

Practical 3 :write and application to read temperature from the environment ..

```
const int sensor=A1;
float tempc;
float tempf;
float vout;
void setup()
{
  pinMode(sensor,INPUT);
  pinMode(13,OUTPUT);
  Serial.begin(9600);
}
void loop()
{
  vout=analogRead(sensor);
  vout=(vout*500)/1023;
  tempc=vout;
  tempf=(vout*1.8)+32;
  Serial.print("in DegreeC=");
  Serial.print("\t");
  Serial.print(tempc);
  Serial.println();
  Serial.print("in Fahrenheit=");
  Serial.print("\t");
  Serial.print(tempf);
  Serial.println();
  delay(2000);

  if(tempc>=25)
  {
    digitalWrite(13,HIGH);
    delay(500);
  }
  else
  {
    digitalWrite(13,LOW);
    delay(500);
  }
}
```

Practical 4 : Write program using arduino to control LED (one or more on/off).blinking

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

Practical 5: create a program so that when the users enters b the green light blinks g the green light is illuminated y

```
#define LED_PIN_1 11
#define LED_PIN_2 10
#define LED_PIN_3 9

void setup()
{
  pinMode(LED_PIN_1,
  OUTPUT);
  pinMode(LED_PIN_2,
  OUTPUT);
  pinMode(LED_PIN_3,
  OUTPUT);
}

void loop()
{
  digitalWrite(LED_PIN_1,
  HIGH);
  digitalWrite(LED_PIN_2,
  HIGH);
  digitalWrite(LED_PIN_3,
  HIGH); delay(1000);
  digitalWrite(LED_PIN_1,
  LOW);
  digitalWrite(LED_PIN_2,
  LOW);
  digitalWrite(LED_PIN_3,
  LOW); delay(1000);
}
```

Practical 6 :write a program that's asks the users for number and outputs the numbert in squared that is entered...

```
int x;
void setup()
{
  Serial.begin(9600);
  Serial.println("Enter A
  Number:-");

  while (Serial.available() == 0)
  {
  }

  x = Serial.parseInt();
  Serial.println("Square of a
  Number is:-");
  Serial.println(x*x);
}
void loop()
{
}
}
```

Practical :7 write a program to control the color of led by turning 3 different potentiometers.....

```
char val;
void setup()
{
  pinMode(13, OUTPUT);
  pinMode(12, OUTPUT);
  Serial.begin(9600);
}
void loop()
{
  if(Serial.available() > 0)
  {
    val = Serial.read();

    switch(val)
    {
      case 'a':
        digitalWrite(13, HIGH);
        break;
      case 'b':
        digitalWrite(13, LOW);
        break;
    }
  }
}
```

Practical 8: write a program read the temperature sensor and send the values and values and send the values to serial monitoring.....

```
float temp;
int tempPin = 0; void setup()
{
  Serial.begin(9600);
}
void loop()
{
  temp =
  analogRead(tempPin);
  temp = temp *
  0.48828125;
  Serial.print("TEMPERATURE = ");
  Serial.print(temp); Serial.print("*C");
  Serial.println(); delay(1000);
}
```

Practical 9 :Write a program so I display the temperature in a fraheint as well as the maximum and minimum temperature it seen....

```
float temp;
float tempF;
float maxTemp = -1000.0;
float minTemp = 1000.0;
int tempPin = 0;

void setup()
{
  Serial.begin(9600);
}

void loop()
{
  temp = analogRead(tempPin);
  temp = temp * 0.48828125;

  tempF = (temp * 9.0/5.0) + 32.0;

  if (tempF > maxTemp)
  {
    maxTemp = tempF;
  }
  if (tempF < minTemp)
  {
    minTemp = tempF;
  }

  Serial.print("TEMPERATURE = ");
  Serial.print(temp);
  Serial.print("*C / ");
  Serial.print(tempF);
  Serial.print("*F / Max: ");
  Serial.print(maxTemp);
  Serial.print("*F / Min: ");
  Serial.print(minTemp);
  Serial.println();
  delay(1000);
}
```