

ASSIGNMENT 1

Date	19 September 2022
Team ID	PNT2022TMID47600
Name	GANESH PRABHU B
Project Name	Project – Real-Time River Water Quality Monitoring and Control System
Maximum Marks	2 Marks

Question :

Build a smart home automation using tinkercad

use atleast 2 sensors, led, buzzer in a circuit

simulation in a single code

Solution:

```
const int echoPin=2, triggerPin=3, red=4, green=5, blue=6;
```

```
const int buzz = 7;
```

```
int pulseValue;
```

```
float distance;
```

```
void setup( ) {
```

```
pinMode(echoPin, INPUT);
```

```
pinMode(triggerPin, OUTPUT);
```

```
pinMode(red, OUTPUT);
```

```
pinMode(green, OUTPUT);
```

```
pinMode(blue, OUTPUT);
```

```
pinMode(buzz, OUTPUT);
```

```
Serial.begin(9600);
```

```
}
```

```
void loop( )
```

```
{
```

```
digitalWrite(triggerPin, LOW);
```

```
delayMicroseconds(5);
```

```
digitalWrite(triggerPin, HIGH);
```

```
delayMicroseconds(10);  
pulseValue=pulseIn(echoPin, HIGH);  
distance=(pulseValue*0.0001657*39.37);
```

```
if (distance<=5)  
{  
    digitalWrite(red, HIGH);  
    digitalWrite(green, LOW);  
    digitalWrite(blue, LOW);  
    tone(buzz, 500);  
}
```

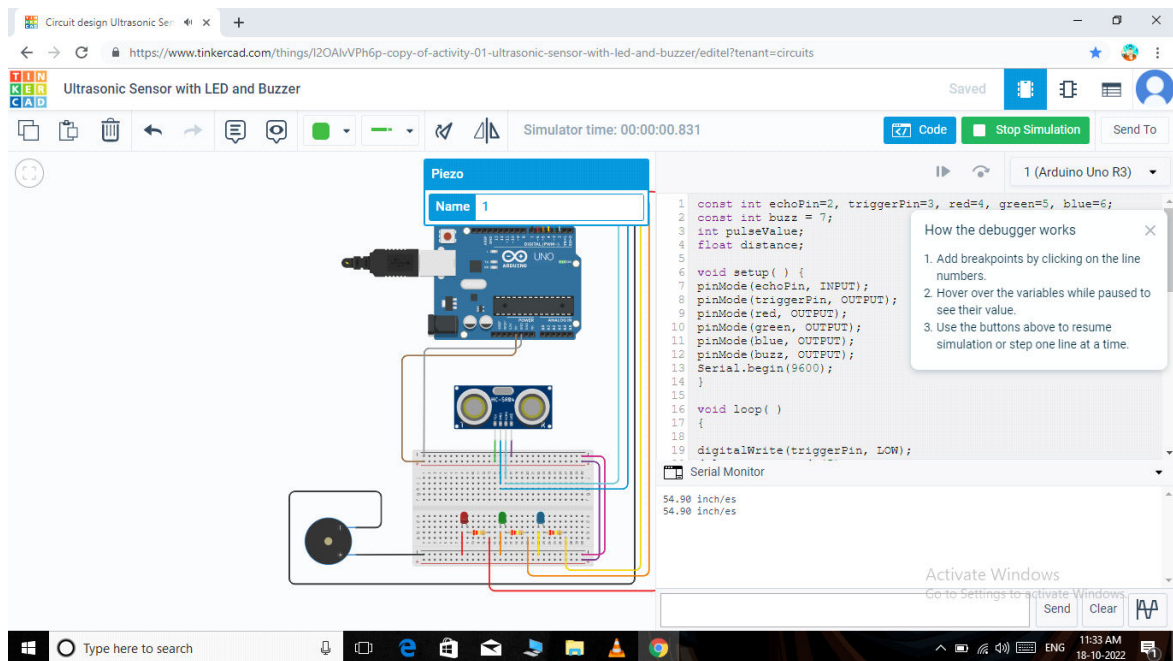
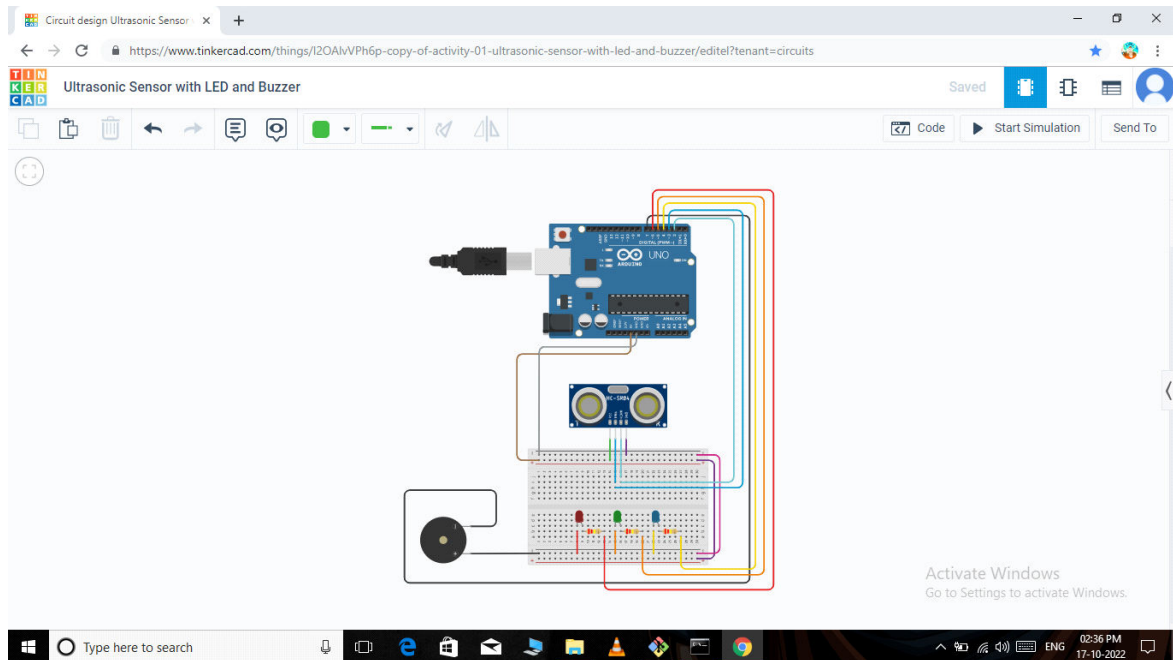
```
else if (distance<=10)  
{  
    digitalWrite(green, HIGH);  
    digitalWrite(red, LOW);  
    digitalWrite(blue, LOW);  
    tone(buzz, 1000);  
}
```

```
else  
{  
    digitalWrite(blue, HIGH);  
    digitalWrite(red, LOW);  
    digitalWrite(green, LOW);  
    tone(buzz, 1500);  
}
```

```
Serial.print(distance);  
Serial.println(" inch/es");
```

```
delay(500);
```

```
}
```



Circuit design Ultrasonic Sensor · x

https://www.tinkercad.com/things/I2QAlvPh6p-copy-of-activity-01-ultrasonic-sensor-with-led-and-buzzer/edit?tenant=circuits

Ultrasonic Sensor with LED and Buzzer

Saved

Code Start Simulation Send To

Piezo

Name 1

```
1 const int echoPin=2, triggerPin=3, red=4, green=5, blue=6;
2 const int buzz = 7;
3 int pulseValue;
4 float distance;
5
6 void setup() {
7   pinMode(echoPin, INPUT);
8   pinMode(triggerPin, OUTPUT);
9   pinMode(red, OUTPUT);
10  pinMode(green, OUTPUT);
11  pinMode(blue, OUTPUT);
12  pinMode(buzz, OUTPUT);
13  Serial.begin(9600);
14 }
15
16 void loop() {
17   {
18     digitalWrite(triggerPin, LOW);
19     Serial Monitor
20     54.90 inch/es
21     54.90 inch/es
```

Activate Windows
Go to Settings to activate Windows

Send Clear

Type here to search

11:33 AM
18-10-2022