HOME AUTOMATION APP

Home Automation App using Bolt IoT Cloud Platform

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Overview

In today's era of smart living, home automation has gained immense popularity due to its ability to enhance convenience and energy efficiency. The "**Home Automation App Using Bolt IoT Cloud Platform**" is an innovative project that leverages the power of the Internet of Things (IoT) and Machine Learning (ML) to create a user-friendly and efficient home automation system. This project focuses on controlling LEDs and a BUZZER remotely through a dedicated mobile application, making it a practical and accessible solution for modern homes.
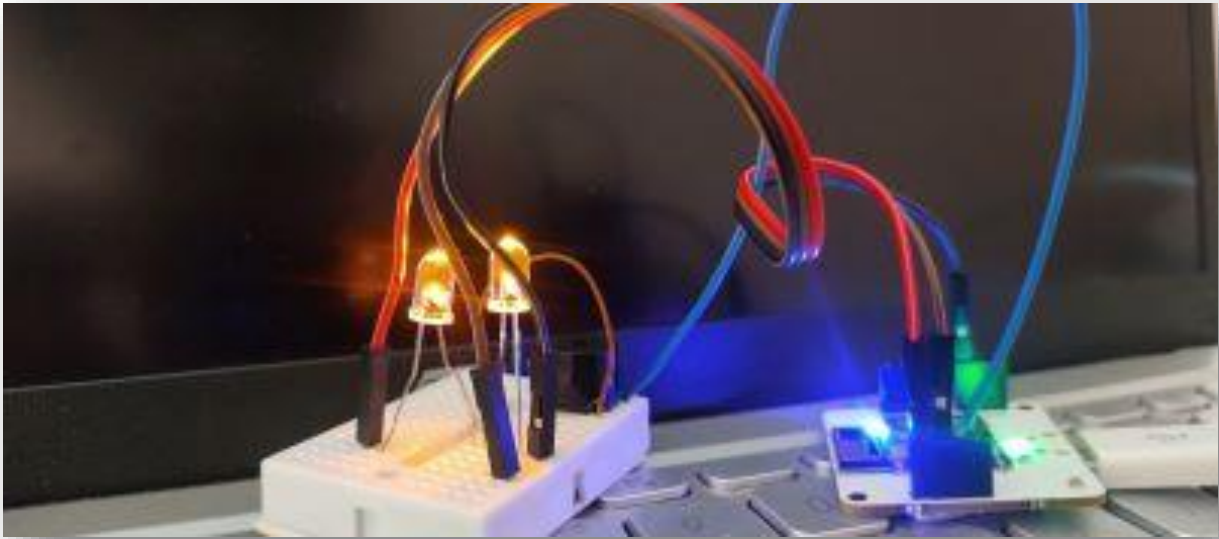

problem

I am undertaking the development of this 'Home Automation App Using Bolt IoT Cloud Platform' project to address the need for modern and convenient home automation solutions. The primary problem i aim to solve is:

Convenience and Energy Efficiency: The project seeks to simplify the control of lighting and cooling systems in homes, enabling users to remotely manage LEDs and a fan through a mobile app. By doing so, you're addressing the inconvenience of manually switching these devices on or off and promoting energy efficiency by allowing users to easily reduce unnecessary energy consumption.
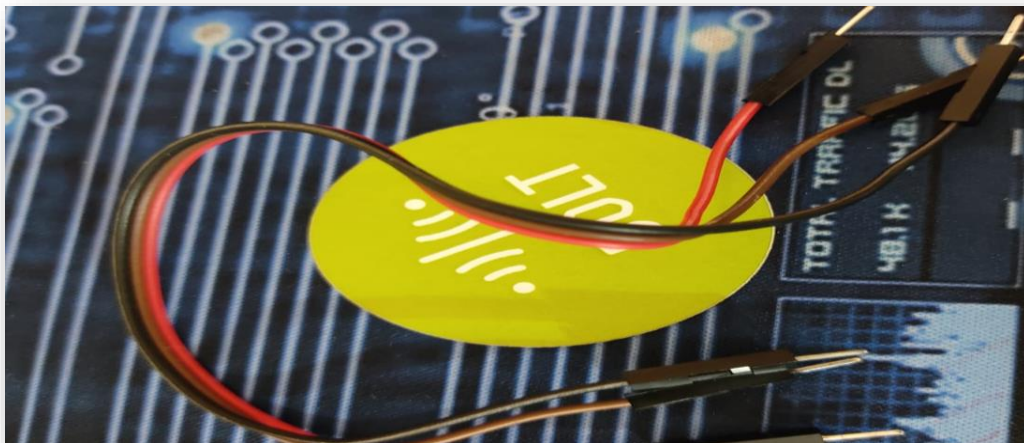
Things used in this product

Hardware components

- [Bolt Wifi module](#)
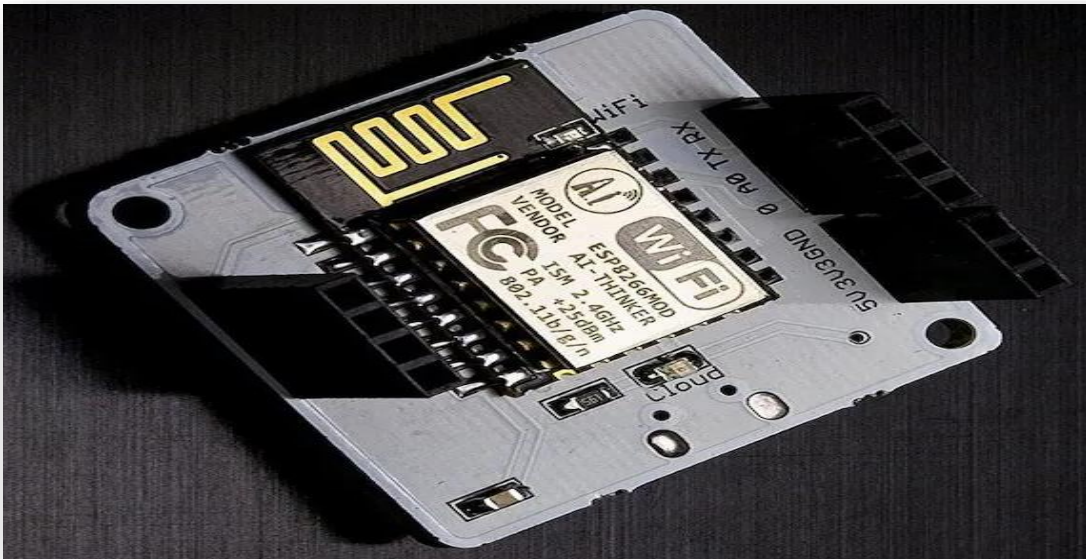
- 4 x Jumper Wires

- 2 x LED

- 1 x Buzzer

Software and online services:

- [Bolt Cloud](#)
- [Bolt Cloud Android App](#)

Steps for building the product

Hardware Setup:

Step 1: Insert the positive leg of the LEDs and BUZZER in digital pin 1,2,3 of the Bolt.
Step 2: Insert the negative leg of the LEDs and BUZZER into the ground pin of the Bolt.

Software Programming:

Step 1: Getting Bolt Cloud API Credentials:

1. Firstly, go to cloud.boltiot.com and create an account.
2. After logging in, link your WiFi Module with the Bolt Cloud using Bolt IoT SetUp App which you can download on your mobile.
3. After being linked, your cloud's dashboard will display your device and you can now get your Device ID and API Key from the dashboard.

Step 2: Go to cloud.boltiot.com and create a new product. While creating the product, choose product type as Output Device and interface type as GPIO. After creating the product, select the recently created product and then click on configure icon.

Step 3: Move to the code tab and write the code to control the LEDs and BUZZER.

Step 4: Once you have written the complete code in the editor, give the file name as ledcontrol and in the drop-down select the file extension as js.

Step 5: Now click on save icon to save the code. Now go back to the dashboard by clicking on 'X' icon.

Step 6: In the products tab, select the product created and then click on the link icon. Select your Bolt device in the popup and then click the 'Done' button.

Step 7: Now click on view this device icon to view the page that you have designed.

Led On

Led Off

Led On

Led Off

FAN On

FAN Off

Source Code

//Javascript code

```
singleButton({name:"Led On", action:"digitalWrite",
        pin:"1", value:"HIGH",bgcolor:"green",
        shape:"rectangle",align:"left","text_color":"white" })
singleButton({name:"Led Off", action:"digitalWrite",
        pin:"1", value:"LOW", bgcolor:"red",
        shape:"rectangle", align:"left", text_color:"black"})
singleButton({name:"Led On", action:"digitalWrite",
        pin:"2", value:"HIGH",bgcolor:"green",
        shape:"rectangle",align:"left","text_color":"white" })
singleButton({name:"Led Off", action:"digitalWrite",
        pin:"2", value:"LOW", bgcolor:"red",
        shape:"rectangle", align:"left", text_color:"black"})
singleButton({name:"FAN On", action:"digitalWrite",
        pin:"3", value:"HIGH",bgcolor:"#ffa500",
        shape:"circle", align:"right","text_color":"white" })
singleButton({name:"FAN Off", action:"digitalWrite",
        pin:"3", value:LOW,bgcolor:"#6a5acd",
        shape:"circle", align:"right", text_color:"white"})
```

Conclusion

In conclusion, the "Home Automation App Using Bolt IoT Cloud Platform" project represents a significant step forward in harnessing the power of IoT and modern technology to enhance our daily lives. By creating a seamless and user-friendly interface for controlling lighting and cooling systems remotely, we have successfully addressed the need for convenience and energy efficiency in today's fast-paced world.

This project not only provides an immediate solution to the inconveniences of manual device control but also opens up possibilities for further improvements in home automation through machine learning integration. As technology continues to evolve, this project serves as a foundation for creating smarter, more energy-efficient homes. The combination of the Bolt IoT Cloud Platform and the mobile app showcases the potential for future developments in home automation, making it more accessible and adaptable to the needs of users. Ultimately, this project stands as a testament to the positive impact that innovation in IoT and ML can have on our daily lives, improving our comfort and environmental sustainability simultaneously.