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Cayenne Application with Raspberry Pi

12.1 Introduction to Cayenne

Cayenne has a customizable dashboard with drag-and-drop widgets. It is easy to set up Cayenne, as it connects with Pi easily. In Cayenne, sensors, motors, actuators, GPIO boards, and more can be added. It is used to control the devices remotely. It has four key components: Cayenne-agent software (responsible for communicating to the server), cloud (processes and stores the sensory data), online dashboard (provides a graphical environment), and Cayenne app for Android and IOS.

12.1.1 Getting Started with Cayenne

1. Open myDevices on the Cayenne website and create an account by clicking on “Get Started for Free” (Figure 12.1).
2. Fill out the registration form and choose a device to work on (Figure 12.2).
3. Download and install myDevices Cayenne on Pi (Figure 12.3), by using commands:

```
wget https://cayenne.mydevices.com/dl/rpi_8bf9u0m7hl.sh  
sudo bash rpi_8bf9u0m7hl.sh -v
```
4. Go to the GPIO menu and select as per the requirement of the project (Figure 12.4).

12.2 LED Blynk with the Cayenne App

The simplest way to understand the working with Cayenne app is with LED. The system is comprised of a Raspberry Pi, a power supply, and an LED. Connect the LED to GPIO17 (Figure 12.5). Follow the steps mentioned in Section 12.1.1 to control. Develop a Cayenne App. Go to the GPIO 17 pin, click on “input,” and change it to “output.” The status of the LED can be changed by changing the state of the button to “HIGH” and “LOW.”



FIGURE 12.1

Create an account.



FIGURE 12.2

Choose the device.

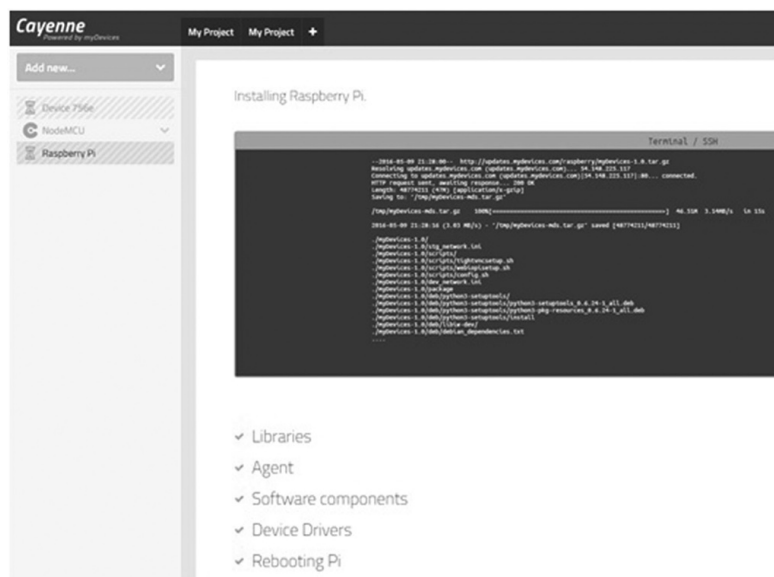


FIGURE 12.3

Installing Raspberry Pi.

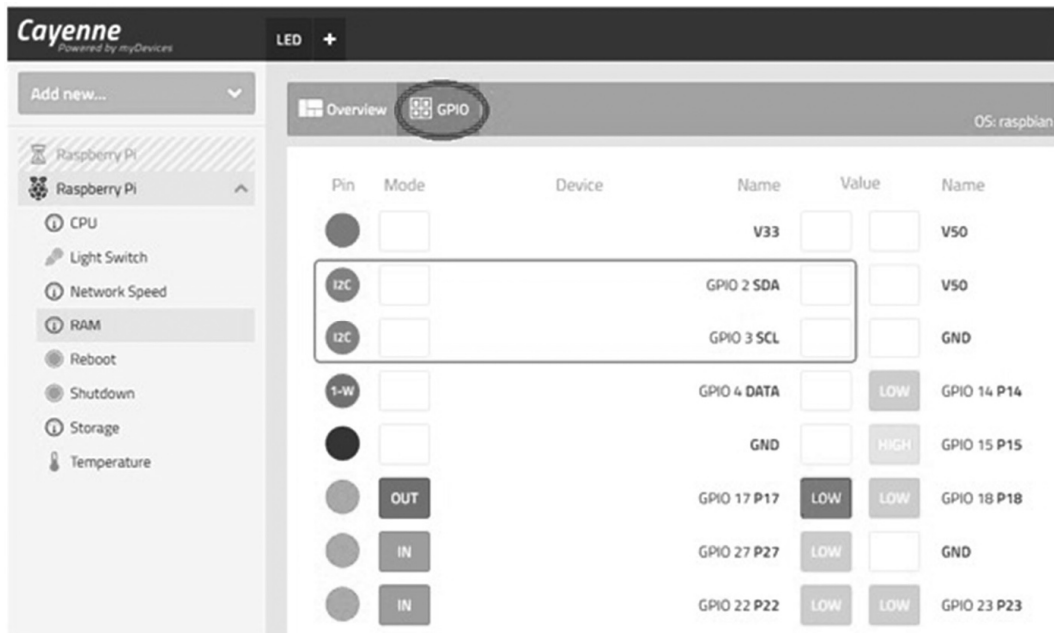


FIGURE 12.4
GPIO of Raspberry pi.

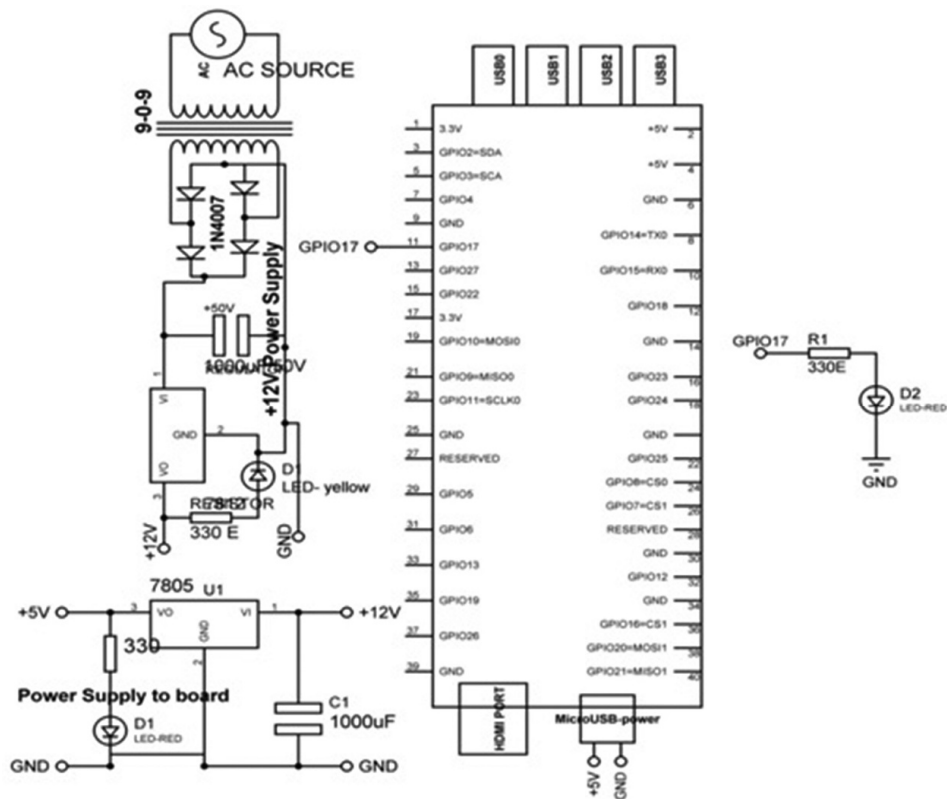


FIGURE 12.5
Circuit diagram for interfacing LED with Raspberry Pi.