Project Title: IoT Based Safety Gadget for Child Safety Monitoring & Notification

DEGREE:Bachelor of Engineering/Technology

BRANCH:Electronics and Communication Engineering

Team ID: PNT2022TMID40055

Team Strength: 6

Team Leader: YUKESH G

Team member 1: SANJAY J

Team member 2: JAGADEESAN U

Team member 3: SHYAM D

Team member 4: HARISH R D

Team member 5: ANBUMANI D

1.INTRODUCTION

Nowadays, crime rate associated with children keeps increasing due to which draws peoples' attention regarding childsafety. This research is conducted to propose a child security smart band utilizing IoT technology. Online questionnaire and semi-structured interview are methodologies used to collect data. The online questionnaire gains feedbacks by sending questions electronically, where answers need to be submitted online. In the semi structured interview, researcher meets and asks respondents some predetermined questions while other being asked are not planned in advanced.

1.1 PROJECT OVERVIEW

As parents, it is very frightening to leave your baby while doing something, isn't it? We often want to check on them but at the same time, we need to focus on our tasks. With this simple project, we can monitor if there is movement from our baby using a motion sensor. Once the motion sensor detects a movement, the user will receive a notification.

Required Components.

- **NodeMCU-32S**
- **Breadboard**
- **PIR Sensor**
- **Jumpers**

1.2 PURPOSE

- **The project aims to create a system that allows the parents to keep a track of their children when they are out of their sight. This is done using a concealed WFPS-enabled device.**
-
- **This device is programmed to continuously monitor the subject's parameters and take action when any dangerous situation presents itself. It does so by detecting the change in the monitored signals, following which appropriate action is taken by means of sending notifications/alerts to designated individuals.**

- **This project employs cutting-edge technology to protect the youngster through the use of a GSM module, ensuring that the child does not feel abandoned while dealing with such social issues. An Arduino Nano, GSM, GPS, temperature sensor, heartbeat sensor, and a panic buttonchild which is connected to the parents' using a mobile network.**

2. LITERATURE SURVEY

Some previous studies have been included for designing the IoT-based child security smart band. It assists parents to monitor their children remotely. In case situations happen, notifications will be sent to parents so that actions can be taken. Through this, child safety can be ensured and crime rate will be reduced.

2.1 EXISTING PROBLEM

It assists parents to monitor their children remotely. In case situations happen, notifications will be sent to parents so that actions can be taken. Through this, child safety can be ensured and crime rate will be reduced.

2.2 REFERENCE

IoT Based Safety Gadget for Child Safety Monitoring & Notification it can be refernce by the many technique . But In my topic iot it can be choosen so we can do this child monitoring and notification by arduino un.

2.3 Problem Statement

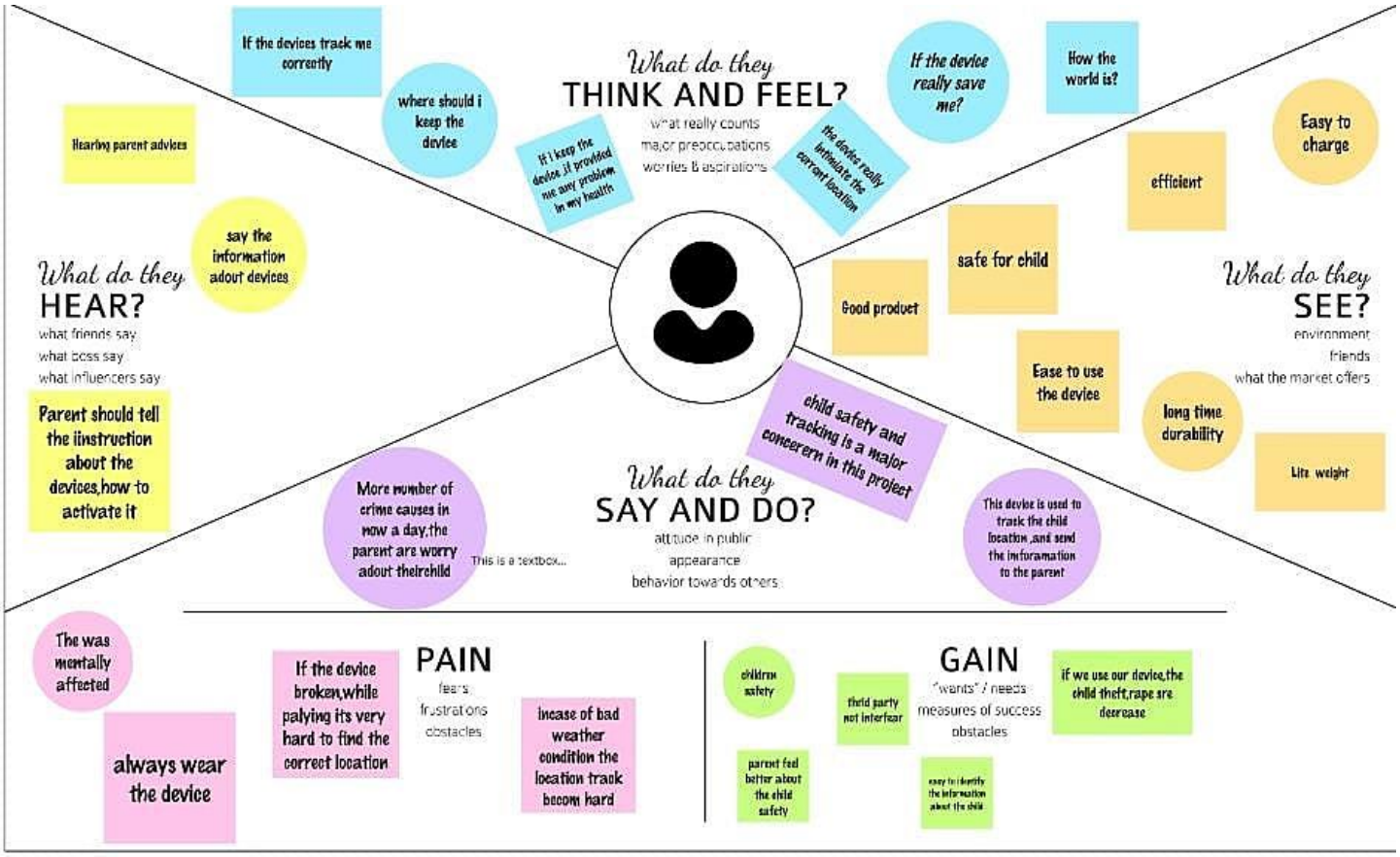
Children can be easily geo-fenced by using this gadget so the children can be protected by the harmful obstacles against them. By using this gadget, parents can easily monitor what was happening beside of their children using IOT. Temperature of the children is monitored using the temperature sensor fixed in the gadget, it plays a major role of child safety in order to make the parents to be updated and the heart beat of the children is also monitored by using heart beat sensor. The smart IOT device can be used to track and monitor the safety of a child. If any abnormal values are read by the sensor then an SMS is sent to the parent's mobile and an real time video is recorded by the camera it was

stored in the storage for reference whenever it is required. A child guard system for mobile devices helps parents and guardians to monitor their children.

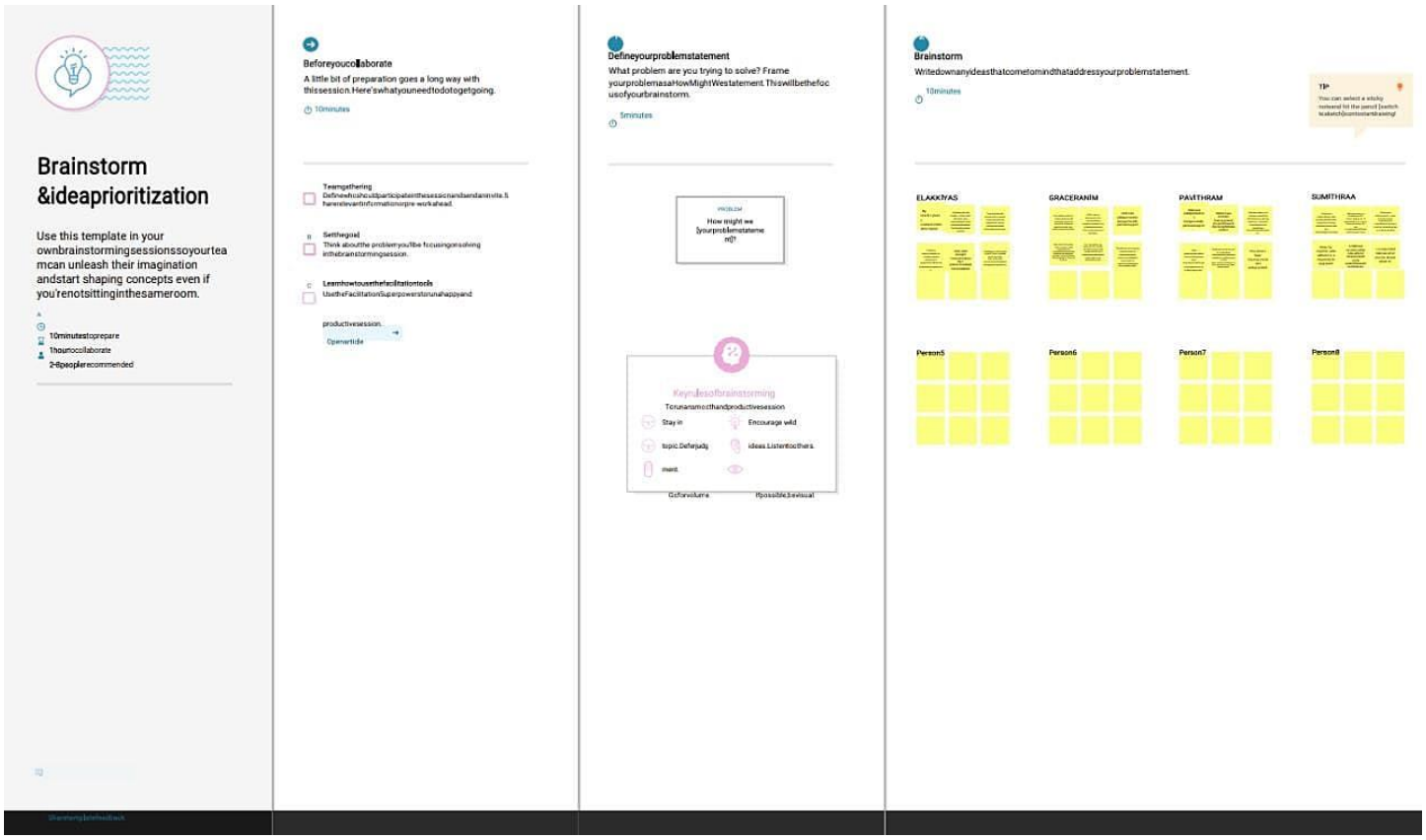
3. IDEATION & PROPOSED SOLUTION

It assists parents to monitor their children remotely. In case situations happen, notifications will be sent to parents so that actions can be taken. Through this, child safety can be ensured and crime rate will be reduced.

3.1 EMPATHY MAP



IDEATION


Brainstorm &ideaprioritization
Use this template in your ownbrainstormingsessionssoyourtea mcan unleash their imagination andstart shaping concepts even if you'renotsittinginthesameroom.
10minutestoprepare
1hourtocollaborate
2-8peopleRecommended
Beforeyoucollaborate
A little bit of preparation goes a long way with thissession.Here'swhatyouneedtodotogetgoing.
10minutes
Teamgathering
Setthegoal
Learnhowtousethefacilitationtools
productivesession.
Openarticle
Defineyourproblemstatement
What problem are you trying to solve? Frame yourproblemasaHowMightWestatement.Thiswillbethefocusofyourbrainstorm.
5minutes
How might we [yourproblemstatement]?
Keyrulesofbrainstorming
To run an smooth and productive session
Stay in
Encourage wild
topic.Defer judg
ideas.Listen to others.
ment.
Brainstorm
Write down any ideas that come to mind that address your problem statement.
10minutes
TIP
ELAKKIYAS
GRACERANIM
PAVITHRAM
SUMITHRAA
Person5
Person6
Person7
Person8
Groupideas
Take turns sharing your ideas while clustering similar or related notes as you go. In the last 10 minutes, give each cluster a sentence-like label. If a cluster is bigger than six sticky notes, try and see if you can break it up into smaller sub-groups.
20 minutes
TIP
Prioritize
Your team should all be on the same page about what's important moving forward. Place your ideas on this grid to determine which ideas are important and which are feasible.
20 minutes
Importance
Feasibility
TIP
Afteryoucollaborate
You can export the mural as an image or pdf to share with members of your company who might find it helpful.
Quick wins
Share the mural
Share a view link to the mural with stakeholders to keep them in the loop about the outcomes of the session.
Export the mural
Export a copy of the mural as a PNG or PDF to attach to emails, include in slides, or save in your drive.
Keep moving forward
Strategy blueprint
Define the components of a new idea or strategy.
Open the template
Customer experience journey map
Understand customer needs, motivations, and obstacles for an experience.
Open the template
Strengths, weaknesses, opportunities & threats
Identify strengths, weaknesses, opportunities and threats (SWOT) to develop plans.
Open the template
Share template feedback

3.3 PROPOSED SOLUTION

Project Design Phase-I

Proposed Solution Template

TEAM ID	PNT2022TMID40055
PROJECT NAME	IoT Based Safety Gadget for Child Safety Monitoring &Notification

Proposed Solution Template:

S.No	Parameter	Description
1.	Problem Statement (Problem to be solved)	Tracking the child activities and notifying their position to their parents.
2.	Idea / Solution description	Designing the project with PIR sensor and esp32s board
3.	Novelty / Uniqueness	In this proposed system, when the baby cries in long distance notifying to their parents
4.	Social Impact / Customer Satisfaction	Secured information, cost efficient is possible.
5.	Business Model (Revenue Model)	The proposed system can be used for child security. Selling the product directly to the parents Selling the product to the child care centers
6.	Scalability of the Solution	The proposed system has less complexity and portable system. Highly secured database handled and highly strong communication.

3.4 PROBLEM SOLUTION FIT

Project Title: IoT based safety gadget for child safety monitoring and notification

Project Design Phase-I - Solution Fit Template

Team ID:PNT2022TMID40055

Define CS, fit into CC

1. CUSTOMER SEGMENT(S) CS

Who is your customer?
i.e. working parents of 0-5 y/o. kids

Parents (mainly suitable for Working parents) and helpful for persons in Day-Care.

6. CUSTOMER CC

What constraints prevent your customers from taking action or limit their choices of solutions? i.e. spending power, budget, no cash, network connection, available devices.

Discontinuity in signal may cause signal loss and continuous monitoring is not possible.

5. AVAILABLE SOLUTIONS AS

Which solutions are available to the customers when they face the problem or need to get the job done? What have they tried in the past? What pros & cons do these solutions have? i.e. pen and paper is an alternative to digital notetaking

Monitoring the child health condition through sensor and send notification in case of problem.

Explore as differentiate

Focus on J&P, tap into BE, understand RC

2. JOBS-TO-BE-DONE / PROBLEMS J&P

Which jobs-to-be-done (or problems) do you address for your customers? There could be more than one: explore different sides.

- To give better network connection.
- To improve the database to manage the details.
- To improve new technique to save the child from strangers.

9. PROBLEM ROOT CAUSE RC

What is the real reason that this problem exists? What is the back story behind the need to do this job?
i.e. customers have to do it because of the change in regulations.

Lack of continuous network or signal.

7. BEHAVIOUR BE

What does your customer do to address the problem and get the job done?

i.e. directly related: find the right solar panel installer, calculate usage and benefits; indirectly associated: customers spend free time on volunteering work (i.e. Greenpeace)

Parents giving awareness and tips to the child .but not sure it helps everytime

Focus on J&P, tap into BE, understand RC

3. TRIGGERS TR

What triggers customers to act? i.e. seeing their neighbour installing solar panels, reading about a more efficient solution in the news.

Through Social Media and awareness about child safety

4. EMOTIONS: BEFORE / AFTER EM

How do customers feel when they face a problem or a job and afterwards?
i.e. lost, insecure > confident, in control - use it in your communication strategy & design.

Lack of safety > safety and under monitoring

10. YOUR SOLUTION SL

If you are working on an existing business, write down your current solution first, fill in the canvas, and check how much it fits reality.
If you are working on a new business proposition, then keep it blank until you fill in the canvas and come up with a solution that fits within customer limitations, solves a problem and matches customer behaviour.

- Fix web camera or sensor to analysis the surrounding of the child.
- Make confirm about the environment around the kid.

8.CHANNELS of BEHAVIOUR CH

8.1 ONLINE

What kind of actions do customers take online? Extract online channels from #7

GPS tracking and networking

8.2 OFFLINE

What kind of actions do customers take offline? Extract offline channels from #7 and use them for customer development.

Calculating distance , checking health condition of child when the gadget is off.

4. REQUIREMENT ANALYSIS

Some previous studies have been included for designing the IoT-based child security smart band.

It assists parents to monitor their children remotely. In case situations happen, notifications will be sent to parents so that actions can be taken.

Through this, child safety can be ensured and crime rate will be reduced.

The IoT or the Internet of Things refers to the billions of physical devices connected to the internet and collecting and exchanging data around the world.

4.1 FUNCTIONAL REQUIREMENT

IOT BASED SAFETY GADGET FOR CHILD SAFETY MONITORING AND NOTIFICATION

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DEPARTMENT: ELECTRONICS AND COMMUNICATION ENGINEERING

COLLEGE NAME: P.T.LEE CHENGALVARAYA COLLEGE OF ENGINEERING AND TECHNOLOGY, OOVERY, KANCHIPURAM.

4.1 FUNTIONAL REQUIREMENTS

- **The system shall allow the user or family's to register phone number. The system shall provide report for the parents.**
- **when the child cries The system should provide all the sensed data from each sensor send by text message.**

- **The system shall check the sensed data with the threshold value of each input. The system shall notify the user while the input value exceed or become below the threshold value.**

4.2 NON-FUNCTIONAL REQUIREMENTS

- **The system shall give the accurate result for different factors using,**
- **sensing material as a result their will not be any distractive damage. The system shall be maintainable whenever faller occurs.**
- **The system is cost effective comparing to the features it provides.**
- **The system shall be usable within a few minutes training.**

5. PROJECT DESIGN

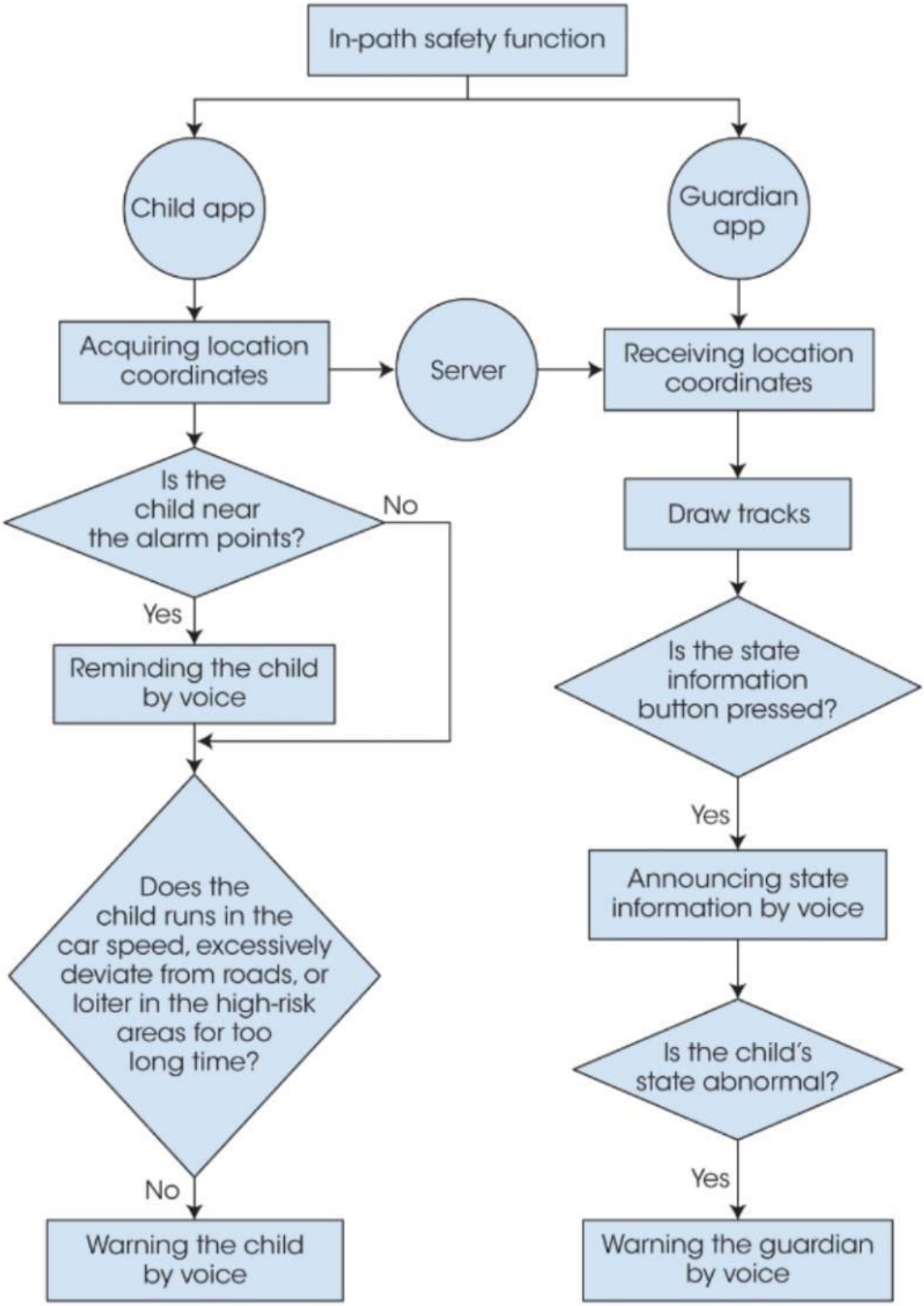
Internet of Things (IoT) plays a major role in every day to day life. The major difference between IoT and embedded system is that a dedicated protocol/software is embedded in the chip in case of embedded system, whereas, IoT devices are smart devices, which are able to take decisions by sensing the environment around the device.
The development of sensors technology, availability of internet connected devices; data analysis algorithms make IoT devices to act smart in emergency situations without human interventions.

So, IoT devices are applied in different fields such as agriculture, medical, industrial, security and communication applications[1]. IoT systems are useful within a system to do deeper automation, analysis, and integration.

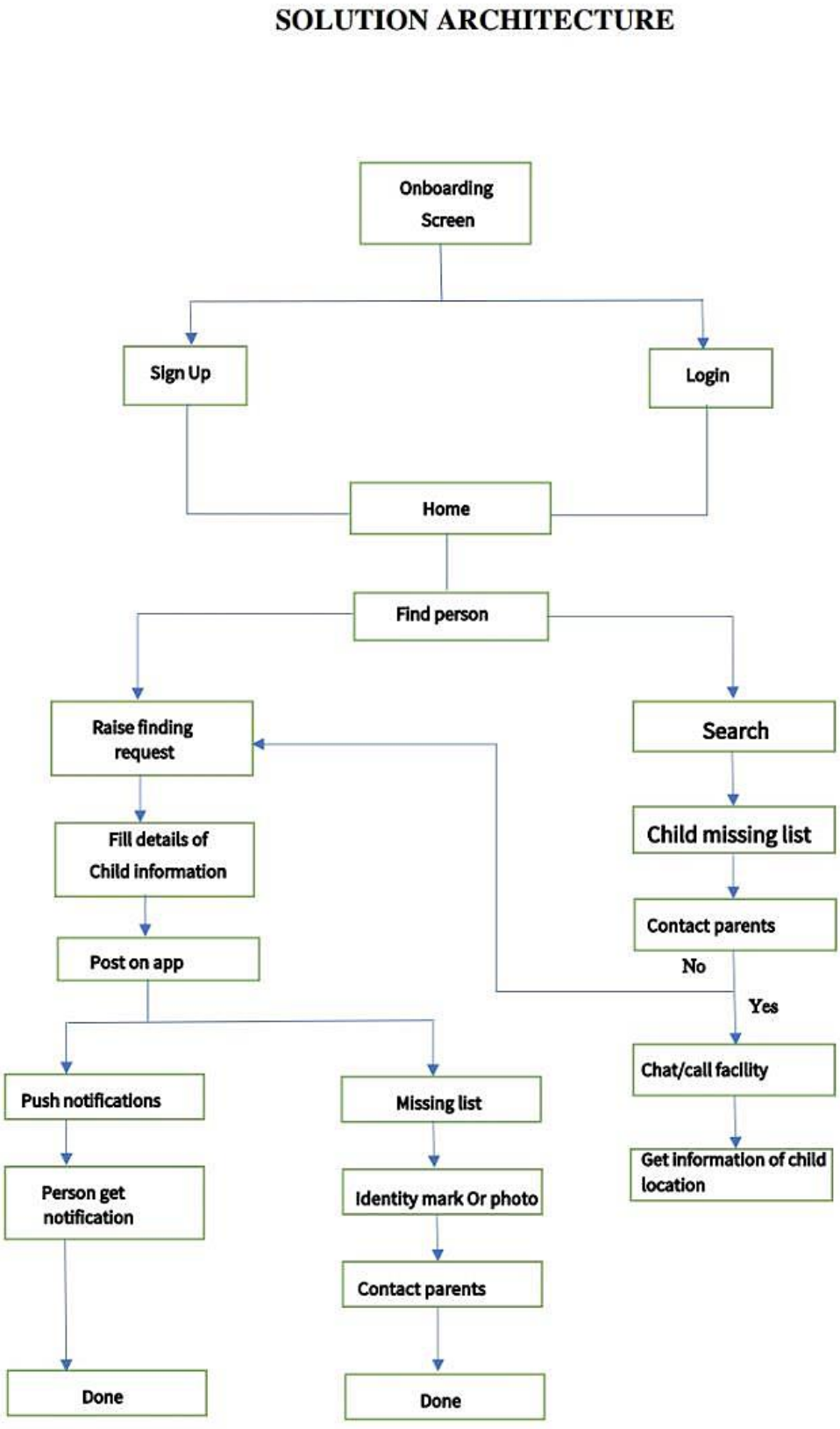
IoT contributes to technology by advances in software, hardware and modern tools. It even uses existing and upcoming technology in the fields of sensing, networking and robotics.

IoT brings global changes by its advanced elements in the social, economic users.

5.1 DATA FLOW DIAGRAM



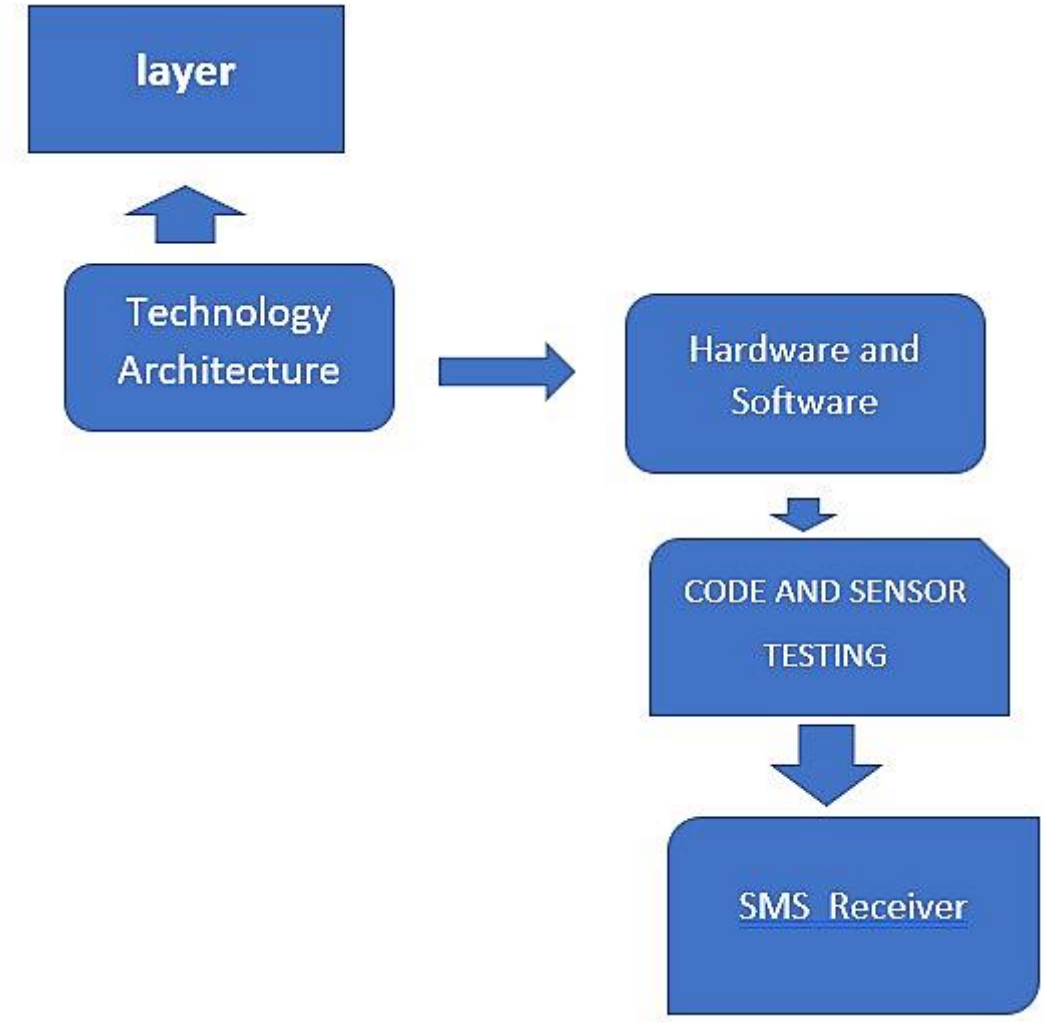
5.2 solution


SOLUTION ARCHITECTURE
Onboarding Screen
Sign Up
Login
Home
Find person
Raise finding request
Search
Fill details of Child information
Child missing list
Post on app
Contact parents
No
Yes
Push notifications
Missing list
Chat/call facility
Person get notification
Identity mark Or photo
Get information of child location
Contact parents
Done
Done

5.2 Technical Architecture

DEFINITION:

Technology Architecture deals with the deployment of application components on technology components



A standard set f predefined components is provided in order to represent severs, network,workstations and so on.

5.3 USER STORIES

IoT Based Safety Gadget for Child Safety Monitoring & Notification IS for the child product for the harmful situation in child suffer. So in order to product the child for harm full situation we need to use many technical method in this we use iot technical method onit. In this we use the code for child monitoring and notification method into parent mobile like a

sms or gmail . So we can product the child for the harm full sutitations so in this user stories the user can product the child form the harm full sutitations . So we can use the arduino code to monitoring the child for the harm full sutitations .

FOR EXMPLE: If a child is crying means a parent can be get the notification alert can be send to parent mobile

6. PROJECT PLANNING & SCHEDULING

MILESTONE & ACTIVITY LIST

How your child plays, learns, speaks, acts, and moves offers important clues about your child's development. Developmental milestones are things most children (75% or more) can do by a certain age.

Check the milestones your child has reached by the end of 1 year by completing a checklist with CDC's free Milestone Tracker mobile app, for iOS and Android devices, using the Digital Online Checklist

What most children do by this age:

Social/Emotional Milestones

- Plays games with you, like pat-a-cake

Language/Communication Milestones

- Waves "bye-bye"

- Calls a parent “mama” or “dada” or another special name
- Understands “no” (pauses briefly or stops when you say it)

Cognitive Milestones (learning, thinking, problem-solving)

- Puts something in a container, like a block in a cup
- Looks for things he sees you hide, like a toy under a blanket

Movement/Physical Development Milestones

- Pulls up to stand
- Walks, holding on to furniture
- Drinks from a cup without a lid, as you hold it
- Picks things up between thumb and pointer finger, like small bits of food

Other important things to share with the doctor…

- What are some things you and your baby do together?
- What are some things your baby likes to do?
- Is there anything your baby does or does not do that concerns you?
- Has your baby lost any skills he/she once had?
- Does your baby have any special healthcare needs or was he/she born prematurely?

Overview

As parents, it is very frightening to leave your baby while doing something, isn't it? We often want to check on them but at the same time, we need to focus on our tasks. With this simple project, we can monitor if there is movement from our baby using a motion sensor. Once the motion sensor detects a movement, the user will receive a notification.

Required Components

- NodeMCU-32S
- Breadboard PIR Sensor
- Jumpers
- Circuit Diagram

6.2 SPRINT DELIVERY SCHEDULE:

Delivery plan sprint-1

Live child crying alert to mobile:

1.Sensor is installed on gadget to track baby crying sensation can be tracked on android app and via SMS request sent from parent phone to safety gadget. Outputs of baby crying sensation

2) Panic Alert Systems:
Panic alert system on gadget is triggered during panic situation, automatic call and SMS are triggered to parental phone. The alert is also updated to the cloud for purpose of app monitoring. Fig. 4. Outputs of panic alert system.

3) Stay Connected Feature:
Stay connected feature is used to trigger call and pre- defined SMS anytime from gadget to parental phone by just pressing a button and also parent can make SMS and call to the gadget anytime.

4) Health Monitoring System:
Health monitoring system is implemented using heart beat sensor, temperature sensor which is updated to the cloud and also can be monitored via app.
The currentvalue of sensors can be obtained using SMS request sent to gadget from parent phone. Outputs of health monitoring system.

5) Gadget Plugged or Unplugged Monitoring:
Gadget plug or unplugged is monitored using contact switch installed on smart gadget, as soon as the device is unplugged, an alert is provided to parent phone via SMS and it is also updated to cloud for app monitoring.

6) Boundary monitoring system:
This is used to track the safety gadget using the binding gadget by implementing signal strength concept as soon as the safety gadget moves far away from the BLE listener gadget then an alert is provided to itself. Listener device and broad cast device . 7. Overview of safety gadget
connection with sensors Limitation The system is dependent on communication signal/network

Delivery plan sprint-2

Live child crying to gmail alert:

Gamil is installed on gadget to track its current child crying can be tracked on android app and
via gmail request sent from parent phone to safety gadget. Outputs of live cilhd crying.

2) Panic Alert Systems:
Panic alert system on gadget is triggered during panic situation, automatic sms are triggered to
parental phone. The alert is also updated to the cloud for purpose of app monitoring. Outputs of
panic alert system.

3) Stay Connected Feature:
Stay connected feature is used to trigger sms and pre-defined SMS anytime from gadget to
parental phone by just child crying and also parent can make SMS and call to the gadget
anytime.

4) Health Monitoring System:
Health monitoring system is implemented using crying sensor, temperature sensor which is
updated to the cloud and also can be monitored via app. The current value of sensors can be
obtained using SMS request sent to gadget from parent phone. Outputs of health monitoring
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strength concept as soon as the safety gadget moves far away from the pir listener gadget then
an alert is provided to itself. Listener device and broad cast device .

7. Overview of safety gadget the circuit connection with sensors. The temperature sensor, pulse
sensor, BLE module, GSM module and sensor module are shown.

Delivery plan sprint-3

```
#include "VOneMqttClient.h"

//define device id
const char* PIRsensor = "bda7cc3c-84fb-4731-b333-8c3c32c4a6b6";  //Replace with YOUR deviceID for the PIR sensor

//Used Pins
const int motionSensor = 22;

#define timeSeconds 3

//input sensor
// Timer: Auxiliary variables
unsigned long now = millis();
unsigned long lastTrigger = 0;
boolean startTimer = false;

// Checks if motion was detected, sets LED HIGH and starts a timer
void IRAM_ATTR detectsMovement() {
  startTimer = true;
  lastTrigger = millis();
}

//Create an instance of VOneMqttClient
VOneMqttClient voneClient;

//last message time
unsigned long lastMsgTime = 0;

void setup_wifi() {

  delay(10);
  // We start by connecting to a WiFi network
  Serial.println();
  Serial.print("Connecting to ");
  Serial.println(WIFI_SSID);

  WiFi.mode(WIFI_STA);
  WiFi.begin(WIFI_SSID, WIFI_PASSWORD);

  while (WiFi.status() != WL_CONNECTED) {
    delay(500);
    Serial.print(".");
  }

  Serial.println("");
  Serial.println("WiFi connected");
  Serial.println("IP address: ");
```

```
  Serial.println(WiFi.localIP());
}

void setup() {

  setup_wifi();
  voneClient.setup();

  //sensor
  pinMode(motionSensor, INPUT);
  attachInterrupt(digitalPinToInterrupt(motionSensor), detectsMovement, RISING);
}

void loop() {

  if (!voneClient.connected()) {
    voneClient.reconnect();
    String errorMsg = "PIRsensor Fail";
    voneClient.publishDeviceStatusEvent(PIRsensor, true);
  }
  voneClient.loop();

  unsigned long cur = millis();
  if (cur - lastMsgTime > INTERVAL) {
    lastMsgTime = cur;

    now = millis();
    // Turn off the LED after the number of seconds defined in the timeSeconds variable
    if(startTimer && (now - lastTrigger > (timeSeconds*1000))) {
      startTimer = false;
    }

    voneClient.publishTelemetryData(PIRsensor, "Motion", startTimer);

  }
}
```

Delivery plan sprint-4

Project 1: Baby Monitoring

Overview

As parents, it is very frightening to leave your baby while doing something, isn't it? We often want to check on them but at the same time, we need to focus on our tasks. With this simple project, we can monitor if there is movement from our baby using a motion sensor. Once the motion sensor detects a movement, the user will receive a notification.

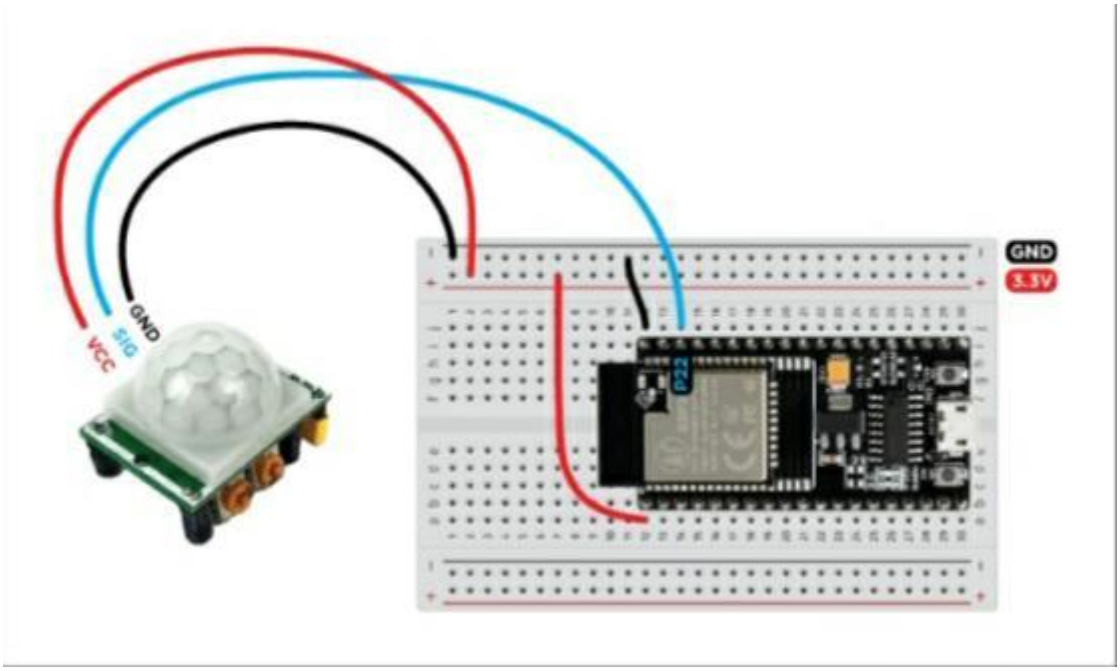
Required Components

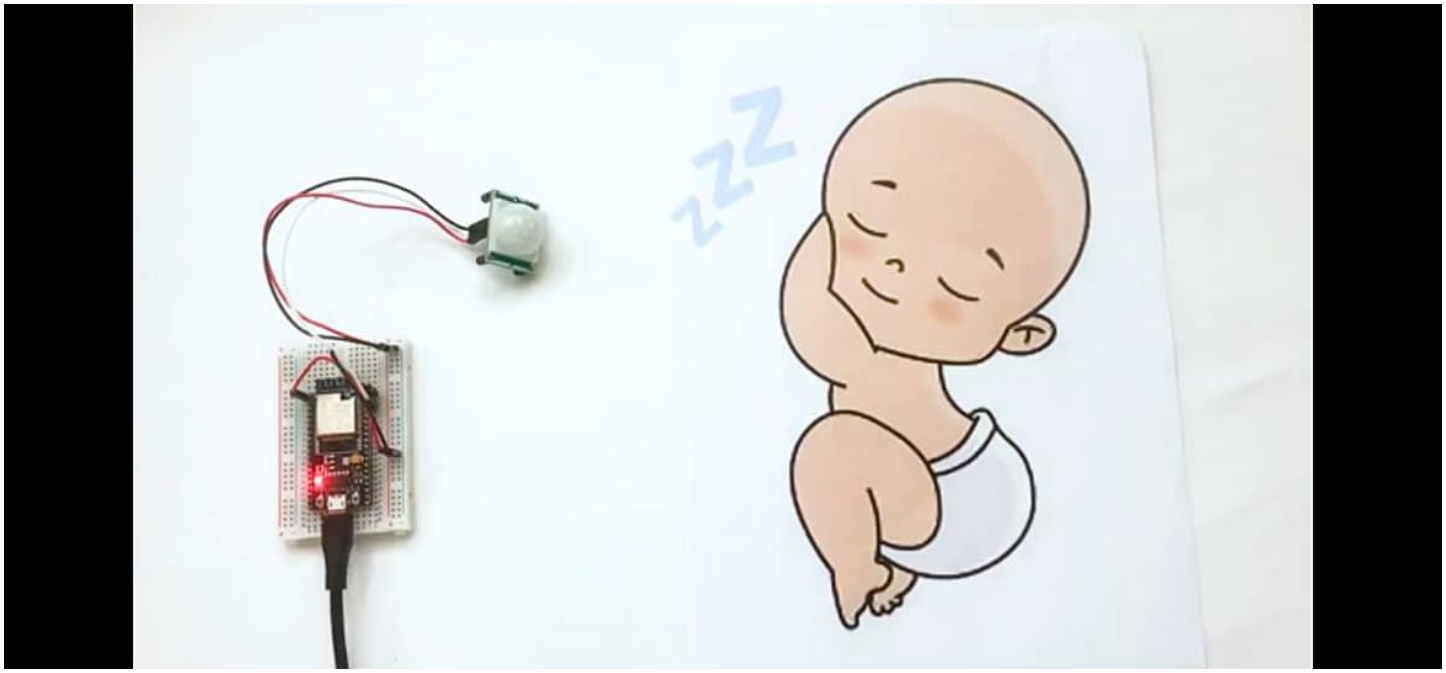
- NodeMCU-32S

Breadboard PIR Sensor

Jumpers

Circuit Diagram

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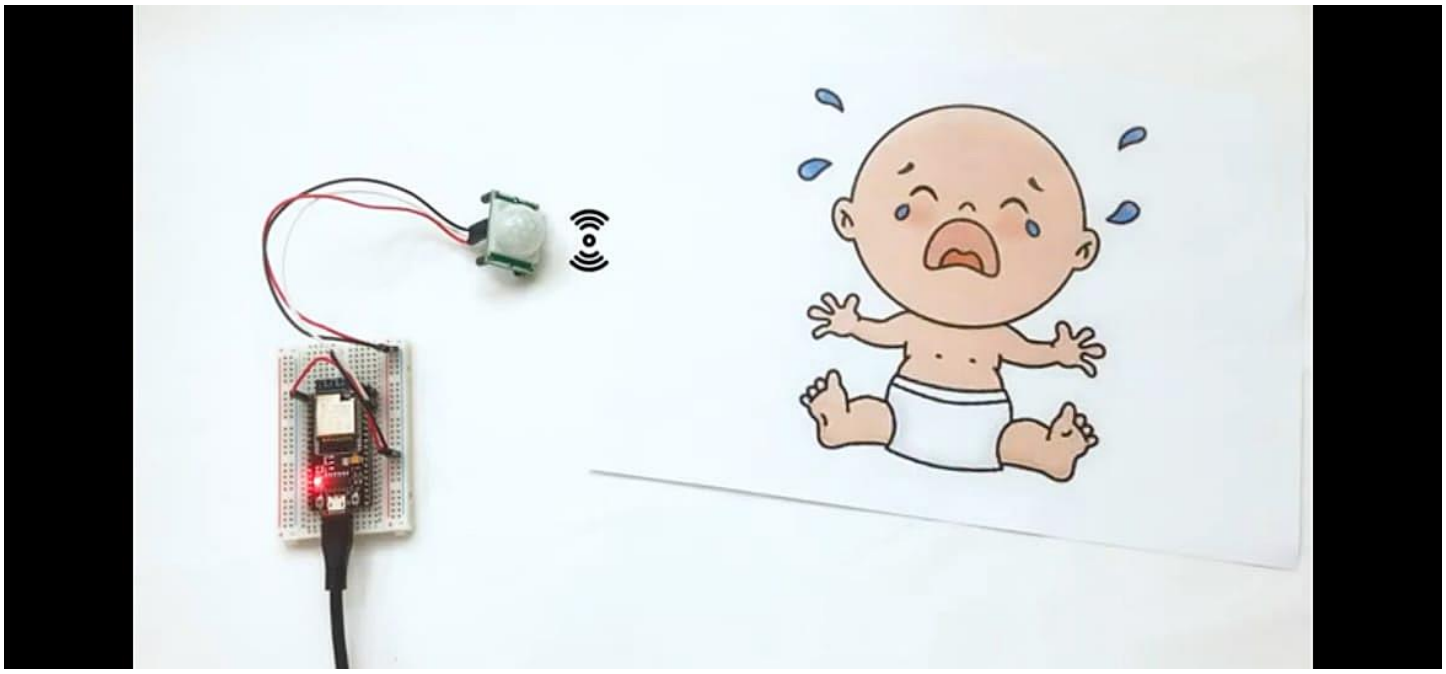

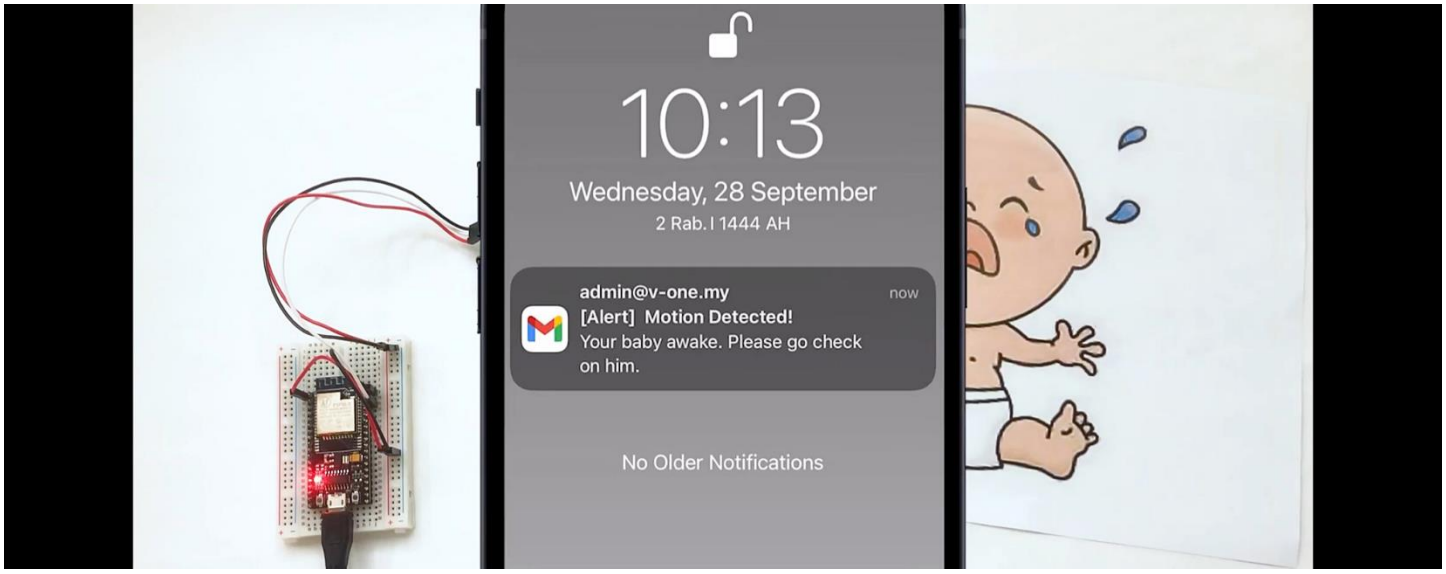

7.CODING & SOLUTIONS

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  }

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  voneClient.loop();

  unsigned long cur = millis();
  if (cur - lastMsgTime > INTERVAL) {
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```
    now = millis();
    // Turn off the LED after the number of seconds defined in the timeSeconds
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    if(startTimer && (now - lastTrigger > (timeSeconds*1000))) {
      startTimer = false;
    }

    voneClient.publishTelemetryData(PIRsensor, "Motion", startTimer);

  }
}
```
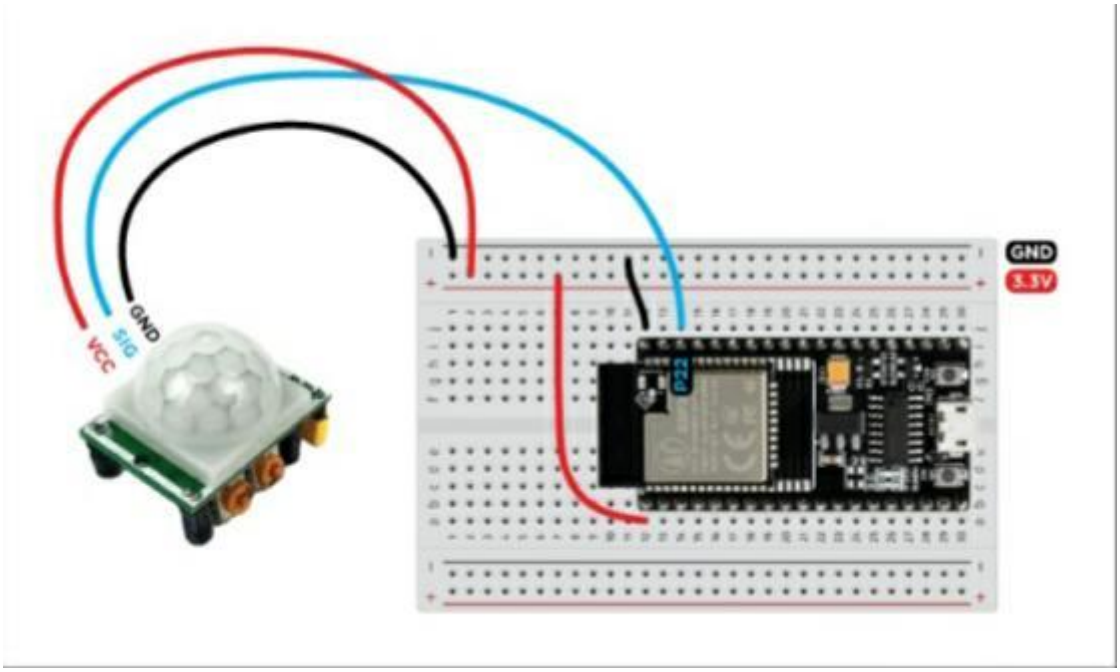
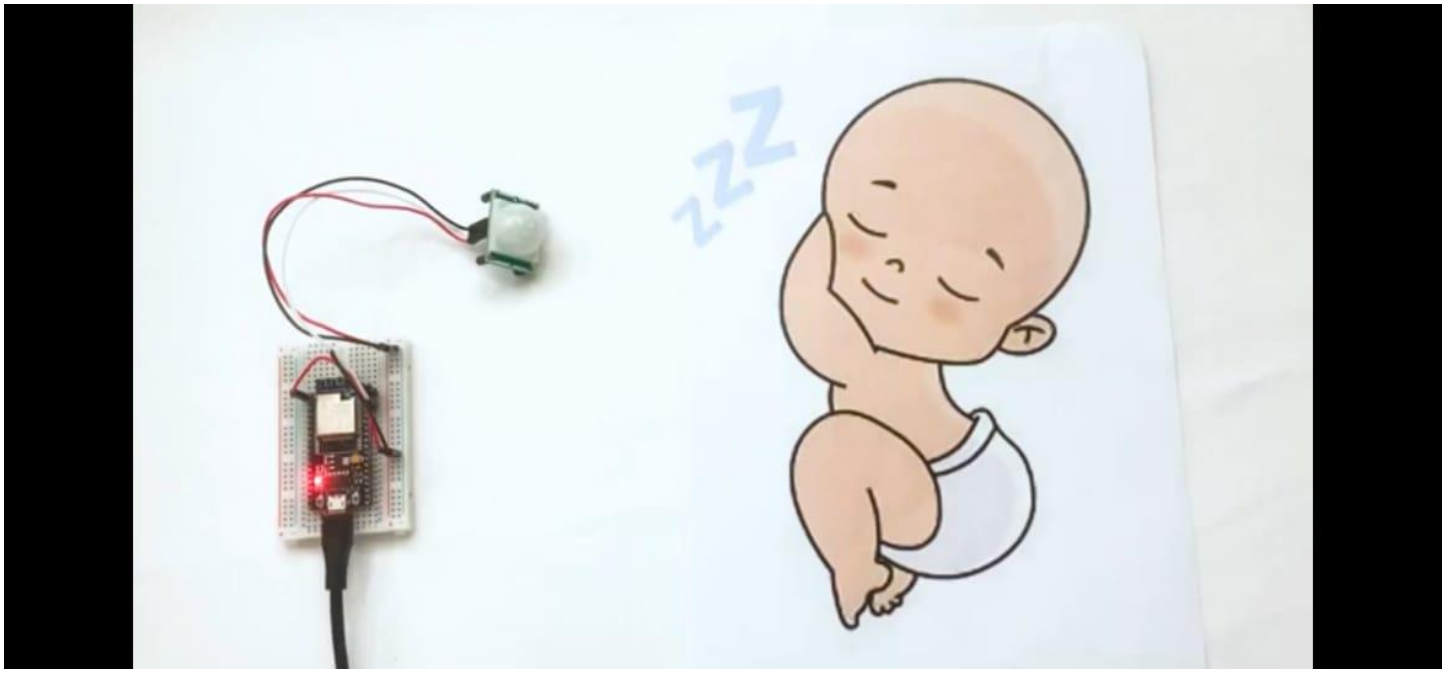

8.TESTING

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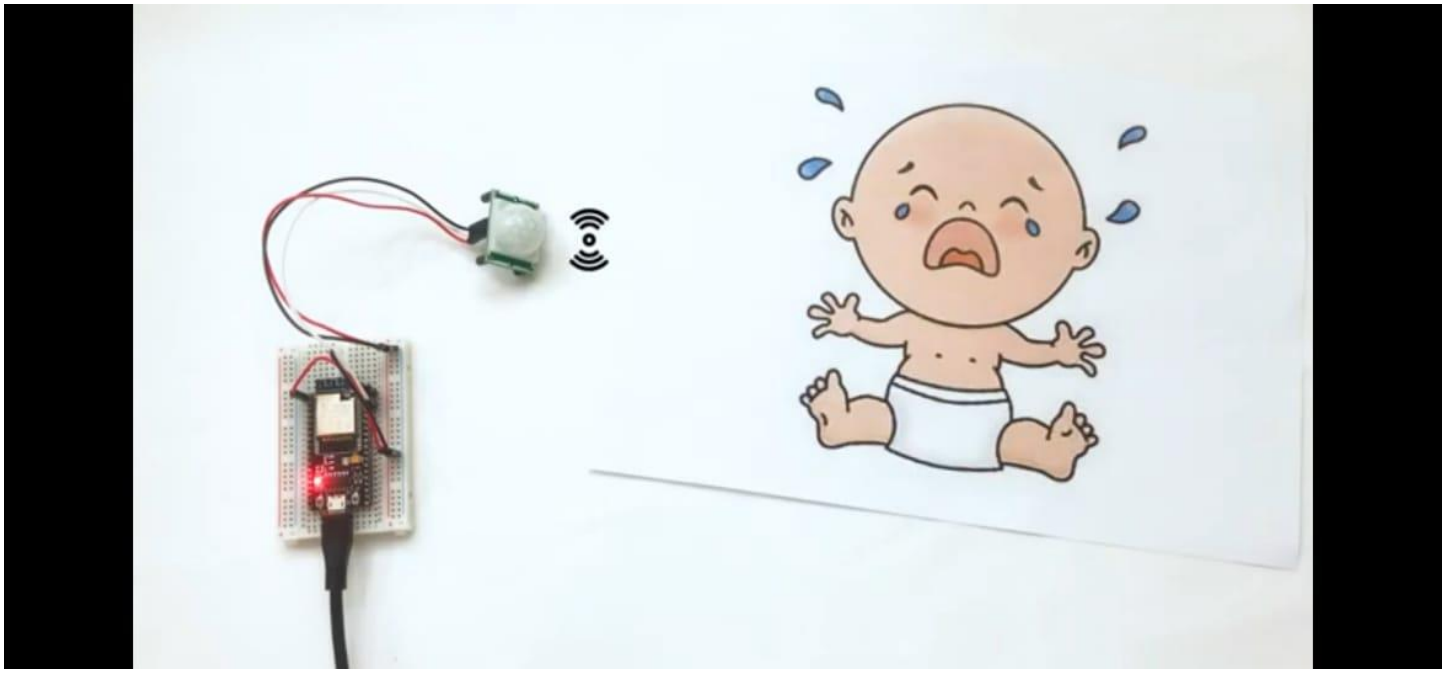
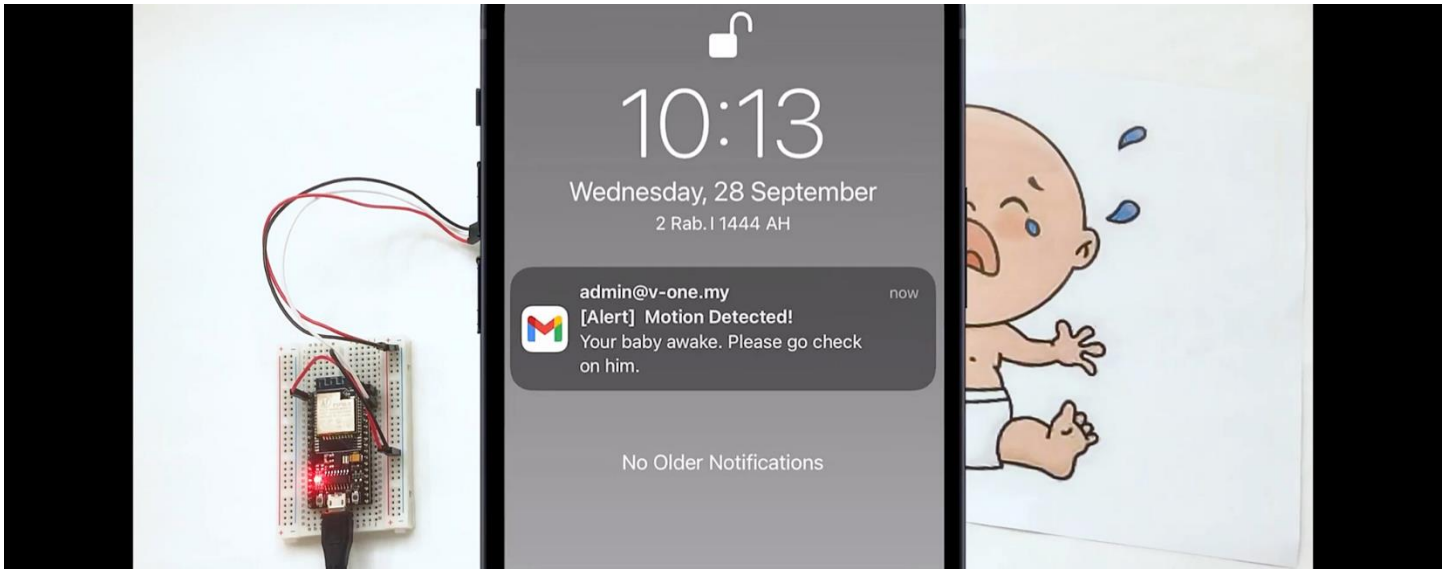
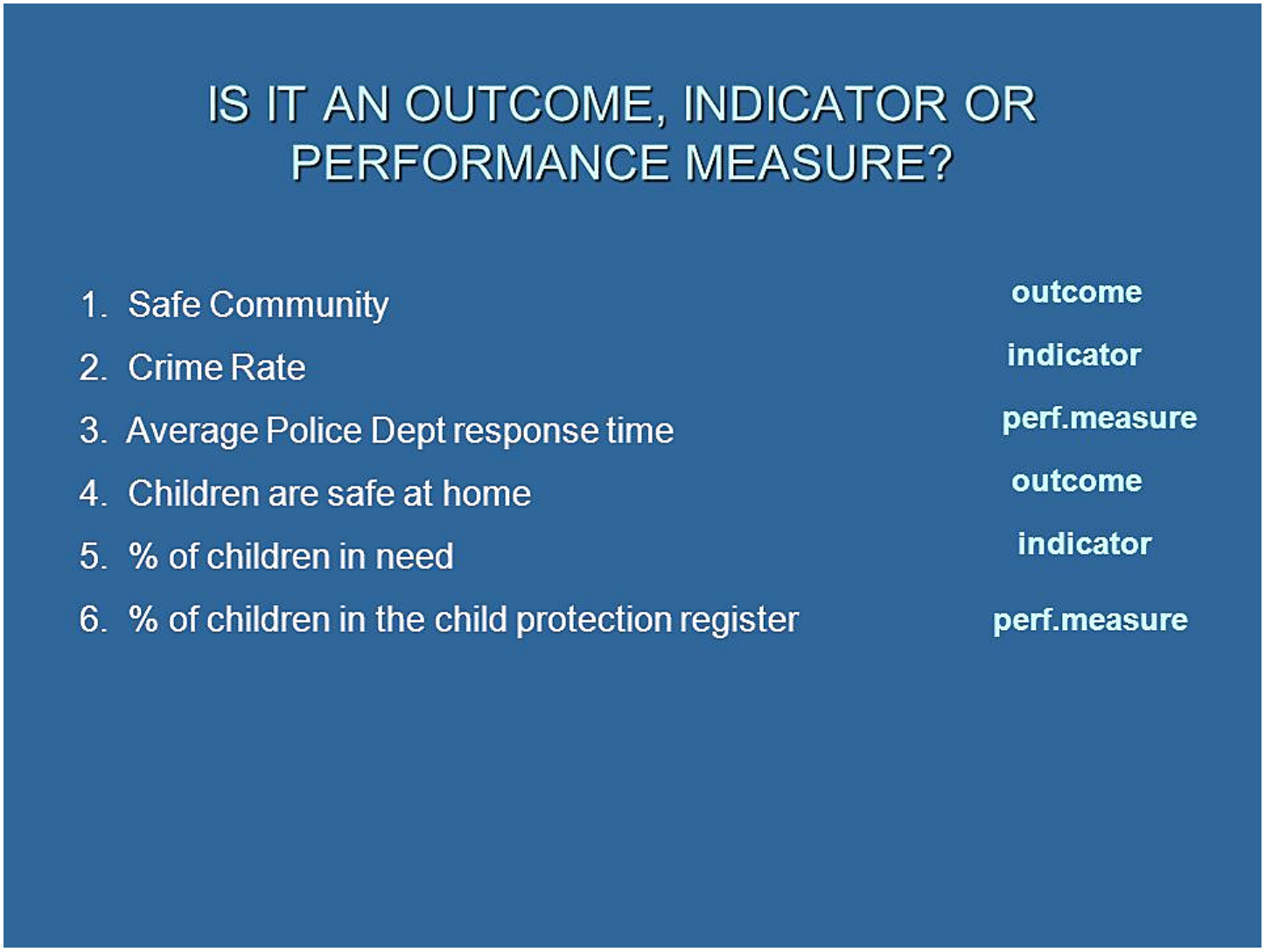




9.RESULT

9.1.PERFORMANCE METRICS

The increasing use of performance measurement by government means that child protection services are under pressure to demonstrate effectiveness in protecting children from harm and efficiency in the use of public funds to help children and families. From a policy perspective, the way performance measurement is conceptualized and implemented can have major consequences for service delivery. This paper examines key issues raised in the literature about performance measurement, the context for its introduction in child protection, how the concepts of effectiveness and efficiency are dealt with, how client outcomes are defined, and assumptions about 'good performance'. An overview of performance measurement in child protection in Australia is provided. The paper argues that a critical approach to performance measurement in child protection can contribute to improved service delivery to clients.



RESULT:

IN THIS PROGRAM WE CAN FIND IF THE CHILD CRYIES MEANS IT CAN SENSES AND IT CAN BE ALRET OR SMS TO THE PARENT GMAIL ACCOUNT LIKE (NOTIFICATION)

10.ADVANTAGES AND DISADVANTAGES

Advantages and disadvantages for the IoT Based Safety Gadget for Child Safety Monitoring & Notification.

ADVANTAGES:

1 – Child Safe Standards Training

The Child Safe Standards Training Hub will give you an overview of the Child Safe Standards. Therefore, the training provides you with an awareness of how your Swim School may establish a safer environment for children. This customised training program is appropriate for all members of the Swim School team. In other words, this can include managers, deck supervisors and swim teachers.

2 – Simple and Easy to Use

The online training platform is straightforward, simple to use, easy to comprehend and covers some critical topics of child protection. It contributes to reducing their vulnerability in potentially dangerous situations. The Child Safe Training Hub is essential for children's social and emotional development to have confidence in their safety and to know that they are not in danger.

3 – Provides Safety and Security

Having a child who feels comfortable will allow them to be more open to exploring and experiencing the world around them and learning more. In regards to the safety and security of children, it is the Swim School's responsibility to take the necessary precautions to guarantee that the children feel secure. For additional safety and security, we would encourage you to find out more information about Kids Alive

4 – Includes Child Safety Criteria

The Child Safe Training Hub provides training on the ten child safe standards. In addition to existing child safety obligations for individuals and organisations, child safety standards also include new child safety criteria. This criteria represents the ten important aspects that must be in place to provide a safer environment for children to develop. The Child Safe Training Hub will provide Swim Schools with knowledge and understanding of the ten Child Safe Standards.

5 – Ensures Child Protection

Swim School staff, including teachers and managers, are educated on child safety. All staff in a Swim School have a crucial role to play in child protection. Child safety in Swim schools does not only lie in the detection and reporting of possible child abuse cases. You can also find it in multi-disciplinary teamwork, and in contributing to a child safer organization. The Child Safe Training Hub helps protect children when they are in swimming schools.

DISADVANTAGES:

Perhaps the most apparent disadvantage of being an only child is **the feeling of loneliness**.

Youngest children are also often described as **spoiled, willing to take unnecessary risks, and less intelligent than their oldest siblings**.

11.FUTURE SCOPE:

In our system, we automatically monitor the child in real time using Internet of Things, with the help of GPS, GSM, and arduino,nodeesp32s, Raspberry Pi. This system requires network connectivity, satellite communication, and high-speed data connection when we use web camera and GPS to lively monitor.

12.CONCLUSION:

Based on the results, it can be concluded that our proposed system provides safety applications for the children and we have come up with an idea of making a safety environment for the children in the society and allows them to go anywhere fear free and it helps reducing the crime rate against the children.

We can product the child for harm full situation. If the crying means the parent can be notification to the gamil account and we can take a action for the harm full situation of the child.

13.APPENDIX:

Appendicitis occurs when your child's appendix becomes infected or inflamed. Symptoms include severe pain in your child's lower right abdomen. Treatment usually involves removal of your child's appendix through surgery. Treatment is vital.

The appendix is located in the right lower section of the abdomen in most children. The appendix is a pinky-sized, tube-like structure located in the right lower section of the abdomen.

We can protect the child the from the harmfull situation .for example If the child cries means the sensor note and send the sms to the parents mobile.

SOURCE CODE:

The source code of the program is we can protuct the child from the sike situtations. In this program we can protuct the child from if cries means the sensor senses the baby cries and it send the sms or gmail to the parent mobile. The can be written in the above paragraph.

```
include "VOneMqttClient.h"

//define device id
const char* PIRsensor = "bda7cc3c-84fb-4731-b333-
8c3c32c4a6b6";  //Replace with YOUR deviceID for the PIR sensor

//Used Pins
const int motionSensor = 22;
```

```
#define timeSeconds 3

//input sensor
// Timer: Auxiliary variables
unsigned long now = millis();
unsigned long lastTrigger = 0;
boolean startTimer = false;

// Checks if motion was detected, sets LED HIGH and starts a
timer
void IRAM_ATTR detectsMovement() {
  startTimer = true;
  lastTrigger = millis();
}

//Create an instance of VOneMqttClient
VOneMqttClient voneClient;

//last message time
unsigned long lastMsgTime = 0;

void setup_wifi() {

  delay(10);
  // We start by connecting to a WiFi network
  Serial.println();
  Serial.print("Connecting to ");
  Serial.println(WIFI_SSID);

  WiFi.mode(WIFI_STA);
  WiFi.begin(WIFI_SSID, WIFI_PASSWORD);

  while (WiFi.status() != WL_CONNECTED) {
    delay(500);
    Serial.print(".");
  }

  Serial.println("");
  Serial.println("WiFi connected");
```

```
  Serial.println("IP address: ");
  Serial.println(WiFi.localIP());
}

void setup() {

  setup_wifi();
  voneClient.setup();

  //sensor
  pinMode(motionSensor, INPUT);
  attachInterrupt(digitalPinToInterrupt(motionSensor),
detectsMovement, RISING);
}

void loop() {

  if (!voneClient.connected()) {
    voneClient.reconnect();
    String errorMsg = "PIRsensor Fail";
    voneClient.publishDeviceStatusEvent(PIRsensor, true);
  }
  voneClient.loop();

  unsigned long cur = millis();
  if (cur - lastMsgTime > INTERVAL) {
    lastMsgTime = cur;

    now = millis();
    // Turn off the LED after the number of seconds defined in the
timeSeconds variable
    if(startTimer && (now - lastTrigger > (timeSeconds*1000))) {
      startTimer = false;
    }

    voneClient.publishTelemetryData(PIRsensor, "Motion",
startTimer);
}
```

PROJECT DEMO LINK: https://youtu.be/-a3kFeF28Lw