PERSONALIZED LEARNING FRAMEWORK
BASED RECOMMENDATION SYSTEM

IBM NALAIYATHIRAN (HX8001)
PROJECT REPORT

Submitted by

BALAMURUGAN S	**211719106006**
KIRUBHA SHREE P	**211719106036**
DHANUSH	**211719106012**
HARISH R	**211719106023**

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IN

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RAJALAKSHMI INSTITUTE OF TECHNOLOGY

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ANNA UNIVERSITY: CHENNAI 600 025

BONAFIDE CERTIFICATE

Certified that this project report **"IOT Based Safety Gadget for Child Safety Monitoring & Notification"** is the bonafide work of "BALAMURUGAN S (211706006), KIRUBHA SHREE P (211718104051), DHANUSH G (211719106012), HARISH R (211719106023) who carried out the project work under my supervision.

SIGNATURE:

Dr. S.MANJULA,

M.E., Ph.D,

HEAD OF THE DEPARTMENT,

Dept. of Electronics and
communication Engg.,

Rajalakshmi Institute of

Technology,

Kuthambakkam Post,

Chennai - 600 124

SIGNATURE:

Mr. L. FRANKLIN TELFER,

M.E.,

ASST. PROFESSOR, (MENTOR)

Dept. of Electronics and
communication Engg.,

Rajalakshmi Institute of

Technology,

Kuthambakkam Post,

Chennai - 600 124

The viva-voce is held on _____.

INTERNAL EXAMINER   **EXTERNAL EXAMINER**

INTRODUCTION

Child safety is a challenging problem nowadays due to antisocial elements in the society. The crime rate is day by day increasing. Schools and working places need high surveillance for ensuring the safety among children. Smart Gadget major role for ensuring the safety, where some mobile based applications provide alert systems. During the emergency, Application alert the control room of nearby police station or caretakers of children. The literature shows that location tracking devices are available in the market, but it does not provide the complete solution to the problem. The solution to this problem is to design an IoT device, which senses the child's location and environment and during emergency, it should send the alert to the parents automatically.

1.1 PROJECT OVERVIEW

Child tracker helps the parents in continuously monitoring the child's location. They can simply leave their children in school or parks and create a geofence around the particular location. By continuously checking the child's location notifications will be generated if the child crosses the geofence. Notifications will be sent according to the child's location to their parents or caretakers. The entire location data will be stored in the database.

1.2 PURPOSE

IoT Based Safety Gadget for Child Safety Monitoring & Notification plays a key role inproviding better care for the lost children until they reconvene with the parents. In this present era, most of the wearable devices today are designed based on the location, activity temperature, pressure, etc of the child and in form the parents via GPS. Therefore it is intended to use voice call as the way of communication between the parent mobile and child' swearable device. The system operates on the microcontroller board and the functionsofsending and receiving notifications,calls,voice messages via GPS.

2. LITERATURE SURVEY

2.1 EXISTING PROBLEM

GPS and GSM child tracking system using smart phone, But it is not necessary to child have the with him. Now, we design Arduino based child tracking system using GPS and GSM which is economical. There are various researches in improving the accuracy of GPS point . Now we can simply find the child location by using the Google Map. Google Map Web mapping service developed by Jens Eilstrup Rasmussen. It provides turn by turn navigation along dedicated parking assistance feature. It is primarily available on the mobile**.**

2.2 REFERENCE

[1]Name of Author: M Nandini Priyanka, S Murugan, K N H Srinivas,
 T D S Sarveswararao,E Kumari.
Published By: Blue Eyes Intelligence Engineering & Sciences Publication
[2] Published By: Copyright © 2021 The Authors. Published by Atlantis Press International B.V. an open access article distributed under the CC BY-NC 4.0 license -http://creativecommons.org/licenses/by-nc/4.0/.
[3] Name of Author: Dipali Badgujar, Neha Sawant,
Prof. Dnyaneshwar Kundande
Published By: INTERNATIONAL RESEARCH JOURNAL OF ENGINEERING AND TECHNOLOGY (IRJET)

2.3 PROBLEM STATEMENT DEFINITION

1. Smart IOT Device for Child Safety and Tracking

A smart IoT device for child safety and tracking is developed to help the parents to locate and monitor their children. 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. The parameters such as touch, temperature &heartbeat of the child are used for parametric analysis and results are plotted for the same. The above system ensures the safety and tracking of children.

## 2. IoT-based Child Security Monitoring System

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. Through information obtained, a smart band have been proposed to monitor the safety of children. By this, parents know what is happening remotely and can take actions if something goes wrong. The future improvements of this device will be adding functions and software to make it works like a phone such as messaging, gallery, Google, YouTube, meanwhile, adding more child security features so that child safety is guaranteed.

3. Smart and Secure IoT based Child Monitoring System

In this focusing on child remote monitoring system also we are using the radar devices as well as obstacle sensors, which will detect the alert when the child enters the danger zone or else he/she is approaching towards harmful object, then alert will be given to the caretaker through the mobile using an alarm or notification. For sensing purpose we are using Waterproof Ultrasonic Obstacle Sensor which are placed in the simple locket that is given to the baby so that locket will give alert to the caretaker through the mobile and for battery backup we are using solar panel through which the energy will get stored in the care taker's shoes and this energy will be dependent on the steps covered by the care taker. In this proposed system a general method for rapid peak detection is used for depth/height measurement. First, the signals curve is equal divided and maximum and minima values in each segmentation are collected. The repeated maximum and minima values are removed and all fake peaks are merged in the case of ensuring true peaks remained. Experimental results showed that: compared with traditional methods, the proposed method is more accurate and faster in peak detection, and suitable for a variety of waveforms

3.IDEATION & PROPOSED SOLUTION
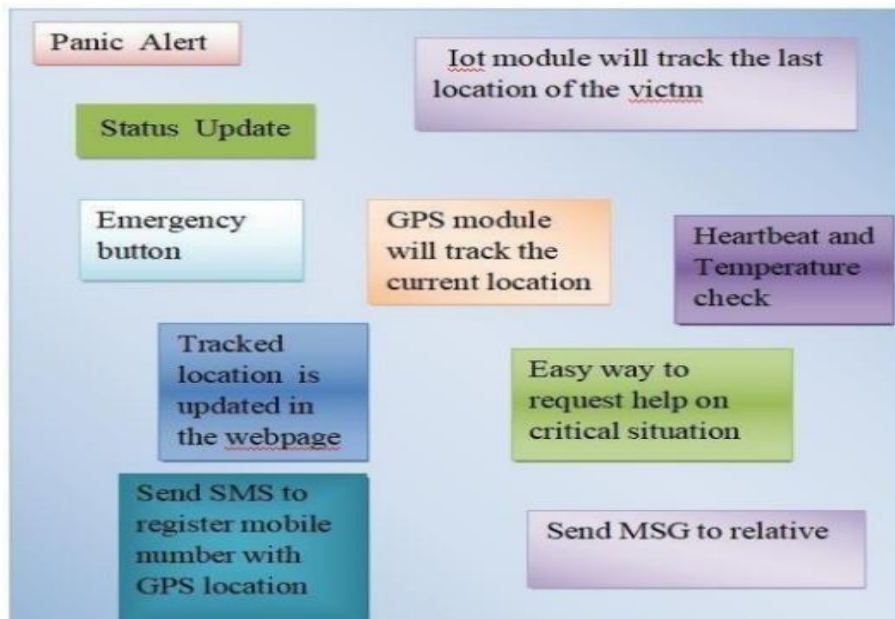
3.1EMPATHY MAP CANVAS
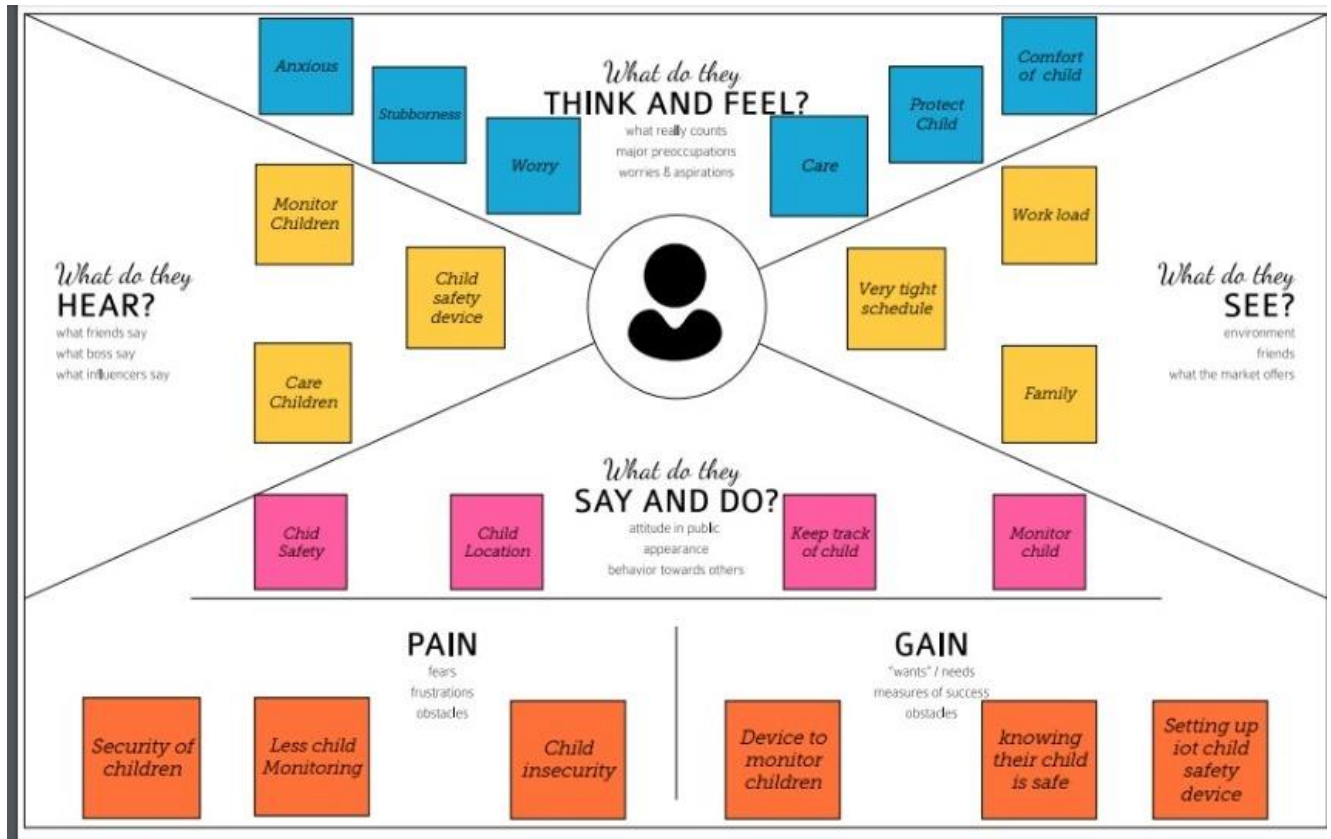
3.2 IDEATION & BRAINSTORMING

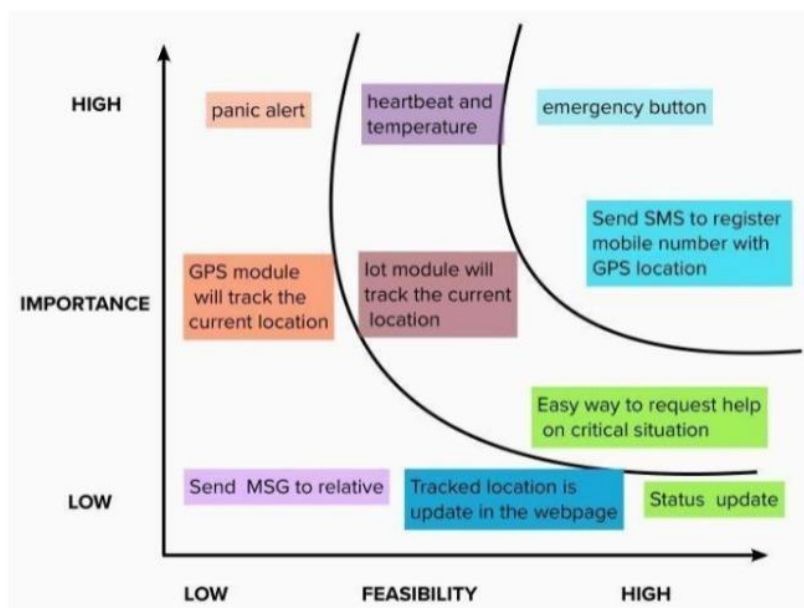Step-1:Team Gathering, Collaboration and Select the Problem:

Problem statement:

| Problem Statement	I Am (customer)	I'm Trying to	But	Because	Which makesme feel
PS-1	Parents	Protect child	Network Issue (Limited Surronding)	The device is not flexible to any place it have limited Surrounding only	No security
PS-2	Parents	Protect child	Battery Failure	The device Is not long time use	No Safe

Step-2: Brainstorm, Idea Listing and Grouping:

Panic Alert

Iot module will track the last location of the victm

Status Update

Emergency button

GPS module will track the current location

Heartbeat and Temperature check

Tracked location is updated in the webpage

Easy way to request help on critical situation

Send SMS to register mobile number with GPS location

Send MSG to relative

Step-3: Idea Prioritization:

HIGH

panic alert

heartbeat and temperature

emergency button

Send SMS to register mobile number with GPS location

IMPORTANCE

GPS module will track the current location

Iot module will track the current location

Easy way to request help on critical situation

LOW

Send MSG to relative

Tracked location is update in the webpage

Status update

LOW   FEASIBILITY   HIGH

3.3 PROPOSED SOLUTION

S.No.	Parameter	Description
1	ProblemStatement(Problemt obesolved)	Now a days, parents concern more about serious cases such as missing children, abductionandabuse.They can not si t with their children or 24*7 hours tosecure their children and monitor thechildren'sactivities.
2	Idea/Solutiondescription	Create a Child tracker which helps theparents with continuously monitoring thechild'slocation.Thenotificationwillbesentaccor ding to the child's location to theirparents or caretakers. The entire locationdatawillbestoredinthedatabase.
3	Novelty/Uniqueness	The novelty of the work is that the systemautomaticallyalertstheparent/caretakerbyse nding notification,when immediateattention is required for the child duringemergency
4	SocialImpact/Customer Satisfaction	Make children parents more assure abouttheirkid'ssecurity,wehaveafeatureinourdevi ce called Geo-Fence. Geo-Fencingfeatureallowsyoutomarkaparticularareaas safe-zone. Whenever your child crossesthat specific area, you will get an instantnotificationonyourphone.
5	BusinessModel (RevenueModel)	● Easytouse
		● Lowcost
		● Weightless
		● Compatible
6	Scalability of the Solution	● Gadgetensuresthesafetyandtrackingofthechild ren
		●Parentsneednotworryabouttheirchildren.

3.4 PROBLEM SOLUTION FIT
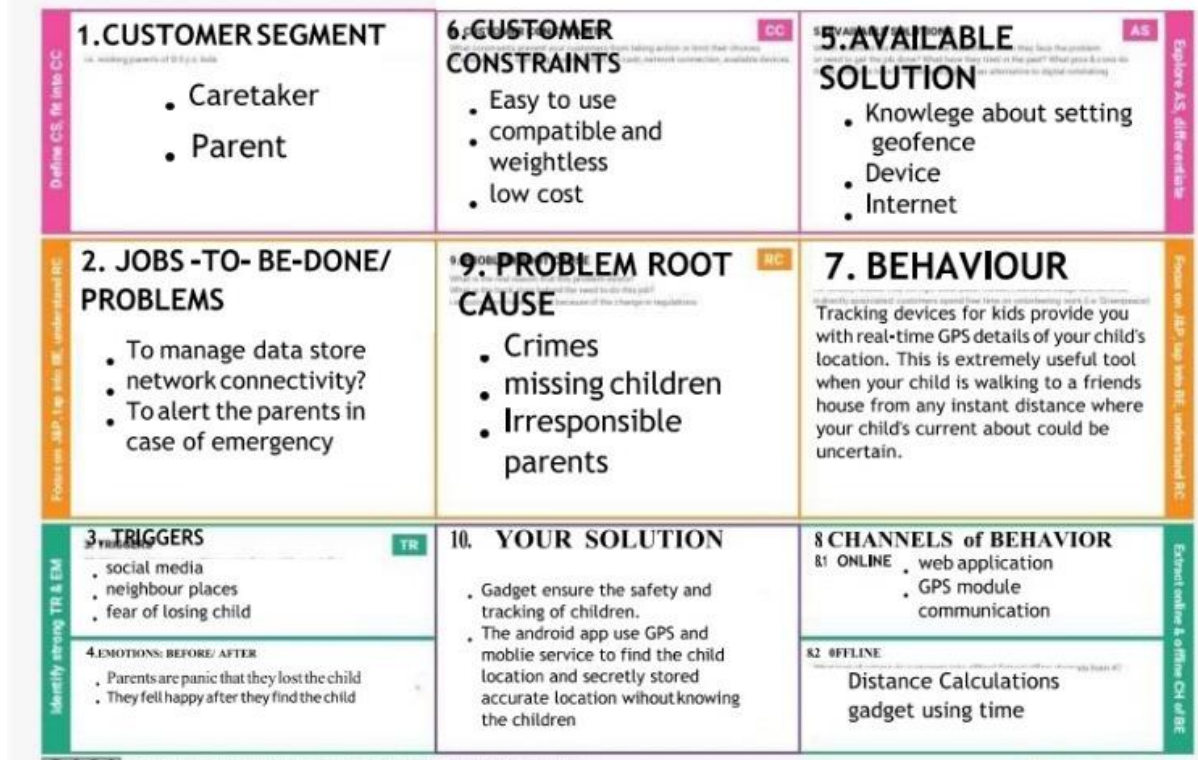
4.REQUIREMENT ANALYSIS

4.1 FUNCTIONAL REQUIREMENT
Functional Requirements:

Following are the functional requirements of the proposed solution.

SI No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
1.	User Registration	Registration through Form Registration through Gmail Registration through LinkedIn
2.	User Confirmation	Confirmation via Email Confirmation via OTP
3.	Authentication	Only the authorized person for that product will know Ensures security
4.	User Interface	The Inventor Able to see the location of children when they are out of geofence will also track the exact information about the children
5.	Notification	Notified through mobile and mail

Non-functional Requirements:

Following are the non-functional requirements of the proposed solution.

SI No.	Non-Functional Requirement	Description
1.	Usability	Accessed through Mobile App Showing location (latitude and longitude) of child and also other measures to ensure safety like notification. Portable and comfortable to use.
2.	Security	Database security and ensuring the safety of the product while in use.
3.	Reliability	Once logged in, the webpage is available until logging out of the app, and a comfortable platform or creates a good environment for users to use.
4.	Performance	Each page must load within 4 seconds and database needs to be updated every few seconds and a notification must be sent immediately if seen a change in the child's location.
5.	Availability	The data must be available whenever needed and the product should be able to use at any time.
6.	Scalability	The process must be flexible to use at anytime and versatile.

5.PROJECT DESIGN

5.1 CUSTOMER JOURNEY

| **Entice**	**Enter**	**Engage**	**Exit**	**Extend**
How does someone initially become aware of this process?	What do people experience as they begin the process?	In the core moments in the process, what happens?	What do people typically experience as the process finishes?	What happens after the experience is over?
Design an App for the respect parents or Guar / Can create a feature called Geofence to set boundaries for the child	Begins to alerts the parents of the Child's location and options will be available for them to set	Frequently it updates the location and activities of the Child	an alert will be sent when the hild removes the device	A detailed review will be available for the parents about the child's activity
Child's location will be updated / interaction between the parents and the Child	they can be create a geofence	The Condition of the caretakers and the guardians regarding the safety of the Child is met	The parents will receive the alrets and notification of their Child	The location verification and notification will be cut off in case of no internet or GPS
Pevention of Child being geting lost / Frequent Monitoring	The respected Parents or Guardians has to click on the begin Monitoring button to start Monitoring	Ensure the saftly of child	Notifies in the case of child crossing the Geofence	Sends the locationof the Child along with the Geofence
Safty of the Child is ensured...Since they are constantly monitored	The tracking device is very useful in determining the loaction of the Child	Frequently updates itself and fixing the bugs that arises	Parents wont be tensed or Worried...Since they Know Where there Child	The requested Parents or the guardians will get their Child back
App wont be availabe due to Server issuse or any other technical issues	Entering so many details is a troublesome process	Constant internet connecttiviy is required as it updates the Child to the Parents	People usually find it as a tedious process as it takes a long time	sometimes due to issues or any other issues that arises the caretaker wont be able to view the location the Child
In case of the respected parents or Guardians being not present / Notify me when the Child leaves the geofence	Another method is sending alert messages r calls and they can also view the video footage	At times when there is no caretaker near the child	At the process ends the parents will pick up their Child	Location and activity details are stored

5.2 DATA FLOW DIAGRAM & USER STORY
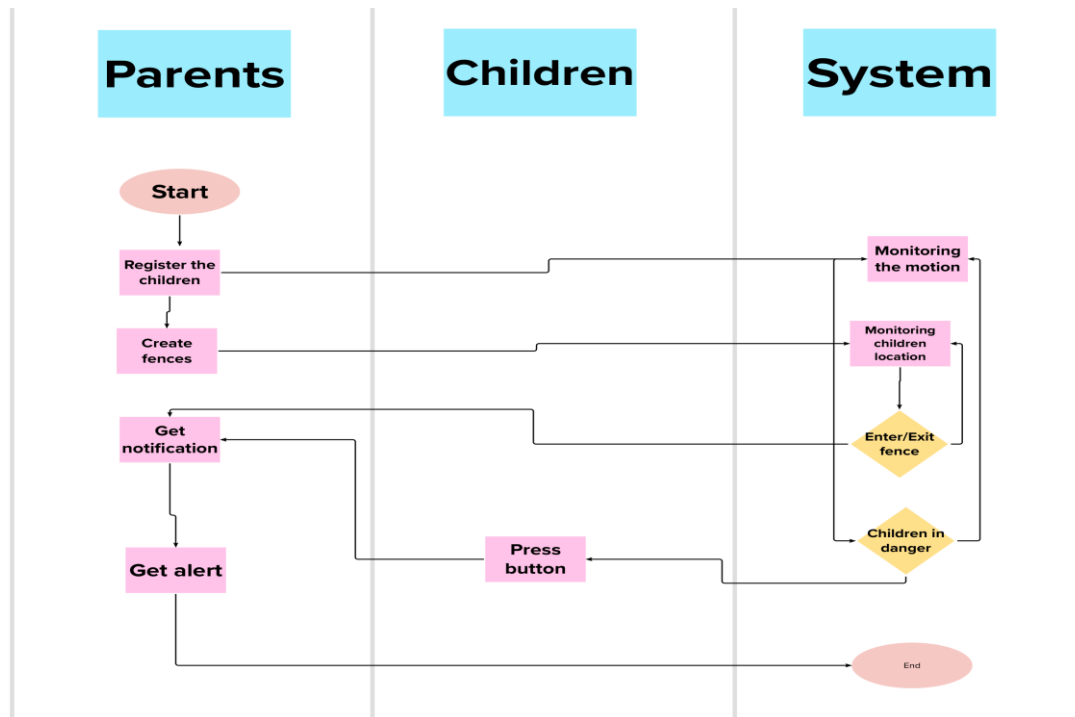
User Stories

Use the below template to list all the user stories for the product.

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
Customer (Parents Mobile user)	Registration	USN-1 (Father)	I can access the location of my children using the credentials provided as a Father.	I can access my account / dashboard and receive confirmation email & click confirm	High	Sprint-1
		USN-2 (Mother)	I can access the location of my children using the credentials provided as a Mother.	I can access my account / dashboard and receive confirmation email & click confirm	High	Sprint-1
		USN-3 (Guardian)	I too can monitor the children's activities using safety gadget monitoring system.	I can access my account / dashboard and receive confirmation email & click confirm	Medium	Sprint-2
	Login	USN-4 (if required)	Same function to be performed as in previous cases.	Same function to be performed as in previous cases.	Not Yet Determined	---------
	Dashboard	USN-5 (if required)	Same function to be performed as in previous cases.	Same function to be performed as in previous cases.	Not Yet Determined	-----------

5.3 SOLUTION &TECHNICAL ARCHITECTURE

Technical Architecture:
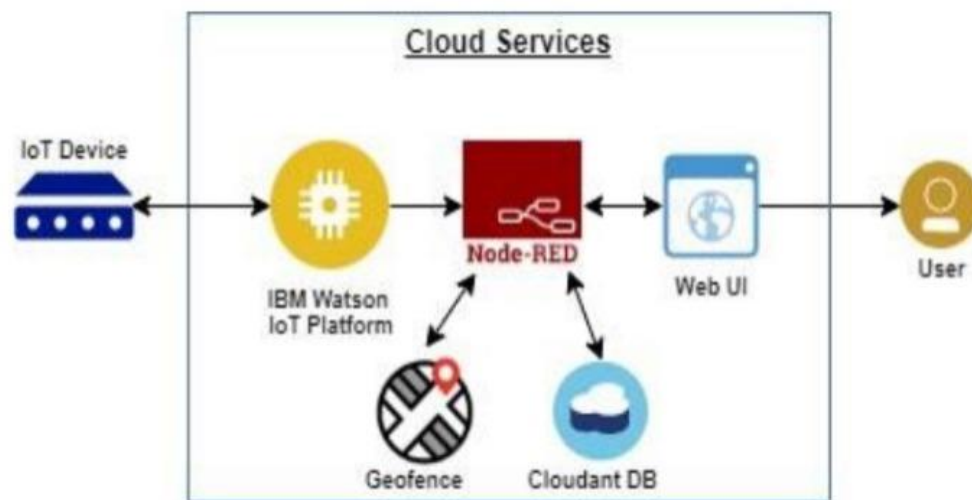
Components & Technologies:

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 Filesystem
6	External API-1	To access the children location	GPS location monitoring etc
7	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud Local Server Configuration	Cloud Foundry

6.PROJECT PLANNING & SCHEDULING
Product Backlog, Sprint Schedule, and Estimation (4 Marks)
Use the below template to create product backlog and sprint schedule

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-1	User Registration	USN-1	Registration through website Registration through app	2	High	Balamurugan Kirubha Shree Dhanush Harish
Sprint-1	User Confirmation	USN-2	Confirmation via Email Confirmation via OTP	1	High	Balamurugan Kirubha Shree Dhanush Harish
Sprint-2	User login	USN-3	Setting up User Id and password	2	Low	Balamurugan Kirubha Shree Dhanush Harish
Sprint-1	App permission	USN-4	Grant the permission for the app to access location, contact etc..	2	Medium	Balamurugan Kirubha Shree Dhanush Harish
Sprint-1	Interface with the Device	USN-5	Connecting the device with the registered app with the device ID.	1	High	Balamurugan Kirubha Shree Dhanush Harish

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-2	Setting Geo-location	USN-6	Creating the Geo-location area in the map	2	Low	Balamurugan Kirubha Shree Dhanush Harish
Sprint-3	Database	USN-7	Location history is stored in the cloud. Can be accessed from the dashboard.	2	High	Balamurugan Kirubha Shree Dhanush Harish
Sprint-4	Tracking location	USN-8	Tracking the location through app. Tracking the location through website.	2	High	Balamurugan Kirubha Shree Dhanush Harish

Project Tracker, Velocity & Burndown Chart: (4 Marks)

| 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-22	29-Oct-22	20	29-Oct-22
Sprint-2	20	6 Days	31-Oct-22	05-Nov-22	20	31-Oct-22
Sprint-3	20	6 Days	07-Nov-22	12-Nov-22	20	07-Nov-22
Sprint-4	20	6 Days	14-Nov-22	19-Nov-22	20	14-Nov-22

Velocity:

Imagine we have a 10-day sprint duration, and the velocity of the team is 20 (points per sprint).
Let's calculate the team's average velocity (AV) periteration unit (story points per day)

$$AV = \frac{sprint\ duration}{velocity} = \frac{20}{10} = 2$$

Burndown Chart:

A burn down chart is a graphical representation of work left to do versus time. It is often used in agile software development methodologies such asScrum. However, burn down charts can be applied to any project containing measurable progress over time.
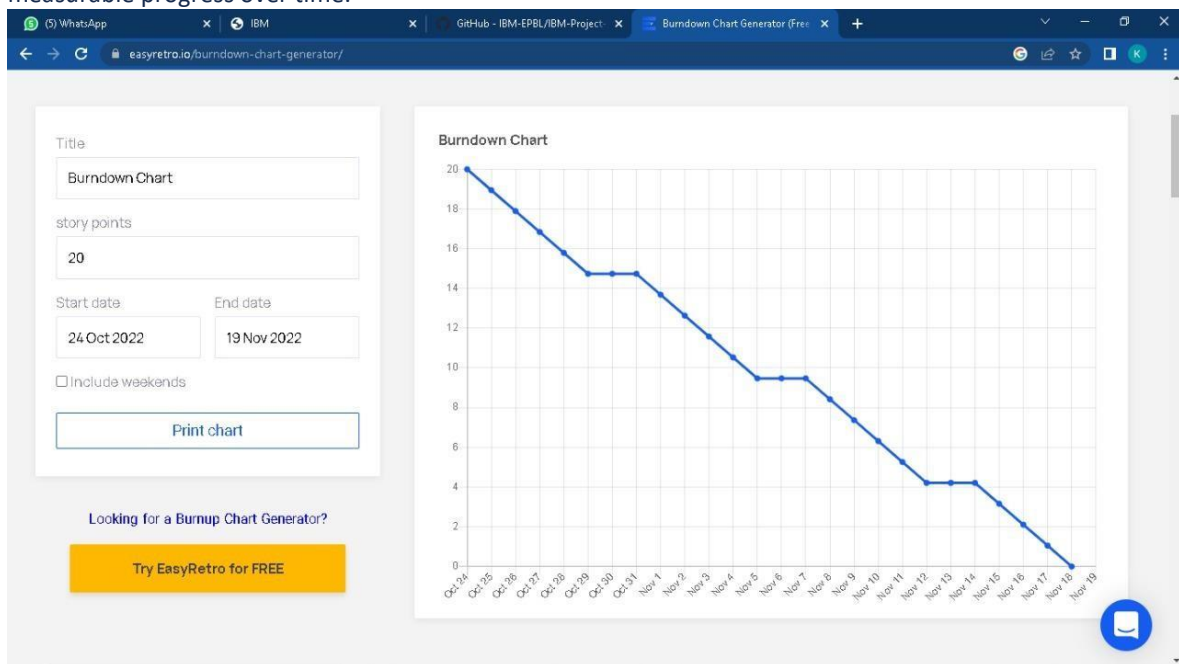
7.CODING & SOLUTIONING

7.1SPRINT-1

REGISTRATION

HTML CODE:

```
<!DOCTYPE html>

<html lang="en">

<head>

    <meta charset="UTF-8">

    <meta http-equiv="X-UA-Compatible" content="IE=edge">

    <meta name="viewport" content="width=device-width, initial-scale=1.0">

    <link rel="stylesheet" href="/LOGIN.css">

    <title>Sign Up</title>

    <script>

        if (window.location.hostname !== "localhost") {if

            (location.protocol !== "https:") {

                location.replace(
```

```
            `https:${location.href.substring(location.protocol.length
            )}`
        )
    }
}
```

</script>
<script src="./localforage.js"></script>
</head>
<body>
  <div class="wrapper">
    <div class="loginContainer">
      Login to Continue
      <div class="traditionalLoginContainer">
        <form class="signupForm" action="/" method="post">
          <input type="text" name="firstName" placeholder="First Name" id="firstName">
          <input type="text" name="lastName" placeholder="LastName" id="lastName">
          <input type="text" name="username" placeholder="User Name" id="username">
          <input type="email" name="email" placeholder="Email" id="email">
          <input type="password" name="password" placeholder="Password" id="password">

```html
<input class="loginButton" type="submit" value="Sign
Up">

    </form>
</div>
<div class="loginWithFireContainer">
    <button type="button" class="fire" title="Login with
SAFETY" id="fire">Login with SAFETY</button>

        </div>

        <a class="hyperLink" href="/login">Already have an Account?
Login ↗</a>

        </div>

    </div>

    <script>

        // Necessary for Fire OAuth to Functionconst

        fireBroadcastingChannel = new
BroadcastChannel('fireOAuthChannel');

        fireBroadcastingChannel.addEventListener('message', asyncevent => {

            let data = event.data

            /**

            * @typedef {Object<string, any>} Data

            * @property {boolean} success - Whether the login was
successful

            * @property {string} token - The data returned from thelogin
i.e. Fire Token

            */
```

```
        // data.token is the message sent from the
fireOAuthChannel after verification

        // data.success is a boolean that indicates whether theverification
was successful

        // data.token is the fire token


        // What to do with the Fire Token?

        // * Fire Token is an unique token which uniquely identifiesthe user
who authorized your login attempt with Fire

        // * You can use this token ONLY ONCE as it will be
destroyed after the first use


        // 1. Send the fire token to the Fire Server to verify the user

        //    - You can do that client sided or server sided

        //    - You need to send a POST Request to the Fire Serverwith the
fire token

        //      at the URL: http://localhost:3003/api/tokens/verify

        //    - The Fire Server will verify the fire token and return aresponse

        //      - If the verification was successful - CODE (200), the FireServer
will return a response with the user's data

// - If the verification was unsuccessful - CODE (400) or CODE (401), the
Fire Server will return a response with an error'message'

        // - You can use the data returned from the Fire Server to create a
new user in your database
```

```javascript
    // This example will send the token to Fire Servers and console.log the response
    console.log("%c" + `Fire Token: ${data.token}`, `color: #f1c40f; font-weight: bold;`);
    const response = await fetch('https://fire.adaptable.app/api/tokens/verify', {
       method: 'POST',
       headers: {
          'Content-Type': 'application/json'
       },
       body: JSON.stringify({
          token: data.token
       })
    })

     // get the response
     const responseData = await response.json()
    // console.log the response
    console.log(responseData)
    await localforage.setItem('userData', {...responseData, isFire: true})
```

```javascript
            // Adding the user data to the user Database

            let database = await localforage.getItem("userDatabase")if (database
            == null) {

                database = []

            }

            database.push(responseData)

            await localforage.setItem("userDatabase", database)

            // redirect to the home page

            window.location.href = '/'



        })


        function popupwindow(url, title, w, h) {var

            left = (screen.width/2)-(w/2);

            var top = (screen.height/2)-(h/2);

            return window.open(url, title, 'toolbar=no, location=no,
directories=no, status=no, menubar=no, scrollbars=no, resizable=no,
copyhistory=no, width='+w+', height='+h+', top='+top+', left='+left);

        }

        document.getElementById("fire").addEventListener("click",function() {

            popupwindow("/fireoauth.html", "Fire OAuth", 450, 600)


        })
    </script>


    <script>

        // this.Website's Scripts / App Logic


document.querySelector(".signupForm").addEventListener("submit" , async (e)
=> {
```

```
        e.preventDefault()

        let firstName = document.getElementById("firstName").value

        let lastName = document.getElementById("lastName").value

        let username =
document.getElementById("username").value

        let email = document.getElementById("email").value

        let password = document.getElementById("password").valuelet

        profilePic =
`https://avatars.dicebear.com/api/adventurer-
neutral/${firstName}${lastName}.svg?backgroundColor=variant03`


        let data = { firstName, lastName, username, email, password,profilePic
}


        await localforage.setItem("userData", data)


        let database = await localforage.getItem("userDatabase")if (database
== null) {

           database = []

        }

        database.push(data)

        await localforage.setItem("userDatabase", database)

        window.location.href = "/"

     })

   </script>
</body>
</html>
```
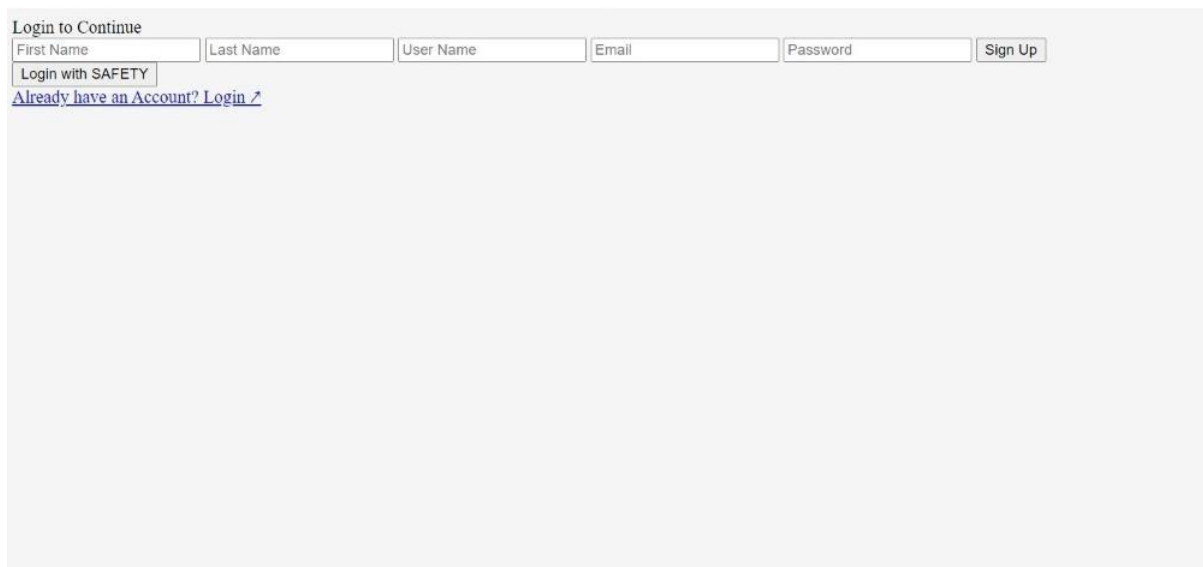
OUTPUT:

Login to Continue

| First Name | Last Name | User Name | Email | Password | Sign Up |

Login with SAFETY

Already have an Account? Login ↗

LOGIN

HTML AND CSS CODE:

```html
<!DOCTYPE html>
<html lang="en">

<head>

  <!-- Design by foolishdeveloper.com -->

  <title>Glassmorphism login Form Tutorial in htmlcss</title>


   <link rel="preconnect" href="https://fonts.gstatic.com">

   <link rel="stylesheet"
href="https://cdnjs.cloudflare.com/ajax/libs/font-
awesome/5.15.4/css/all.min.css">

   <link href="https://fonts.googleapis.com/css2?family=Poppins:w
ght@300;500;600&display=swap" rel="stylesheet">
```

```
<!--Stylesheet-->
<style media="screen">
  *,
*:before,
 *:after{ padding: 0;

    margin: 0;

    box-sizing: border-box;

}
body{

    background-color: #080710;

}
 .background{ width:

    430px; height: 520px;

    position: absolute;
    transform: translate(-50%,-50%);left: 50%;

    top: 50%;

}
 .background .shape{

    height: 200px;
```

```css
    width: 200px; position:
    absolute; border-radius:
    50%;
}

.shape:first-child{
    background: linear-gradient(#1845ad,
        #23a2f6

    );
    left: -80px;
    top: -80px;

}

.shape:last-child{
    background: linear-gradient(to right,
        #ff512f,
        #f09819

    );
    right: -30px; bottom: -
    80px;
}
```

```css
form{
    height: 520px;
    width: 400px;
    background-color: rgba(255,255,255,0.13);position:
    absolute;
    transform: translate(-50%,-50%);top: 50%;
    left: 50%;
    border-radius: 10px; backdrop-
    filter: blur(10px);
    border: 2px solid rgba(255,255,255,0.1);box-
    shadow: 0 0 40px rgba(8,7,16,0.6); padding: 50px
    35px;
}

form *{
    font-family: 'Poppins',sans-serif;color:
    #ffffff;
    letter-spacing: 0.5px;
    outline: none; border: none;
}
form h3{
    font-size: 32px;
    font-weight: 500; line-
    height: 42px;text-align:
    center;
}


label{
    display: block; margin-
    top: 30px;font-size:
    16px; font-weight: 500;
}
```

```css
input{
    display: block;
    height: 50px;
    width: 100%;
    background-color: rgba(255,255,255,0.07);border-
    radius: 3px;
    padding: 0 10px;
    margin-top: 8px; font-
    size: 14px; font-
    weight: 300;
}

 ::placeholder{ color:
    #e5e5e5;
}
button{
    margin-top: 50px;
    width: 100%;
    background-color: #ffffff;color:
    #080710;
    padding: 15px 0; font-
    size: 18px; font-weight:
    600; border-radius: 5px;
    cursor: pointer;
}
.social{
   margin-top: 30px;
   display: flex;
}
 .social div{ background:
   red; width: 150px;
   border-radius: 3px;
```

```css
padding: 5px 10px 10px 5px;

    background-color: rgba(255,255,255,0.27);color:

    #eaf0fb;

    text-align: center;
}

.social div:hover{

    background-color: rgba(255,255,255,0.47);

}
.social .fb{
    margin-left: 25px;

}
.social i{
    margin-right: 4px;

}


    </style>

</head>

<body>
    <div class="background">
        <div class="shape"></div>

        <div class="shape"></div>

    </div>

    <form>
        <h3>Login Here</h3>


        <label for="username">Username</label>
        <input type="text" placeholder="Email or Phone"id="username">


        <label for="password">Password</label>
        <input type="password" placeholder="Password"id="password">
```

```html
        <button>Log In</button>

        <div class="social">

         <div class="go"><i class="fab fa-google"></i>
Google</div>

         <div class="fb"><i class="fab fa-facebook"></i>
Facebook</div>

          </div>
        </form>
</body>
</html>
```
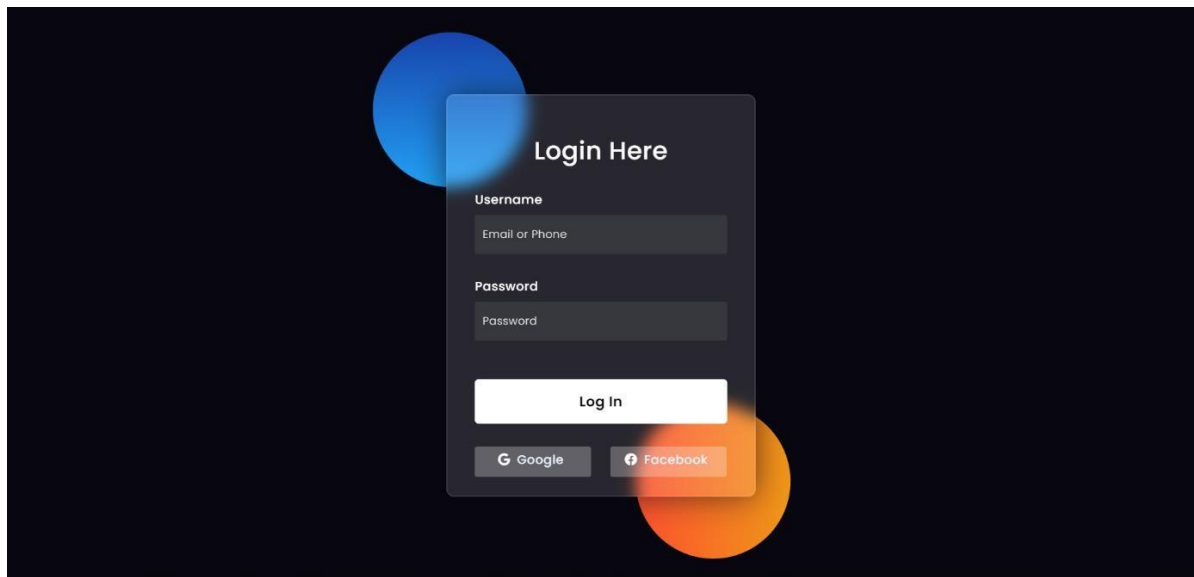
OUTPUT:

INDEX

HTML CODE:

```html
<!DOCTYPE html>

<html lang="en" style="height: 100%; margin: 0;">

<head>

<meta charset="UTF-8" />

<meta name="description" content="The Home Page afterLogged In" />

<meta name="viewport" content="width=device-width, initial-scale=1.0" />

<title>IOT Based Safety Gadget for Child Safety Monitoring and
Notification</title>

<script src="./LOCALFORAGE.js"></script>

<script>

if (window.location.hostname !== "localhost") {if

(location.protocol !== "https:") {

location.replace(

`https:${location.href.substring(location.protocol.length
)}`

)

}

}

async function check() {

let data = localforage.getItem("userData")if (data ==

null) {

window.location.href = "/login"

}

}

check()

</script>

</head>

<body

style="

height: 100%;

margin: 0;

font-weight: 300;

font-family: -apple-system, BlinkMacSystemFont, 'Segoe
```

```
UI', Roboto,Neue',

                class="wrapper"
        "   style="
                        height: 90%;
Oxygen,                 display: flex;
                        flex-direction: column;align-
Ubuntu,                 items: center; justify-content:
                        center;
Cantarell,                      text-align: center;
'Open Sans',

'Helveticasans-

serif;

        >
            <div
                "
            >
                <div
                        class="details"
                        style="
                                display: flex;
                                flex-direction: column;align-
                                items: center; gap: 20px;
                                padding: 1rem; border-
                                radius: 5px;
                                box-shadow: 0 0 8px 0px #44444444;
                                max-width: 80%;
                        "
                >
                        <h1 class="name" style="margin: 0"></h1>
```

```html
<div
    class="imageContainer"
    style="padding: 10px; height: 10rem; width: 10rem"
>
    <img class="image" alt="profile picture" />
</div>
<h2 class="email" style="margin: 0"></h2>

<a style="text-decoration: none;text-align: center;font-size: 1.2rem;color: #0070f3;font-weight: 400;" href="./dashboard">Go toDashboard ↗</a>
        </div>
    </div>
    <script>
        async function main() {
            let name = document.querySelector(".name") let image =
            document.querySelector(".image")let email =
            document.querySelector(".email")
            let userData = await localforage.getItem("userData")if(userData ==
            null) {
                window.location.href = "/login"
            }
            name.innerHTML = `Welcome ${userData.firstName}
${userData.lastName}!`
            image.src = userData.profilePic
```
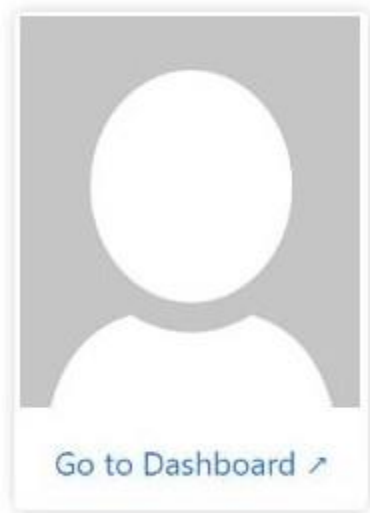
```
        email.innerHTML = `Your email is: <a style="text-decoration:none;color:
#0072B5;" href="mailto:${userData.email}">${userData.email}</a>`

    }

    main()

            </script>

    </body>

</html>
```

OUTPUT:

LOCAL FORAGE:

```
!function(a)
    {if("object"==typeof exports&&"undefined"!=typeof
    module)module.exports=a();
     else if("function"==typeof define&&define.amd)define([],a);else{var b;
        b="undefined"!=typeof window?window:"undefined"!=typeof
    global?global:"undefined"!=typeof self?self:this,b.localforage=a()}}(function(){
      return function a(b,c,d){
        function e(g,h){if(!c[g]){if(!b[g]){
          var i="function"==typeof require&&require;
          if(!h&&i)return i(g,!0);if(f)return f(g,!0);
          var j=new Error("Cannot find module '"+g+"'");
          throw j.code="MODULE_NOT_FOUND",j}var k=c[g]={exports:{}};
                        b[g][0].call(k.exports,function(a){
                            var c=b[g][1][a];return e(c||a)},k,k.exports,a,b,c,d)}return
                c[g].exports}
        for(var f="function"==typeof require&&require,g=0;g<d.length;g++)e(d[g]);
        return e}({1:[function(a,b,c){(function(a){"use strict";
                                    function c(){k=!0;for(var a,b,c=l.length;c;){
                                      for(b=l,l=[],a=-1;++a<c;)b[a]();c=l.length}k=!1}function
                                    d(a){1!==l.push(a)||k||e()}var
    e,f=a.MutationObserver||a.WebKitMutationObserver;
                                    if(f){var g=0,h=new
    f(c),i=a.document.createTextNode("");h.observe(i,{characterData:!0}),e=f
    unction(){i.data=g=++g%2}}
                                    else if(a.setImmediate||void
    0===a.MessageChannel)e="document"in a&&"onreadystatechange"in
    a.document.createElement("script")?function(){var
    b=a.document.createElement("script");b.onreadystatechange=function(){
    c(),b.onreadystatechange=null,b.parentNode.removeChild(b),b=null},a.d
    ocument.documentElement.appendChild(b)}:function(){setTimeout(c,0)};else{var j=new
    a.MessageChannel;j.port1.onmessage=c,e=function(){j.port2.postMessag e(0)}}var
    k,l=[];b.exports=d}).call(this,"undefined"!=typeof global?global:"undefined"!=typeof
    self?self:"undefined"!=typeof window?window:{})},{}],2:[function(a,b,c){"use strict";function
    d(){}function e(a){if("function"!=typeof a)throw new TypeError("resolver must be a
    function");this.state=s,this.queue=[],this.outcome=void
```

0,a!==d&&i(this,a)}function f(a,b,c){this.promise=a,"function"==typeof b&&(this.onFulfilled=b,this.callFulfilled=this.otherCallFulfilled),"function" ==typeof c&&(this.onRejected=c,this.callRejected=this.otherCallRejected)}function g(a,b,c){o(function(){var d;try{d=b(c)}catch(b){return p.reject(a,b)}d===a?p.reject(a,new TypeError("Cannot resolve promise with itself")):p.resolve(a,d)})}function h(a){var b=a&&a.then;if(a&&("object"==typeof a||"function"==typeof a)&&"function"==typeof b)return function(){b.apply(a,arguments)}}function i(a,b){function c(b){f||(f=!0,p.reject(a,b))}function d(b){f||(f=!0,p.resolve(a,b))}function e(){b(d,c)}var f=!1,g=j(e);"error"===g.status&&c(g.value)}function j(a,b){var c={};try{c.value=a(b),c.status="success"}catch(a){c.status="error",c.value =a}return c}function k(a){return a instanceof this?a:p.resolve(new this(d),a)}function l(a){var b=new this(d);return p.reject(b,a)}function m(a){function b(a,b){function d(a){g[b]=a,++h!==e||f||(f=!0,p.resolve(j,g))}c.resolve(a).then(d,function(

a){f||(f=!0,p.reject(j,a))})}var c=this;if("[object

Array]"!==Object.prototype.toString.call(a))return this.reject(new TypeError("must

be an array"));var e=a.length,f=!1;if(!e)return this.resolve([]);for(var g=new

Array(e),h=0,i=-1,j=new this(d);++i<e;)b(a[i],i);return j}function n(a){function

b(a){c.resolve(a).then(function(a){f||(f=!0,p.resolve(h,a))},function(a){f||

(f=!0,p.reject(h,a))})}var c=this;if("[object

Array]"!==Object.prototype.toString.call(a))return this.reject(new TypeError("must

be an array"));var e=a.length,f=!1;if(!e)return this.resolve([]);for(var g=-1,h=new

this(d);++g<e;)b(a[g]);return h}var

o=a(1),p={},q=["REJECTED"],r=["FULFILLED"],s=["PENDING"];b.exports=e,

e.prototype.catch=function(a){return this.then(null,a)},e.prototype.then=function(a,b){if("function"!=typeof a&&this.state===r||"function"!=typeof b&&this.state===q)return this;var c=new this.constructor(d);if(this.state!==s){g(c,this.state===r?a:b,this.outcome)} else this.queue.push(new f(c,a,b));return c},f.prototype.callFulfilled=function(a){p.resolve(this.promise,a)},f.protot ype.otherCallFulfilled=function(a){g(this.promise,this.onFulfilled,a)},f.pro totype.callRejected=function(a){p.reject(this.promise,a)},f.prototype.oth erCallRejected=function(a){g(this.promise,this.onRejected,a)},p.resolve=function(a,b){var c=j(h,b);if("error"===c.status)return

p.reject(a,c.value);var d=c.value;if(d)i(a,d);else{a.state=r,a.outcome=b;for(var e=-1,f=a.queue.length;++e<f;)a.queue[e].callFulfilled(b)}return a},p.reject=function(a,b){a.state=q,a.outcome=b;for(var c=-1,d=a.queue.length;++c<d;)a.queue[c].callRejected(b);return a},e.resolve=k,e.reject=l,e.all=m,e.race=n},{1:1}],3:[function(a,b,c){(functi on(b){"use strict";"function"!=typeof b.Promise&&(b.Promise=a(2))}).call(this,"undefined"!=typeof global?global:"undefined"!=typeof self?self:"undefined"!=typeof window?window:{})},{2:2}],4:[function(a,b,c){"use strict";function d(a,b){if(!(a instanceof b))throw new TypeError("Cannot call a class as a function")}function e(){try{if("undefined"!=typeof indexedDB)return indexedDB;if("undefined"!=typeof webkitIndexedDB)return webkitIndexedDB;if("undefined"!=typeof mozIndexedDB)return mozIndexedDB;if("undefined"!=typeof OIndexedDB)return OIndexedDB;if("undefined"!=typeof msIndexedDB)return msIndexedDB}catch(a){return}}function f(){try{if(!ua||!ua.open)return!1;var a="undefined"!=typeof openDatabase&&/(Safari|iPhone|iPad|iPod)/.test(navigator.userAgent)&&!/Chrome/.test(navigator.userAgent)&&!/BlackBerry/.test(navigator. platform),b="function"==typeof fetch&&- 1!==fetch.toString().indexOf("[native code");return(!a||b)&&"undefined"!=typeof indexedDB&&"undefined"!=typeof IDBKeyRange}catch(a){return!1}}function g(a,b){a=a||[],b=b||{};try{return new Blob(a,b)}catch(f){if("TypeError"!==f.name)throw f;for(var c="undefined"!=typeof BlobBuilder?BlobBuilder:"undefined"!=typeof MSBlobBuilder?MSBlobBuilder:"undefined"!=typeof MozBlobBuilder?MozBlobBuilder:WebKitBlobBuilder,d=new c,e=0;e<a.length;e+=1)d.append(a[e]);return d.getBlob(b.type)}}function h(a,b){b&&a.then(function(a){b(null,a)},function(a){b(a)})}function i(a,b,c){"function"==typeof b&&a.then(b),"function"==typeof c&&a.catch(c)}function j(a){return"string"!=typeof a&&(console.warn(a+" used as a key, but it is not a string."),a=String(a)),a}function k(){if(arguments.length&&"function"==typeof arguments[arguments.length-1])return arguments[arguments.length- 1]}function l(a){for(var b=a.length,c=new ArrayBuffer(b),d=new Uint8Array(c),e=0;e<b;e++)d[e]=a.charCodeAt(e);return c}function

m(a){return new va(function(b){var c=a.transaction(wa,Ba),d=g([""]);c.objectStore(wa).put(d,"key"),c.onabort=function(a){a.preventDefault(),a.stopPropagation(),b(!1)},c.oncomplete=function(){var a=navigator.userAgent.match(/Chrome\/(\d+)/),c=navigator.userAgent.match(/Edge\//);b(c||!a||parseInt(a[1],10)>=43)}}).catch(function(){retu rn!1})}function n(a){return"boolean"==typeof xa?va.resolve(xa):m(a).then(function(a){return xa=a})}function o(a){var b=ya[a.name],c={};c.promise=new va(function(a,b){c.resolve=a,c.reject=b}),b.deferredOperations.push(c),b.dbReady?b.dbReady=b.dbReady.then(function(){return c.promise}):b.dbReady=c.promise}function p(a){var b=ya[a.name],c=b.deferredOperations.pop();if(c)return c.resolve(),c.promise}function q(a,b){var c=ya[a.name],d=c.deferredOperations.pop();if(d)return d.reject(b),d.promise}function r(a,b){return new va(function(c,d){if(ya[a.name]=ya[a.name]||B(),a.db){if(!b)return c(a.db);o(a),a.db.close()}var e=[a.name];b&&e.push(a.version);var f=ua.open.apply(ua,e);b&&(f.onupgradeneeded=function(b){var c=f.result;try{c.createObjectStore(a.storeName),b.oldVersion<=1&&c.createObjectStore(wa)}catch(c){if("ConstraintError"!==c.name)throw c;console.warn('The database "'+a.name+'" has been upgraded from version '+b.oldVersion+" to version "+b.newVersion+', but the storage "'+a.storeName+'" already exists.')}}),f.onerror=function(a){a.preventDefault(),d(f.error)},f.onsucces s=function(){var b=f.result;b.onversionchange=function(a){a.target.close()},c(b),p(a)}})}fun ction s(a){return r(a,!1)}function t(a){return r(a,!0)}function u(a,b){if(!a.db)return!0;var c=!a.db.objectStoreNames.contains(a.storeName),d=a.version<a.db.versi on,e=a.version>a.db.version;if(d&&(a.version!==b&&console.warn('The database "'+a.name+"\" can't be downgraded from version "+a.db.version+" to version "+a.version+"."),a.version=a.db.version),e||c){if(c){var f=a.db.version+1;f>a.version&&(a.version=f)}return!0}return!1}function v(a){return new va(function(b,c){var d=new FileReader;d.onerror=c,d.onloadend=function(c){var d=btoa(c.target.result||"");b({_____local_forage_encoded_blob:!0,data:d,type:a.type})},d.readAsBinaryString(a)})}function w(a){return g([l(atob(a.data))],{type:a.type})}function x(a){return

```
a&&a.____local_forage_encoded_blob}function y(a){var
b=this,c=b._initReady().then(function(){var a=ya[b._dbInfo.name];if(a&&a.dbReady)return
a.dbReady});return i(c,a,a),c}function z(a){o(a);for(var
b=ya[a.name],c=b.forages,d=0;d<c.length;d++){var
e=c[d];e._dbInfo.db&&(e._dbInfo.db.close(),e._dbInfo.db=null)}return
a.db=null,s(a).then(function(b){return a.db=b,u(a)?t(a):b}).then(function(d){a.db=b.db=d;for(var
e=0;e<c.length;e++)c[e]._dbInfo.db=d}).catch(function(b){throw q(a,b),b})}function
A(a,b,c,d){void 0===d&&(d=1);try{var
e=a.db.transaction(a.storeName,b);c(null,e)}catch(e){if(d>0&&(!a.db||"I
nvalidStateError"===e.name||"NotFoundError"===e.name))return
va.resolve().then(function(){if(!a.db||"NotFoundError"===e.name&&!a.d
b.objectStoreNames.contains(a.storeName)&&a.version<=a.db.version)r eturn
a.db&&(a.version=a.db.version+1),t(a)}).then(function(){return z(a).then(function(){A(a,b,c,d-
1)})}).catch(c);c(e)}}function
B(){return{forages:[],db:null,dbReady:null,deferredOperations:[]}}function C(a){function
b(){return va.resolve()}var c=this,d={db:null};if(a)for(var e in a)d[e]=a[e];var
f=ya[d.name];f||(f=B(),ya[d.name]=f),f.forages.push(c),c._initReady||(c._
initReady=c.ready,c.ready=y);for(var g=[],h=0;h<f.forages.length;h++){var
i=f.forages[h];i!==c&&g.push(i._initReady().catch(b))}var j=f.forages.slice(0);return
va.all(g).then(function(){return d.db=f.db,s(d)}).then(function(a){return
d.db=a,u(d,c._defaultConfig.version)?t(d):a}).then(function(a){d.db=f.db=a,c._dbInfo=d;for(var
b=0;b<j.length;b++){var
e=j[b];e!==c&&(e._dbInfo.db=d.db,e._dbInfo.version=d.version)}})}functi on D(a,b){var
c=this;a=j(a);var d=new
va(function(b,d){c.ready().then(function(){A(c._dbInfo,Aa,function(e,f){if(e)return d(e);try{var
g=f.objectStore(c._dbInfo.storeName),h=g.get(a);h.onsuccess=function(){ var a=h.result;void
0===a&&(a=null),x(a)&&(a=w(a)),b(a)},h.onerror=function(){d(h.error)}}c
atch(a){d(a)}})}).catch(d)});return h(d,b),d}function E(a,b){var c=this,d=new
va(function(b,d){c.ready().then(function(){A(c._dbInfo,Aa,function(e,f){if( e)return d(e);try{var
g=f.objectStore(c._dbInfo.storeName),h=g.openCursor(),i=1;h.onsuccess= function(){var
c=h.result;if(c){var d=c.value;x(d)&&(d=w(d));var e=a(d,c.key,i++);void
0!==e?b(e):c.continue()}else
```

```
b()},h.onerror=function(){d(h.error)}}catch(a){d(a)}})}).catch(d)});return h(d,b),d}function
F(a,b,c){var d=this;a=j(a);var e=new va(function(c,e){varf;d.ready().then(function(){return
f=d._dbInfo,"[object Blob]"===za.call(b)?n(f.db).then(function(a){return
a?b:v(b)}):b}).then(function(b){A(d._dbInfo,Ba,function(f,g){if(f)return e(f);try{var
h=g.objectStore(d._dbInfo.storeName);null===b&&(b=void 0);var
i=h.put(b,a);g.oncomplete=function(){void
0===b&&(b=null),c(b)},g.onabort=g.onerror=function(){var
a=i.error?i.error:i.transaction.error;e(a)}}catch(a){e(a)}})}).catch(e)});retu rn h(e,c),e}function
G(a,b){var c=this;a=j(a);var d=new
va(function(b,d){c.ready().then(function(){A(c._dbInfo,Ba,function(e,f){if( e)return d(e);try{var
g=f.objectStore(c._dbInfo.storeName),h=g.delete(a);f.oncomplete=functi
on(){b()},f.onerror=function(){d(h.error)},f.onabort=function(){var
a=h.error?h.error:h.transaction.error;d(a)}}catch(a){d(a)}})}).catch(d)});re turn
h(d,b),d}function H(a){var b=this,c=new
va(function(a,c){b.ready().then(function(){A(b._dbInfo,Ba,function(d,e){if (d)return c(d);try{var
f=e.objectStore(b._dbInfo.storeName),g=f.clear();e.oncomplete=function(
){a()},e.onabort=e.onerror=function(){var
a=g.error?g.error:g.transaction.error;c(a)}}catch(a){c(a)}})}).catch(c)});ret urn h(c,a),c}function
I(a){var b=this,c=new
va(function(a,c){b.ready().then(function(){A(b._dbInfo,Aa,function(d,e){if (d)return c(d);try{var
f=e.objectStore(b._dbInfo.storeName),g=f.count();g.onsuccess=function()
{a(g.result)},g.onerror=function(){c(g.error)}}catch(a){c(a)}})}).catch(c)});r eturn
h(c,a),c}function J(a,b){var c=this,d=new va(function(b,d){if(a<0)return void
b(null);c.ready().then(function(){A(c._dbInfo,Aa,function(e,f){if(e)return d(e);try{var
g=f.objectStore(c._dbInfo.storeName),h=!1,i=g.openKeyCursor();i.onsucc ess=function(){var
c=i.result;if(!c)return void
b(null);0===a?b(c.key):h?b(c.key):(h=!0,c.advance(a))},i.onerror=function(
){d(i.error)}}catch(a){d(a)}})}).catch(d)});return h(d,b),d}function K(a){var b=this,c=new
va(function(a,c){b.ready().then(function(){A(b._dbInfo,Aa,function(d,e){if(d)return c(d);try{var
f=e.objectStore(b._dbInfo.storeName),g=f.openKeyCursor(),h=[];g.onsuccess=function(){var
b=g.result;if(!b)return void
a(h);h.push(b.key),b.continue()},g.onerror=function(){c(g.error)}}catch(a){
```

c(a)}})}).catch(c)});return h(c,a),c}function L(a,b){b=k.apply(this,arguments);var c=this.config();a="function"!=typeof a&&a||{},a.name||(a.name=a.name||c.name,a.storeName=a.storeNam e||c.storeName);var d,e=this;if(a.name){var f=a.name===c.name&&e._dbInfo.db,g=f?va.resolve(e._dbInfo.db):s(a).th en(function(b){var c=ya[a.name],d=c.forages;c.db=b;for(var e=0;e<d.length;e++)d[e]._dbInfo.db=b;return b});d=a.storeName?g.then(function(b){if(b.objectStoreNames.contains(a.storeName)){var c=b.version+1;o(a);var d=ya[a.name],e=d.forages;b.close();for(var f=0;f<e.length;f++){var g=e[f];g._dbInfo.db=null,g._dbInfo.version=c}return new va(function(b,d){var e=ua.open(a.name,c);e.onerror=function(a){e.result.close(),d(a)},e.onupg radeneeded=function(){e.result.deleteObjectStore(a.storeName)},e.onsu ccess=function(){var a=e.result;a.close(),b(a)}}).then(function(a){d.db=a;for(var b=0;b<e.length;b++){var c=e[b];c._dbInfo.db=a,p(c._dbInfo)}}).catch(function(b){throw(q(a,b)||va. resolve()).catch(function(){}),b})}}):g.then(function(b){o(a);var c=ya[a.name],d=c.forages;b.close();for(var e=0;e<d.length;e++){d[e]._dbInfo.db=null}return new va(function(b,c){vard=ua.deleteDatabase(a.name);d.onerror=function(){var a=d.result;a&&a.close(),c(d.error)},d.onblocked=function(){console.warn('dropInstance blocked for database "'+a.name+'" until all open connections are closed')},d.onsuccess=function(){var a=d.result;a&&a.close(),b(a)}}).then(function(a){c.db=a;for(var b=0;b<d.length;b++)p(d[b]._dbInfo)}).catch(function(b){throw(q(a,b)||va. resolve()).catch(function(){}),b})})}else d=va.reject("Invalid arguments");return h(d,b),d}function M(){return"function"==typeof openDatabase}function N(a){var b,c,d,e,f,g=.75*a.length,h=a.length,i=0;"="===a[a.length-1]&&(g--
,"="===a[a.length-2]&&g--);var j=new ArrayBuffer(g),k=new Uint8Array(j);for(b=0;b<h;b+=4)c=Da.indexOf(a[b]),d=Da.indexOf(a[b+1]), e=Da.indexOf(a[b+2]),f=Da.indexOf(a[b+3]),k[i++]=c<<2|d>>4,k[i++]=(15 &d)<<4|e>>2,k[i++]=(3&e)<<6|63&f;return j}function O(a){var b,c=new Uint8Array(a),d="";for(b=0;b<c.length;b+=3)d+=Da[c[b]>>2],d+=Da[(3&c[b])<<4|c[b+1]>>4],d+=Da[(15&c[b+1])<<2|c[b+2]>>6],d+=Da[63&c[b+2]];r eturn c.length%3==2?d=d.substring(0,d.length-
1)+"=":c.length%3==1&&(d=d.substring(0,d.length-2)+"=="),d}function P(a,b){var c="";if(a&&(c=Ua.call(a)),a&&("[object

ArrayBuffer]"===c||a.buffer&&"[object ArrayBuffer]"===Ua.call(a.buffer))){var d,e=Ga;a instanceof ArrayBuffer?(d=a,e+=Ia):(d=a.buffer,"[object Int8Array]"===c?e+=Ka:"[object Uint8Array]"===c?e+=La:"[object Uint8ClampedArray]"===c?e+=Ma:"[object Int16Array]"===c?e+=Na:"[object Uint16Array]"===c?e+=Pa:"[object Int32Array]"===c?e+=Oa:"[object Uint32Array]"===c?e+=Qa:"[object Float32Array]"===c?e+=Ra:"[object Float64Array]"===c?e+=Sa:b(new Error("Failed to get type for BinaryArray"))),b(e+O(d))}else if("[object Blob]"===c){var f=new FileReader;f.onload=function(){var c=Ea+a.type+"~"+O(this.result);b(Ga+Ja+c)},f.readAsArrayBuffer(a)}else try{b(JSON.stringify(a))}catch(c){console.error("Couldn't convert value into a JSON string: ",a),b(null,c)}}function Q(a){if(a.substring(0,Ha)!==Ga)return JSON.parse(a);var b,c=a.substring(Ta),d=a.substring(Ha,Ta);if(d===Ja&&Fa.test(c)){var e=c.match(Fa);b=e[1],c=c.substring(e[0].length)}var f=N(c);switch(d){case Ia:return f;case Ja:return g([f],{type:b});case Ka:return new Int8Array(f);case La:return new Uint8Array(f);case Ma:return new Uint8ClampedArray(f);case Na:return new Int16Array(f);case Pa:return new Uint16Array(f);case Oa:return new Int32Array(f);case Qa:return newUint32Array(f);case Ra:return new Float32Array(f);case Sa:return new Float64Array(f);default:throw new Error("Unkown type: "+d)}}function R(a,b,c,d){a.executeSql("CREATE TABLE IF NOT EXISTS "+b.storeName+" (id INTEGER PRIMARY KEY, key unique, value)",[],c,d)}function S(a){var b=this,c={db:null};if(a)for(var d in a)c[d]="string"!=typeof a[d]?a[d].toString():a[d];var e=new va(function(a,d){try{c.db=openDatabase(c.name,String(c.version),c.description,c.size)}catch(a){return d(a)}c.db.transaction(function(e){R(e,c,function(){b._dbInfo=c,a()},functio n(a,b){d(b)})},d)});return c.serializer=Va,e}function T(a,b,c,d,e,f){a.executeSql(c,d,e,function(a,g){g.code===g.SYNTAX_ERR?a. executeSql("SELECT name FROM sqlite_master WHERE type='table' AND name

= ?",[b.storeName],function(a,h){h.rows.length?f(a,g):R(a,b,function(){a.e xecuteSql(c,d,e,f)},f)},f):f(a,g)},f)}function U(a,b){var c=this;a=j(a);var d=new va(function(b,d){c.ready().then(function(){var e=c._dbInfo;e.db.transaction(function(c){T(c,e,"SELECT * FROM "+e.storeName+" WHERE key = ? LIMIT 1",[a],function(a,c){var d=c.rows.length?c.rows.item(0).value:null;d&&(d=e.serializer.deserialize(d)),b(d)},function(a,b){d(b)})})}).catch(d)});return h(d,b),d}function

```
V(a,b){var c=this,d=new va(function(b,d){c.ready().then(function(){var
e=c._dbInfo;e.db.transaction(function(c){T(c,e,"SELECT * FROM
"+e.storeName,[],function(c,d){for(var f=d.rows,g=f.length,h=0;h<g;h++){var
i=f.item(h),j=i.value;if(j&&(j=e.serializer.deserialize(j)),void 0!==(j=a(j,i.key,h+1)))return void
b(j)}b()},function(a,b){d(b)})})}).catch(d)});return h(d,b),d}function W(a,b,c,d){var
e=this;a=j(a);var f=new va(function(f,g){e.ready().then(function(){void 0===b&&(b=null);var
h=b,i=e._dbInfo;i.serializer.serialize(b,function(b,j){j?g(j):i.db.transaction(
function(c){T(c,i,"INSERT OR REPLACE INTO "+i.storeName+" (key, value) VALUES
(?, ?)",[a,b],function(){f(h)},function(a,b){g(b)})},function(b){if(b.code===
b.QUOTA_ERR){if(d>0)return void f(W.apply(e,[a,h,c,d- 1]));g(b)}})})}).catch(g)});return
h(f,c),f}function X(a,b,c){return W.apply(this,[a,b,c,1])}function Y(a,b){var c=this;a=j(a);var
d=new va(function(b,d){c.ready().then(function(){var
e=c._dbInfo;e.db.transaction(function(c){T(c,e,"DELETE FROM "+e.storeName+" WHERE key
= ?",[a],function(){b()},function(a,b){d(b)})})}).catch(d)});return h(d,b),d}function Z(a){var
b=this,c=new va(function(a,c){b.ready().then(function(){var
d=b._dbInfo;d.db.transaction(function(b){T(b,d,"DELETE FROM
"+d.storeName,[],function(){a()},function(a,b){c(b)})})}).catch(c)});return h(c,a),c}function
$(a){var b=this,c=new va(function(a,c){b.ready().then(function(){var
d=b._dbInfo;d.db.transaction(function(b){T(b,d,"SELECT COUNT(key) as c FROM
"+d.storeName,[],function(b,c){var
d=c.rows.item(0).c;a(d)},function(a,b){c(b)})})}).catch(c)});return h(c,a),c}function _(a,b){var
c=this,d=new va(function(b,d){c.ready().then(function(){var
e=c._dbInfo;e.db.transaction(function(c){T(c,e,"SELECT key FROM "+e.storeName+" WHERE
id = ? LIMIT 1",[a+1],function(a,c){var
d=c.rows.length?c.rows.item(0).key:null;b(d)},function(a,b){d(b)})})}).catch(d)});return
h(d,b),d}function aa(a){var b=this,c=new va(function(a,c){b.ready().then(function(){var
d=b._dbInfo;d.db.transaction(function(b){T(b,d,"SELECT key FROM
"+d.storeName,[],function(b,c){for(var
d=[],e=0;e<c.rows.length;e++)d.push(c.rows.item(e).key);a(d)},function(a,
b){c(b)})})}).catch(c)});return h(c,a),c}function ba(a){return new
```

```
va(function(b,c){a.transaction(function(d){d.executeSql("SELECT nameFROM sqlite_master WHERE type='table' AND name <>
'__WebKitDatabaseInfoTable__'",[],function(c,d){for(var
e=[],f=0;f<d.rows.length;f++)e.push(d.rows.item(f).name);b({db:a,storeN
ames:e})},function(a,b){c(b)})},function(a){c(a)})})}function
ca(a,b){b=k.apply(this,arguments);var c=this.config();a="function"!=typeof
a&&a||{},a.name||(a.name=a.name||c.name,a.storeName=a.storeNam e||c.storeName);var
d,e=this;return d=a.name?new va(function(b){var
d;d=a.name===c.name?e._dbInfo.db:openDatabase(a.name,"","",0),b(a.s
toreName?{db:d,storeNames:[a.storeName]}:ba(d))}).then(function(a){return new
va(function(b,c){a.db.transaction(function(d){function e(a){return new
va(function(b,c){d.executeSql("DROP TABLE IF EXISTS
"+a,[],function(){b()},function(a,b){c(b)})})}for(var
f=[],g=0,h=a.storeNames.length;g<h;g++)f.push(e(a.storeNames[g]));va.al
l(f).then(function(){b()}).catch(function(a){c(a)})},function(a){c(a)})})}):va.reject("Invalid
arguments"),h(d,b),d}function da(){try{return"undefined"!=typeof localStorage&&"setItem"in
localStorage&&!!localStorage.setItem}catch(a){return!1}}function ea(a,b){var
c=a.name+"/";return a.storeName!==b.storeName&&(c+=a.storeName+"/"),c}function fa(){var
a="_localforage_support_test";try{return
localStorage.setItem(a,!0),localStorage.removeItem(a),!1}catch(a){return
!0}}function ga(){return!fa()||localStorage.length>0}function ha(a){var b=this,c={};if(a)for(var
d in a)c[d]=a[d];return
c.keyPrefix=ea(a,b._defaultConfig),ga()?(b._dbInfo=c,c.serializer=Va,va.re
solve()):va.reject()}function ia(a){var b=this,c=b.ready().then(function(){for(var
a=b._dbInfo.keyPrefix,c=localStorage.length-1;c>=0;c--){var
d=localStorage.key(c);0===d.indexOf(a)&&localStorage.removeItem(d)}})
;return h(c,a),c}function ja(a,b){var c=this;a=j(a);var d=c.ready().then(function(){var
b=c._dbInfo,d=localStorage.getItem(b.keyPrefix+a);return
d&&(d=b.serializer.deserialize(d)),d});return h(d,b),d}function ka(a,b){var
c=this,d=c.ready().then(function(){for(var
b=c._dbInfo,d=b.keyPrefix,e=d.length,f=localStorage.length,g=1,h=0;h<f;h
++){var i=localStorage.key(h);if(0===i.indexOf(d)){var
j=localStorage.getItem(i);if(j&&(j=b.serializer.deserialize(j)),void
0!==(j=a(j,i.substring(e),g++)))return j}}});return h(d,b),d}functionla(a,b){var
c=this,d=c.ready().then(function(){var
```

b,d=c._dbInfo;try{b=localStorage.key(a)}catch(a){b=null}return b&&(b=b.substring(d.keyPrefix.length)),b});return h(d,b),d}function ma(a){var b=this,c=b.ready().then(function(){for(var a=b._dbInfo,c=localStorage.length,d=[],e=0;e<c;e++){var f=localStorage.key(e);0===f.indexOf(a.keyPrefix)&&d.push(f.substring(a.k eyPrefix.length))}return d});return h(c,a),c}function na(a){var b=this,c=b.keys().then(function(a){return a.length});return h(c,a),c}function oa(a,b){var c=this;a=j(a);var d=c.ready().then(function(){var b=c._dbInfo;localStorage.removeItem(b.keyPrefix+a)});return h(d,b),d}function pa(a,b,c){var d=this;a=j(a);var e=d.ready().then(function(){void 0===b&&(b=null);var c=b;return new va(function(e,f){var g=d._dbInfo;g.serializer.serialize(b,function(b,d){if(d)f(d);else try{localStorage.setItem(g.keyPrefix+a,b),e(c)}catch(a){"QuotaExceededE rror"!==a.name&&"NS_ERROR_DOM_QUOTA_REACHED"!==a.name||f(a)),f(a)}})})});return h(e,c),e}function qa(a,b){if(b=k.apply(this,arguments),a="function"!=typeof a&&a||{},!a.name){var c=this.config();a.name=a.name||c.name,a.storeName=a.storeName||c.st oreName}var d,e=this;return d=a.name?new va(function(b){b(a.storeName?ea(a,e._defaultConfig):a.name+"/")}).then(function(a){for(var b=localStorage.length-1;b>=0;b--){var c=localStorage.key(b);0===c.indexOf(a)&&localStorage.removeItem(c)}}): va.reject("Invalid arguments"),h(d,b),d}function ra(a,b){a[b]=function(){var c=arguments;return a.ready().then(function(){return a[b].apply(a,c)})}}function sa(){for(var a=1;a<arguments.length;a++){var b=arguments[a];if(b)for(var c in b)b.hasOwnProperty(c)&&($a(b[c])?arguments[0][c]=b[c].slice():arguments[0][c]=b[c])}return arguments[0]}var ta="function"==typeof Symbol&&"symbol"==typeof Symbol.iterator?function(a){return typeof a}:function(a){return a&&"function"==typeof Symbol&&a.constructor===Symbol&&a!==Symbol.prototype?"symbol":t ypeof a},ua=e();"undefined"==typeof Promise&&a(3);var va=Promise,wa="local-forage-detect-blob-support",xa=void 0,ya={},za=Object.prototype.toString,Aa="readonly",Ba="readwrite",Ca={ _driver:"asyncStorage",_initStorage:C,_support:f(),iterate:E,getItem:D,set Item:F,removeItem:G,clear:H,length:I,key:J,keys:K,dropInstance:L},Da="A BCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopqrstuvwxyz01234567 89+/",Ea="~~local_forage_type~",Fa=/^~~local_forage_type~([^~]+)~/,Ga

="___lfsc___:",Ha=Ga.length,Ia="arbf",Ja="blob",Ka="si08",La="ui08",Ma="
uic8",Na="si16",Oa="si32",Pa="ur16",Qa="ui32",Ra="fl32",Sa="fl64",Ta=
Ha+Ia.length,Ua=Object.prototype.toString,Va={serialize:P,deserialize:Q,s
tringToBuffer:N,bufferToString:O},Wa={_driver:"webSQLStorage",_initSt
orage:S,_support:M(),iterate:V,getItem:U,setItem:X,removeItem:Y,clear:Z
,length:$,key:_,keys:aa,dropInstance:ca},Xa={_driver:"localStorageWrapp
er",_initStorage:ha,_support:da(),iterate:ka,getItem:ja,setItem:pa,remov
eItem:oa,clear:ia,length:na,key:la,keys:ma,dropInstance:qa},Ya=function(a,b){return
a===b||"number"==typeof a&&"number"==typeof
b&&isNaN(a)&&isNaN(b)},Za=function(a,b){for(var
c=a.length,d=0;d<c;){if(Ya(a[d],b))return!0;d++}return!1},$a=Array.isArra
y||function(a){return"[object
Array]"===Object.prototype.toString.call(a)},_a={},ab={},bb={INDEXEDDB:
Ca,WEBSQL:Wa,LOCALSTORAGE:Xa},cb=[bb.INDEXEDDB._driver,bb.WEBS
QL._driver,bb.LOCALSTORAGE._driver],db=["dropInstance"],eb=["clear","
getItem","iterate","key","keys","length","removeItem","setItem"].conca
t(db),fb={description:"",driver:cb.slice(),name:"localforage",size:4980736
,storeName:"keyvaluepairs",version:1},gb=function(){function a(b){d(this,a);for(var c in
bb)if(bb.hasOwnProperty(c)){var
e=bb[c],f=e._driver;this[c]=f,_a[f]||this.defineDriver(e)}this._defaultConfi
g=sa({},fb),this._config=sa({},this._defaultConfig,b),this._driverSet=null,th
is._initDriver=null,this._ready=!1,this._dbInfo=null,this._wrapLibraryMet
hodsWithReady(),this.setDriver(this._config.driver).catch(function(){})}ret urn
a.prototype.config=function(a){if("object"===(void
0===a?"undefined":ta(a))){if(this._ready)return new Error("Can't call config() after localforage
has been used.");for(var b in
a){if("storeName"===b&&(a[b]=a[b].replace(/\W/g,"_")),"version"===b&&"number"!=typeof
a[b])return new Error("Database version must be a
number.");this._config[b]=a[b]}return!("driver"in
a&&a.driver)||this.setDriver(this._config.driver)}return"string"==typeof
a?this._config[a]:this._config},a.prototype.defineDriver=function(a,b,c){v ar d=new
va(function(b,c){try{var d=a._driver,e=new Error("Custom driver not compliant; see
https://mozilla.github.io/localForage/#definedriver");if(!a._driver)return void c(e);for(var
f=eb.concat("_initStorage"),g=0,i=f.length;g<i;g++){var
j=f[g];if((!Za(db,j)||a[j])&&"function"!=typeof a[j])return void c(e)}(function(){for(var
b=function(a){return function(){var b=new Error("Method "+a+" is not implemented by the
current driver"),c=va.reject(b);return h(c,arguments[arguments.length-
1]),c}},c=0,d=db.length;c<d;c++){var e=db[c];a[e]||(a[e]=b(e))}})();var
k=function(c){_a[d]&&console.info("Redefining LocalForage driver:
"+d),_a[d]=a,ab[d]=c,b()};"_support"in a?a._support&&"function"==typeof
a._support?a._support().then(k,c):k(!!a._support):k(!0)}catch(a){c(a)}});re turn
i(d,b,c),d},a.prototype.driver=function(){return
this._driver||null},a.prototype.getDriver=function(a,b,c){var
d=_a[a]?va.resolve(_a[a]):va.reject(new Error("Driver not found."));return
i(d,b,c),d},a.prototype.getSerializer=function(a){var b=va.resolve(Va);return
i(b,a),b},a.prototype.ready=function(a){var b=this,c=b._driverSet.then(function(){return
null===b._ready&&(b._ready=b._initDriver()),b._ready});return
i(c,a,a),c},a.prototype.setDriver=function(a,b,c){function
d(){g._config.driver=g.driver()}function e(a){return
g._extend(a),d(),g._ready=g._initStorage(g._config),g._ready}function f(a){return
function(){function b(){for(;c<a.length;){var f=a[c];return
c++,g._dbInfo=null,g._ready=null,g.getDriver(f).then(e).catch(b)}d();var h=new Error("No
available storage method found.");return g._driverSet=va.reject(h),g._driverSet}var c=0;return
b()}}var g=this;$a(a)||(a=[a]);var

```
h=this._getSupportedDrivers(a),j=null!==this._driverSet?this._driverSet.catch(function(){return
va.resolve()}):va.resolve();return this._driverSet=j.then(function(){var a=h[0];return
g._dbInfo=null,g._ready=null,g.getDriver(a).then(function(a){g._driver=a.
_driver,d(),g._wrapLibraryMethodsWithReady(),g._initDriver=f(h)})}).catc h(function(){d();var
a=new Error("No available storage method found.");return
g._driverSet=va.reject(a),g._driverSet}),i(this._driverSet,b,c),this._driverS
et},a.prototype.supports=function(a){return!!ab[a]},a.prototype._extend
=function(a){sa(this,a)},a.prototype._getSupportedDrivers=function(a){for(var
b=[],c=0,d=a.length;c<d;c++){var e=a[c];this.supports(e)&&b.push(e)}return
b},a.prototype._wrapLibraryMethodsWithReady=function(){for(var
a=0,b=eb.length;a<b;a++)ra(this,eb[a])},a.prototype.createInstance=funct ion(b){return new
a(b)},a}(),hb=new gb;b.exports=hb},{3:3}]},{},[4])(4)});
```

DASHBORAD

HTML CODE:

```html
!DOCTYPE html>
<html lang="en">
<head>

    <meta charset="UTF-8">

    <meta http-equiv="X-UA-Compatible"
content="IE=edge">

    <meta name="viewport" content="width=device-width,initial-scale=1.0">

    <link rel="stylesheet" href="./DASHBOARD.css">

    <title>Dashboard</title>

    <script src="./LOCALFORAGE.js"></script>
</head>
```

```html
<body>
    <div class="wrapper">
        <div class="header">
            <span class="heading">Dashboard</span>
            <span class="right">
                <span class="username">Hello User</span>
                <span>
                    <img class="profilePic"
src="https://avatars.dicebear.com/api/avataaars/asdfasdfds.svg" alt="User Profile"
height="30" width="30">
                </span>
            </span>
        </div>

        <div class="actionCenter">
            <div class="action">
                <span>Create Child Card</span>
            </div>
            <div class="action">
                <span class="logout">Log out</span>
            </div>
        </div>
```

```html
<div class="childCardContainer">
    <div class="childCard">
        <div class="childCardHeader">
            <span>Gowsa</span>
            <span>Age 10</span>
        </div>
        <div class="actions">
            <span>View</span>
            <span>GeoFence</span>
        </div>
    </div>
</div>
<script>
    async function main() {
        let userData = await localforage.getItem('userData')if(userData ==
        null) {
            window.location.href = "/login"

        }
        document.querySelector(".username").innerHTML =
`Hello ${userData.firstName}`
```

```
        document.querySelector(".profilePic").src =
userData.profilePic
    }
    main()

document.querySelector(".logout").addEventListener("click", async () => {
        await localforage.setItem('userData', null)
        window.location.href = "/login"
    })
  </script>
</body>
</html>
```

CSS CODE:

```css
html, body {
    margin: 0;
    padding: 0;
    font-family: system-ui, -apple-system, BlinkMacSystemFont, 'Segoe UI',
Roboto, Oxygen, Ubuntu,Cantarell, 'Open Sans', 'Helvetica Neue', sans-serif;

}
```

```css
.wrapper { display:
    flex;
    flex-direction: column;height:
    100vh;

    margin: 0 auto;

}
.header { display:
    flex;
    justify-content: space-between;align-
    items: center;
    padding: 1rem; background-color:
    #f1f1f1;
}
.heading {
    font-size: 1.3rem;

}
.right {
    display: flex;
    align-items: center;gap:
    0.5rem;
}
.actionCenter {
```

```css
  display: flex;

  justify-content: flex-end;align-

  items: center;

  gap: 1rem; padding:

  0.5rem 0;

}


.actionCenter .action { padding: 0.5rem

  0.8rem; border: 1px solid #44444444;

  border-radius: 12px;

  margin-right: 0.5rem;cursor:

  pointer;

}


.actionCenter .action:hover {

  background-color: #0070f3;color:

  white;

}


.childCardContainer {

  display: flex;
```

```css
    flex-wrap: wrap; padding:
    0.5rem 1rem;
}


.childCardContainer .childCard {display:
    flex;
    flex-direction: column; border: 1px
    solid #44444444;border-radius: 12px;
    max-width: 300px;font-
    size: 1.4rem;
}


.childCardContainer .childCard .childCardHeader {display: flex;
    gap: 3rem;
    margin: 0.1rem 0.1rem 0.8rem;padding:
    1rem 0.8rem 0;
}


.childCardContainer .childCard .actions {
    background-color: #0070f3;
```
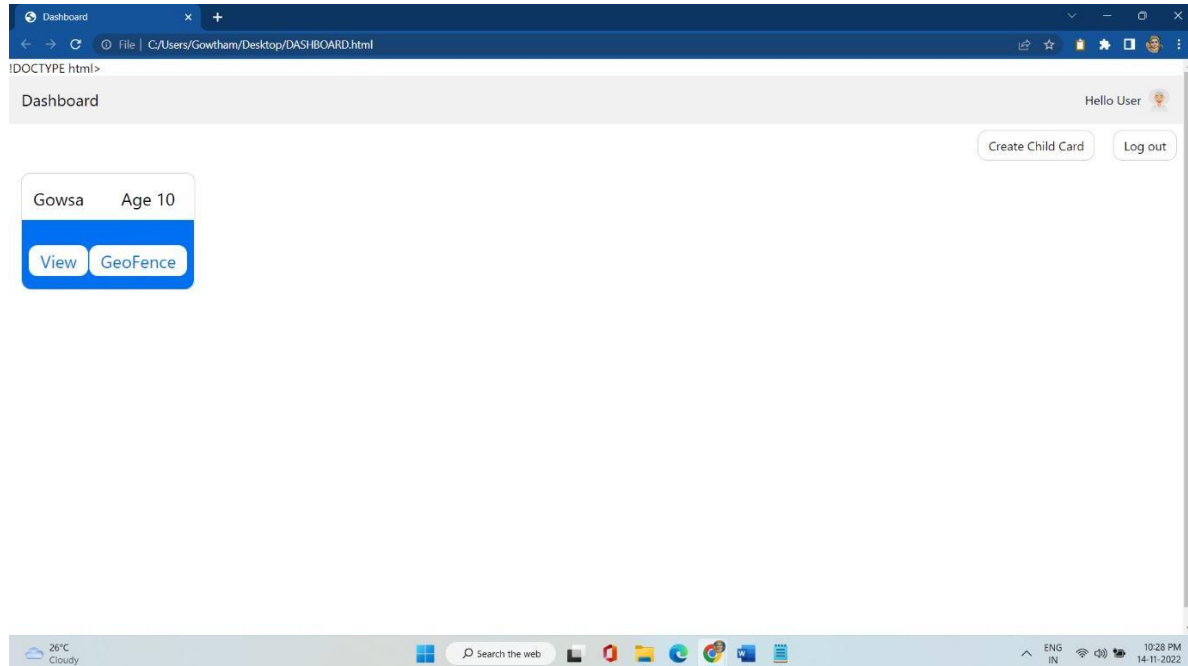
```css
        padding: 2rem 0.5rem 1rem;color:

        white;

        display: flex;

        justify-content: space-around;border-

        radius: 12px;

        border-top-left-radius: 0;

        border-top-right-radius: 0;

}


.childCardContainer .childCard .actions span {border: 1px

        solid #0070f3;

        background-color: white;color:

        #0070f3;

        padding: 0.3rem 0.9rem;border-

        radius: 12px; cursor: pointer;
```

OUTPUT:

7.2 SPRINT-2

NOTIFICATION:

This coding will make connection between IoT Device & Parent's application. When the child cross across the geofence message will be notified on parent's application.

Coding:

#include<WiFi.h>//library for wifi

#include<PubSubClient.h>//library forMQTT
void callback(char* subscribe topic, byte* payload, unsigned int payload length);

//---------------credentials of IBM Account------

#define ORG "frpi8s"// IBM ORGANIZATION ID

#define DEVICE_TYPE "NodeMCU"//DEVICE TYPE MENTIONED IN IOTWATSON

PLATFORM #define DEVICE_ID "12345"//DEVICE ID MENTIONED IN IOTWATSONPLATEFORM

#define TOKEN "12345678"//Token String data3;floatdist;

//------------customize the above value-------

```
char server [] =ORG ".messaging.internetofthings.ibmcloud.com";//servername

char publish topic[]="ultrasonic/evt/Data/fmt/json";/*topic name andtypeof event perform and
format

in which data to be send*/

char subscribetopic[]="ultrasonic/cmd/test/fmt/String";/*cmd REPRESENTCommand tupe and

COMMAND IS TEST OF FORMAT STRING*/

char authMethod[]="use-token-auth";//authentication method chartoken[]=TOKEN;
char clientid[]="d:" ORG ":" DEVICE_TYPE":" DEVICE_ID;//CLIENT ID
//
WiFiClient wifiClient;// creating an instance for wificlient
PubSubClient client(server, 1883 , callback , wifiClient);/*calling the predefinedclient id by passing
parameter like server id,portand wificredential*/
int LED =4;

int trig =5; int echo=18; void setup(){
Serial.begin(115200); pinMode(trig,OUTPUT); pinMode(echo,INPUT); pinMode(LED,OUTPUT); delay(10);
Serial.println(); wificonnect(); mqttconnect();

void loop() { digitalWrite(trig,LOW); digitalWrite(trig,HIGH);
delayMicroseconds(10); digitalWrite(trig,LOW);
float dur=pulseIn(echo,HIGH); float dist=(dur * 0.0343)/2; Serial.print("distance incm");
Serial.println(dist); PublishData(dist);
delay(1000);

if (!client.loop()){ mqttconnect();

}

}
/*..............................................retriving to cloud. ..................................................

*/

void PublishData(float dist){ mqttconnect();//function call for connecting to ibm
/*creating the string in form of JSON to update the data to ibm cloud*/ Stringobject;
```

```
        if(dist<100)
          {
            digitalWrite(LED,HIGH); Serial.println("no object is near");object="Near";
        }
        else
          {
            digitalWrite(LED,LOW); Serial.println("no object found"); object="No";
          }
        String payload="{\"distance\":"; payload +=dist; payload +=","
        "\"object\":\""; payload += object;payload += "\"}";
        Serial.print("Sending payload: ");
        Serial.println(payload);

        if(client.publish(publishtopic, (char*) payload.c_str())){
                Serial.println("Publish ok");/* if its sucessfully upload data on thecloud then it will
print publish ok in serial monitor or else it will print publish failed*/
      } else{
            Serial.println("Publish failed");
        }
}
void mqttconnect(){ if(!client.connected()){

Serial.print("Reconnecting client to "); Serial.println(server);while(!!!client.connect(clientid,authMethod,
token)){ Serial.print("."); delay(500);
      }

initManagedDevice();
  Serial.println();
      }
}
void wificonnect()//function defenition for wificonnect

  {
      Serial.println(); Serial.print("Connecting to ");
```

```
WiFi.begin("vivo 1816", "taetae95",6);//PASSING THE WIFI CREDIDENTIALS TOESTABLISH
CONNECTION
while (WiFi.status() !=WL_CONNECTED){ delay(500);
      Serial.print(".");
    }
          Serial.println(""); Serial.println("WiFi connected"); Serial.println("IP
address");
          Serial.println(WiFi.localIP());
      }
void initManagedDevice(){ if(client.subscribe(subscribetopic)){
                Serial.println((subscribetopic)); Serial.println("subscribe to cmd OK");
        }else{
                Serial.println("subscribe to cmd failed");
          }
        }
void callback(char* subscribetopic,byte*payload,unsigned int payloadLength)
      {
        Serial.print("callback invoked for topic: ");
        Serial.println(subscribetopic); for(int i=0; i< payloadLength; i++){
        //Serial.print((char)payload[i]); data3 +=(char)payload[i];
}
//Serial.println("dta: "+ data3);
//if(data3=="Near")
//{
//Serial.println(data3);
//digitalWrite(LED,HIGH);
//}
//else //{
//Serial.println(data3);
//digitalWrite(LED,LOW);//} data3="";
}
```

SCHEMATIC DIAGRAM:
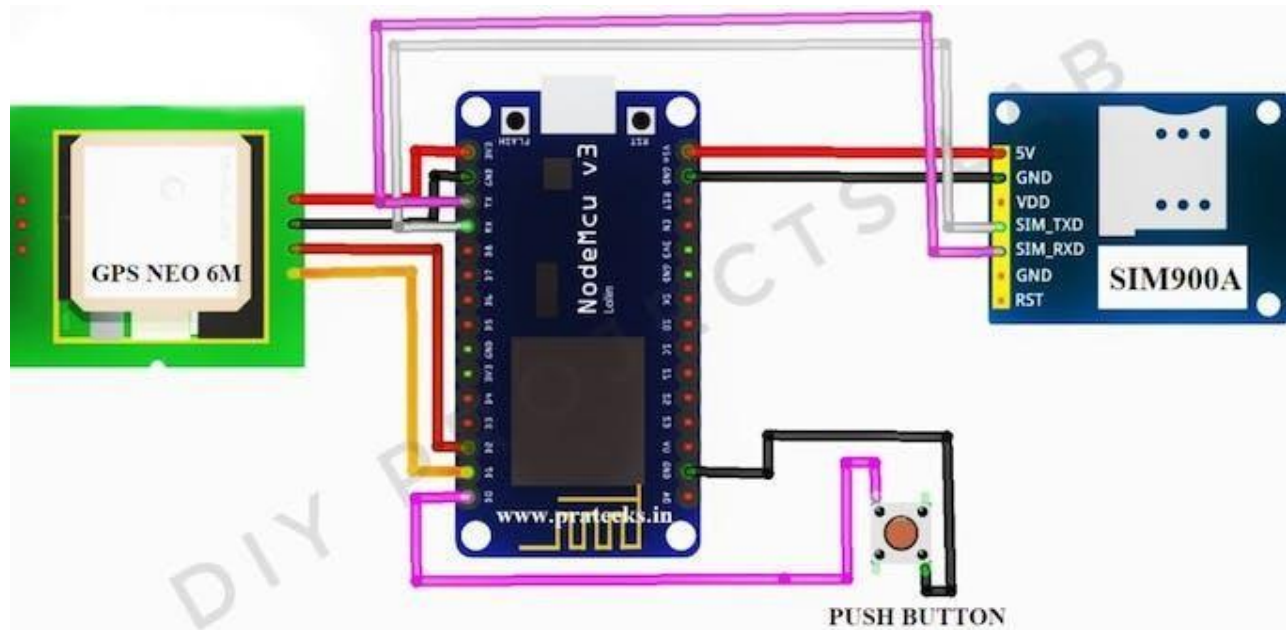
OUTPUT:
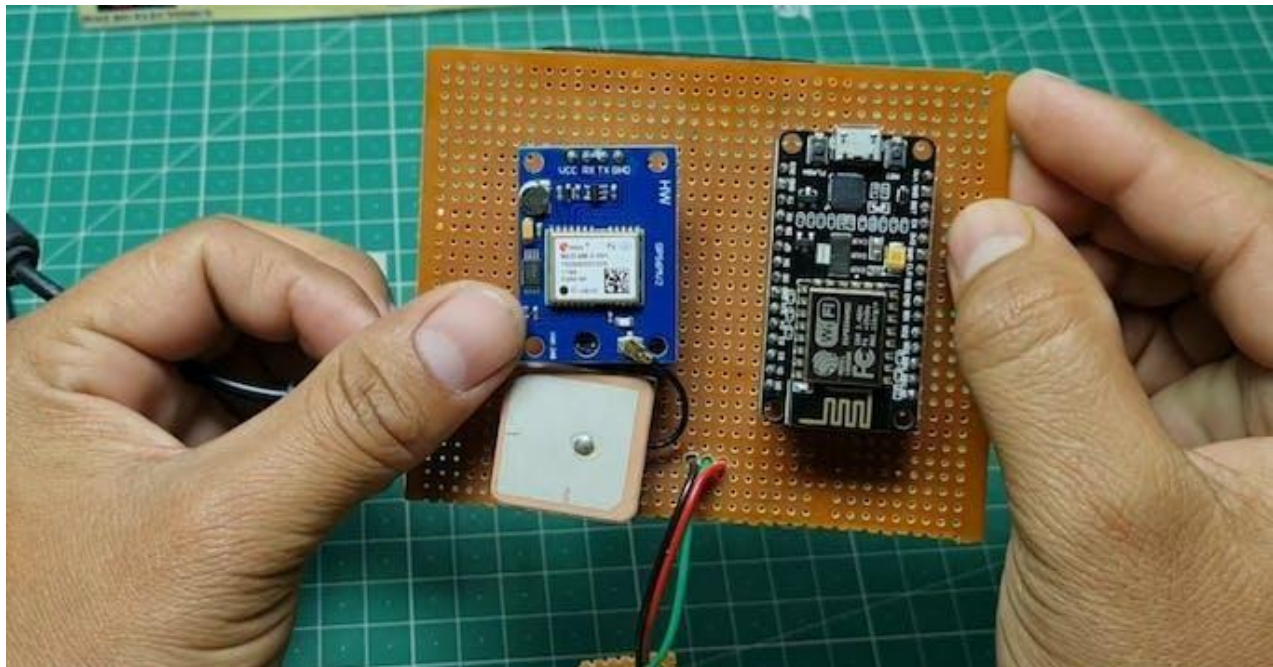
NOTIFY TO THIS DEVICE IBM WATSON CLOUD COMMUNICATION:

7.3 SPRINT-3

IoT Device – Watson communication

The data from IoT device should reach IBM Cloud

The recent events listed show the live stream of data that is coming and going from this device.

Event	Value	Format	Last Received
data	{"Warning":28.95}	json	a few seconds ago
data	{"Warning":28.95}	json	a few seconds ago
data	{"Warning":49.98}	json	a minute ago
data	{"Warning":49.98}	json	a minute ago
data	{"Warning":11.03}	json	a minute ago

NODE RED-CLOUDANTDB COMMUNICATION:

```
Editor - C:\Users\HP\Desktop\child.py                                    IPython console
child.py                                                                 Console 2/A
1 import json                                                            Data published to IBM IoT platfrom:
2 import wiotp.sdk.device                                                Data published to IBM IoT platfrom:
3 import time                                                            Data published to IBM IoT platfrom:
4                                                                        Data published to IBM IoT platfrom:
5 myConfig = {                                                           Data published to IBM IoT platfrom:
6     "identity": {                                                      Data published to IBM IoT platfrom:
7         "orgId": "hj5fmy",                                             Data published to IBM IoT platfrom:
8         "typeId": "NodeMCU",                                           Data published to IBM IoT platfrom:
9         "deviceId": "12345"                                            Data published to IBM IoT platfrom:
10    },                                                                 Data published to IBM IoT platfrom:
11    "auth": {                                                          Data published to IBM IoT platfrom:
12        "token": "12345678"                                           Data published to IBM IoT platfrom:
13    }                                                                  Data published to IBM IoT platfrom:
14 }                                                                     Data published to IBM IoT platfrom:
15 client = wiotp.sdk.device.DeviceClient(config=myConfig, logHandlers=None)  Data published to IBM IoT platfrom:
16 client.connect()                                                      Data published to IBM IoT platfrom:
17                                                                       Data published to IBM IoT platfrom:
18 while True:                                                           Data published to IBM IoT platfrom:
19     name= "Smartbridge"                                               Data published to IBM IoT platfrom:
20     #in area location                                                 Data published to IBM IoT platfrom:
21                                                                       Data published to IBM IoT platfrom:
22     #latitude= 17.4225176                                             Data published to IBM IoT platfrom:
23     #longitude= 78.5458842                                            Data published to IBM IoT platfrom:
24                                                                       Data published to IBM IoT platfrom:
25     #out area location                                                Data published to IBM IoT platfrom:
26                                                                       Data published to IBM IoT platfrom:
27     latitude= 17.4219272                                              Data published to IBM IoT platfrom:
28     longitude= 78.5488783                                            Data published to IBM IoT platfrom:
29     myData={'name': name, 'lat':latitude,'lon':longitude}             Data published to IBM IoT platfrom:
30     client.publishEvent(eventId="status", msgFormat="json", data=myData, qos=0, onPub  Data published to IBM IoT platfrom:
31     print("Data published to IBM IoT platfrom: ",myData)              Data published to IBM IoT platfrom:
32     time.sleep(5)                                                     Data published to IBM IoT platfrom:
33                                                                       Data published to IBM IoT platfrom:
34 client.disconnect()                                                   Data published to IBM IoT platfrom:
35                                                                       Data published to IBM IoT platfrom:
36                                                                       Data published to IBM IoT platfrom:
```


Databases

Your Databases

Name	Size	# of Docs	Partitioned	Actions
login_credentials	13.7 KB	111	No	
noderedwjldy20221105	37.4 KB	4	No	
sample	59.4 KB	351	No	
sensor_data	15.7 KB	90	No	

Showing 1–4 of 4 databases.   Databases per page 20

The data stored in IBM Cloud should beproperly integrated with
Cloudant DB

7.4 SPRINT 4

WEB USER INTERFACE

FIREOUTH.HTML

HTML,CSS AND JS CODE:

```
<!DOCTYPEhtml>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width,initial-scale=1.0">
    <link rel="stylesheet" href="/FIREOAUTH.css">
    <link                                                        rel="stylesheet"
href="https://cdnjs.cloudflare.com/ajax/libs/nprogress/0.2.0/nprogress.min.css">
    <link                        rel="shortcut                        icon"
href="https://raw.githubusercontent.com/tharunoptimus-
pd/firepwa/main/favicon.ico?token=GHSAT0AAAAAABR46
HVJ5M5L3QGFRZRQXOISYUJUWAA" type="image/x-
icon">

    <style>
        html, body {
            height: 100%;
            margin: 0;
            font-family: -apple-system, BlinkMacSystemFont, "Segoe  UI",
Roboto, Oxygen,
```

```css
        Ubuntu, Cantarell, "Open Sans", "Helvetica Neue",sans-serif;
    font-weight: 300;
}



a {
    text-decoration:  none; color:
    #007bff;
    font-weight:  500; font-
    size: 1.2rem;
}



h3 {
    font-size: 1.4rem;
}



h3, h4 {
    margin: 0;
    padding: 0.3rem 0;
}



.wrapper   {   display:
    flex;
    flex-direction:  column; align-
    items:  center;  justify-content:
    center;height: 100%;
    text-align: center;
}



.oneClickSignin    {    padding:
    0.5rem;
    border:  1px  solid  #44444444; border-
    radius: 5px;

    box-shadow: 0 0 3px 0px #44444444;

    opacity: 0.2;
    pointer-events: none;
}
```

```css
.qrcode { opacity: 0.1;
}


.learnAboutFire { padding-top:
    1.25em;
}


.qrHolder { display:
    none;
    margin-top: 3rem;
}



.qrContainer {
    align-items:            center;
    display: flex;
    justify-content:             center;
    padding: 8px;

    margin: 2rem auto;
    box-shadow: 0 0px 6px 1px rgb(0 0 0 / 16%); border: 1px
    solid #44444444;
    border-radius: 6px; width:
    200px; height: 200px;
}
```
```html
</style>
<title>Fire OAuth</title>
<script>
    if   (window.location.hostname   !==   "localhost")   {   if
    (location.protocol !== "https:") {
        location.replace(
            `https:${location.href.substring(
                location.protocol.length
            )}`
        )
    }
    }
</script>
```

```html
</head>
<body>
    <div class="wrapper">
        <h3 class="pageTitle">Login with SAFETY</h3>



        <div class="qrAuthorize">
            <h4 class="subTitle">Scan QR from your Fire OAuthApp</h4>



            <div class="qrContainer">
                <canvas id="qr-code" class="qrcode"></canvas>
            </div>
        </div>



        <div class="oneClickSignin">
            <h4>Have Fire PWA on this device?</h4>
            <a            target="_blank"            id="authorizeOverLink"
href="https://firepwa.netlify.app/authorize?sessionId"
rel="noopener">Click to Authorize  </a>
        </div>



        <div class="learnAboutFire">
            <a            target="_blank"            href="https://fireoauth.netlify.app"
rel="noopener">LearnMore about SAFETY</a>
        </div>
    </div>
    <script                  src="https://cdnjs.cloudflare.com/ajax/libs/nprogress/0.2.0/n
progress.min.js"></script>
    <script                  src="https://cdnjs.cloudflare.com/ajax/libs/qrious/4.0.2/qriou
s.min.js"></script>
    <script                  src="https://cdnjs.cloudflare.com/ajax/libs/socket.io/4.2.0/soc
ket.io.js"></script>
    <script>
```

```javascript
const FIRE_API_KEY = "635b790a3bcc6b59c4b772d0" const
FIRE_ENDPOINT =
"https://fire.adaptable.app/api/apis/generate"
const CHANNEL_NAME = "fireOAuthChannel" const
broadCastingChannel = new
BroadcastChannel(CHANNEL_NAME)
const FIRE_SERVER_SOCKET_ENDPOINT =
"https://fire.adaptable.app"
let socket = io(FIRE_SERVER_SOCKET_ENDPOINT)let qr


let qrcode = document.querySelector(".qrcode") let
oneClickSignin =
document.querySelector(".oneClickSignin")
let pageTitle = document.querySelector(".pageTitle") let subTitle =
document.querySelector(".subTitle")



function setOpacity(opacity) { oneClickSignin.style.opacity = opacity
oneClickSignin.style.pointerEvents = opacity ===
"1" ? "auto" : "none"
qrcode.style.opacity = opacity
}



async function getSessionID() { let
response
try {
response = await fetch(`${FIRE_ENDPOINT}/${FIRE_API_KEY}`, {
method: "GET",
headers: {
"Content-Type": "application/json",
}
})
} catch (error) {
console.log(error) return
null
}
```

```
let data = await response.json()
let { sessionId, chatRoomId } = data return {
sessionId, chatRoomId }
}


function generateQR(value) { (qr = new
    QRious({
        element: document.getElementById("qr-code"),size: 200,
        level:   'M',   value:
        value,
    }))
}


function    changeHREF    ({sessionId,   chatRoomId})   {   let
    firePwaUrlHostname =
"https://firepwa.netlify.app"         let
    originURL =
encodeURIComponent(window.location.origin)


    let url =
`${firePwaUrlHostname}/authorize.html?sessionId=${session
Id}&chatRoomId=${chatRoomId}&url=${originURL}`
    let a = document.getElementById("authorizeOverLink")
    a.href = url
}


async   function   fire()   {
    NProgress.set(0.4)
    let { sessionId, chatRoomId } = await getSessionID()


    if(sessionId === undefined || chatRoomId === undefined || sessionId ===
null || chatRoomId === null) {
        pageTitle.innerHTML = "Something went wrong
"
```

```
            subTitle.innerHTML = "Please try again later "return
        }


        setOpacity("1")



        NProgress.done()      let
        data = {
            sessionId,
            url: encodeURIComponent(window.location.origin)
        }
        data    =    JSON.stringify(data)    generateQR(data)
        changeHREF({sessionId,              chatRoomId})
        socket.emit("join room", sessionId)
    }


    fire()



    socket.on("trusted token", (token) => {let data = {}
        data.success    =    true
        data.token = token



        broadCastingChannel.postMessage(data)



        window.close()
    })
</script>
</body>
</html>
```
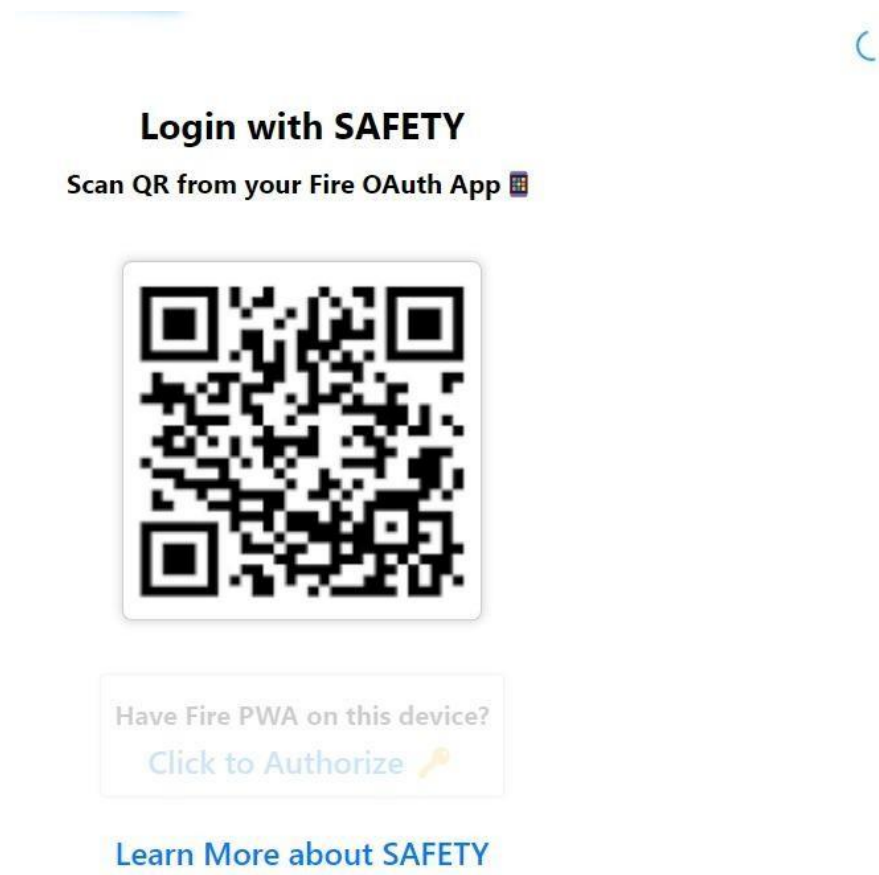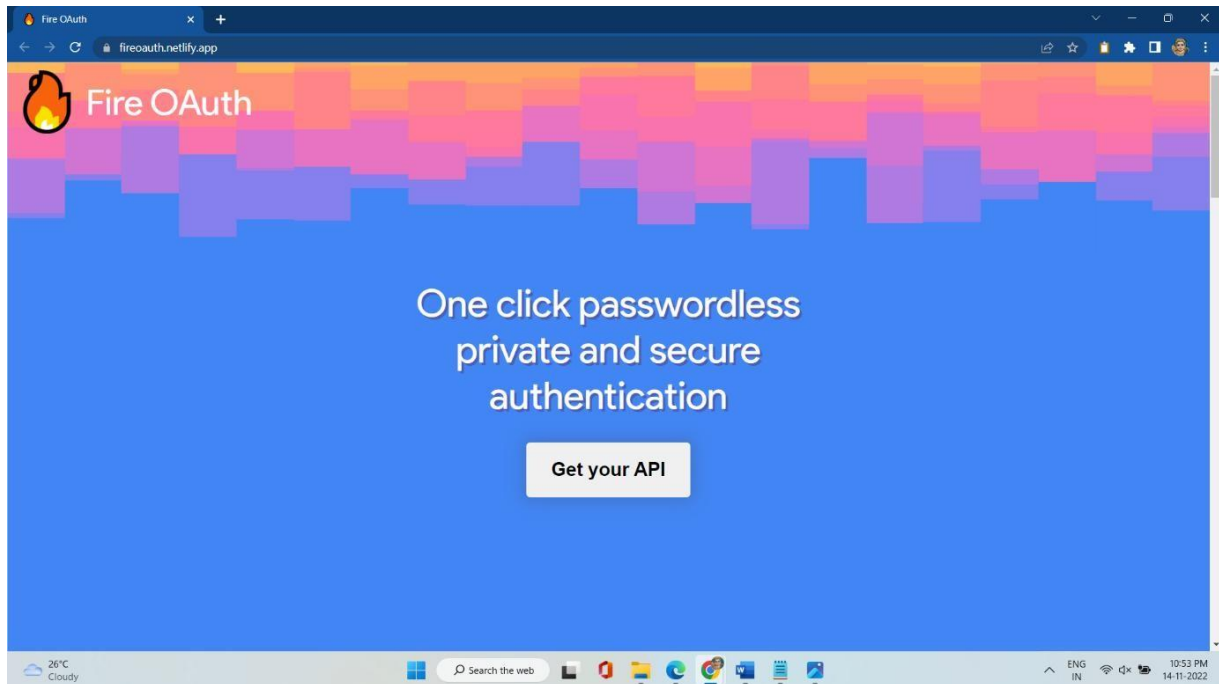
OUTPUT:

Login with SAFETY

Scan QR from your Fire OAuth App 📱

Have Fire PWA on this device?
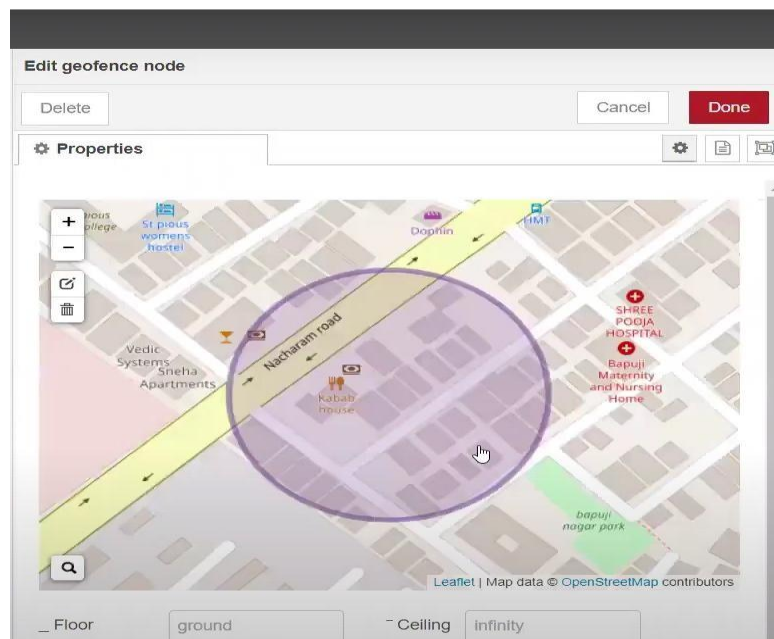Click to Authorize 🔑

Learn More about SAFETY

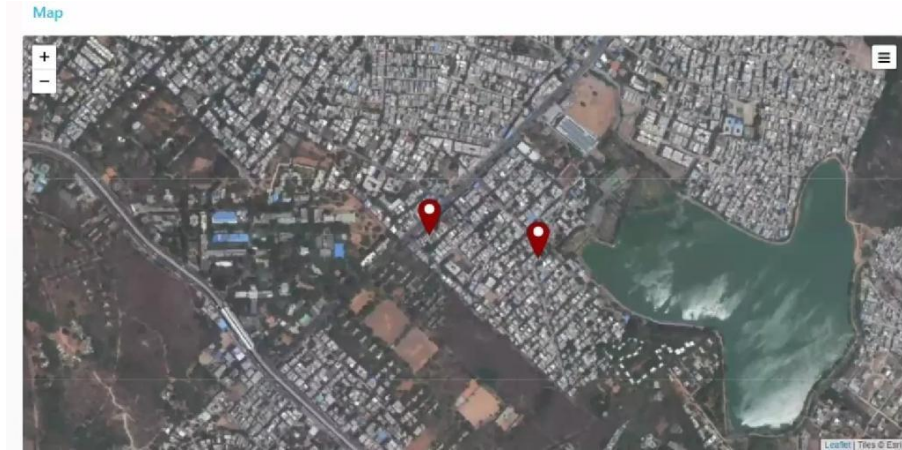**OUTPUT:** AFTER CLICKING LEARN MORE ABOUT SAFETY

GEOFENCE NODE:

8.RESULT

After running the script, the web UI shows "Child is not in the
particular area"

Result: successfully completed.

9 ADVANTAGES & DISADVANTAGES

ADVANTAGE:

The main Advantage of the proposed system is send location by using mobile
network (GSM). Here a prototype model (device) is created which is hardware
based. The work comprises ARDUINO UNO as microcontroller, along with GPS
and GSM module.

DISADVANTAGE:

Children need a smartphone for their parents to install a tracking app, but this
can expose them to the potential dangers associated with social media and the
internet such as cyber bullying, inappropriate contact with strangers and
unsupervised access to inappropriate information.

10 CONCLUSION

The child tracking app, parent can track and monitor their child with just a simple app. The parent is not possible to always stay beside of children as most of the parents needs to go for work. By having this child tracking system, parents can track the location of their children. In order to avoid the kidnapping cases, the child tracking system is needed.

11 FUTURESCOPE

This project is actually developed for parents to keep track the child where about. Nowadays, child is easier influenced by their friends, and they might even get cheated or kidnapped by any of the strangers. By developing this system can track child current location.

The application will deal with the Android platform and is utilized for GPS following between different mobile devices .The application is mindful to keep track the location of the device. The parent or child account can be edit by parents. The application will include the route history trace where the parent track for the route their child traversed during a certain period of time. The application in the device will update the location of the child to the application by having the interval time for 30 in, 1 hour and 2 hour. Parent can select the interval time to view the current location of the child. Parent also can make call from the application if any inconvenience happens when the location not found or track.

12 APPENDIX

GITHUB: https://github.com/IBM-EPBL/IBM-Project-22636-1659855506
OUTPUT LINK: https://drive.google.com/file/d/1043Znf-qOldhBEDcatTDfiEm_szcNs7v/view?usp=drivesdk