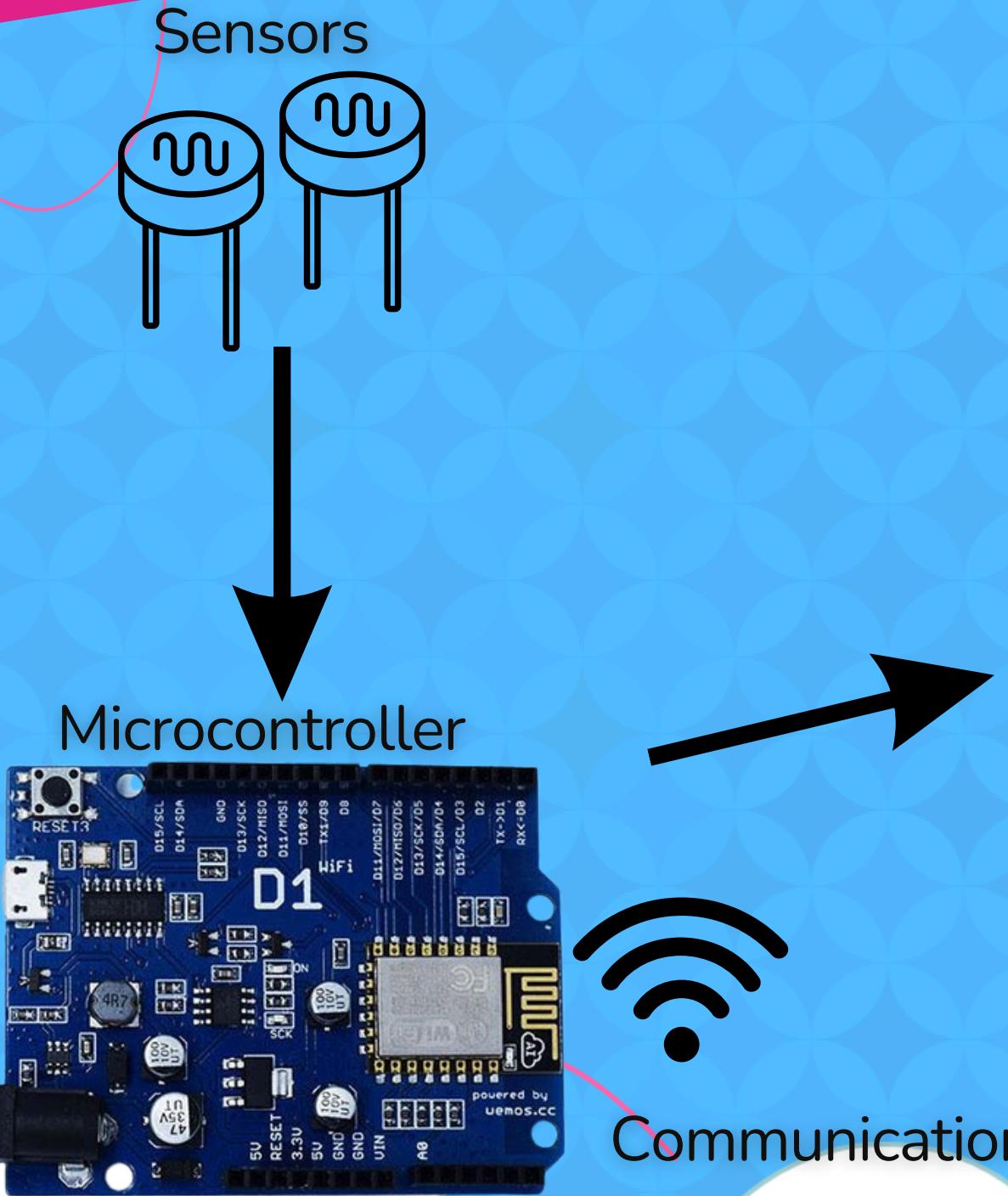
Right Instance (localhost / ate_co / power):

- Table: power**
- Structure:** power_state, mode_state, alarm_state
- Data:**

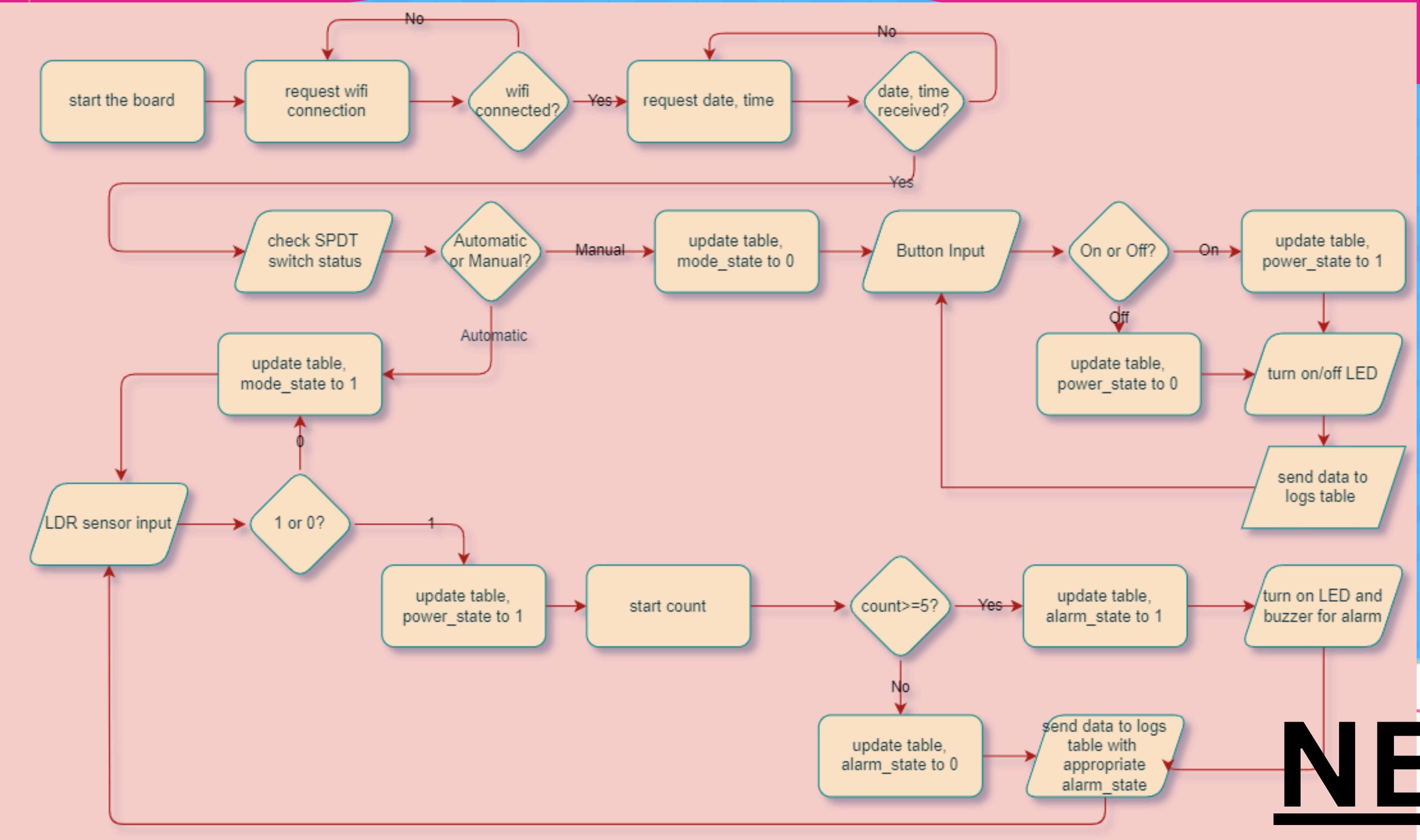
power_state	mode_state	alarm_state
0	0	0

- Console:** Shows executed SQL queries related to the logs table.

System Architecture



Sensor and LED Function Flowchart



NEXT

logs Table Data Attributes

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra
1	logs_pk 	int(255)			No	None		AUTO_INCREMENT
2	month	varchar(10)	utf8mb4_general_ci		No	None		
3	day	varchar(10)	utf8mb4_general_ci		No	None		
4	year	varchar(10)	utf8mb4_general_ci		No	None		
5	log_time	varchar(10)	utf8mb4_general_ci		No	None		
6	mode_status	varchar(10)	utf8mb4_general_ci		No	None		
7	alarm_status	varchar(10)	utf8mb4_general_ci		No	None		

power Table Data Attributes

	#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra
<input type="checkbox"/>	1	power_state	varchar(10)	utf8mb4_general_ci		No	None		
<input type="checkbox"/>	2	mode_state	varchar(10)	utf8mb4_general_ci		No	None		
<input type="checkbox"/>	3	alarm_state	varchar(10)	utf8mb4_general_ci		No	None		

Breakdown of Project Cost

ITEM	QUANTITY	COST
Wemos D1	1	181
LEDs	4	20
Relay Switch	1	42
SPDT Switch	1	16
Jumper Wires	20	70
Circuit Board	1	49
Potentiometer	1	19
Buzzer	1	15
LDR	1	15

ITEM	QUANTITY	COST
Popsicle Sticks	3	180
Paint	1	150
Glue	3	35
Glue Sticks	4	196
Printed Designs	15	75

= 427

= 636

Gantt Chart (Progress Report)

Main Cast of Ate Co.



Ivan Alvarez

○ - ○ - ○

- as Barbie



Jason Miran

○ - ○ - ○

- as Ken



Reiner Valdez

○ - ○ - ○

- as Barbie



Xavier Hipolito

○ - ○ - ○

- as Ken

Thanks

