

Problem Statement :

IoT-Based SAFETY GADGET FOR CHILD
SAFETY MONITORING AND NOTIFICATION

Domain :

Internet of Things

Assignment 1 :

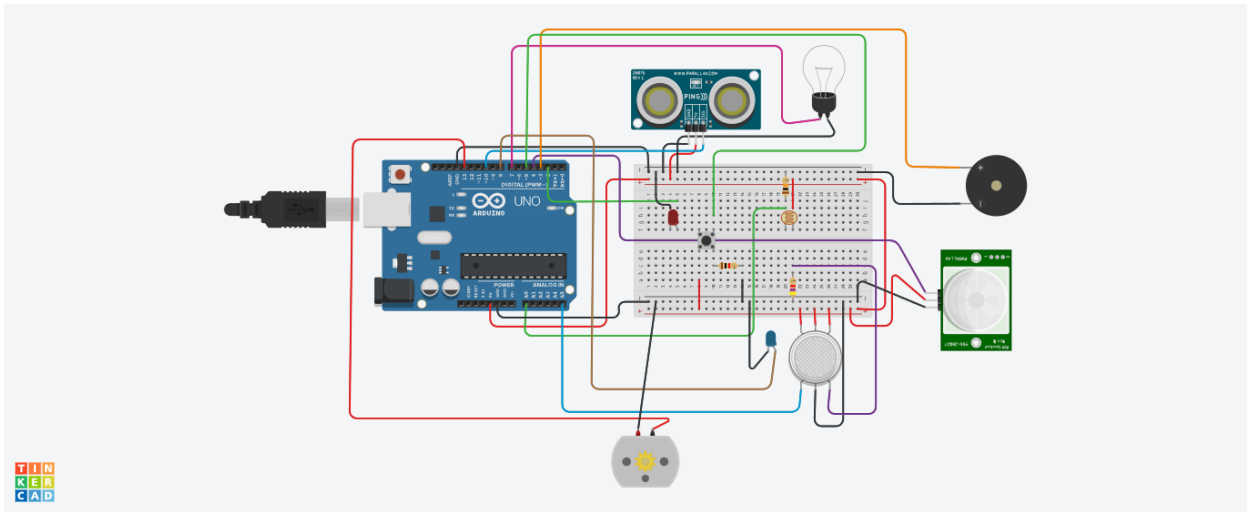
Smart home with at least two sensors and
led, buzzer in TinkerCad

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Link:

https://www.tinkercad.com/things/6k2FfP5l8fW-brave-migelo-amberis/editel?sharecode=KzPJ_TiBU8pThZploEd_nCUQhJjzx_X8DEbwvb1-ZLM

Circuit diagram :



Arduino Uno Code :

```
const int pingPin = 10;
const int ledUS = 2;
const int light = 7;
const int pir = 4;
#define photoSensor A0
#define buzzer 3
int const PINO_SGAS = A5;
int const ledGas = 8;
int const button = 5;
int const motor = 13;
void setup()
{
  pinMode(ledUS, OUTPUT);
  pinMode(light, OUTPUT);
  pinMode(buzzer, OUTPUT);
  pinMode(ledGas, OUTPUT);
  pinMode(motor, OUTPUT);
}
```

```

pinMode(pir, INPUT);
pinMode(button, INPUT);
pinMode(photoSensor, INPUT);
Serial.begin(9600);
}

void loop()
{
    long duration, cm;
    int valLight = analogRead(photoSensor);
    int valPIR= digitalRead(pir);
    int valGAS = analogRead(PINO_SGAS);
    valGAS = map(valGAS, 300, 750, 0, 100);
    int valBt = digitalRead(button);
    pinMode(pingPin, OUTPUT);
    digitalWrite(pingPin, LOW);
    delayMicroseconds(2);
    digitalWrite(pingPin, HIGH);
    delayMicroseconds(5);
    digitalWrite(pingPin, LOW);
    pinMode(pingPin, INPUT);
    duration = pulseIn(pingPin, HIGH);
    cm = microsecondsToCentimeters(duration);
    if(cm < 336){
        digitalWrite(ledUS, HIGH);
    }else{
        digitalWrite(ledUS, LOW);
    }
    if(valLight < 890){
        digitalWrite(light, HIGH);
    }
}

```

```

}else{
    digitalWrite(light, LOW);
}
if(valPIR == 1){
    digitalWrite(buzzer, HIGH);
}else{
    digitalWrite(buzzer, LOW);
}
if(valBt == 1){
    digitalWrite(motor, HIGH);
}else{
    digitalWrite(motor, LOW);
}
if(valGAS > 20){
    digitalWrite(ledGas, HIGH);
}else{
    digitalWrite(ledGas, LOW);
}
Serial.print(valPIR);
Serial.println();
}

long microsecondsToCentimeters(long microseconds) {
    return microseconds / 29 / 2;
}

```