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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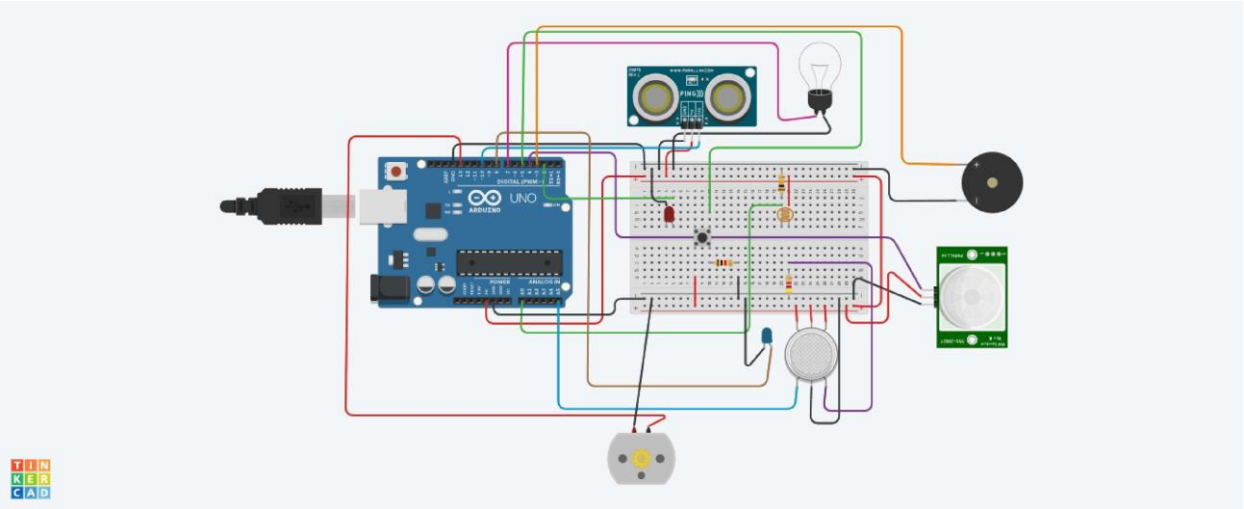
Link: https://www.tinkercad.com/things/39SEf7Fqr4h-terrific-luulia-amur/editel?sharecode=FKQR_ZuHMpvx0HiLrnrJ0Iagb3g2hb1sZ9oTxZPFFAo

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(PIN0 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;
```