APPENDIX

```
const int PIR_SENSOR_OUTPUT_PIN = 4;  /* PIR sensor O/P pin */
int warm_up;

void setup() {
 pinMode(PIR_SENSOR_OUTPUT_PIN, INPUT);
 Serial.begin(9600); /* Define baud rate for serial communication */
 delay(20000); /* Power On Warm Up Delay */
}

void loop() {
 int sensor_output;
 sensor_output = digitalRead(PIR_SENSOR_OUTPUT_PIN);
 if( sensor_output == LOW )
 {
  if( warm_up == 1 )
   {
    Serial.print("Warming Up\n\n");
    warm_up = 0;
    delay(2000);
   }
  Serial.print("No object in sight\n\n");
```

```
    delay(1000);
  }
  else
  {
    Serial.print("Object detected\n\n");
    warm_up = 1;
    delay(1000);
  }
}

int led = 13;                // the pin that the LED is atteched to
int sensor = 2;              // the pin that the sensor is atteched to
int state = LOW;             // by default, no motion detected
int val = 0;                 // variable to store the sensor status (value)

void setup() {
  pinMode(led, OUTPUT);      // initalize LED as an output
  pinMode(sensor, INPUT);    // initialize sensor as an input
  Serial.begin(9600);        // initialize serial
}

void loop(){
  val = digitalRead(sensor);   // read sensor value
```

```
 if (val == HIGH) {           // check if the sensor is HIGH
   digitalWrite(led, HIGH);   // turn LED ON
   delay(100);                // delay 100 milliseconds

   if (state == LOW) {
     Serial.println("Motion detected!");
     state = HIGH;       // update variable state to HIGH
   }
 }
 else {
     digitalWrite(led, LOW); // turn LED OFF
     delay(100);             // delay 200 milliseconds

     if (state == HIGH){
       Serial.println("Motion stopped!");
       state = LOW;       // update variable state to LOW
     }
 }
}
   int OUT = 5; //pin 5 of Arduino is connected to the output of the sensor

   void setup()
   {
```

```
 Serial.begin(9600); //inicjalizaja monitor serial port
 pinMode(OUT, INPUT); //setting Arduino pin 5 as output
 Serial.println("Test of spacing");
 Serial.println("");
}

void loop()
{

 Serial.print("object: "); //display results on the screen in a loop for 500
MS
 if(digitalRead(OUT) == 0) //low state indicates detection of the object
 { //status is high, and the lack of
 Serial.println("YES");
 }
 if(digitalRead(OUT) == 1)
 {
 Serial.println("NOT");
 }
 delay(500);
}
```

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Report #11122468

Introduction Background The background of this problem, some families who have babies, parents do not always always look after the baby. There are other activities that must be done. Such as cooking, washing, working out of the house and other activities. From the bustle there are problems when the baby sleeps in the room. His parents left him to do other work. But parents do not know when the baby is awake. And around the crib there is no barrier from the edge of the mattress so that the baby does not fall. With this case, this project was created by providing security around the baby's bed. And gives an alarm to his parents when the baby wakes up. By installing an infrared sensor on the edge of the mattress and PIR sensor to find out the baby is awake. From this the project offers a system for baby safety when the baby sleeps and wakes up the parents knowing the baby's condition. Problem Formulation In this case there are several things that make the topic of problems in the execution of this project; 1. How does the device work to find out the baby has woken up? 5 2. How to prevent the baby from falling out of bed? Scope Limitation of problems in this project; 1. record a baby who has fallen asleep 2. in the baby's bedroom there is no one else but the baby as the object 3. The size of the nursery is 3.5 meters long, 2.5 meters wide, and 2 meters high Objective The purpose for this project is to