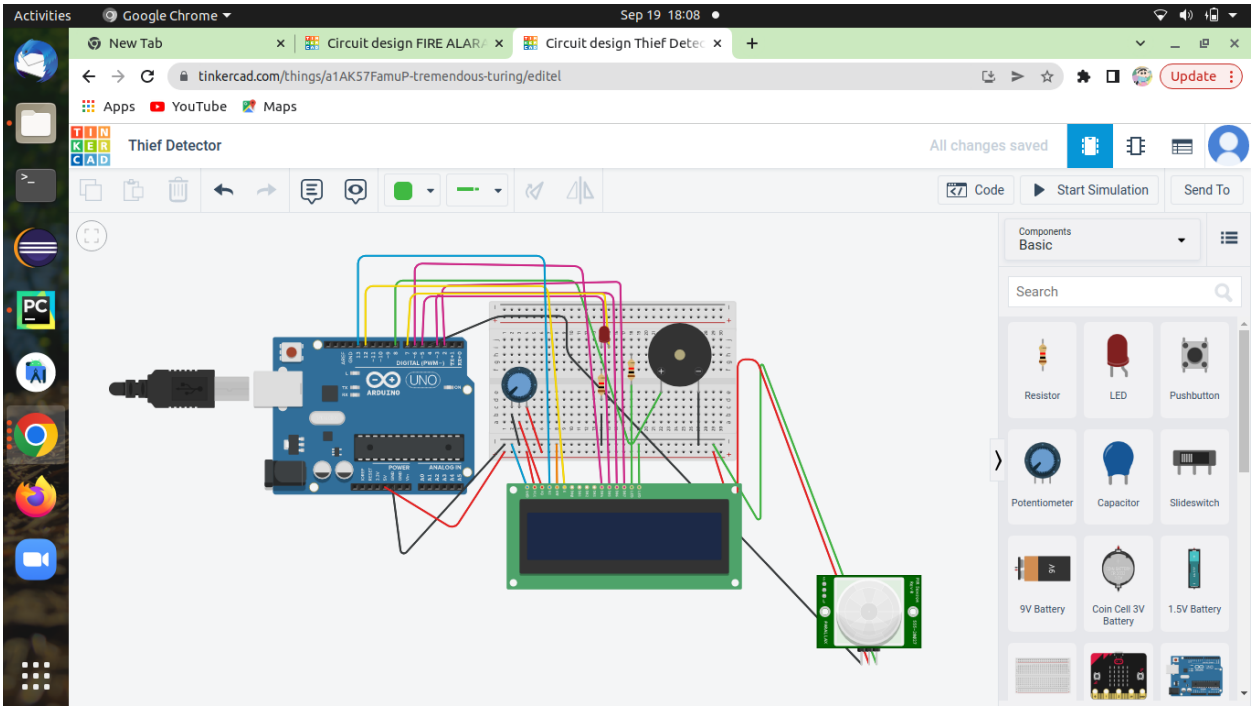
# SMART HOME USING TINKERCAD

## ASSIGNMENT - 1

## CIRCUIT DIAGRAM




## Interfacing of Components

1)LED interface to digital pin no. 7 via 220 ohm resistor

2)Buzzer to digital pin no. 8

3)PIR sensor digital pin no. 4

4)LCD interfacing:

5)GND to ground pin

6)VCC to 5V

7)Contrast(v0) to potentiometer

8)Register select(RS) to digital pin no.13

9)Read/write(RW) to ground pin

10)Enable to digital pin no.12

11)DB4 to digital pin no. 6

12)DB5 to digital pin no. 5

13)DB6 to digital pin no. 3

14)DB7 to digital pin no. 2

15)LED anode to 5v via 220 ohm resistor

16)LED cathode to ground pin

## CODING

```
// C++ code
#include <LiquidCrystal.h>
LiquidCrystal lcd(13,12,6,5,3,2);
int led=7;
int PIR=4;
int buzzer=8;
int PIRstatus;


void setup()
{
  lcd.begin(16,2);
  pinMode(led, OUTPUT);
  pinMode(buzzer, OUTPUT);
  pinMode(PIR, INPUT);
  lcd.clear();
}

void loop()
{
  PIRstatus=digitalRead(PIR);
  if (PIRstatus==HIGH){
    lcd.clear();
```

```
  digitalWrite(led, HIGH);
    digitalWrite(buzzer, HIGH);
    tone(buzzer, 300, 10000);
    lcd.setCursor(0,1);
    lcd.print("ALERT");
    delay(7000);
    lcd.clear();
  }
  else
  {
lcd.setCursor(0, 0);
    lcd.print("SAFE");
    digitalWrite(led, LOW);
    digitalWrite(buzzer, LOW);
  }
  delay(1000);
}
```