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

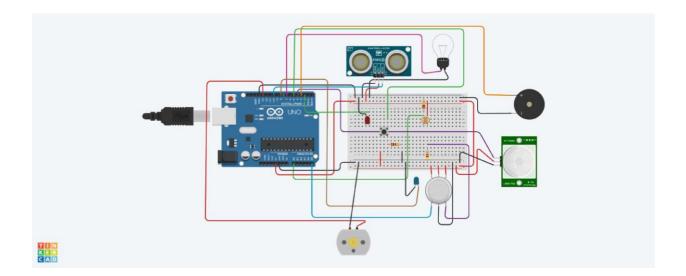
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Link: https://www.tinkercad.com/things/39SEf7Fqr4h-terrific-luulia-amur/editel?sharecode=FKQR ZuHMpvx0HiLrnrJ0lagb3g2hb1sZ9oTxZPFFAo

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
intconstPINO SGAS=A5;
int const ledGas =8;
int const button = 5;
intconstmotor=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);
 intvalGAS=analogRead(PIN0SGAS);
 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;
```