Innovation, Employability Professional Readiness for and Entrepreneurship

ASSIGNMENT 1

SMART HOME

SUBMITTED BY,

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BATCH:- B12-6A2E

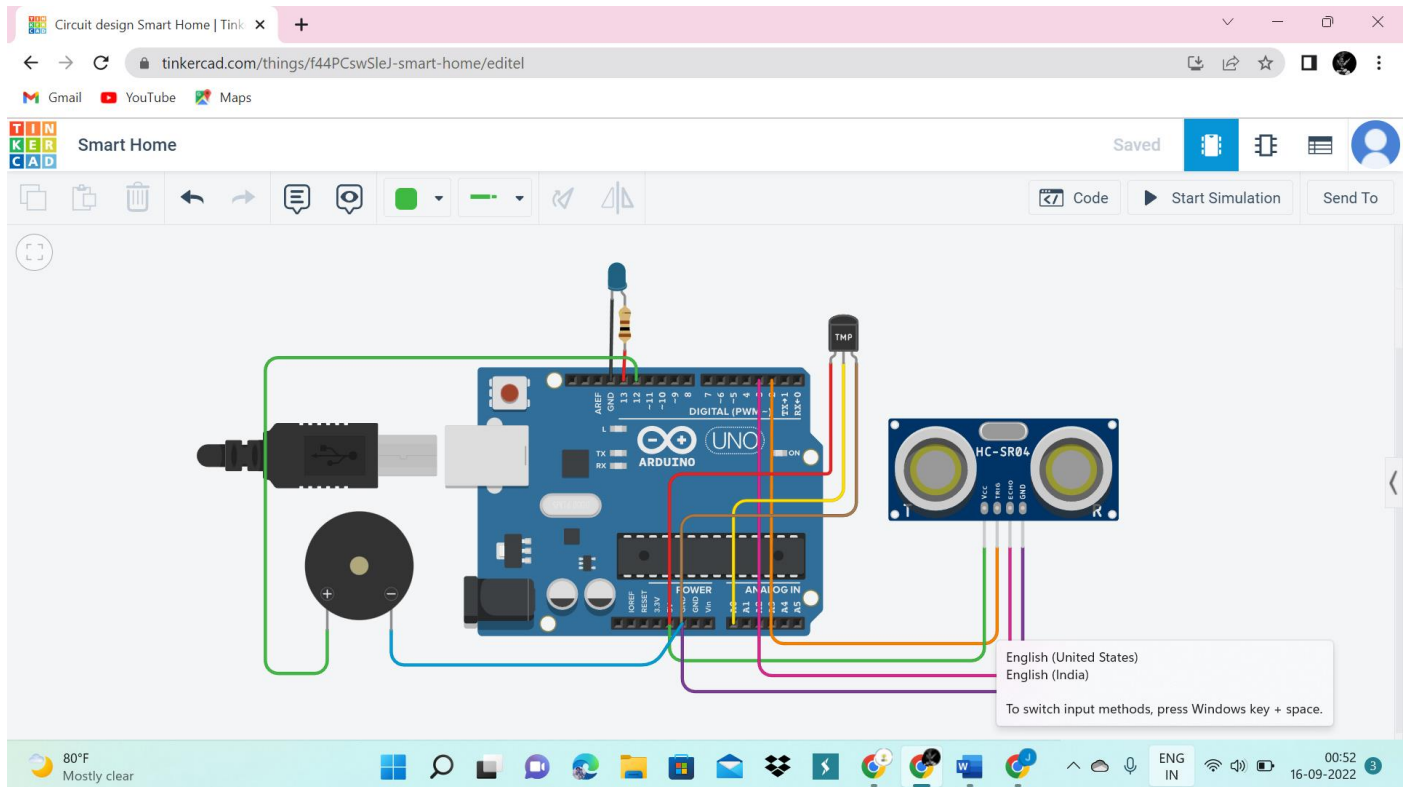# SMART HOME

CODE FOR SMART HOME:-

```
void setup()
{
  Serial.begin(9600);
  pinMode(13,OUTPUT); //LED lights in the room
  pinMode(3,INPUT);  //ECHO in ultrasonic
  pinMode(2,OUTPUT);  //TRIGGER in ultrasonic
  pinMode(12,OUTPUT);  //Buzzer for temperature
}

void loop()
{
  digitalWrite(2,0);
  digitalWrite(2,1);
  delay(1000);
  digitalWrite(2,0);
  float dur=pulseIn(3,1);
  float dis=(dur*0.0343)/2;
  digitalWrite(13,0);
  if (dis<20){
    Serial.print("Distance: ");
    Serial.print(dis);
    Serial.println(" cm");
    digitalWrite(13,1);
    double a=analogRead(A0);
    double t=(((a/1024) *5)-0.5) *100;
    Serial.print("Temperature: ");
    Serial.println(t);
    delay(1000);
    if (t>100){
      for(int j=130;j<150;j++)
      {
      tone(12,j);
      }
      delay(10000);
      noTone(12);
    }
  }
  delay(1000);
}
```

CIRCUIT DIAGRAM FOR SMART HOME:-

Tinker cad link: https://www.tinkercad.com/things/f44PCswSleJ-smart-home

SNAPS OF SMART HOME:-

          The above circuit describes the Smart home application using ultrasonic sensor and temperature sensor . Ultrasonic sensor is used to calculate the distance from an object . If a man entering close to ultrasonic sensor ,the light (LED) Connected to pinmode 13 gets ON and if a man leave from that appropriate distance the lights get OFF . And when the temperature in a home is detected high the buzzer in pinmode 12 gets on , to detect the high temperature that may be a fire also. Hence , the power consumption in a home can be saved .