

Assignment 1

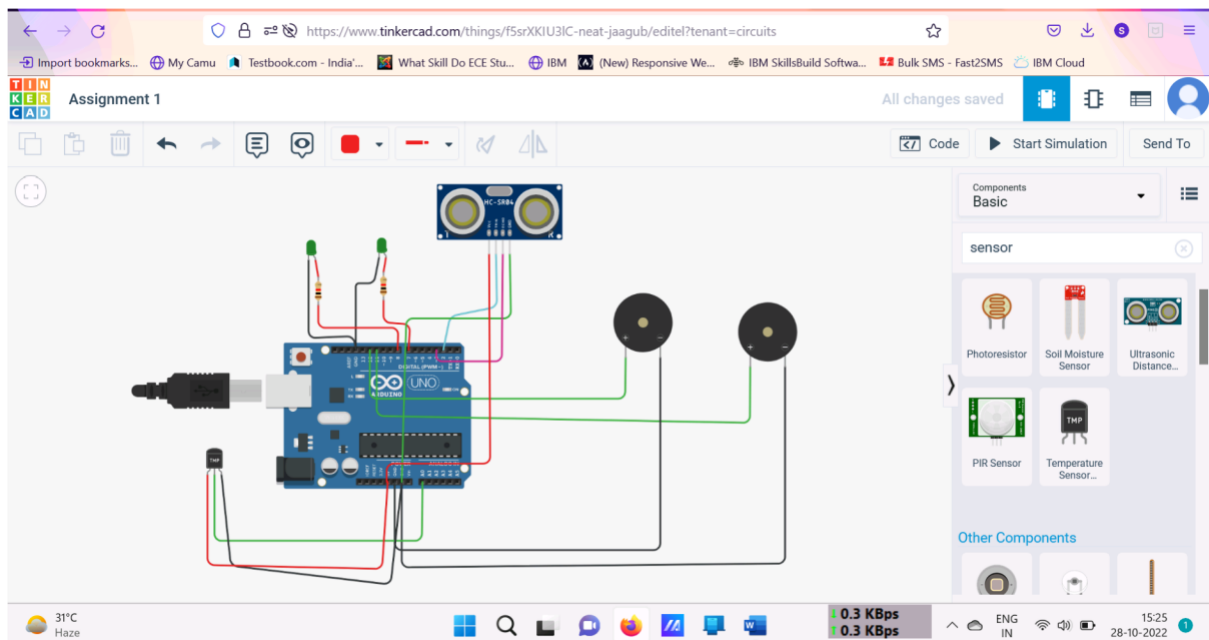
Tinkercad Simulation

Assignment Date	12 September 2022
Student Name	Vanathi.M
Student Roll Number	812019106040
Maximum Marks	2 Marks

Question-1

Build a smart home in Tinkercad with 2 sensors, an Led, buzzer

Circuit:



Code :

```
int t=2; int
```

```
e=3;
```

```
void setup()
```

```
{
```

```
Serial.begin(9600);  
pinMode(t,OUTPUT);  
pinMode(e,INPUT);  
pinMode(12,OUTPUT);  
}
```

```
void loop() { //ultrasonic sensor  
digitalWrite(t,LOW);  
digitalWrite(t,HIGH);  
delayMicroseconds(10);  
digitalWrite(t,LOW); float  
dur=pulseIn(e,HIGH); float  
dis=(dur*0.0343)/2;  
Serial.print("Distance is: ");  
Serial.println(dis);
```

```
    //LED ON if(dis>=60)//(in terms  
of centimeter)  
{  
    digitalWrite(8,HIGH);  
    digitalWrite(7,HIGH);  
}
```

```
    //Buzzer For ultrasonic Sensor if(dis>=60)  
{  
    for(int i=0; i<=5; i=i+1)  
{tone(12,i);  
delay(1000);
```

```
noTone(12);  
delay(1000);
```

```
}
```

```
}
```

```
    //Temperate Sensor    double  
a= analogRead(A0);    double  
t=((a/1024)*5)-0.5)*100;  
    Serial.print("Temp Value: ");  
Serial.println(t);    delay(1000);
```

```
    //LED ON    if(t>=20)//(in  
terms of celsius)  
    {  
        digitalWrite(8,HIGH);  
digitalWrite(7,HIGH);  
    }
```

```
    //Buzzer for Temperature Sensor  
if(t>=20)  
    {  
        for(int i=0; i<=5; i=i+1)  
{tone(12,i);  
delay(1000);  
noTone(12);  
delay(1000);
```

```
}  
}
```

```
//LED OFF
```

```
if(t<20)
```

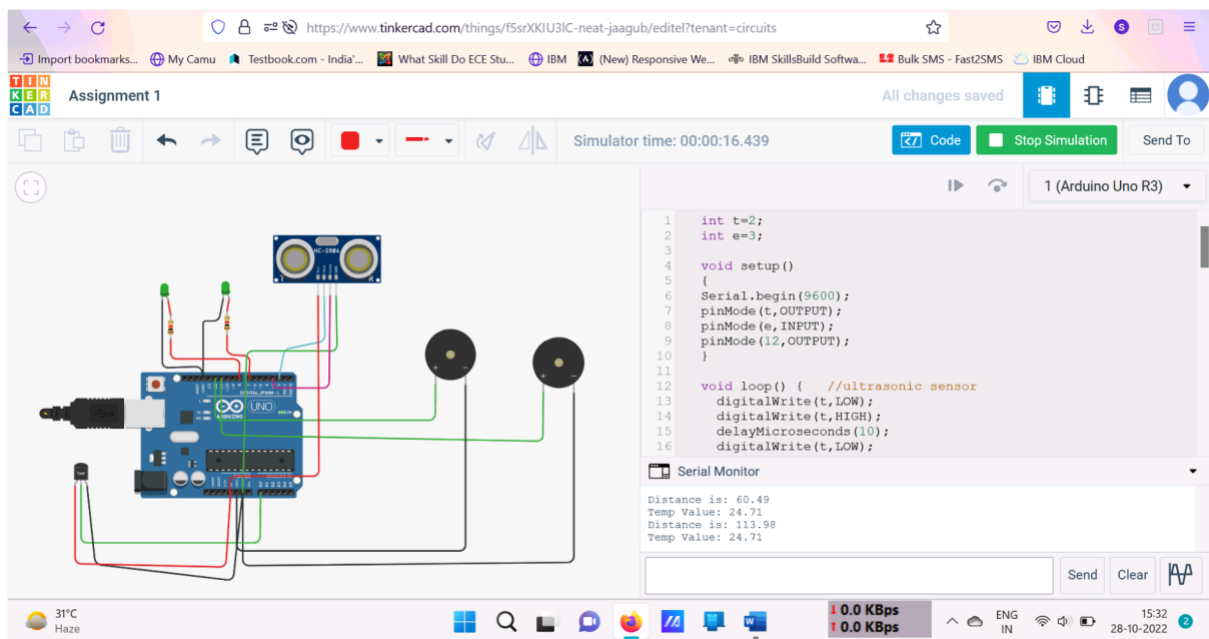
```
{
```

```
    digitalWrite(8,LOW);
```

```
digitalWrite(7,LOW);
```

```
}}
```

Output :



Link:

<https://www.tinkercad.com/things/f5srXKIU3IC>