ASSIGNMENT TASK – 1

PROJECT TITLE:

IoT Based Smart Crop Protection System for Agriculture
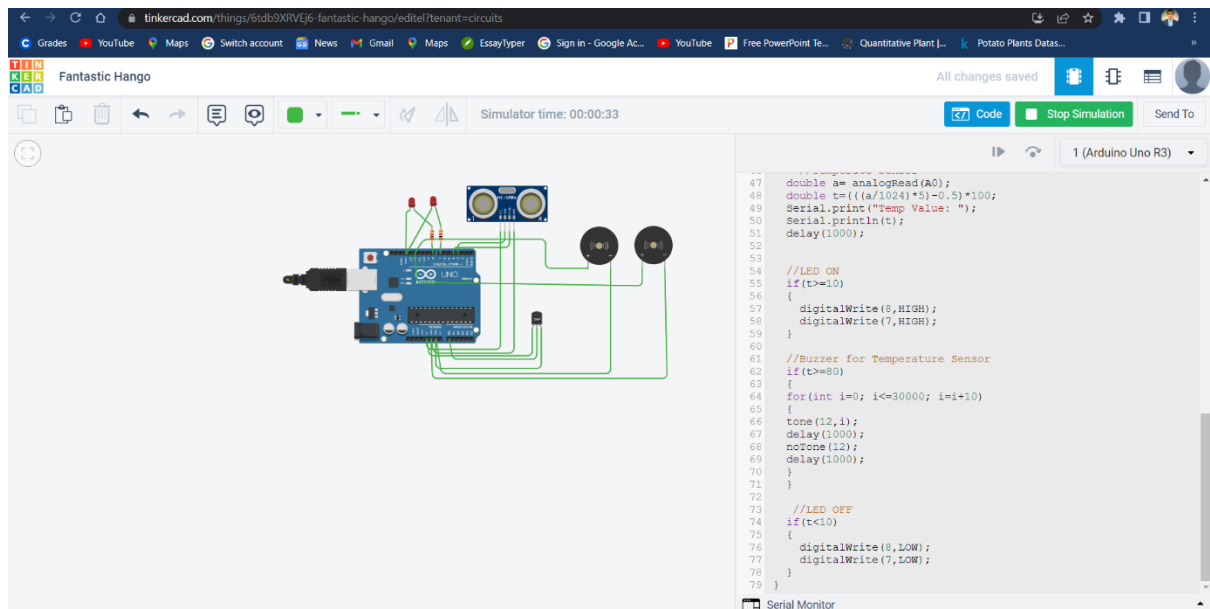
TEAM DETAILS:

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ASSIGNMENT TASK DETAIL:

TASK: MAKE A SMART HOME IN TINKER CAD

DESCRIPTION:

Here we designed a circuit using Ultrasonic and Temperature Sensor. To get alert when the sensors reached the threshold by indicating in led and buzzer.

ARDUINO CODE:

```arduino
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>=10)
  {
   digitalWrite(8,HIGH);
   digitalWrite(7,HIGH);
  }
```

```
//Buzzer For ultrasonic Sensor

if(dis>=10)

{

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;

Serial.print("Temp Value: ");

Serial.println(t);

delay(1000);



//LED ON

if(t>=10)

{

  digitalWrite(8,HIGH);

  digitalWrite(7,HIGH);

}


//Buzzer for Temperature Sensor
```

```
if(t>=80)

{

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

{

tone(12,i);

delay(1000);

noTone(12);

delay(1000);

}

}


 //LED OFF

 if(t<10)

 {

  digitalWrite(8,LOW);

  digitalWrite(7,LOW);

 }

}
```