Project Report: IoT-Based Smart Humidifier and Perfume Dispenser

1. Project Objectives:

To develop a Smart Humidifier (Perfume Dispenser) for customizable fragrances to enhance user experience.
To establish IoT connectivity for remote monitoring and control via a mobile application.

2. Project Features:

Hardware Components:
Microcontroller - ESP-32 - 01
Power Led – 01
On/Off Switch – 01
3.7V 10000mAH Li-Po Rechargeable Battery– 01
Single Channel Relay Board Module 5V– 01
DC5V Humidifier USB Spray Module– 01
Micro 2 Pin Tactile Self Locking Switch – 01
Power Bank Module with Dual USB Output- 3.7V to 5V with LiPo Charger– 01

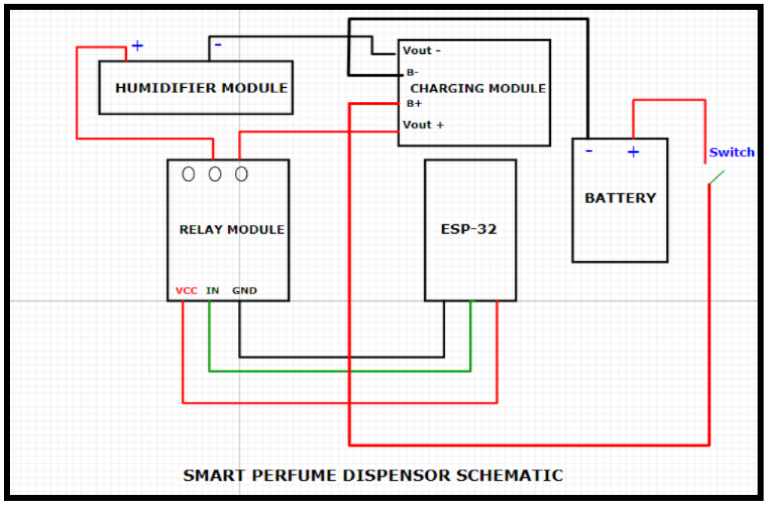
3. Software Development and IOT Connectivity:

1. Cadio Firmware 32
2. Flash Download Tool

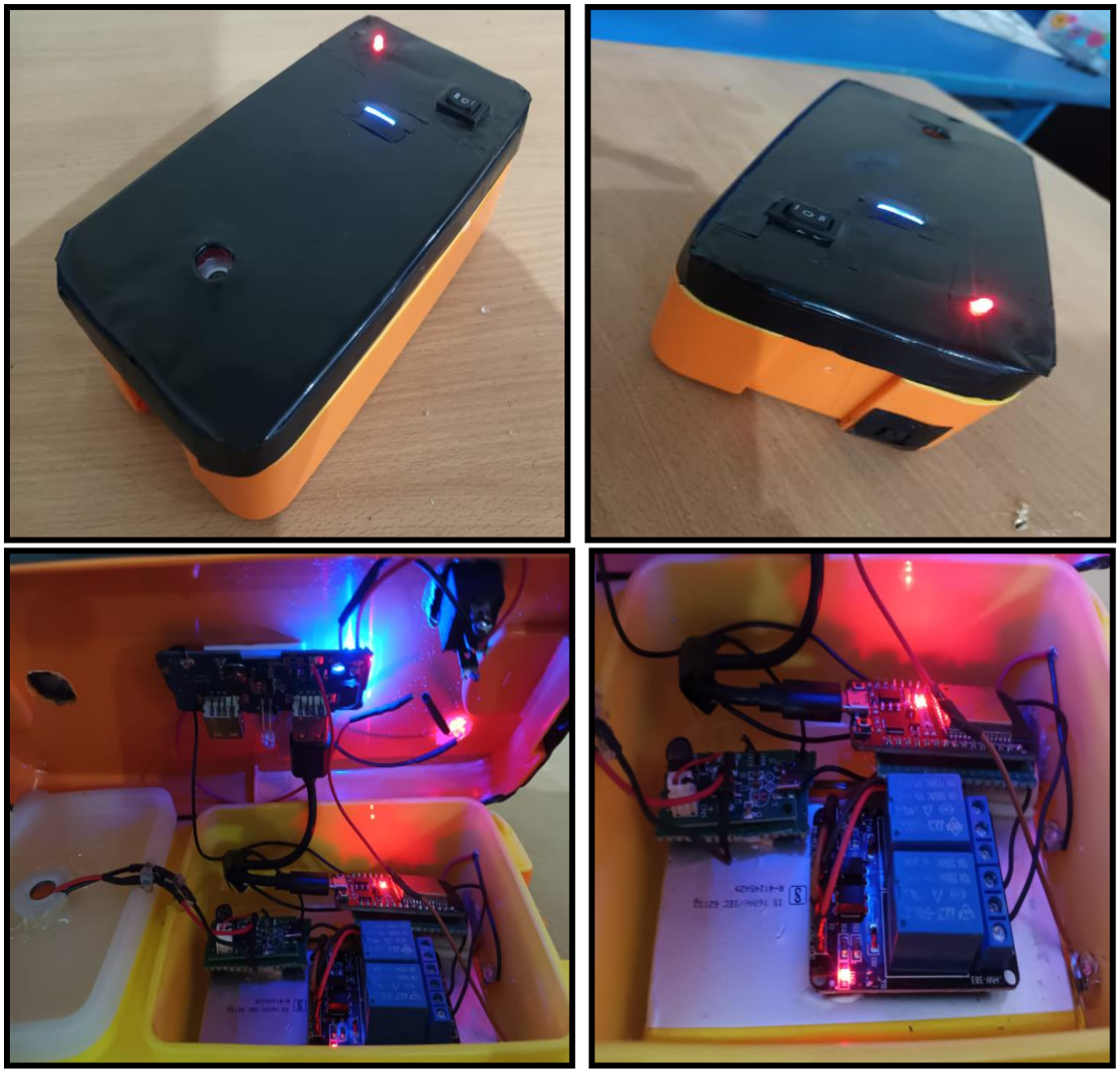
Connectivity: Wi-Fi or Bluetooth for IoT communication.
User Interface: Cadio Mobile application for iOS and Android devices.

4. Technical Implementation:

Schematic Diagram:



5. Smart Perfume Dispenser Pictures



6. Applications:

a. Home Automation:

Improves indoor air quality and creates a pleasant atmosphere in homes.

Enables users to remotely control and monitor the device through a mobile app.

b. Office Environments:

Enhances the working environment by maintaining comfortable humidity levels.

Customizable fragrance helps create a positive and productive workspace.

c. Healthcare Facilities:

Supports patient comfort and recovery by ensuring optimal humidity.

Fragrance customization can contribute to a soothing and therapeutic environment.

d. Hospitality Industry:
Provides a luxurious and welcoming atmosphere in hotels and resorts.
Customizable scents for lobbies, rooms, and common areas.

e. Retail Spaces:
Enhances customer experience through pleasant fragrances.
Real-time monitoring for timely maintenance and refilling of perfume containers.

f. Spa and Wellness Centers:
Creates a relaxing and rejuvenating ambiance with customizable scents.
Maintains ideal humidity levels for wellness treatments.

6. Benefits:

Improved indoor air quality.
Enhanced user comfort through customizable fragrances.
Remote monitoring and control for convenience.
Energy-efficient operation.
Versatile applications across various sectors.

Perfume Dispensing:
Integration of a perfume dispenser for customizable fragrances.
Programmable scent intensity and schedule for personalized experiences.

IoT Connectivity:
Integration of Wi-Fi or Bluetooth for remote access.
Mobile application development for iOS and Android devices.

7. Conclusion:

The IoT-Based Smart Humidifier and Perfume Dispenser project aim to create a sophisticated and user-friendly solution for optimizing indoor environments.

This project addresses the diverse needs of users in residential, commercial, and healthcare settings. The integration of IoT connectivity ensures convenience and remote accessibility, making it a promising innovation in the realm of smart home devices.