

Assignment 1

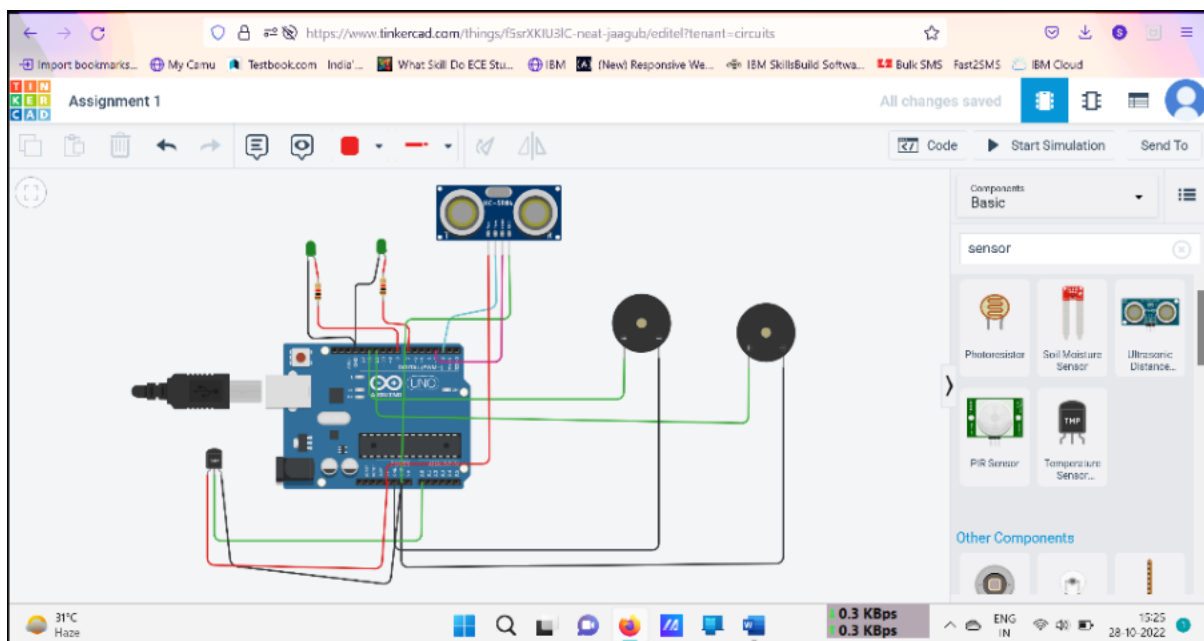
Tinkercad Simulation

Assignment Date	12 September 2022
Student Name	Sudhakar. S
Student Roll Number	812019106037
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)
```

```
{
```

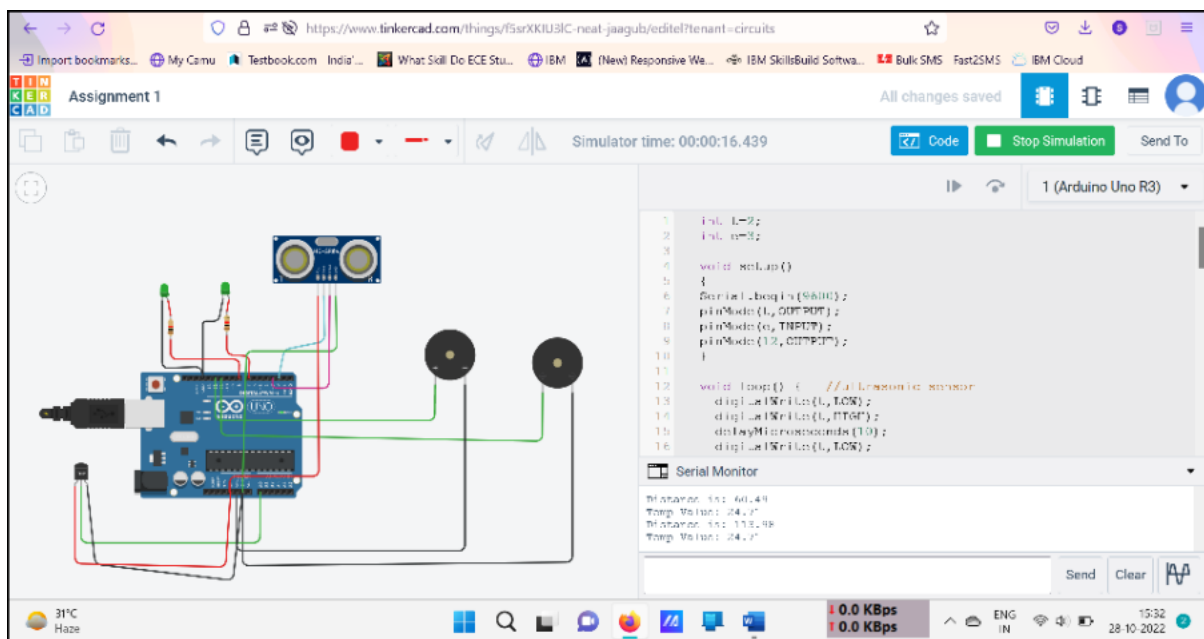
```
    digitalWrite(8,LOW);
```

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

```
}
```

```
}
```

Output :



Link:

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