

Traffic Light

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1BM18CS098

```
int GREEN=2;
int YELLOW=3;
int RED=4;
int DELAY_GREEN=5000;
int DELAY_YELLOW=3000;
int DELAY_RED=7000;
void setup()
{
    pinMode(GREEN, OUTPUT);
    pinMode(YELLOW, OUTPUT);
    pinMode(RED, OUTPUT);
}
void loop()
{
    green_light();
    delay(DELAY_GREEN);
    yellow_light();
    delay(DELAY_YELLOW);
    red_light();
    delay(DELAY_RED);
}
void green_light()
{
    digitalWrite(GREEN, HIGH);
    digitalWrite(YELLOW, LOW);
    digitalWrite(RED, LOW);
}
```

O1 → Blink

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void setup()

{ pinMode(13, OUTPUT);
}

void loop()

{ digitalWrite(13, HIGH);
delay(500);
digitalWrite(13, LOW);
delay(500);
}

Push Button Code

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IBM 18 CS09B

```
int BUTTON=2;  
int LED=3;  
int BUTTONstate=0;  
  
void setup()  
{  
    pinMode(BUTTON, INPUT);  
    pinMode(LED, OUTPUT);  
}  
  
void loop()  
{  
    BUTTONstate=digitalRead(BUTTON);  
    if(BUTTONstate==HIGH){  
        digitalWrite(LED,HIGH);  
    }  
    else{  
        digitalWrite(LED,LOW);  
    }  
}
```

```
void yellow-light()
{
    digitalWrite(GREEN, LOW);
    digitalWrite(YELLOW, HIGH);
    digitalWrite(RED, LOW);
}
```

```
void red-light()
{
    digitalWrite(GREEN, LOW);
    digitalWrite(YELLOW, LOW);
    digitalWrite(RED, HIGH);
}
```

Fading P :-

```
int led=9;  
int brightness=0;  
int fadeAmount=5;  
  
void setup(){  
    pinMode(led, OUTPUT);  
}  
  
void loop(){  
    analogWrite(led, brightness);  
    brightness = brightness + fadeAmount;  
    if (brightness == 0 || brightness == 255){  
        fadeAmount = -fadeAmount;  
    }  
    delay(30)  
}
```

LDR sensor

```
int ldr=A3;  
int ldrvalue=0;  
int light_s=500;  
void setup()  
{ serial.begin(9600);  
  pinMode(9, OUTPUT);  
}  
void loop()  
{  
  ldrvalue = analogRead(ldr);  
  serial.println(ldrvalue);  
  delay(50);  
  if (ldrvalue < light_s)  
    digitalWrite(4, HIGH);  
  }  
  else {  
    digitalWrite(11, LOW);  
  }  
  delay(500);  
}
```

Temperature Sensor

```
int outputpin = 0;
```

```
void setup()
```

```
{ serial.begin(9600);
```

```
}
```

```
void loop()
```

```
int rawvoltage = analogRead(outputpin);
```

```
float millivolts = rawvoltage / 1024 * 5000;
```

```
float celsius = millivolts / 10;
```

```
serial.print("celsius");
```

```
serial.print("celsius");
```

```
serial.print("Farenheit");
```

```
serial.print((celsius * 9) / 5 + 32);
```

```
delay(1000);
```

```
}
```

PIR sensor

```
int led=13;  
int sensor=6;  
int state=LOW;  
int val=0;  
  
void setup() {  
    pinMode(led, OUTPUT);  
    pinMode(sensor, INPUT);  
    serial.begin(9600);  
}  
  
void loop() {  
    val=digitalRead(sensor);  
    if (val==HIGH) {  
        digitalWrite(led, HIGH);  
        delay(10);  
        if (state==LOW) {  
            serial.println("Motion detected");  
            state=HIGH;  
        }  
    }  
    else {  
        delayWrite(led, LOW);  
        delay(10);  
    }  
}
```

A
if (state==HIGH){
 serial.println
 ("Motion stopped");
 state=LOW;
}
}
}
}

Ultrasonic

```
float cm;  
float inches;  
float pulse;  
void setup(){  
    serial.begin(9600);
```

}

```
void loop()
```

```
{ pinMode(Q, INPUT);  
  pulse = pulseIn(Q, HIGH);
```

inches = pulse / 147;

cm = inches * 2.54;

```
serial.print('\' , );
```

```
serial.print(in);
```

```
serial.print("cm");
```

```
serial.print("cm");
```

```
delay(500);
```

}

FireAlarm

```
void setup() {
    serial.begin(9600);
    pinMode(2, OUTPUT);
}

void loop() {
    int temp = analogRead(40);
    float c = map(temp, 31, 368, 40, 125);
    if (c > 70) {
        serial.println("Buzzing");
        digitalWrite(2, HIGH);
        delay(2000);
        digitalWrite(2, LOW);
    } else {
        serial.println("Idle");
    }
}
```

Tilt Sensor

```
int tilt = 4;  
int led = 11;  
void setup() {  
    pinMode(tilt, INPUT);  
    pinMode(led, OUTPUT);  
}  
void loop() {  
    int reading;  
    reading = digitalRead(tilt);  
    if (reading)  
        digitalWrite(led, LOW);  
    else  
        digitalWrite(led, HIGH);  
}
```

IR

```
#include <servo.h>
#include <IRremote.h>
int recv_PIN=11
IRrecv rcv(recv_PIN);
decode_results results;
servo myservo;
void setup(){
    serial.begin(9600);
    irrecv.enableIRIn();
}
void loop()
```

```
case OnFF609F
    my servo.write(30);
    serial.println("cc");
    break
default:
    serial.print("unrecognized")
}
irrecv.resume()
}
```

```
if (rcv.decode(&results)){
    switch(results.value){
```

```
        case OnFD00F
            my servo.attach(a);
            serial.println("start");
            break;
        case OnFO609F;
            servo.write(360);
            serial.println("clockwise");
            break;
```