


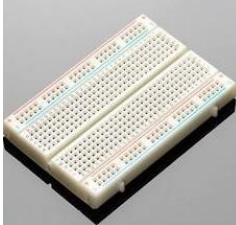


Task1

Hardware

Sensor:IR Obstacle Auoidance Sensor module *1	
Actuator: Buzzer*1	
Arduino uno board * 1	
Breadboard *1	

Connection:

IR Obstacle Auoidance Sensor:

GND-----GND

VCC-----5v

OUT-----Digital pin 3

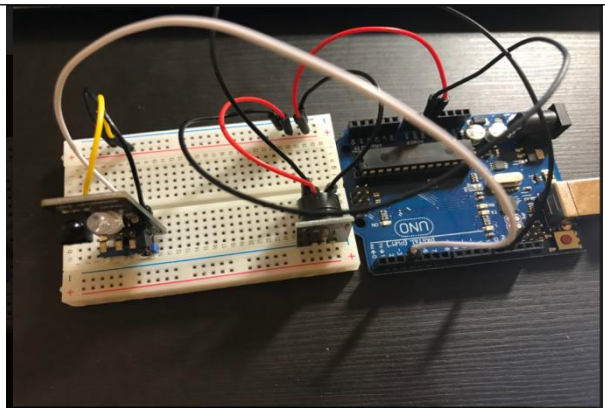
EN-----not use

Buzzer:

GND-----GND

VCC-----5v

OUT-----Digital pin 12



Code snippet:

```
assignmenttask1 | Arduino 1.8.11
File Edit Sketch Tools Help
Upload
assignmenttask1 $
//yichen guan 10194926
//task1 IOT programming
int buzzer =12; //buzzer pin
int IR_obstacle=3; //IR Obstacle Avoidance Sensor pin
int IRobstacle=HIGH;//High means no obstacles
void setup() {
  pinMode(buzzer,OUTPUT);// setting buzzer pin as output
  pinMode(IR_obstacle,INPUT);//setting IR pin as input
  Serial.begin(9600);//The serial port baud rate is set to 9600
}

void loop() {
  IRobstacle =digitalRead(IR_obstacle);
  if(IRobstacle == LOW)//has obstacles the buzzer will ring
  {
    digitalWrite(buzzer,HIGH);
    Serial.println("something obstruct ");
  }
  else // no obstacles buzzer not ring
  {
    Serial.println("nothing");
    digitalWrite(buzzer,LOW);
  }
}

Done compiling.

Sketch uses 1982 bytes (6%) of program storage space. Maximum is 32256 bytes.
Global variables use 206 bytes (10%) of dynamic memory, leaving 1842 bytes for local variables. Maximum is 2048 bytes.

22 Arduino Uno on COM2
```

Demonstration

Task2

Code snippet:

1. Create a database call “TempandHumi”
2. Create a table call “TempandHumi” and add field”TaMid”, ”Humidity”, ”Temperature”

```
RAS (install mysql) [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help



mysql> show databases;
+-----+
| Database |
+-----+
| TempandHumi |
| information_schema |
| mysql |
| performance_schema |
| tempdb |
+-----+
0 rows in set (0.008 sec)

mysql> use TempandHumi;
Database changed
mysql> create table TempandHumi(TaMid int(11) AUTO_INCREMENT NOT NULL, Humidity VARCHAR(20) NOT NULL, Temperature VARCHAR(20) NOT NULL, constraint TempandHumi_PK primary key (TaMid));
Query OK, 0 rows affected, 1 warning (0.023 sec)

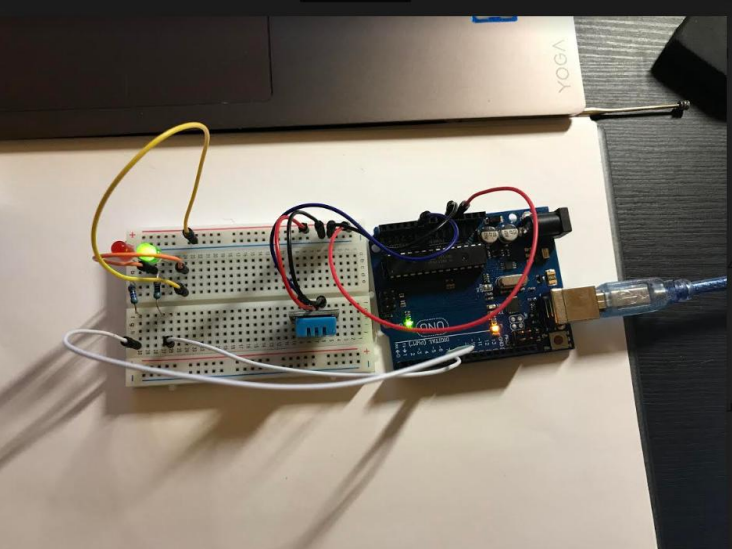
mysql> describe TempandHumi;
+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+
| TaMid | int(11) | NO | PRI | NULL | auto_increment |
| Humidity | varchar(20) | NO | | NULL | |
| Temperature | varchar(20) | NO | | NULL | |
+-----+
0 rows in set (0.008 sec)

mysql>
```

Task 3

	<p>Arduino Compatible Temperature and Humidity Sensor Module</p> <p>CAT.NO: XC4520</p> <p> ADD TO WISHLIST</p> <p> NOTIFY ME WHEN ON SPECIAL</p>	<p>Arduino compatible temperature and humidity sensor</p> <p>*1</p>
	<p>LED light</p>	<p>*2</p>

Connection:

<p>Arduino compatible temperature and humidity sensor</p> <p>GND-----GND</p> <p>VCC-----5v</p> <p>S-----analog A0</p> <p>LED</p> <p>Red-----digital 5</p> <p>Green-----digital 6</p>	
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