```
#define dht_dpin A0
byte bGlobalErr;
byte dht_dat[5];


void setup(){
InitDHT();
Serial.begin(9600);
delay(300);
Serial.println("Humidity and temperaturenn");
delay(700);
}


void loop(){
 ReadDHT();
 switch (bGlobalErr){
    case 0:
 Serial.print("Current humdity = ");
 Serial.print(dht_dat[0], DEC);
 Serial.print(".");
 Serial.print(dht_dat[1], DEC);
 Serial.print("%  ");
 Serial.print("temperature = ");
 Serial.print(dht_dat[2], DEC);
 Serial.print(".");
 Serial.print(dht_dat[3], DEC);
 Serial.println("C  ");
    break;
   case 1:
     Serial.println("Error 1: DHT start condition 1 not met.");
```

```
        break;
      case 2:
        Serial.println("Error 2: DHT start condition 2 not met.");
        break;
      case 3:
        Serial.println("Error 3: DHT checksum error.");
        break;
      default:
        Serial.println("Error: Unrecognized code encountered.");
        break;
      }
  delay(800);
}

void InitDHT(){
  pinMode(dht_dpin,OUTPUT);
    digitalWrite(dht_dpin,HIGH);
}

void ReadDHT(){
bGlobalErr=0;
byte dht_in;
byte i;
digitalWrite(dht_dpin,LOW);
delay(20);

digitalWrite(dht_dpin,HIGH);
delayMicroseconds(40);
pinMode(dht_dpin,INPUT);
```

```
//delayMicroseconds(40);
dht_in=digitalRead(dht_dpin);

if(dht_in){
  bGlobalErr=1;
  return;
   }
delayMicroseconds(80);
dht_in=digitalRead(dht_dpin);

if(!dht_in){
  bGlobalErr=2;
  return;
   }
delayMicroseconds(80);
for (i=0; i<5; i++)
   dht_dat[i] = read_dht_dat();
pinMode(dht_dpin,OUTPUT);
digitalWrite(dht_dpin,HIGH);
byte dht_check_sum =
     dht_dat[0]+dht_dat[1]+dht_dat[2]+dht_dat[3];
if(dht_dat[4]!= dht_check_sum)
  {bGlobalErr=3;}
};

byte read_dht_dat(){
 byte i = 0;
 byte result=0;
 for(i=0; i< 8; i++){
```

```
    while(digitalRead(dht_dpin)==LOW);

    delayMicroseconds(30);

    if (digitalRead(dht_dpin)==HIGH)

   result |=(1<<(7-i));

  while (digitalRead(dht_dpin)==HIGH);

   }

 return result;

}
```

This article was published on Monday 09 January, 2012.