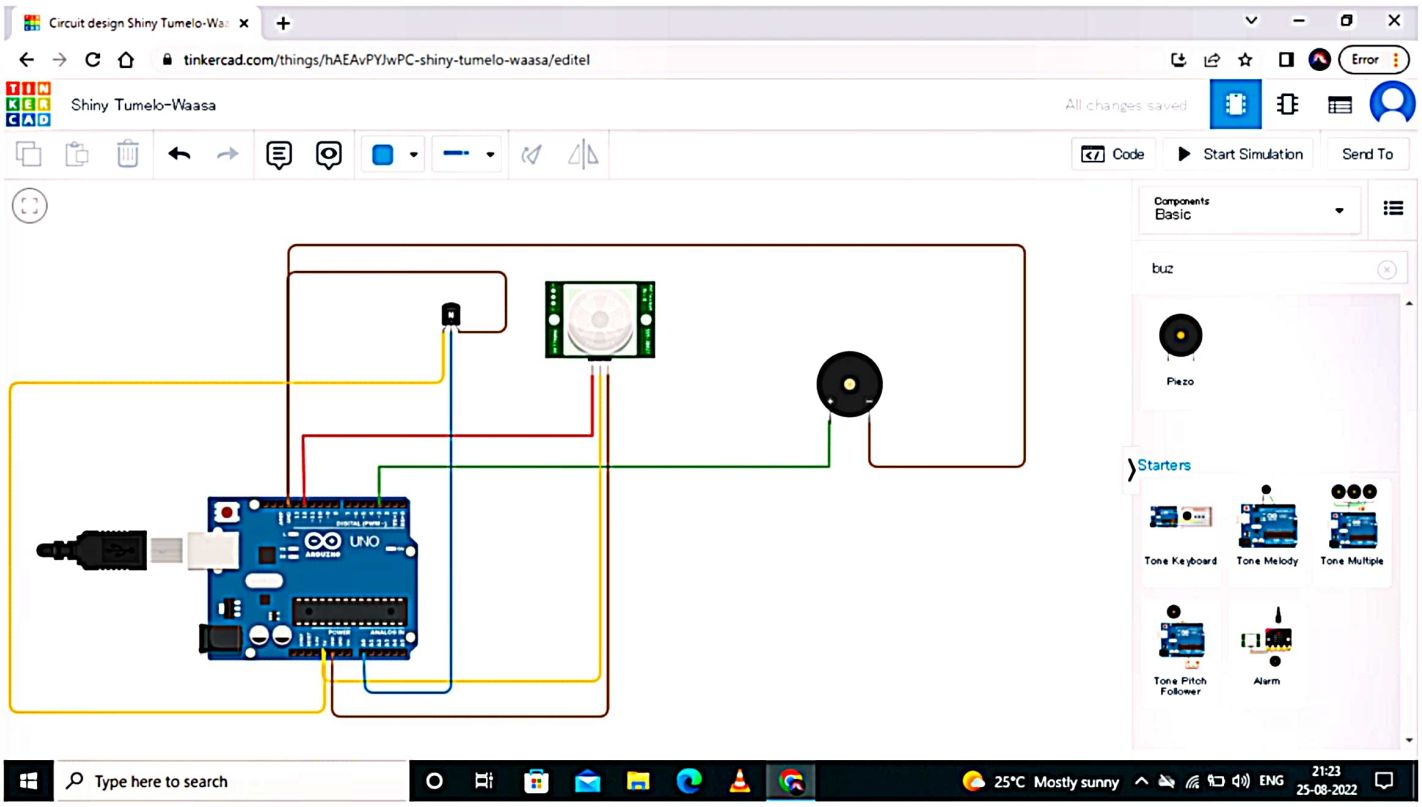
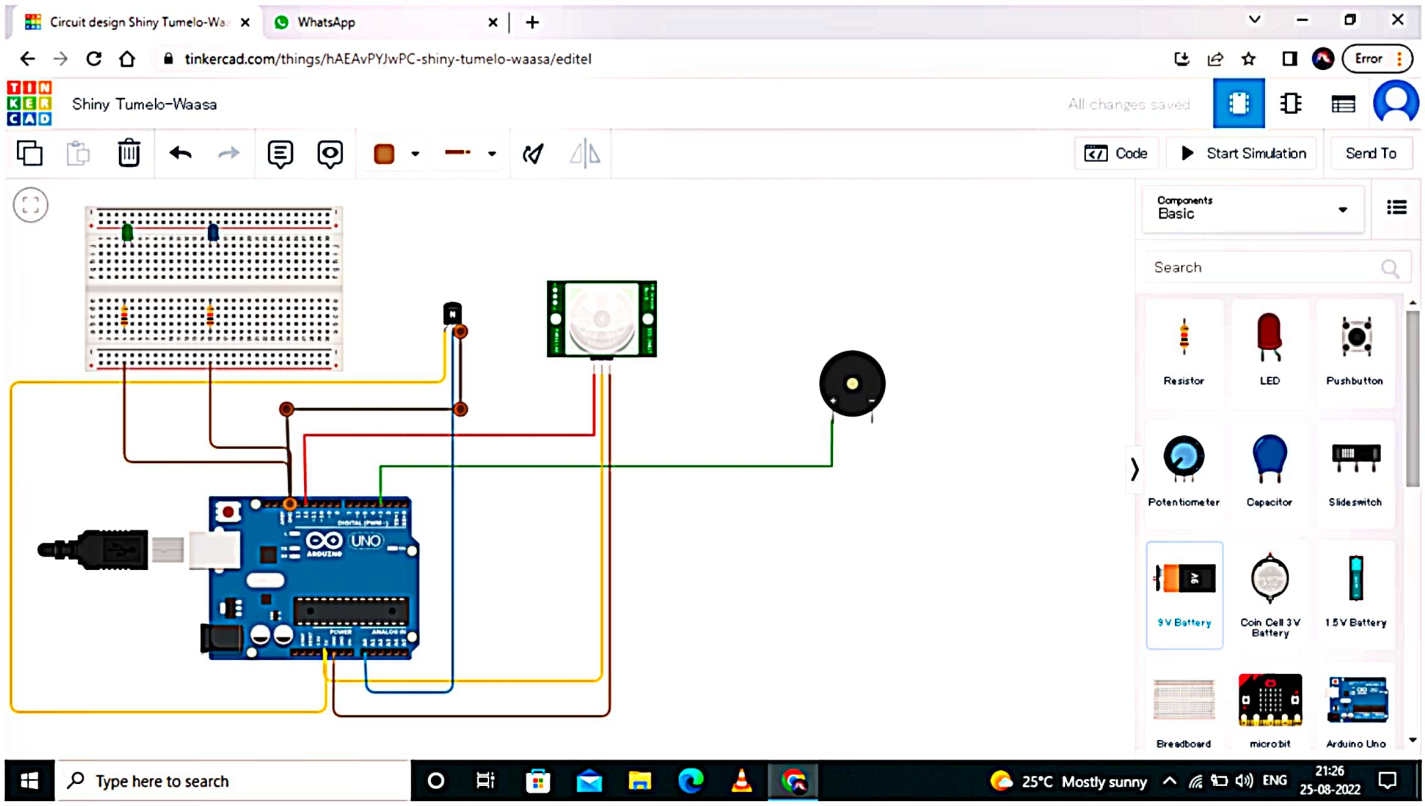
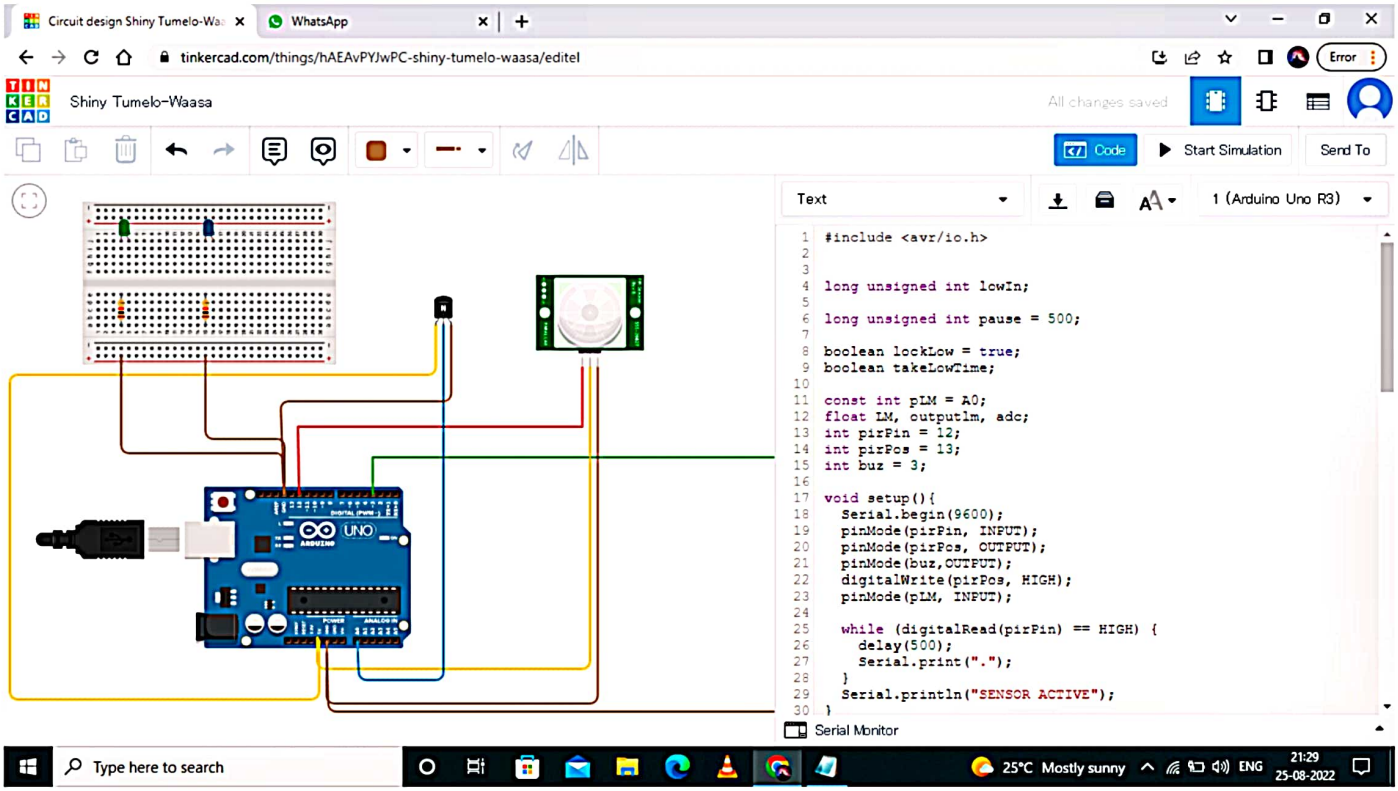
Assignment 1: Make a smart home tinkercad, using 2 sensor, led, buzzer in simulate in a single code



Using Tinkercad connecting the circuit



Code inserting:



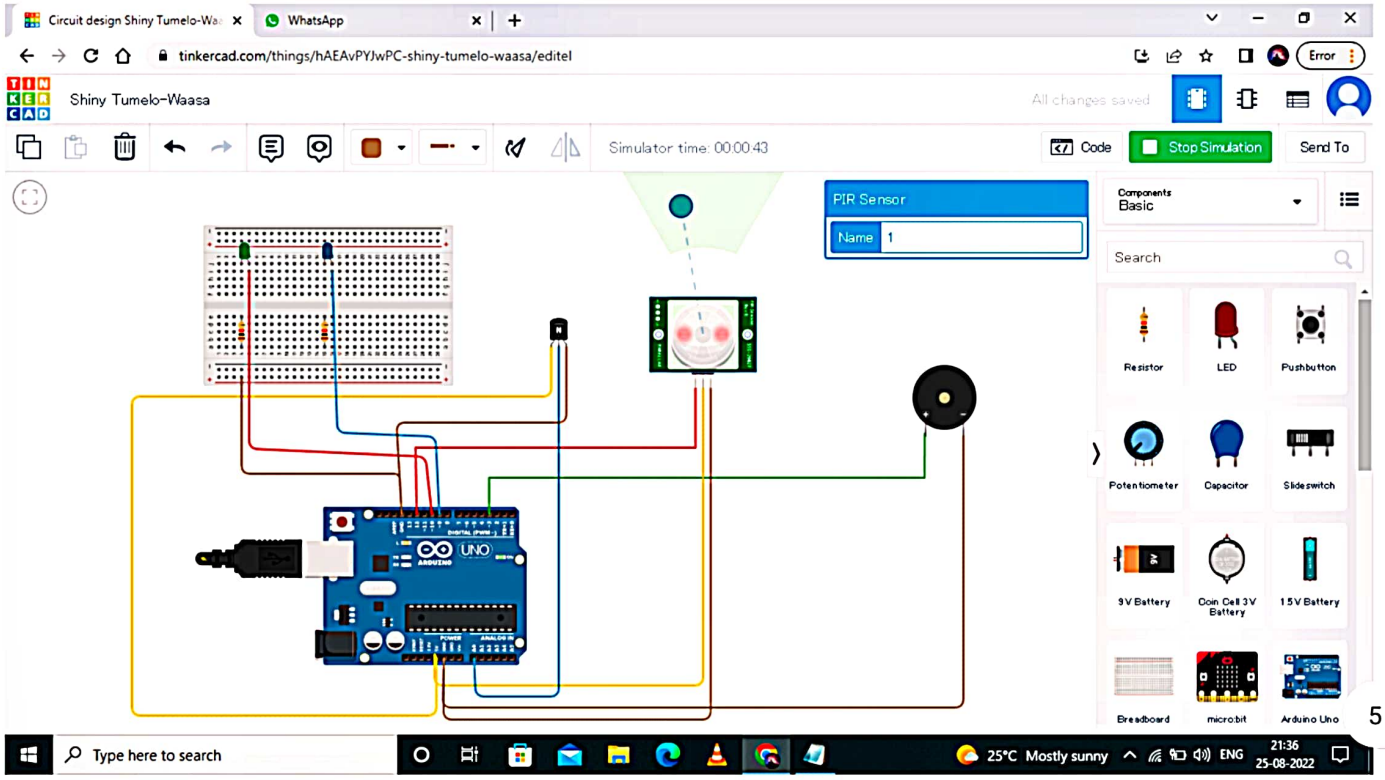
Program code:

```
#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:


Circuit design Shiny Tumelo-Waa
WhatsApp
tinkercad.com/things/hAEAvPYJwPC-shiny-tumelo-waasa/editel
Error
Shiny Tumelo-Waasa
All changes saved
Simulator time: 00:00:43
Code
Stop Simulation
Send To
PIR Sensor
Name
1
Components
Basic
Search
Resistor
LED
Pushbutton
Potentiometer
Capacitor
Slide switch
9V Battery
Coin Cell 3V Battery
1.5V Battery
Breadboard
micro:bit
Arduino Uno
Type here to search
25°C Mostly sunny
ENG
21:36
25-08-2022