Assignment -1

Assignment Date	22 September 2022
Team ID	PNT2022TMID29469
Maximum Marks	2 Marks

Question-1:

Make a Smarthome in TinkerCad,using 2+ Sensors,LED,Buzzer in Single Code and Circuit.

ASSIGNMENT-1
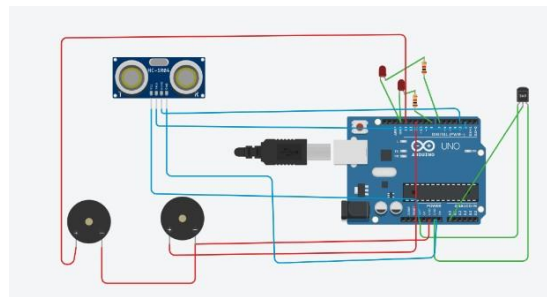

```cpp
// C++ code
//
int t=2;

int e=3;


void setup()
{
  Serial.begin(9600);

  pinMode(t,OUTPUT);

  pinMode(e,INPUT);

  pinMode(12,OUTPUT);

}


void loop()
{
```

```cpp
//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>=100)

{

 digitalWrite(8,HIGH);

 digitalWrite(7,HIGH);

}


//Buzzer For ultrasonic Sensor

if(dis>=100)

{

for(int i=0; i<=30000; i=i+10)

{

tone(12,i);

delay(1000);

noTone(12);

delay(1000);

}

}

 //Temperate Sensor

double a= analogRead(A0);

double t=(((a/1024)*5)-0.5)*100;
```

```arduino
  Serial.print("Temp Value: ");
  Serial.println(t);
  delay(1000);
//LED ON
  if(t>=100)
  {
   digitalWrite(8,HIGH);
   digitalWrite(7,HIGH);
  }


   //Buzzer for Temperature Sensor
   if(t>=100)
   {
   for(int i=0; i<=30000; i=i+10)
   {
   tone(12,i);
   delay(1000);
   noTone(12);
   delay(1000);
   }
   }
  //LED OFF
   if(t<100)
   {
    digitalWrite(8,LOW);
    digitalWrite(7,LOW);
   }
  }
```