

# Assignment 1

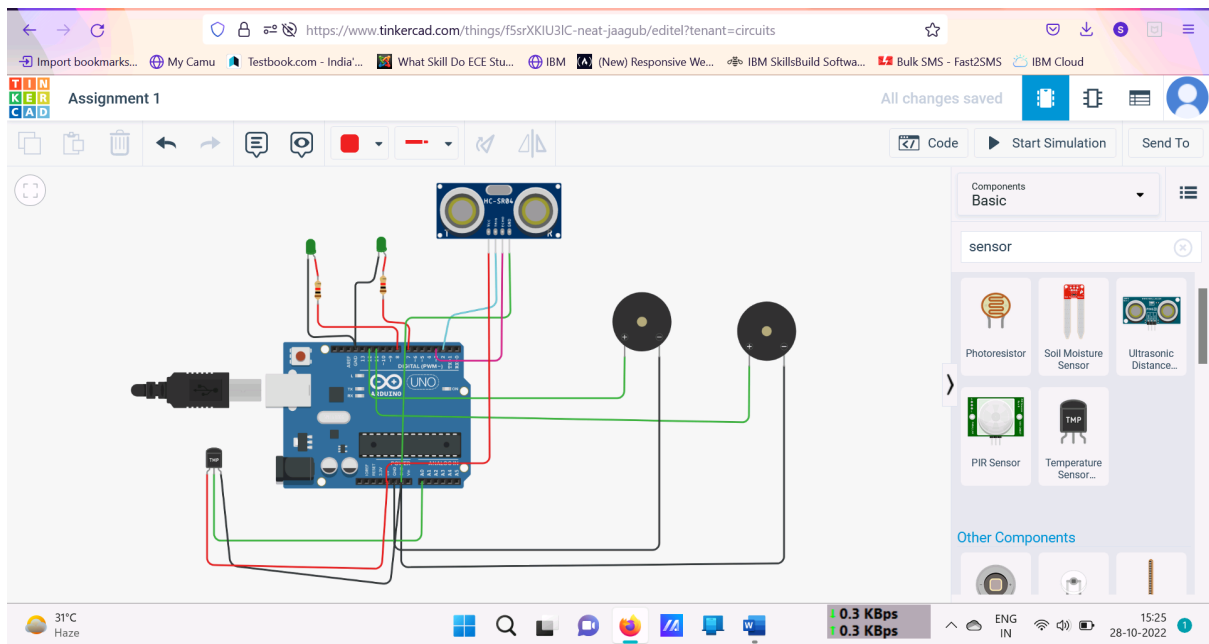
## Tinkercad Simulation

Assignment Date	12 September 2022
Student Name	I.Sathish
Student Roll Number	812019106028
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)
```

```
{
```

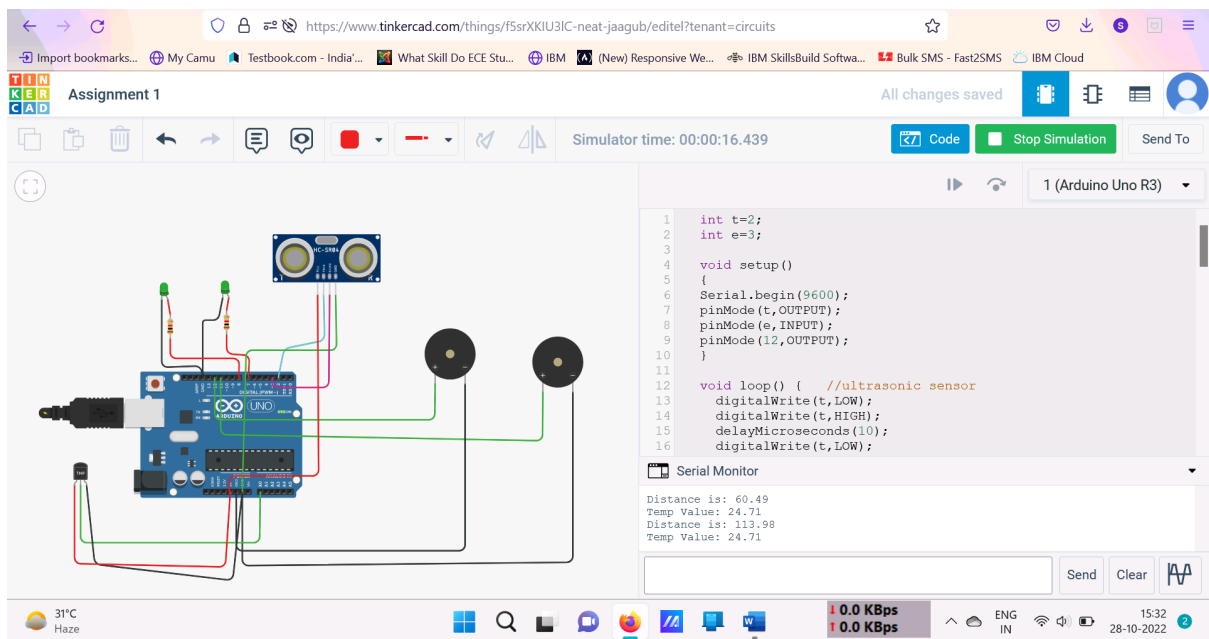
```
  digitalWrite(8,LOW);
```

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

```
}
```

```
}
```

Output :



Link:

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