WIFI Controlled LED using Raspberry Pi 3

Required Components

1: Raspberry Pi 3

2: LED

3: Resistor

4: Board for the Connections

Setting Up the Connections

Connect the positive pin to the GPID 17 of the Raspberry Pi 3 and negative pin to the Resistor

And the other side of the resistor to the Raspberry Pi 3's GND

Installing Library in the Raspberry Pi 3

We need WringPi Library for the GPIO interface in the Raspberry Pi 3.

For that we need to install WringiPi Library .

sudo apt-get install git-core

git clone git://git.drogon.net/wiringPi

cd wiringPi

./build by this commands I downloaded the library

Web Server

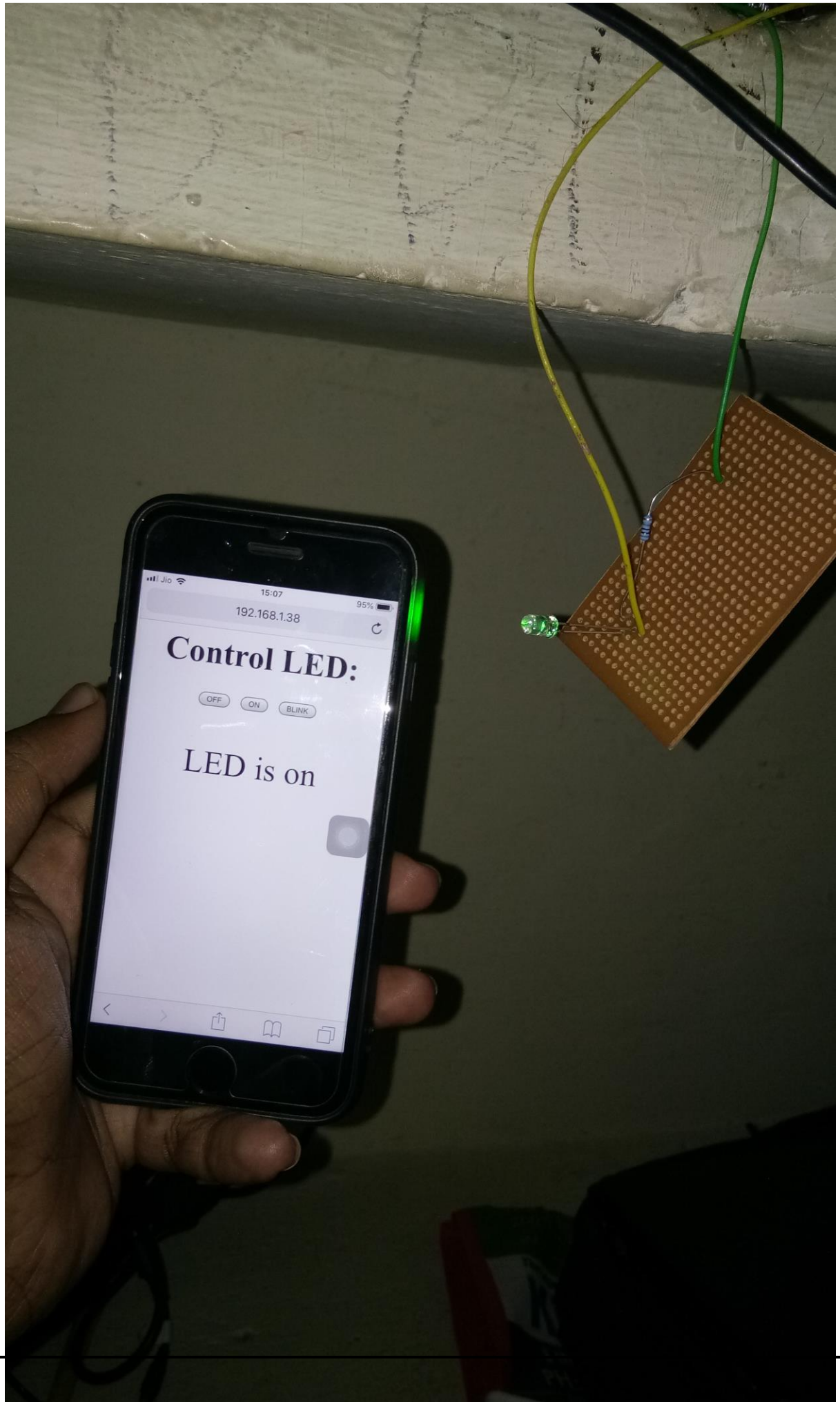
This Project does require an web Server. And the most powerful Web Server is Apache and I used here.

Coding

The project is not a complex one and doesn't require much coding .

```
<html>
<head>
<meta name="viewport" content="width=device-width" />
<title>WIFI Controlled LED</title>
</head>
    <body>
    <center><b><font size = '20'>Control LED:</b>
```

```
<form method="get" action="gpio.php">
    <input type="submit" style = "font-size: 16 pt" value="OFF" name="off">
    <input type="submit" style = "font-size: 16 pt" value="ON" name="on">
    <input type="submit" style = "font-size: 16 pt" value="BLINK" name="blink">
</form>
<?php
shell_exec("/usr/local/bin/gpio -g mode 17 out");
if(isset($_GET['off']))
{
        echo "LED is off";
        shell_exec("/usr/local/bin/gpio -g write 17 0");
}
    else if(isset($_GET['on']))
    {
        echo "LED is on";
        shell_exec("/usr/local/bin/gpio -g write 17 1");
    }
    else if(isset($_GET['blink']))
    {
        echo "LED is blinking";
        for($x = 0;$x<=4;$x++)
        {
            shell_exec("/usr/local/bin/gpio -g write 17 1");
            sleep(1);
            shell_exec("/usr/local/bin/gpio -g write 17 0");
            sleep(1);
        }
    }
?>
</center></font></body></html>
```


Jio
15:07
95%
192.168.1.38
Control LED:
OFF
ON
BLINK
LED is on

We can now Run this in the local host in the Raspberry Pi 3..

Further Implementation Ideas are Home Automation.

This project can be further developed to control the Bulbs, Fans and other Electrical and Electronic Devices..