**Practical 08**

**IoT based Web Controlled Home Automation using Raspberry Pi**

**In Raspberry pi:**

import lgpio

from flask import Flask

app = Flask(\_\_name\_\_)

LED\_PIN = 18

chip = lgpio.gpiochip\_open(0)

lgpio.gpio\_claim\_output(chip, LED\_PIN)

@app.route("/on")

def turn\_on():

lgpio.gpio\_write(chip, LED\_PIN, 1)

return "LED turned ON"

@app.route("/off")

def turn\_off():

lgpio.gpio\_write(chip, LED\_PIN, 0)

return "LED turned OFF"

@app.route("/")

def home():

return "Raspberry Pi 5 Home Automation API"

if \_\_name\_\_ == "\_\_main\_\_":

try:

app.run(host="0.0.0.0", port=5000)

except KeyboardInterrupt:

pass

finally:

lgpio.gpiochip\_close(chip)

**In pc:**  
<!DOCTYPE html>

<html>

<head>

<title>Raspberry Pi LED Control</title>

</head>

<body style="text-align:center; margin-top:50px;">

<h2>Control Raspberry Pi LED</h2>

<form method="post">

<input type="submit" name="on" value="Turn ON" style="width:120px;height:40px;">

<input type="submit" name="off" value="Turn OFF" style="width:120px;height:40px;">

</form>

<?php

$raspberry\_ip = "192.168.1.228"; // <-- Replace with your Pi's IP address

if (isset($\_POST['on'])) {

file\_get\_contents("http://$raspberry\_ip:5000/on");

echo "<p>LED turned ON</p>";

}

if (isset($\_POST['off'])) {

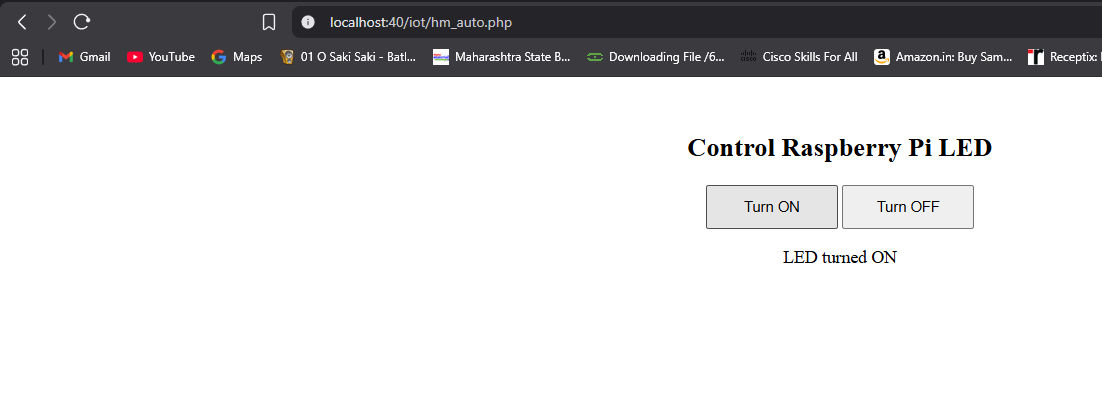
file\_get\_contents("http://$raspberry\_ip:5000/off");

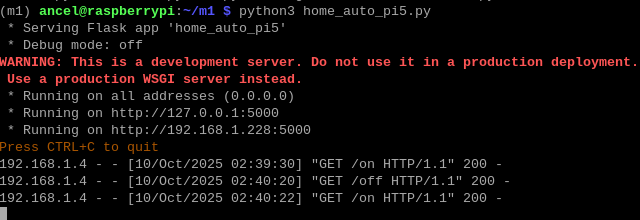
echo "<p>LED turned OFF</p>";

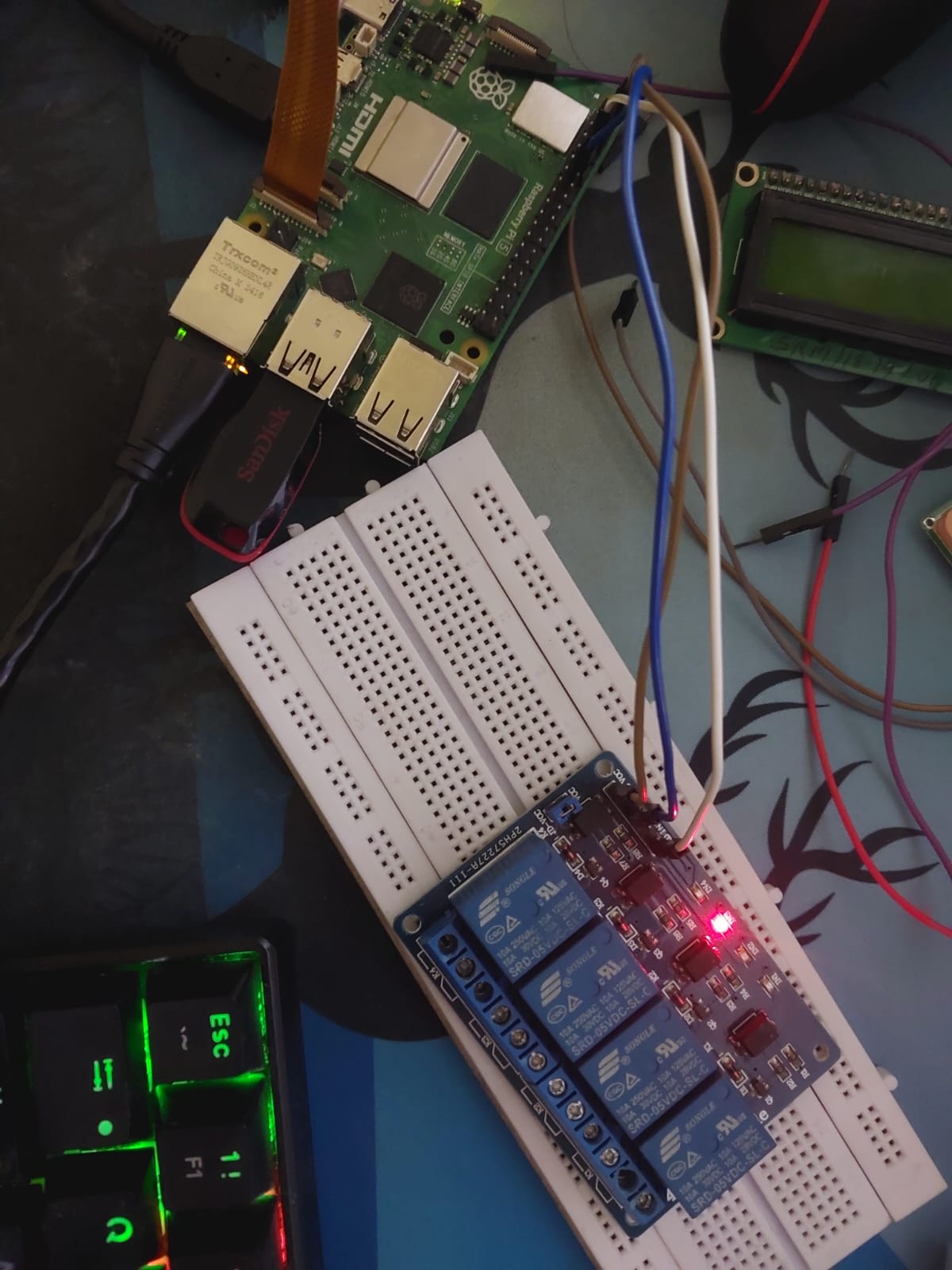
}

?></body></html>

**Output:**



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