Intelligent Street Lighting System

Software Installations:

1. Update your Raspberry Pi sudo apt-get update sudo apt-get upgrade

2. Install Python and pip if not

already installed sudo apt-get install
python3 python3-pip

#3. Install required Python packages

pip3 install RPi.GPIO pip3 install pad4pi pip3 install flask pip3 install flask-cors pip3 install requests

4. Create a project directory

mkdir street_light_system cd street_light_system

5. Create a static directory for web files mkdir

static

Project Setup:

1. Create the main Python file: nano

street_light_system.py

- 2. Copy the code into this file.
- **3.** Make the script executable: mod + street_light_system.py

Running the Project:

- 1. Start the system: python3 street_light_system.py
- 2. Access the web interface:
- 3. From the same Raspberry Pi: http://localhost:5000
- 4. From other devices on the network: http://[raspberry_pi_ip]:5000

To find your Raspberry Pi IP: hostname -I

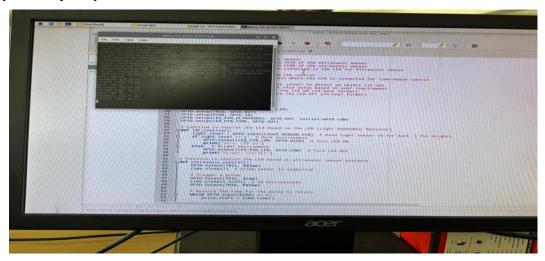


Fig. The Code of the Project

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Penvironment: production

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**Debug mode: on

**Running on http://0.0.0.0.0:5000/ (Press CTRL+C to quit)

**Restarting with stat

**Value Level: 224.96 cm

**Debug mode: on

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Fig. The Terminal Page of the Project