## Lab-08

Blinking an LED Bulb

LED Overview

LED is the acronym for Light Emitting Diode. They are a special type of diode that convert electrical energy into light. They have very similar electrical characteristics to a normal PN junction diode. This lighting emitting diode is a p-n junction diode. It is a specially doped diode and made up of a special type of semiconductors.

LED Symbol

The LED symbol is similar to a normal PN junction diode symbol except that it contains arrows pointing away from the diode indicating that light is being emitted by the diode, thus it is called LED (light-emitting diode). The LED includes two terminals namely anode (+) and the cathode (-). The LED symbol is shown below.
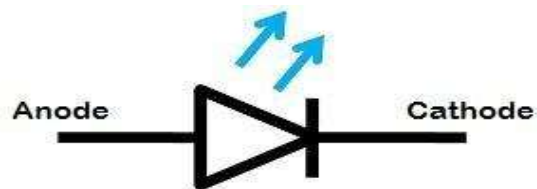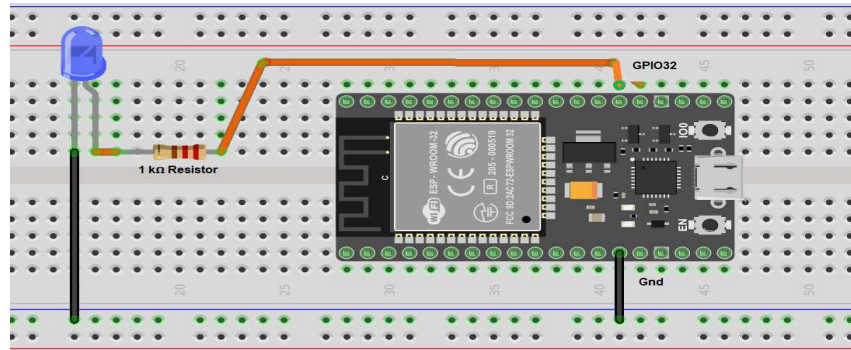

Circuit Diagram:

The following diagram shows how to connect an LED to microcontroller
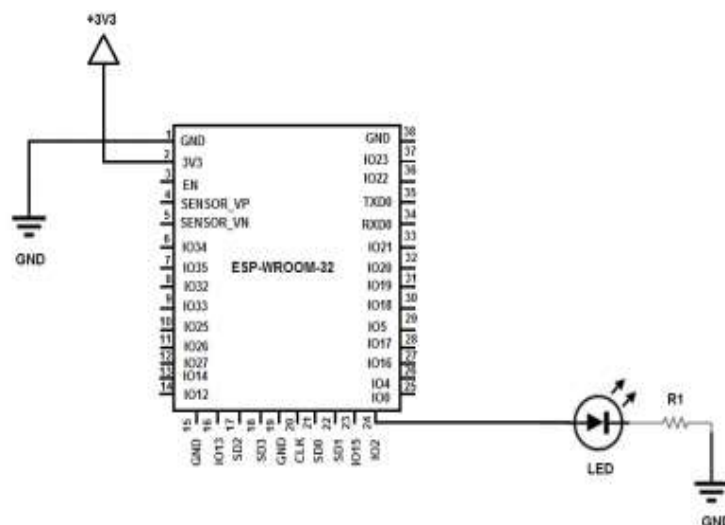
Connection Diagram:

Algorithm

1. Setup GPIO32 for LED.
2. Define LED as OUTPUT pin.
3. In loop, pass the HIGH(1) value to the LED pin, and then the LOW(0) value with some delay in each phase.
4. The LED connected to the LED pin will be blinking with the specified amount of delay.

CODE:

```
void setup(){
        pinMode(8,OUTPUT);
}
void loop(){
        digitalWrite(8,HIGH);
        delay(1000);
        digitalWrite(8,LOW);
        delay(1000);
}
```

OUTPUT: