# MOVEMENT DETECTING SYSTEM USING PIR SENSOR AND ALERTING SYSTEM.

INTRODUCTION

The system is intended to detect the movement in particular area and give alerts to the admin using LED and buzzers. This system uses arduino uno as a main control unit and sensors are its peripherals. The system can be used as movement detector in sensing the movements of a person or obstacles. The movement is counted using a seven segment display for upto nine counts and movements more than nine is denoted as extended and displayed as E. The movement sensing is accompanied with an alert using buzzer and an led.

SYSTEM CHART
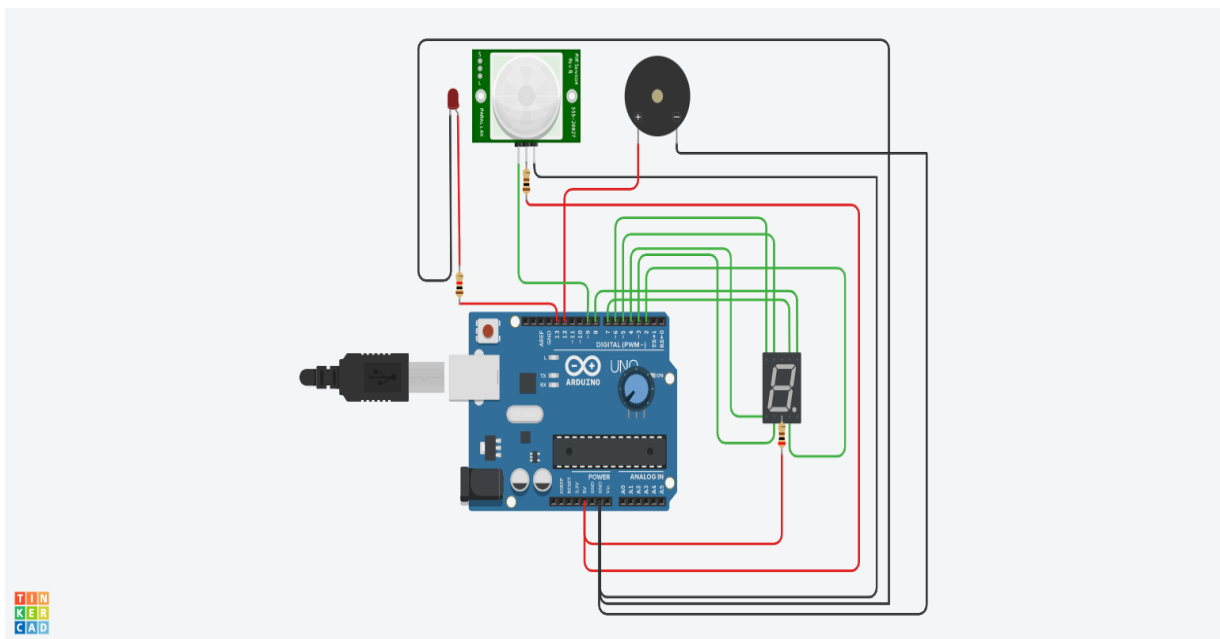
- There is an LED and buzzer near the PIR sensor which gives alerts when there is an movement detection.
- The segment display counts for nine movement and displays "E" for more than nine counts.

USES

- This system can be used proctoring exams where PIR sensor is embedded to camera for detecting facial detections.

EMBEDDED C CODE

```
void setup()
{
 Serial.begin(9600);
 pinMode(13,OUTPUT);
 pinMode(12,OUTPUT);
 pinMode(9,INPUT);
 pinMode(2,OUTPUT);
 pinMode(3,OUTPUT);
 pinMode(4,OUTPUT);
 pinMode(5,OUTPUT);
 pinMode(6,OUTPUT);
 pinMode(7,OUTPUT);
 pinMode(8,OUTPUT);
}
void loop()
{
 digitalWrite(13,LOW);
 digitalWrite(12,LOW);
 int a =digitalRead(9);
 static int b=0;
 if(a==1)
 {
 digitalWrite(13,HIGH);
 digitalWrite(12,HIGH);
 Serial.println("Movement Detected!!");
```

```
    ++b;
    }
    switch(b){
    case(0):
     digit(0,0,0,0,0,0,1);
     delay(1000);
     break;


    case(1):
     digit(1,0,0,1,1,1,1);
     delay(1000);
     break;


    case(2):
     digit(0,0,1,0,0,1,0);
     delay(1000);
     break;


    case(3):
     digit(0,0,0,0,1,1,0);
     delay(1000);
     break;


    case(4):
     digit(1,0,0,1,1,0,0);
     delay(1000);
     break;


    case(5):
     digit(0,1,0,0,1,0,0);
     delay(1000);
     break;
```

```
  case(6):
   digit(0,1,0,0,0,0,0);
   delay(1000);
   break;


  case(7):
   digit(0,0,0,1,1,1,1);
   delay(1000);
   break;


  case(8):
   digit(0,0,0,0,0,0,0);
   delay(1000);
   break;


  case(9):
   digit(0,0,0,0,1,0,0);
   delay(1000);
   break;


  default:
   digit(0,1,1,0,0,0,0);
   delay(1000);
   break;
  }
}
void digit(int a0,int a1,int a2, int a3, int a4, int a5, int a6)
{
 digitalWrite(7,a0);
 digitalWrite(8,a1);
 digitalWrite(2,a2);
```

```
    digitalWrite(3,a3);
    digitalWrite(4,a4);
    digitalWrite(5,a5);
    digitalWrite(6,a6);
}
```

TINKERCAD LINK

https://www.tinkercad.com/things/bMHZprqS3tg-bodacious-bombul-elzing/editel?sharecode=zpoHgQv0Apjs5b-eKWl2Go5DLPmwp-n-Eq34_CXANkk