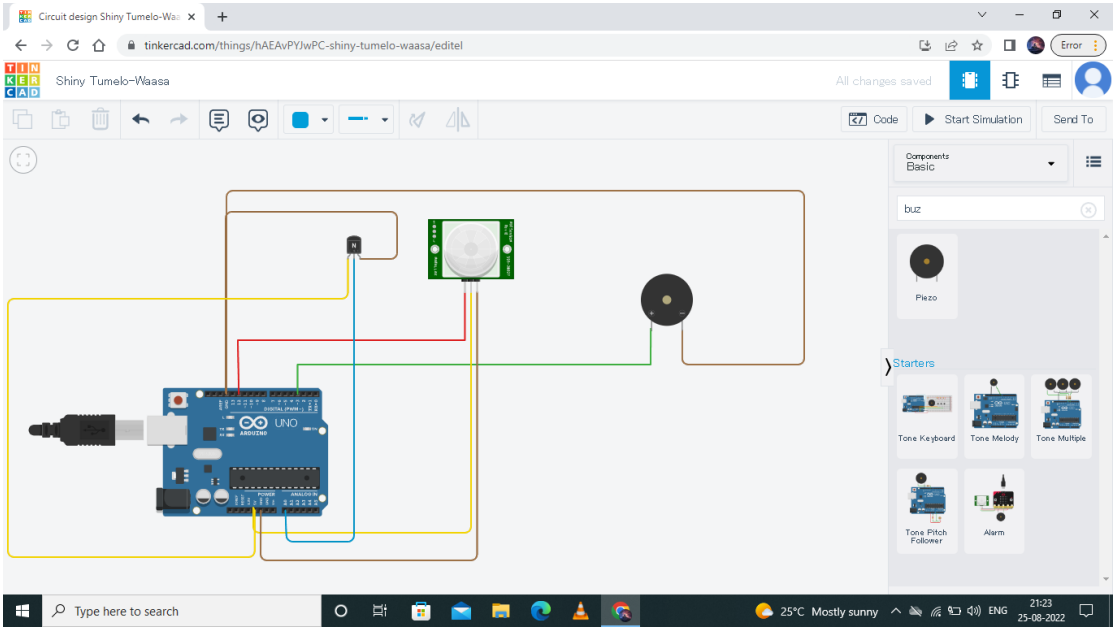
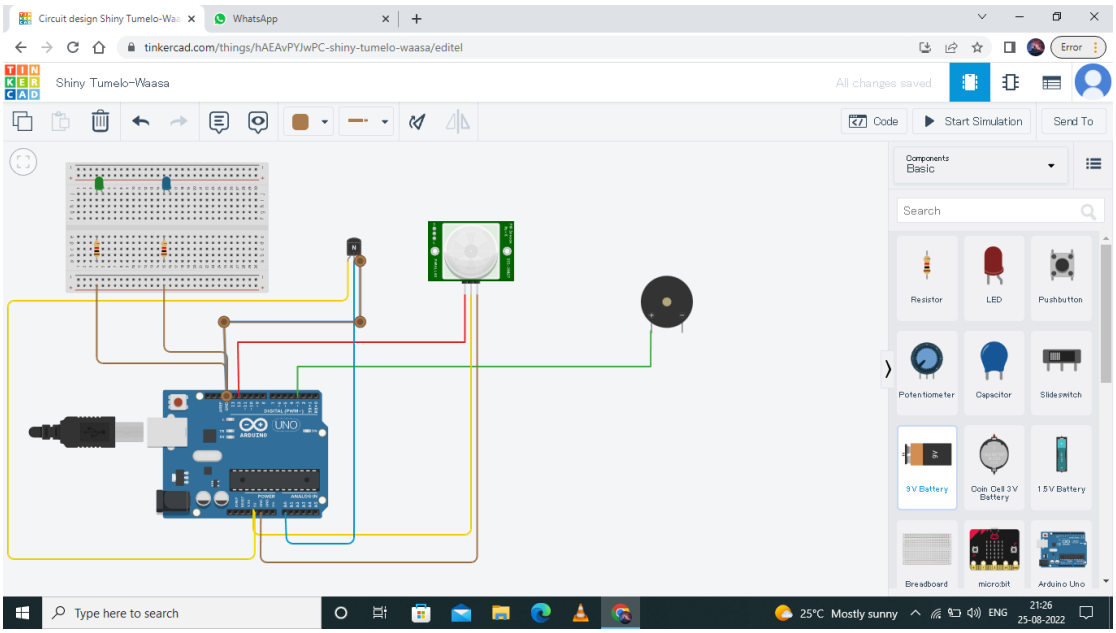
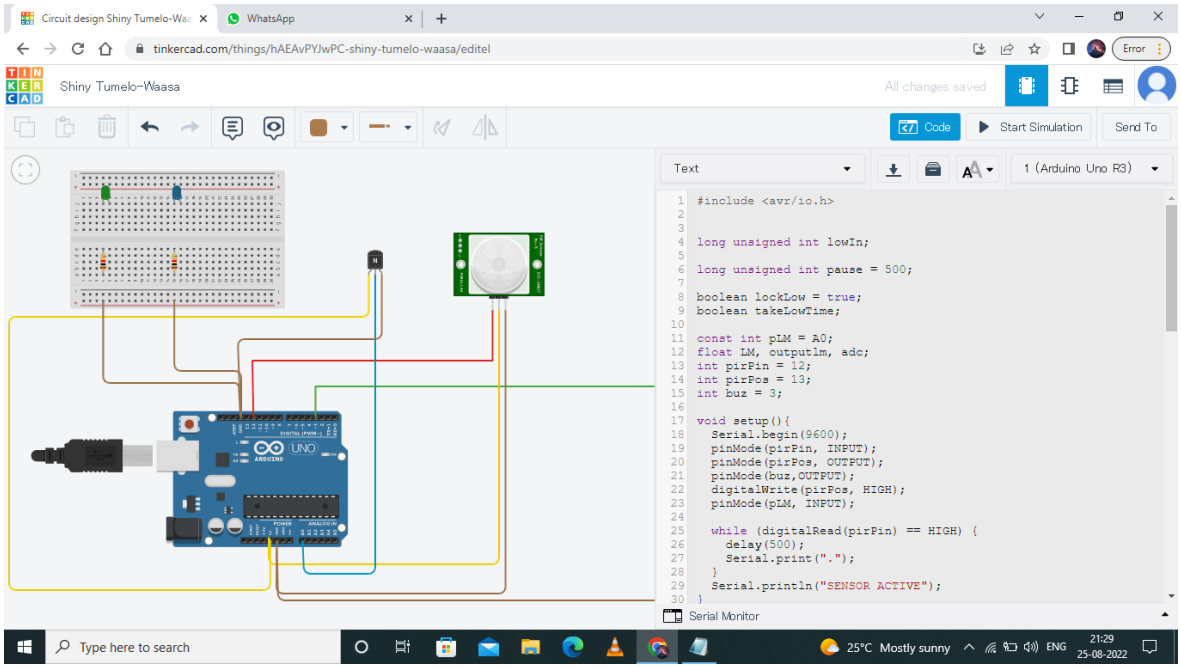
Assignment 1: Make a Smart Home in Tinkercad, using 2+ sensors, Led, Buzzer in single code and circuit.



Using Tinkercad connecting the circuit.



Insering the code.



Program Code:

```
#include <avr/io.h>

long unsigned int lowIn;

long unsigned int pause = 500;

boolean lockLow = true;
boolean takeLowTime;

const int pLM = A0;
float LM, outputlm, adc;
int pirPin = 12;
int pirPos = 13;
int buz = 3;
```

```
void setup(){
  Serial.begin(9600);
  pinMode(pirPin, INPUT);
  pinMode(pirPos, OUTPUT);
  pinMode(buz,OUTPUT);
  digitalWrite(pirPos, HIGH);
  pinMode(pLM, INPUT);

  while (digitalRead(pirPin) == HIGH) {
    delay(500);
    Serial.print(".");
  }
  Serial.println("SENSOR ACTIVE");
}
void lm35(){
  adc = analogRead(pLM);
  LM = adc / 2.0479;
  outputlm=adc*4.883;
  if (LM >= 10)
  {
    analogWrite(buz,50);
    Serial.println("Kecepatan=50");
  }
  if (LM >= 60)
   {
    analogWrite(buz,100);
    Serial.println("Kecepatan=100");
  }

 }
```

```
void loop(){
  if(digitalRead(pirPin) == HIGH){
    lm35();
    if(lockLow){

      lockLow = false;
      Serial.println("---");
      Serial.print("motion detected at ");
      Serial.print(millis()/1000);
      Serial.println(" sec");
      delay(50);
    }
    takeLowTime = true;
  }

  if(digitalRead(pirPin) == LOW){
    digitalWrite(buz,LOW);
    if(takeLowTime){
      lowIn = millis();
      takeLowTime = false;
    }



    if(!lockLow && millis() - lowIn > pause){

      lockLow = true;
      Serial.print("motion ended at ");
      Serial.print((millis() - pause)/1000);
      Serial.println(" sec");
      delay(50);
    }
```

```
}
 delay(1000);
 Serial.print(", LM: ");
 Serial.print(LM);
 Serial.println();
 delay(1000);
 Serial.print(", ADC: ");
 Serial.print(adc);
 Serial.println();
 delay(1000);
}
```

OUTPUT: