Pgm1

```
void setup()
{
  Serial.begin(9600);
  Serial.println("led is bliking");
  pinMode(4,OUTPUT);
  pinMode(5,OUTPUT);
  }
  void loop()
  {
    digitalWrite(4,HIGH);
    delay(500);
    Serial.println("LED 2 is blinking\n");
    digitalWrite(4,LOW);
    delay(500);
    Serial.println("LED 2 is OFF\n");
    digitalWrite(5,HIGH);
    delay(500);
    Serial.println("LED 3 is blinking\n");
    digitalWrite(4,LOW);
    delay(500);
    Serial.println("LED 3 is OFF\n");

  }
```

Pgm2

```
int ldr;
void setup(){
  pinMode(A0,INPUT);
  Serial.begin(9600);
}void loop(){
  ldr=analogRead(A0);
  Serial.println(ldr);
  if(ldr>=300)
  {
    Serial.println("darkness");
    digitalWrite(A0,HIGH);
    Serial.println();
  }
  else
  {
    Serial.println("sufficient");
    digitalWrite(A0,LOW);
  }
  delay(500);
}
```

Pgm3

```
const int lm35_pin=A0;
void setup() {
  Serial.begin(9600);
```

```
}
void loop(){
  int temp_abc_val;
  float temp_val;
  temp_abc_val=analogRead(lm35_pin);
  temp_val=(temp_abc_val*4.88);
  temp_val=(temp_val/10);
  Serial.print("\n temperature=");
  Serial.print(temp_val);
  Serial.print("degree celsius");
  delay(1000);
}
```

Pgm4

```
int smokeA0=A0;
void setup() {
  Serial.begin(9600);
  }
  void loop(){
    int value=analogRead(smokeA0);
    Serial.println("Smoke A0 value is");
    Serial.println(value);
    if (value>=400)
    {
      digitalWrite(smokeA0,HIGH);
      Serial.println("smoke id dected");
    }
    else
    {
      digitalWrite(smokeA0,LOW);
      Serial.println("smoke is not detected");
      delay(2000);
    }
  }
```

Pgm5

```
const int ledPin=12;
int blinkRate=0;
void setup() {
  Serial.begin(9600);
  pinMode(ledPin,OUTPUT);
}
void loop() {
  if(Serial.available())
  {
    char ch=Serial.read();
    if(ch=='0')
    {
      digitalWrite(ledPin,LOW);
    }
    if(ch=='1')
    {
```

```
      digitalWrite(ledPin,HIGH);
    }
  }
}
```

Pgm6

```
void setup() {
  pinMode(3,INPUT);
  Serial.begin(9600);
}

void loop() {
  if(digitalRead(3)==LOW)
  {
    Serial.println("obstacle detected");
    delay(500);
    }
    else
    {
      Serial.println("no obstacle detected");
      delay(500);
    }
}
```

Pgm7

```
#include <DHT.h>
DHT dht(3, DHT11);
void setup() {
  Serial.begin(9600);
  dht.begin();
}
void loop() {
  float h, c, f;
  h = dht.readHumidity();
  c = dht.readTemperature();
  f = dht.readTemperature(true);
  Serial.print("HUMIDITY%=");
  Serial.println(h);
  Serial.print("Temperature%=");
  Serial.print(c);
  Serial.println();
  Serial.print(f);
  Serial.println();
  Serial.println();
  delay(2000);
}
```

Pgm8

Compile only

```
#include<SoftwareSerial.h>
SoftwareSerial esp(2,3);
String str;
```

```
void setup()
{
  Serial.begin(115200);
  esp.begin(115200);
}
void loop()
{
    str=String("hello world");
    esp.println(str);
  }
```

Compile and Run this pgm

```
void setup()
{
  Serial.begin(115200);
  {
    ;
  }
}
  void loop()
  {
    if(Serial.available())
    {
      Serial.write(Serial.read());
    }
  }
```