

IOT BASED SAFETY GADGET FOR CHILD SAFETY MONITORING AND NOTIFICATION

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CHAPTER 1

INTRODUCTION

1. INTRODUCTION

1.1 Project Overview

The internet of things (IoT) refers to the set of devices and system that stay interconnected with real-world sensor and to the internet. During years' Child safety is under threat and it is very important to provide a technology-based solution which will help them under panic situations and monitor them using a smart gadget. The proposed system is equipped with GSM and GPS modules for sending and receiving call and SMS between safety gadget and parental phone, the proposed system also consists of Wi-Fi module used to implement IoT and send all the monitoring parameters to the cloud for android app monitoring on parental phone. Android application can be used to track the current location of safety gadget using its location coordinates on parental phone android app and also via SMS request from parent phone to safety gadget. Panic alert system is used during panic situations and automatic SMS alert and phone call is triggered from safety gadget to the parental phone seeking for help and also monitored for plug and unplug from hand, as soon the gadget is unplugged from hand a SMS is triggered to parental phone and the alert parameter is also updated to the cloud.

1.2 Purpose

Heart-beats, temperature is monitored and the values are updated to cloud continuously for parent app monitoring. Boundary monitoring system is implemented on safety gadget with the help of BEACON technology, as soon as the safety gadget moves far away from the binding gadget an alert is provided to parent on binding gadget. The system is used to monitor the health parameters and also used for location tracking during necessary situations in safety concern.

CHAPTER 2

LITERATURE SURVEY

2.1 References

[1] Authors: M Nandini Priyanka, S Murugan, K. N. H. Srinivas, T. D. S. Sarveswararao, E. Kusuma Kumari. Title: Smart IoT Device for Child Safety and Tracking. Published in: 2019 IEEE. The system is developed using Link-It ONE board programmed in embedded C and interfaced with temperature, heartbeat, touch sensors and also GPS, GSM & digital camera modules. The novelty of the work is that the system automatically alerts the parent/caretaker by sending SMS, when immediate attention is required for the child during emergency. Merits: The parameters such as touch, temperature & heartbeat of the child are used for parametric analysis and results are plotted for the same. Demerits: To implement the IoT device which ensures the complete solution for child safety problems.

[2] Authors: N.Senthamilarasi at 2019 J. Phys.: Conf. Ser. 1362 012012 :
The aim of this work is to develop a wearable device for the safety and protection of childrens. This objective is achieved by the analysis of physiological signals in conjunction with body position. The physiological signals that are analyzed are galvanic skin resistance and body temperature. Body position is determined by acquiring raw accelerometer data from a triple axis accelerometer. Acquisition of raw data is then followed by activity recognition which is a process of employing a specialized machine learning algorithm. Real-time monitoring of data is achieved by wirelessly sending sensor data to an open source Cloud Platform. Analysis of the data is done on MATLAB simultaneously. 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 mean sending notifications/alerts to designated individuals.

[3] Authors: Aditi Gupta, Vibhor Harit. Published in: 2016 IEEE. Title: Child Safety & Tracking Management System by using GPS. This paper proposed a model for child safety through smart phones that provides the option to track the location of their children as well as in case of emergency children is able to send a quick message and its current location via Short Message services. Merits: The advantages of smart phones which offers rich features like Google maps, GPS, SMS etc. Demerits: This system is unable to sense human behavior of child.

[4] Authors: Dheeraj Sunehera, Pottabhatini Laxmi Priya. Title: Children Location Monitoring on Google Maps Using GPS and GSM. Published in: 2016 IEEE. This paper provides an Android based solution for the parents to

track their children in real time. Different devices are connected with a single device through channels of internet. The concerned device is connected to server via internet. The device can be used by parents to track their children in real time or for women safety. The proposed solution takes the location services provided by GSM module. It allows the parents to get their child's current-location via SMS. Merits: A child tracking system using android terminal and hoc networks. Demerits: This device cannot be used in rural areas.

[5] Authors : Dheeraj Sunehera,Pottabhatini Laxmi Priya Published in: 2016 IEEE :
This paper provides an Android based solution for the parents to track their children in real time. Different devices are connected with a single device through channels of internet. The concerned device is connected to server via internet. The device can be used by parents to track their children in real time or for women safety. The proposed solution takes the location services provided by GSM module. It allows the parents to get their child's current-location via SMS. A child tracking system using android terminal and adhoc network This device cannot be used in rural areas.

2.2 Problem Statement Definition

Create a problem statement to understand your customer's point of view. The Customer Problem Statement template helps you focus on what matters to create experiences people will love.

A well-articulated customer problem statement allows you and your team to find the ideal solution for the challenges your customers face. Throughout the process, you'll also be able to empathize with your customers, which helps you better understand how they perceive your product or service.

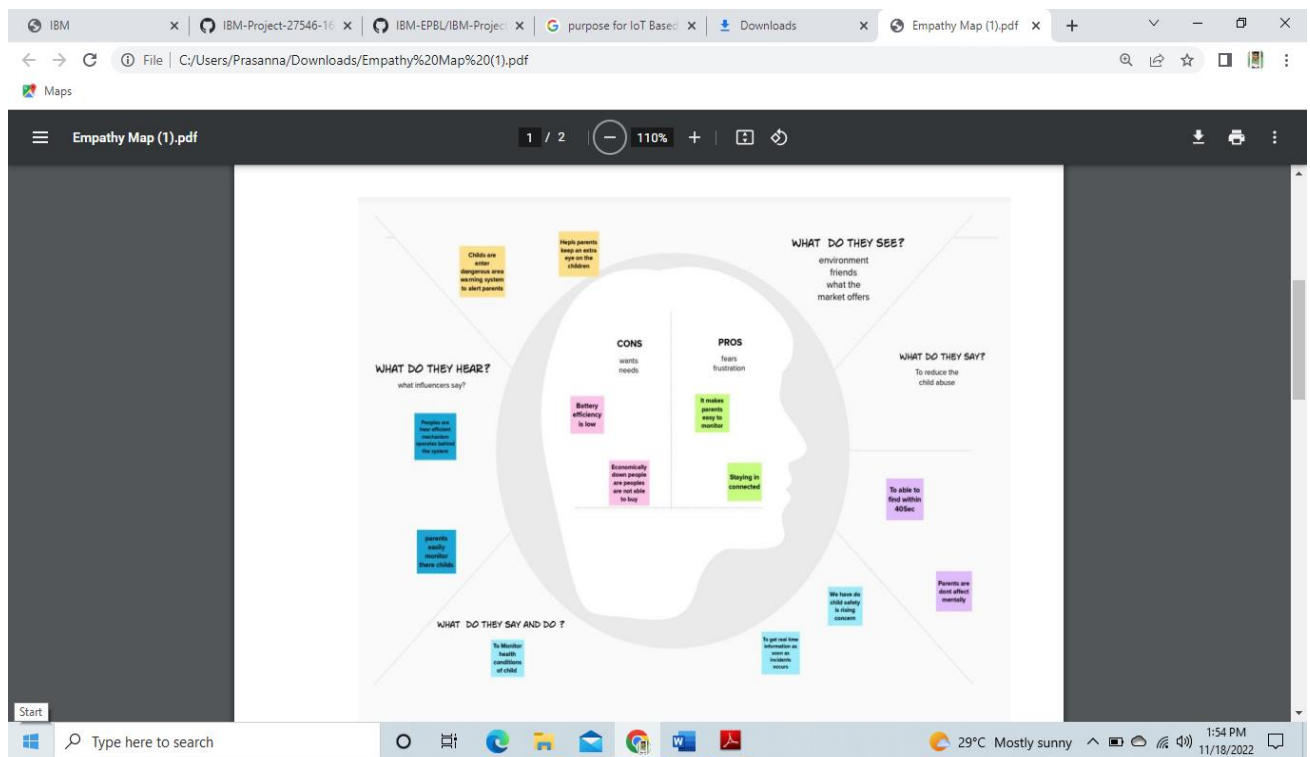


Problem Statement (PS)	I am (Customer)	I'm trying to	But	Because	Which makes me feel
PS-1	Parent	Take care of child	I can't look after him/her after he/she leaves me	There is no application for tracking him/her	Worried, Nervous
PS-2	Child	Give information about my where abouts to my parents frequently	I can't give	I tend to forget	Worried

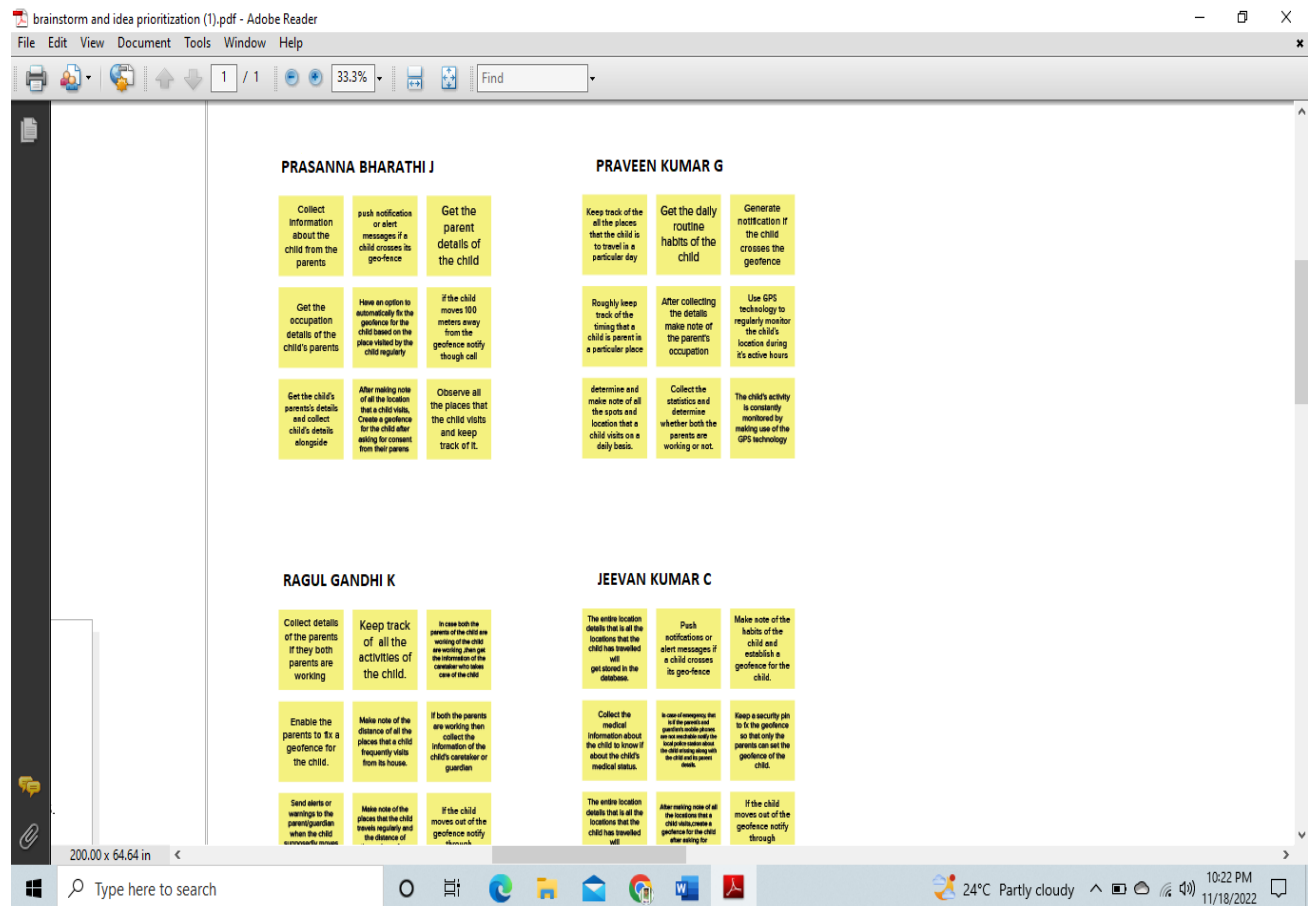
CHAPTER 3

IDEATION & PROPOSED SOLUTION

3.1 Empathy Map Canvas



3.2 Ideation & Brainstorming



3.3 Proposed Solution

The block diagram of the proposed child safety device. It consists of inbuilt Wi-Fi, GSM, GPS and Bluetooth modules. The link it one board is similar to the Arduino board and it is termed as all-in-one prototyping board for safety and IoT devices. The link it one is a robust development board for the hardware and also used for industrial applications. Different components such as temperature sensor, heartbeat sensor, panic button, contact switch are connected to the link it ONE board along with built in GSM, GPS modules. Safety gadget consists of BEACON and BLE packet is transmitted through it, this packet is received by binding gadget which has BLE receiver module, the packet usually contains information such as identification number, signal strength

etc. Temperature is one of the most commonly measured variables. For measuring body temperature of the child DS18B20 temperature sensor is used. The heartbeat sensor is used in the proposed system for measuring the pulse rate. There is a heartbeat/pulse sensor which is combined to simple optical heart rate sensor with amplification and nullification circuitry making it is fast and easy to get reliable pulse reading. The GSM/GPRS block is activated with a SIM card on the board. They mainly differ based on bandwidth and RF carrier frequency.

GSM network consists of mobile station, base station subsystem network and operation subsystem. The GPS module is provided for identifying the location of the child. GPS module receives the signals from satellites. The latitude and longitude of the location can be identified by the GPS module. The device sends the monitored parameters data such as temperature and pulse rate to cloud. If any abnormalities occurs in temperature or pulse rate readings, a SMS and call triggers to the parent/caretaker mobile phone immediately and also updated to the mobile app only for the registries mobile no. We can use mobile application, cloud and database as the back end of storing and retrieving information and also a device for monitoring.

Software Specification The Arduino Software (IDE) which is an open-source and makes it easy to write the code as well as to upload in to the board. It runs on the Linux, Mac, IOS and Windows. The programs are written in Java, based on the Processing and other open-source software. This software makes the interfacing with Arduino-Uno much more reliable. The primary reason for using the GS shield as the mode of communication over Wi-Fi and Bluetooth was that this gadget was aimed at being accessible to any smartphone user.

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	the main aim of this project is to provide safety to child using smart IOT wearable gadget and android application
2.	Idea / Solution description	This research demonstrates Smart IOT device for child safety and tracking, to help the parents to locate and monitor their children. If any abnormal readings are detected by the sensor, then an SMS and phone call is triggered to the parents mobile
3.	Novelty / Uniqueness	Panic Alert System .The gadget is equipped with panic alert system feature which mainly consist of a button that is triggered only during certain abnormal/panic situations
4.	Social Impact / Customer Satisfaction	Improved safety index of places, providing Freedom for children with special need

5.	Business Model (Revenue Model)	Selling the product directly to the parent(Device with multiple subscription for tracking and notification service)
6.	Scalability of the Solution	This system can be further enhanced by installation of mini camera inside smart gadget for better security so that live footage can be seen on parental phone during panic situations

3.4 PROBLEM SOLUTION FIT

Define CS, Fit into CC	2.Jobs-to-be-done/problems	3.Triggers
<h3>1.Customer Segment(s)</h3> <p>Who is your Customer?</p> <p>The Customers are: Working parents of 2 to 5 year of kids</p> <p>Family members ,caretakers ,guardians and babysitters</p> <p>This product of use full for Handicap</p> <p>CC</p>	<p>Which jobs-to-be-done do you address for your customers? There could be more than one ,explore different side.</p> <p>Creating a geofence around the child after monitoring its activities.</p> <p>With the help of geofence ,the child's parent get a notification whenever the child crosses the geofence</p> <p>W</p>	<p>What trigger customers to act? Seeing their neighbour installing solar panels, reading about a more efficient solution in the news.</p> <p>Whenever the child crosses its geofence ,the parent gets the notification and acts accordingly.</p>

4.Emotions: before/after	5.Available Solutions	6.Customer Constraints
<p>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.</p> <p>Whenever the customer faces the problem, they tend to feel anxious, upset and worried, frightened.</p> <p>After they get to know that their child has crossed the geofence , the parent identifies the child's location using this application and feel relieved.</p> <p>CC</p>	<p>Which of the following are available to the customers when they face the problem of need to get the job done? What have they used in past to help solve and come up with better solution?</p> <p>Google maps Child's location is being monitored Google Unnecessary hassle and a cumbersome process Parent who don't have access to smart phone cannot make use of this application</p> <p>W</p>	<p>What constraints prevent your customers from taking action or limit their choices of solutions?</p> <p>The possible constraints are</p> <p>Spending power Budget</p> <p>No cash</p> <p>Network connection Available devices</p> <p>Geo Positioning System (GPS)</p>

7. Behaviour	8.channels of Behaviour	9.Problem root cause	10.Your Solution
<p>What does your customer do to address the problem and the job done? Perfected find the right solar panel installer, calculate directly usage and benefits, indirectly associated customers spend free time on volunteering work (Le. Greenpeace) After the customer gets access to the child's location, he/she can go to the specified location and find their child</p> <p>CC</p>	<p>What kind of actions do customers take online? The customer constantly monitors his/her child and gets access to their location. The customer gets a notification when something suspicious activity occurs.</p> <p>What kind of actions do customers take offline? After tracking the child's activity, the customer goes</p> <p>W</p>	<p>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</p> <p>change in regulations The root cause of this problem is that the child not informing its parents whenever it goes out. More and more children go missing and only some children are recovered. Child trafficking</p>	<p>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. The customers are the parents, guardians, caretakers and babysitters. We constantly monitor the child's movements and create a geofence for the child. Whenever the child crosses the geofence, i.e. the child goes to another location other than its usual ones, the parent gets a notification stating that his/her child has crossed the geofence, so that the parent gets alerted.</p> <p>miro</p>

CHAPTER 4

REQUIREMENTS ANALYSIS

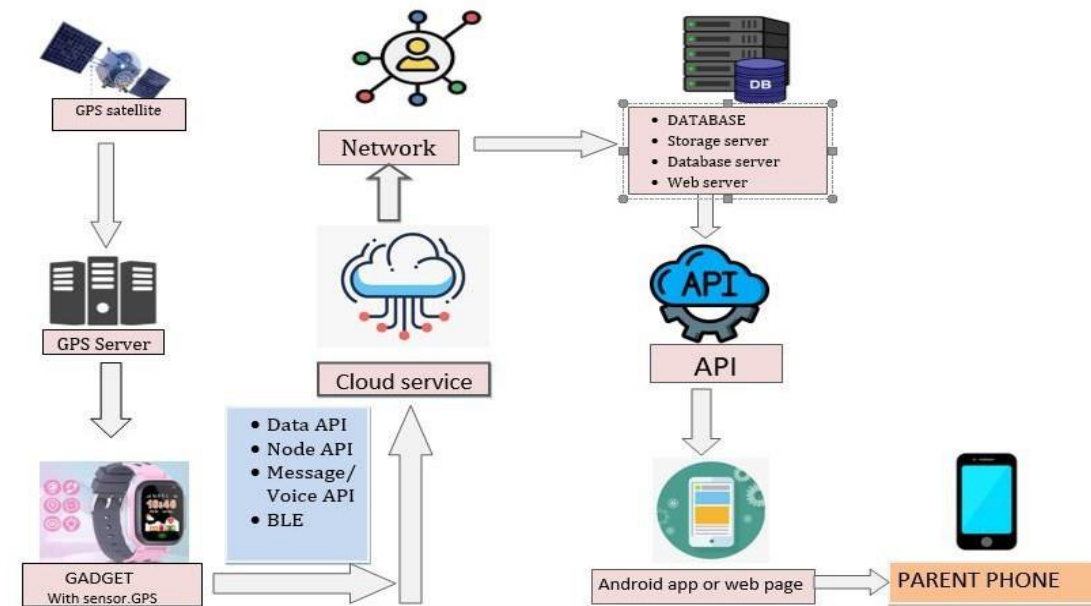
4.1 Functional requirement

FR NO.	Function Requirement	Sub Requirement(Story/Sub-Task
FR-1	User Registration	Registration through account Registration through Gmail
FR-2	User Confirmation	Confirmation via Email Confirmation via OTP
FR-3	User Notification	Notification via message
FR-4	User location check	Check through account

4.2 Non-Functional requirements

5.2 SOLUTION & TECHNICAL ARCHITECTURE

SOLUTION ARCHITECTURE:



Overview of Architecture:

An IOT system is interconnected with sensors, computing devices, and machines that are connected through a network to form one complete operation. Therefore, an IOT solution architecture is a design of the step-by-step data flow from collecting raw data to obtaining predictions or results. There is no universal standard for an IOT solution architecture, but typically this technology requires four major components, consisting of,

- ✓ Sensors,
- ✓ Gateways and Network,
- ✓ Cloud or Data Server,

✓ Applications Layer.

Technical Architecture:

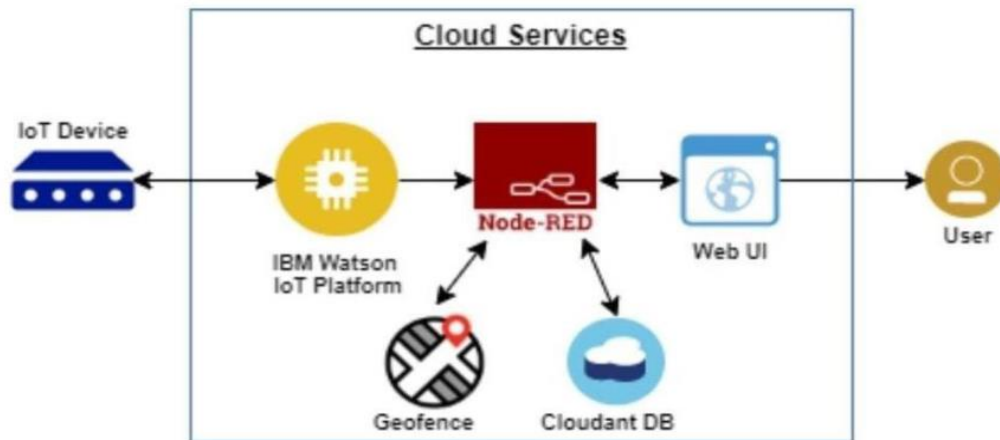


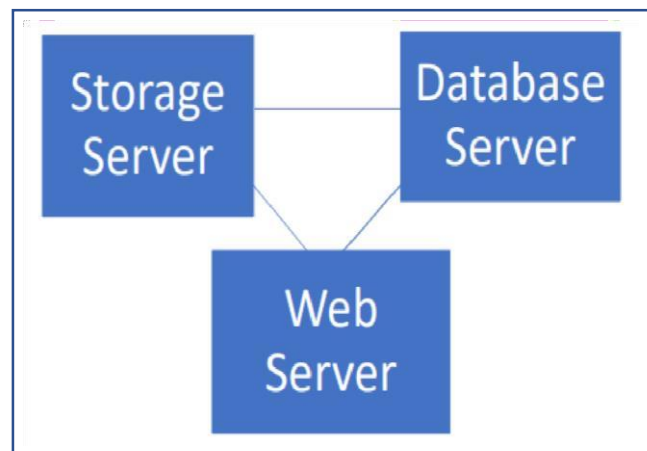
Table-1: Components & Technologies:

S. No	Component	Description	Technology
1.	User Interface	The communication protocol being used in the proposed solution might act as an interface the way like Wi-Fi, Bluetooth and ZigBee	MIT app
2.	Application Logic	The data to be collected and sent to the authenticator's(parent) via GSM providing the GPS coordinates to easily locate access and monitor the child	IBM Watson STT service, python etc

3.	Database	Data to be segregated and secured in the form of relational DBMS	MySQL
4.	Cloud Database	IBM	IBM Cloudant
5.	File Storage	File storage requirements	IBM Block Storage or Other Storage Service or Local File system

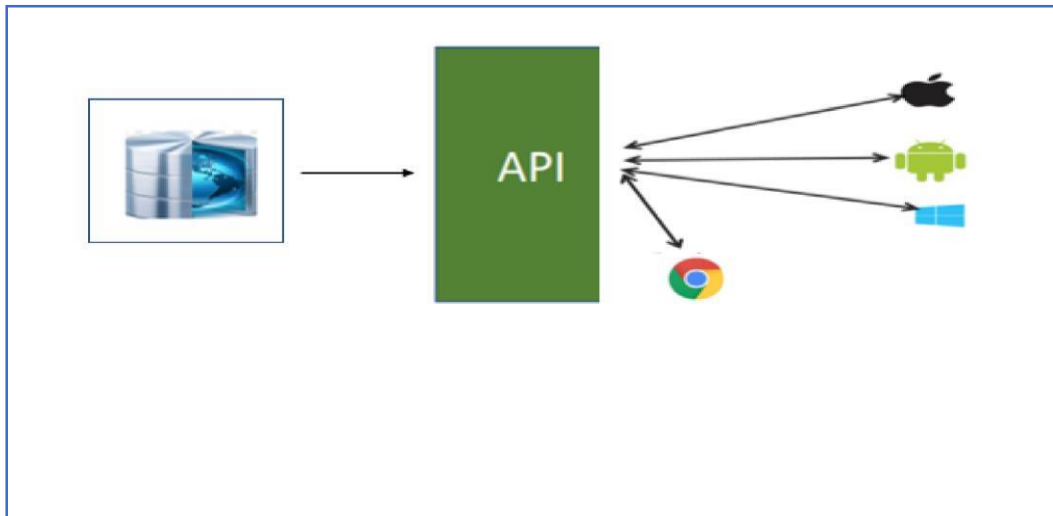
Table-2: Application Characteristics:

S. No	Characteristics	Description	Technology
1.	Open-Source Frameworks	The proposed solution being framed in the form an android application providing the end user an easy surveillance of their children (preferably users are parents)	UI/UX design development
2.	Security Implementations	The developed application should be accessible in the way it can only respond to the comments of the relevant users	Encryptions, IAM Controls.
3.	Scalable Architecture	The app format comes the way easier to handle and operate.	Not yet determined
4.	Availability	The developed solution tends to be available in the market at any time	Not yet determined
5.	Performance	Highly proper and betterment functionalities are to be ensured in the designed solution	Not yet determined



End user:

Database is stored for the future use and the web application is for fetching the information, the user wants in the client side. It acts as a server client configuration through the API.



5.3 USER STORIES

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
Customer (Web user)	Registration	USN-1	As a user, I can register for the application by entering my email, password, and confirming my password.	I can access my account / dashboard	High	Sprint-1
		USN-2	As a user, I will receive confirmation email once I have registered for the application	I can receive confirmation email & click confirm	High	Sprint-1
		USN-3	As a user, I can register for the application through Facebook	I can register & access the dashboard with Facebook Login	Low	Sprint-2
		USN-4	As a user, I can register for the application through Gmail	I can Check back whether the application is recieved	Medium	Sprint-1
	Login	USN-5	As a user, I can log into the application by entering email & password		High	Sprint-1
	Dashboard	USN-6	As a User, I can view the Dashboard	I can view the locations which is stored in the database of the child via dashboard	High	Sprint-2
Customer Care Executive		USN-7	As a customer care executive, I will detect the problems	I will detect the problems and correct them if the device face any	Medium	Sprint-3
Administrator		USN-8	As an administrator, I ensure the efficiency of the device	I will ensure efficiency, cost, etc	High	Sprint-4

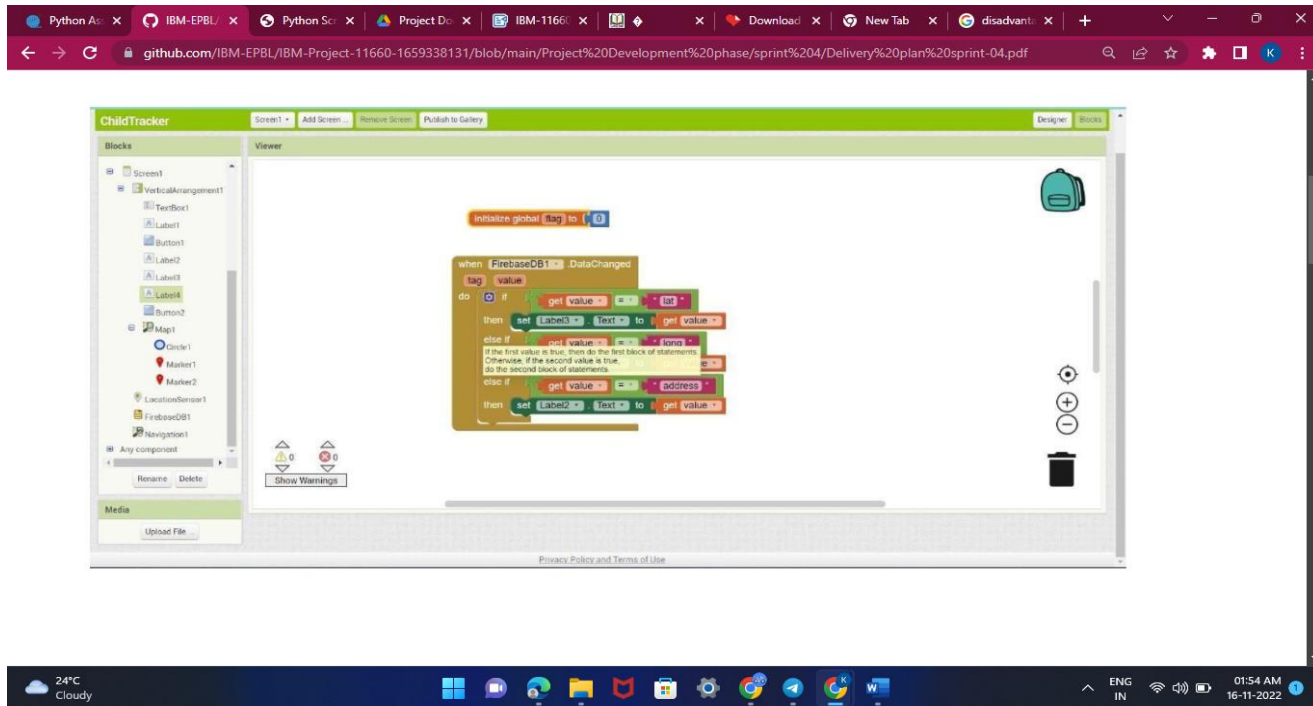
CHAPTER 6 PROJECT PLANNING & SCHEDULING

6.1 Sprint Planning & Estimation

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-1	Simulation creation	USN-1	Connect Sensors and Arduino with python code	2	High	Praveen kumar,Ragul Gandhi
Sprint-2	Software	USN-2	Creating device in the IBM Watson IoT platform, workflow for IoT scenarios using Node-Red	2	High	Prasanna bharathi, Jeevan kumar ,Praveen kumar
Sprint-3	MIT App Inventor	USN-3	Develop an application for the Smart farmer project using MIT App Inventor	2	High	Prasanna bharathi, jeevankumar, Ragul Gandhi
Sprint-3	Dashboard	USN-3	Design the Modules and test the app	2	High	Jeevan kumar, Praveen lumar
Sprint-4	Web UI	USN-4	To make the user to interact with software.	2	High	Prasanna bharathi, Ragul Gandhi

6.2 Sprint Delivery Schedule

Sprint	Total Story Points	Duration	Sprint Start Date	Sprint End Date (Planned)	Story Points Completed (as on Planned End Date)	Sprint Release Date (Actual)
Sprint-1	20	6 Days	24 Oct 2022	29 Oct 2022	20	29 Oct 2022
Sprint-2	20	6 Days	31 Oct 2022	05 Nov 2022		05 Oct 2022
Sprint-3	20	6 Days	07 Nov 2022	12 Nov 2022		12 Oct 2022
Sprint-4	20	6 Days	14 Nov 2022	19 Nov 2022		15 Oct 2022



CHAPTET 7

CODING & SOLUTIONING

```
import json
import wiotp.sdk.device
import time
```

```
myconfig = {
    "idebtity": {
        "orgId": "njg71w",
```

```

        "typeId": "NodeMCU",
        "deviceId": "12345"
    },
    "auth": {
        "token": "12345678"
    }
}

client = wiotp.sdk.device.Deviceclient(config=myconfig, logHandlers=None)
client.connect()
while True:
    name= "Smartbridge"

    #in area location
    #latitude=17.4225176
    #longitude=78.5458842

    #out area location
    latitude=17.4219272
    longitude=78.5488783
    myData={'name': name, 'lat': latitude,'lon': longitude} client.publishEvent(eventId="status",msgformat="json",
    data=mydata, qos=0, onpublish=None)
    print("Data published to IBM IOT platform :",myData)
    time.sleep(5)
    client.disconnect()

```

FEATURE 1

Algorithm :

1. Enter the credentials and hit enter (email and password).
2. If already logged in user is taken to home page
3. Else, check for validity of credentials entered using query to cloudant db.

4. If wrong credentials entered, notification displayed to user and user stays inlogin page.
5. On correct credentials , user is taken to home page.

Login checker :

```
if(msg.req==null){

    email = msg.payload.email;

}

else{

    var email = msg.req.params.email;

}

msg.enteredPassword =

msg.payload.password;

msg.payload={

    "selector":{

        "email":{

            "$eq":email

        }

    },

    "fields":["email","password"]
```

```
}
```

```
return msg;
```

FEATURE 2 : SIGNUP

Algorithm :

1. Enter the signup form fields (name , email , password , re-enter password , dateof birth) and hit enter.
2. All credentials are validated at client side.
3. Email is checked if already registered or not in the database.
4. If already registered , notification displayed. Or else, the user is taken to the successful signup page.

DATABASE SCHEME

User				Location			
name	string			lat	float		
email	string			lon	float		
password	string			description	string		
dob	date			time	datetime		
entry-type	string			entry-type	string		
Add field				Add field			

Notification			
lat	string		
lon	string		
time	string		
description	string		
Add field			

CHAPTER 8

TESTING

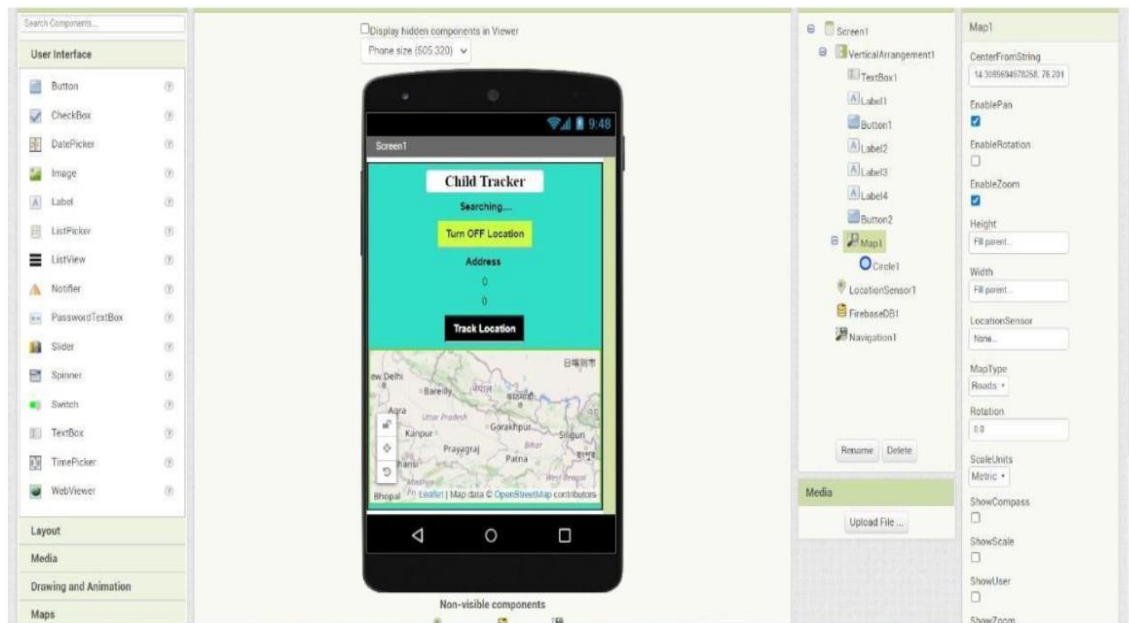
8.1 Test Cases

1. Login button click with wrong credentials entered.
2. Signup with already registered mail ID.
3. Signup with wrong form data entered.
4. Entering home page with logged out session.
5. Clicking home page buttons with logged out session.
6. Invalid data entered in change password page and requested for change in password.

8.2 USER ACCEPTANCE TESTING

S.NO	TEST CASE	REQUIRED OUTPUT	RESULT OUTPUT	STATUS
------	-----------	-----------------	---------------	--------

1	Login button click with wrong credentials	Wrong credentials entered notification	Wrong credentials entered notification	ACCEPTED
2	Signup with already registered mail ID.	Email already registered notification	Email already registered notification	ACCEPTED
3	Signup with wrong form data entered.	Wrong credentials entered notification	Wrong credentials entered notification	ACCEPTED
4	Entering home page with logged out session.	Take user to login page	Take user to login page	ACCEPTED
5	Clicking home page buttons with logged out session.	Take user to login page	Take user to login page	ACCEPTED
6	Invalid data entered in change password page and requested for change in password.	Wrong form data entered notification	Wrong form data entered notification	ACCEPTED



CHAPTER 9

RESULTS

9.1 PERFORMANCE METRICS

1. Planned value : Rs.4000
2. Actual value : Rs.1300
3. Hours worked : 50 hours
4. Stick to Timelines : 100%
5. Stay within budget : 100%
6. Consistency of the product : 75%
7. Efficiency of the product : 80%
8. Quality of the product : 80%



CHAPTER 10

ADVANTAGES AND DISADVANTAGES

ADVANTAGES :

1. Low cost.
2. Simple UI.
3. Faster response due to single page web page.
4. Capability of adding many features with ease and less cost.

DISADVANTAGES :

1. Lack of efficiency . Efficiency of the product needs to be improved.
2. Consistency of the product is not 100%.
3. Not a compact sized product. Size needs to be decreased.

CHAPTER 11

CONCLUSION

This research demonstrates Smart IoT device for child safety and tracking to help the parents to locate and monitor their children. If any abnormal readings are detected by the sensor, then an SMS and phone call is triggered to the parents mobile. Also, updated to the parental app through the cloud. The system is equipped with GSM and GPS modules for sending and receiving call, SMS between safety gadget and parental phone. The system also consists of Wi-Fi module used to implement IoT and send all the monitored parameters to the cloud for android app monitoring on parental phone. Panic alert system is used during panic situations alerts are sent to the parental phone, seeking for help also the alert parameters are updated to the cloud. Boundary monitoring system is implemented on safety gadget with the help of BEACON technology, as soon as the safety gadget moves far away from the BLE listener gadget an alert is provided to itself.

CHAPTER 12

FUTUER SCOPE

The product can include many other additional features like checking the weather forecast of the child location, interacting with the child etc. If we improve the efficiency of the code and reduce the size of our product, the market will be able to find a new child tracker gadget with low cost and high quality.

CHAPTER 13

APPENDIX

INTERNET OF THINGS

The **Internet of things (IoT)** describes physical objects (or groups of such objects) with sensors, processing ability, software, and other technologies that connect and exchange data with other devices and systems over the Internet or other communications networks. Internet of things has been considered a misnomer because devices do not need to be connected to the public internet, they only need to be connected to a network and be individually addressable. The field has evolved due to the convergence of multiple technologies, including ubiquitous computing, commodity sensors, increasingly powerful embedded systems, and machine learning. Traditional fields of embedded systems, wireless sensor networks, control systems, automation (including home and building automation), independently and collectively enable the Internet of things. In the consumer market, IoT technology is most synonymous with products pertaining to the concept of the "smart home", including devices and appliances (such as

lighting fixtures, thermostats, home security systems, cameras, and other home appliances) that support one or more common ecosystems, and can be controlled via devices associated with that ecosystem, such as smartphones and smart speakers. IoT is also used in healthcare systems. There are a number of concerns about the risks in the growth of IoT technologies and products, especially in the areas of privacy and security, and consequently, industry and governmental moves to address these concerns have begun, including the development of international and local standards, guidelines, and regulatory frameworks.

MQTT

MQTT is an OASIS standard messaging protocol for the Internet of Things (IoT). It is designed as an extremely lightweight publish/subscribe messaging transport that is ideal for connecting remote devices with a small code footprint and minimal network bandwidth. MQTT today is used in a wide variety of industries, such as automotive, manufacturing, telecommunications, oil and gas, etc.

NODE RED

Node-RED is a programming tool for wiring together hardware devices, APIs and online services in new and interesting ways. It provides a browser-based editor that makes it easy to wire together flows using the wide range of nodes in the palette that can be deployed to its runtime in a single-click.

Node-RED provides a browser-based flow editor that makes it easy to wire together flows using the wide range of nodes in the palette. Flows can be then deployed to the runtime in a single-click. JavaScript functions can be created within the editor using a rich text editor. A built-in library allows to save useful functions, templates or flows for re-use.

IBM WATSON IOT PLATFORM

IBM Watson IoT Platform for Bluemix provides a versatile toolkit that includes gateway devices, device management, and powerful application access. By using Watson IoT Platform, you can collect connected device data and perform analytics on real-time data. The IBM Watson IoT Platform is a fully managed, Cloud-hosted service that provides device management capabilities as well as data collection and management in a time series format. As part of IBM's Platform as a Service offering, IBM Bluemix, you can use the IBM Watson IoT Platform to rapidly build IoT apps from the catalog of services available in IBM Bluemix. You can choose from such IoT app options as storage services, rules, analytics services, stream analytics, machine learning, visualization, and user apps (Web or mobile). You also can embed cognitive capabilities in your IoT apps by using IBM Watson services available in IBM Bluemix.

CLOUDANT

A fully managed, distributed database optimized for heavy workloads and fast-growing web and mobile apps, IBM Cloudant is available as an IBM Cloud® service with a 99.99% SLA. Cloudant elastically scales throughput and storage, and its API and replication protocols are compatible with Apache Couch DB for hybrid or multi cloud architecture.

Source Code

```
from http import client
import json
import wiotp.sdk.device
import time
myConfig = {
    "identify":{
        "orgId":"njg71w",
        "typeId":"NodeMCU",
        "deviceId":"12345"
    },
    "auth":{
        "token":"12345678"
    }
}
client = wiotp.sdk.device.DeviceClient(config=myConfig, logHandlers=None)
client.connect()
while True:
    name= "Smartbridge"
    #in area location
    #latitude=17.4225176
    #longitude 78.5458842
    #out area location
    latitude=17.4219272
    longitude=78.5488783
    myData={'name': name, 'lat': latitude, 'lon': longitude}
    client.publishEvent(eventId="status", msgFormat="json", data=myData, qos=0,
onPublish=None)
    print("Data published to IBM IOT platfrom: ",myData)
```

```
time.sleep(5)
```

```
client.disconnect().
```

Demo video link:

https://drive.google.com/drive/folders/1g9c-W9uyxSHpWdQiWsxDu9vxZY5KzEae?usp=share_link