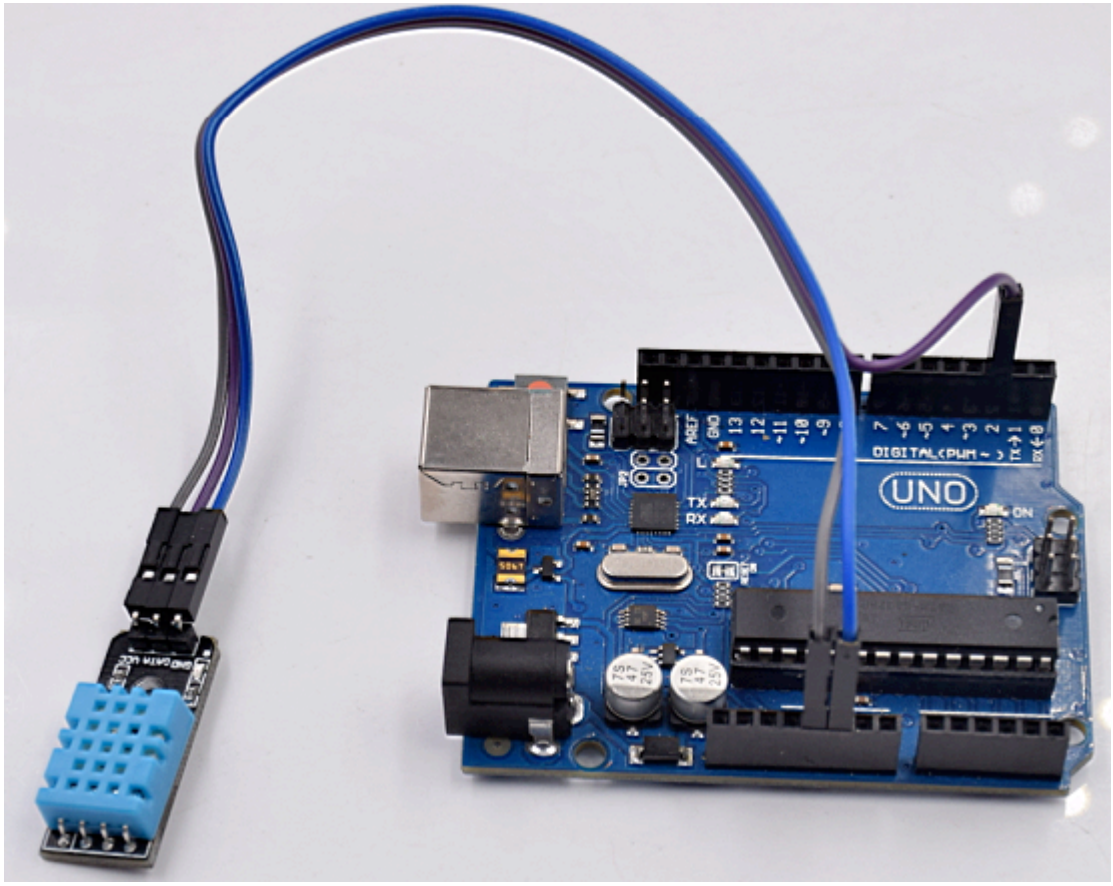
This project uses DHT11 sensor module to get environment temperature and humidity and show them in serial monitor window.

Step 1: connect DHT11 sensor to Arduino as per following circuit graph.



Step 2: Download sketch code and load it into Arduino IDE.

CODE:

```
/*This is our website www.weikedz.com
For bulk orders, please feel free to contact
sophie@weikedz.com. If any question, for orders,
for technical problems, pls contact us.
We will response you fastest time. */
double Fahrenheit(double celsius)
{
        return 1.8 * celsius + 32;
}     // The degree Celsius is converted to Fahrenheit

double Kelvin(double celsius)
{
        return celsius + 273.15;
}      // The temperature of the centigrade is converted to the kelvin temperature

// Dew point (at this temperature, the air is saturated and dewdrops are produced)
double dewPoint(double celsius, double humidity)
{
        double A0= 373.15/(273.15 + celsius);
        double SUM = -7.90298 * (A0-1);
        SUM += 5.02808 * log10(A0);
        SUM += -1.3816e-7 * (pow(10, (11.344*(1-1/A0)))-1) ;
        SUM += 8.1328e-3 * (pow(10,(-3.49149*(A0-1)))-1) ;
        SUM += log10(1013.246);
        double VP = pow(10, SUM-3) * humidity;
        double T = log(VP/0.61078);     // temp var
        return (241.88 * T) / (17.558-T);
}

// Quick calculation of dew point is 5 times dewPoint ()
double dewPointFast(double celsius, double humidity)
{
        double a = 17.271;
        double b = 237.7;
        double temp = (a * celsius) / (b + celsius) + log(humidity/100);
        double Td = (b * temp) / (a - temp);
        return Td;
}

#include <dht11.h>

dht11 DHT11;
```

```
#define DHT11PIN 2

void setup()
{
   Serial.begin(9600);
   Serial.println("DHT11 TEST PROGRAM ");
   Serial.print("LIBRARY VERSION: ");
   Serial.println(DHT11LIB_VERSION);
   Serial.println();
}

void loop()
{
   Serial.println("\n");

   int chk = DHT11.read(DHT11PIN);

   Serial.print("Read sensor: ");
   switch (chk)
   {
      case DHTLIB_OK:
                  Serial.println("OK");
                  break;
      case DHTLIB_ERROR_CHECKSUM:
                  Serial.println("Checksum error");
                  break;
      case DHTLIB_ERROR_TIMEOUT:
                  Serial.println("Time out error");
                  break;
      default:
                  Serial.println("Unknown error");
                  break;
   }

   Serial.print("Humidity (%): ");
   Serial.println((float)DHT11.humidity, 2);

   Serial.print("Temperature (oC): ");
   Serial.println((float)DHT11.temperature, 2);

   Serial.print("Temperature (oF): ");
   Serial.println(Fahrenheit(DHT11.temperature), 2);
```

```
    Serial.print("Temperature (K): ");
    Serial.println(Kelvin(DHT11.temperature), 2);

    Serial.print("Dew Point (oC): ");
    Serial.println(dewPoint(DHT11.temperature, DHT11.humidity));

    Serial.print("Dew PointFast (oC): ");
    Serial.println(dewPointFast(DHT11.temperature, DHT11.humidity));

    delay(2000);
}
```