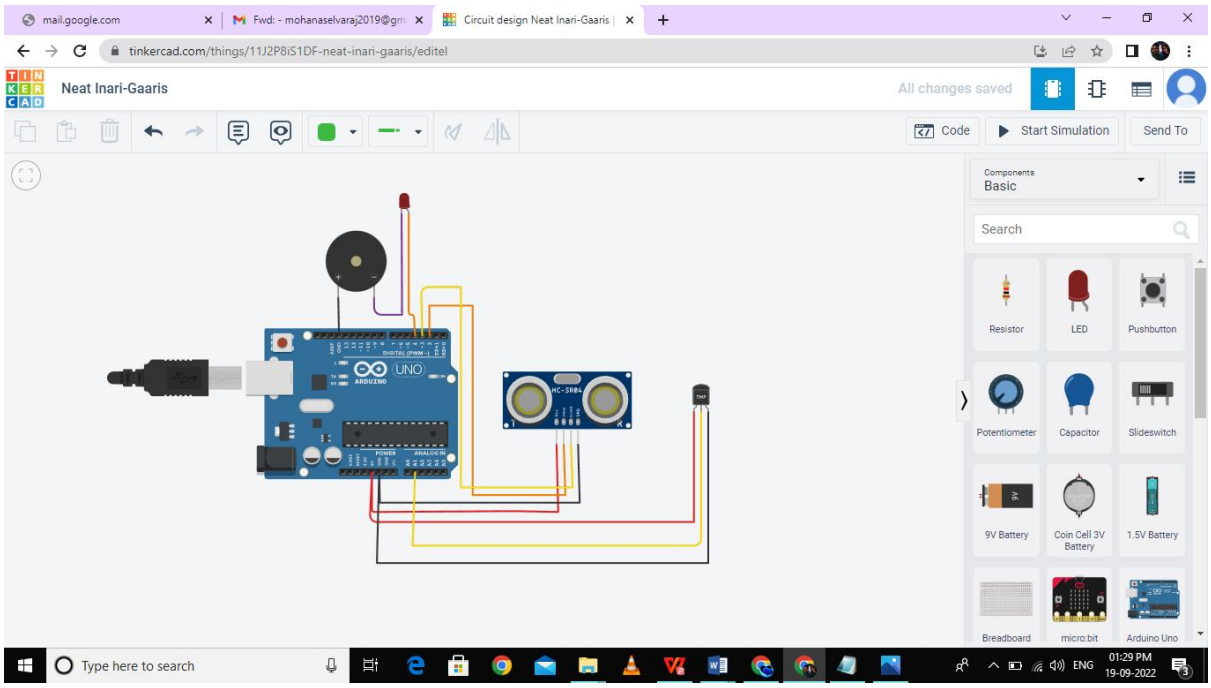
ASSIGNMENT 1

Circuit Diagram:



Code:

```
// C++ code
//
int trig = 2;
int echo=3;
void setup()
{
  Serial.begin(9600);
  pinMode(trig,OUTPUT);
```

```
  pinMode (echo,INPUT);
  Serial.begin(9600);
  pinMode(4,OUTPUT);
}
void loop()
{
  double a=analogRead(A1);
  Serial.print("Adc value:");
  Serial.println(a);
  double v= a/1024;
  double tvolt=v*5;
  Serial.print("temp value voltage:");
  Serial.println(tvolt);
  double o =tvolt-0.5;
  double t=o*100;
  Serial.print("Temperature is :");
  Serial.println(t);
  delay(2000);
  digitalWrite(trig,LOW);
  digitalWrite(trig,HIGH);
   delayMicroseconds(10);
   digitalWrite(trig,LOW);
```

```
 float dur = pulseIn(echo,HIGH);
  float dist = (dur*0.0343)/2;
  Serial.print("distance:");
 Serial.println(dist);
 if (dist>=100)
 {
   digitalWrite(4,HIGH);
 }
}
```

Output: