IBM – NALAIYATHIRAN PROJECT
IOT BASED SAFETY GADGET FOR CHILD SAFETY AND MONITORING

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1. INTRODUCTION

1.1 PROJECT OVERVIEW

Creating a device that can be followed using GPS locations and has a panic button to inform the parent via a GSM module, this invention is primarily focused on improving child safety. An Android app for parents is created to control and monitor the device at any time. Smart gadget devices are always connected to parents' phones, which can receive and make phone calls as well as SMS gadget via a GSM module. Additionally, wireless technology is implemented on the device, which is useful to bind the device within a region of monitoring range; if the device is moving out of monitoring range, an alert will be triggered on a binding gadget, helping you maintain a virtual watch over the child. An alert will be sent to a bound device if the device moves outside of the monitoring range, allowing you to keep a virtual check on the child. Devices come with a health monitoring system that checks for factors including heart rate, pulse, and temperature. The parental app allows for the monitoring of these indicators. Using a contact switch, the device also keeps track of whether or not it is plugged in and notifies the parent the moment it is unplugged.

1.2 PURPOSE

Approximately 80% of all reports of child abuse are made nowadays, with 74% of the victims being girls and the remaining 20% being males. In this world, a child goes missing every forty seconds. Children are the foundation of a country; if their future was threatened, it would have an effect on the development of the whole country.

The emotional and mental stability of the children is compromised as a result of the abuse, ruining their futures and careers. The things that happen to these defenseless kids are not their fault. Therefore, parents are in charge of raising their own children. However, parents are compelled to seek money because of the state of the economy and their desire to concentrate on their child's future and job.

Consequently, it becomes challenging for them to constantly cling to their kids. We have created a setting in our system where this issue can be effectively solved. It enables parents to keep a close eye on their kids in real time while concentrating on their own careers without having to take any physical action. In essence, kids cannot tell their parents about the abuse they experience on a regular basis. They are too young to really comprehend what truly occurs to them. Parents find it challenging to recognize when their children are being abused. So, the main objective of this module is to help working parents to be free from worry about their children by tracking their movements at any time. An autonomous real-time monitoring system is required for every child worldwide in order to stop attacks on children.

2. Literature Survey

Employing an efficient Child Tracking System using the Internet of Things

The main concept of this paper talks about the idea of Child Tracking (CT) System for the safety of kids. Our purpose in this work is to track and secure the child at any place, over a command via SMS to communicate between device and parent with the help of GSM module wired to Arduino Mega Board. The proposed system provides the real-time location, child body temperature, environment temperature, humidity of the environment and alarm to the parents so that they can rescue their child from strangers. The proposed CT system combines technologies and sensors to easily monitor the child and get the information. This paper provides the comfort of taking care over the children remotely at an instance of time.

Design and development of an IOT based wearable device for the safety and security of women and girl children

The aim of this work is to develop a wearable device for the safety and protection of women and girls. This objective is achieved by the analysis of physiological signals in conjunction with body position. The physiological signals that are analysed 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 means of sending notifications/alerts to designated individuals.

Smart Intelligent System for Women and Child Security

This paper surveys about the security system for women and children which allows immediate responses in any harassment in public places, societies etc. Women all over the world are facing unethical physical harassment and Children cannot be left unattended at a social event or outside the home. Our project solves both the problems. A portable device which will have a pressure switch. As soon as an assailant is about to attack the women/child or when they sense any insecurity from a stranger, he/she can then put pressure on the device by squeezing or compressing it. Instantly the pressure sensor senses this pressure and a conventional SMS, with the victim's location will be sent to their parents/guardian cell phone numbers stored in the device while purchasing it, followed by a call. If the call is unanswered for a prolonged time, a call will be redirected to the police and the same message will be sent. The main feature of our system is less response time will be required for helping the victim.

RFID-based System for School Children Transportation Safety Enhancement

This paper presents a system to monitor pick-up/drop-off of school children to enhance the safety of children during daily transportation from and to school. The system consists of two main units, a bus unit, and a school unit. The bus unit the system is used to detect when a child boards or leaves the bus. This information is communicated to the school unit that identifies which of the children did not board or leave the bus and issues an alert message accordingly. The system has a developed web-based database-driven application that facilities its management and provides useful information about the children to authorized personnel. A complete

prototype of the proposed system was implemented and tested to validate the system functionality. The results show that the system is promising for daily transportation safety.

2.1 EXISTING SYSTEM

Mobile wearable device communication creates new challenges and also covers the short-range. It gives peer-to-peer communication or client-server fashion communication with smartphones, tablets, and gateway nodes. Women safety devices give protection and women themselves want to intimate their dangerous situation by pressing the buzzer in the device. In this, a person with a particular application will receive a woman's current status in a danger situation. The system provides an alert message for the small range and it can be received only through mobile phones. The existing system uses a Wi-Fi module to intimate the parents about their child's condition. Parents can get the personal details of children by giving keywords like Body temperature, location to the concern device.

2.2 REFERENCE

[1] Kumar A, Shankar KM. "Employing an efficient Child Tracking System using the Internet of Things". 30Jun.2022 ;14(02):139-42. DOI: 10.18090/samriddhi.v14i02.2

[2] A. Jatti, M. Kannan, R. M. Alisha, P. Vijayalakshmi and S. Sinha, "Design and development of an IOT based wearable device for the safety and security of women and girl children," 2016 IEEE International Conference on Recent Trends in Electronics, Information & Communication Technology (RTEICT), 2016, pp. 1108-1112, doi: 10.1109/RTEICT.2016.7808003.

[3] S. K. Punjabi, S. Chaure, U. Ravale and D. Reddy, "Smart Intelligent System for Women and Child Security," 2018 IEEE 9th Annual Information Technology, Electronics and Mobile Communication Conference (IEMCON), 2018, pp. 451-454, doi: 10.1109/IEMCON.2018.8614929.

[4] RFID-based System for School Children Transportation Safety

Enhancement ", Proceedings of the 8th IEEE GCC Conference and Exhibition, Muscat, Oman, 1-4 February 2015.

3 IDEATION & PROPOSED SOLUTION
3.1 Empathy Map Canvas
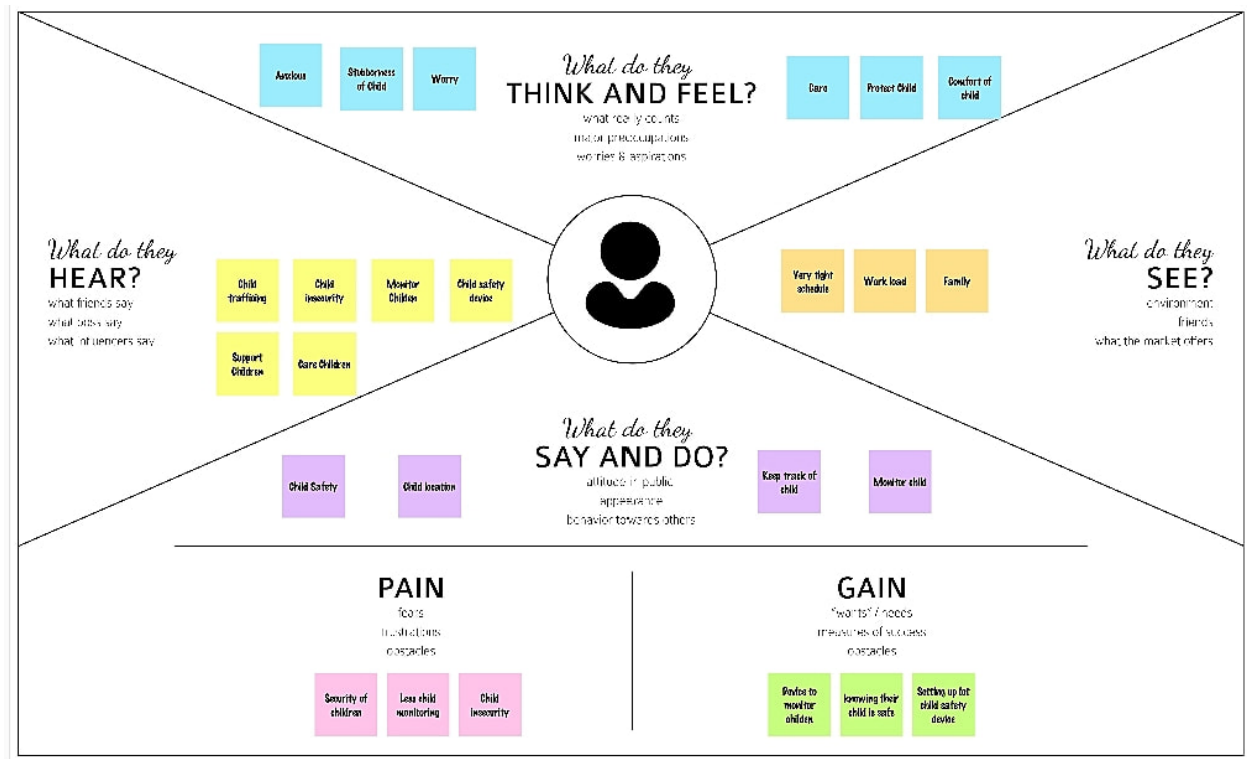
3.2 Ideation and Brainstorming

Idea 1:

A compact wearable gadget with a pressure switch. The user can apply pressure to the device by squeezing or compressing it as soon as an attacker is preparing to attack the person or as soon as the person perceives any insecurity from a stranger. Instantaneously the pressure sensor detects this pressure, and a call is placed to the victim's parents' or guardian's mobile phone numbers that were put in the device at purchase, along with a regular SMS that includes the victim's location. The identical message will be delivered to the police if the call goes unanswered for an extended period of time. Further, a message with the person's current location is sent to the parent or guardian's phone by

standard SMS if the person enters an area that is typically offlimits to them**.**

Idea 2:

By creating a device that can be followed using GPS locations and has a panic button to inform the parent via a GSM module, this invention is primarily focused on improving child safety. An Android app for parents is created to control and monitor the device at any time. Smart gadget device is always connected to parents' phone, which can receive and make phone calls as well as SMS on gadget via GSM module. Additionally, wireless technology is implemented on the device, which is useful to bind the device within a region of monitoring range; if the device is moving out of monitoring range, an alert will be triggered on a binding gadget, helping you maintain a virtual watch over the child. An alert will be sent to a bound device if the device moves outside of the monitoring range, allowing you to keep a virtual check on the child. Devices come with a health monitoring system that checks for factors including heart rate, pulse, and temperature. The parental app allows for the monitoring of these indicators. Using a contact switch, the device also keeps track of whether or not it is plugged in and notifies the parent the moment it is unplugged.

Idea 3:

According to the latest surveys, the number of cases of child abduction and missing children in India is steadily rising. One of the primary worries for parents today is the safety of their children on school buses and outside of school premises, The suggested system makes an effort to give kids security features using new techniques that are introduced to the current safety system for better defense. A portable unit, a cloud platform, and an Android application make up the proposed system. A raspberry pi 2 model B, a GPS receiver with antenna, and a pulse rate sensor make up the portable device. Using a GPS receiver and a heartbeat sensor, this device will track the child's location in terms of latitude, longitude, and altitude. These data are transmitted

to a raspberry pi module, which uses internet connectivity to inject them into elastic search. The android program has a user interface that displays the child's location on a map, path they took, and their rate of movement. The child's heart rate is also continuously tracked by the application.

3.4 Problem solution fit

4 Requirement analysis

4.1 Functional requirements

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	User Registration	Registration through Form Registration through Gmail
FR-2	User Confirmation	Confirmation via Email Confirmation via OTP
FR-3	Notification	Notified via Mobile App
FR-4	User Interface	Mobile App- MIT App Inventor Able to see location of children when they are out of geofence

4.2 Non-Functional requirements:

FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	Accessed through Mobile App Showing location (latitude and longitude) of child
NFR-2	**Security**	Database security must meet HIPAA requirements
NFR-3	**Reliability and Availability**	Once logged in ,webpage is available until logging out of the app
NFR-4	**Performance**	Each page must load within 2 seconds
NFR-6	Scalability	The process must finish within 3 hours so data is available by 8 a.m. local time after an overnight update

5 PROJECT DESIGN

5.1 Data Flow Diagrams

```
                              ┌──────────┐
                              │  Start   │
                              └────┬─────┘
                                   │
                                   ▼
         ┌──────────────────▶ Initialise GSM, GPS
         │                         │
         │        Thread 1         │          Thread 2
         │      ┌──────────────────┴──────────────┐
         │      ▼                                  ▼
         │                                   Wait for 5 min ◀─┐
         │      ◇                                  │          │
         │  Button Pressed ──YES──┐                ▼          │
         │  Or Keyword?           │             Acquire       │
         │      │                 │            Parameters     │
         │      NO                │                │          │
         │      └──────┐          ▼                ▼          │
         │             │       Send SMS        Update Data ───┘
         │             │          │              On Server
         │             │          ▼
         │             │       Acquire ◀──────────┐
         │             │      Parameters           │
         │             │          │                │
         │             │          ▼                │
         │             │      Update Data          │
         │             │      On Server            │
         │             │          │                │
         │             │          ▼                │
         │             │          ◇                │
         │   ◀──YES────────────  Reset             │
         │             │          ?                │
         │             │          │                │
         │             │         NO                │
         │             │          ▼                │
         │             │     Wait for 1 min ───────┘
```
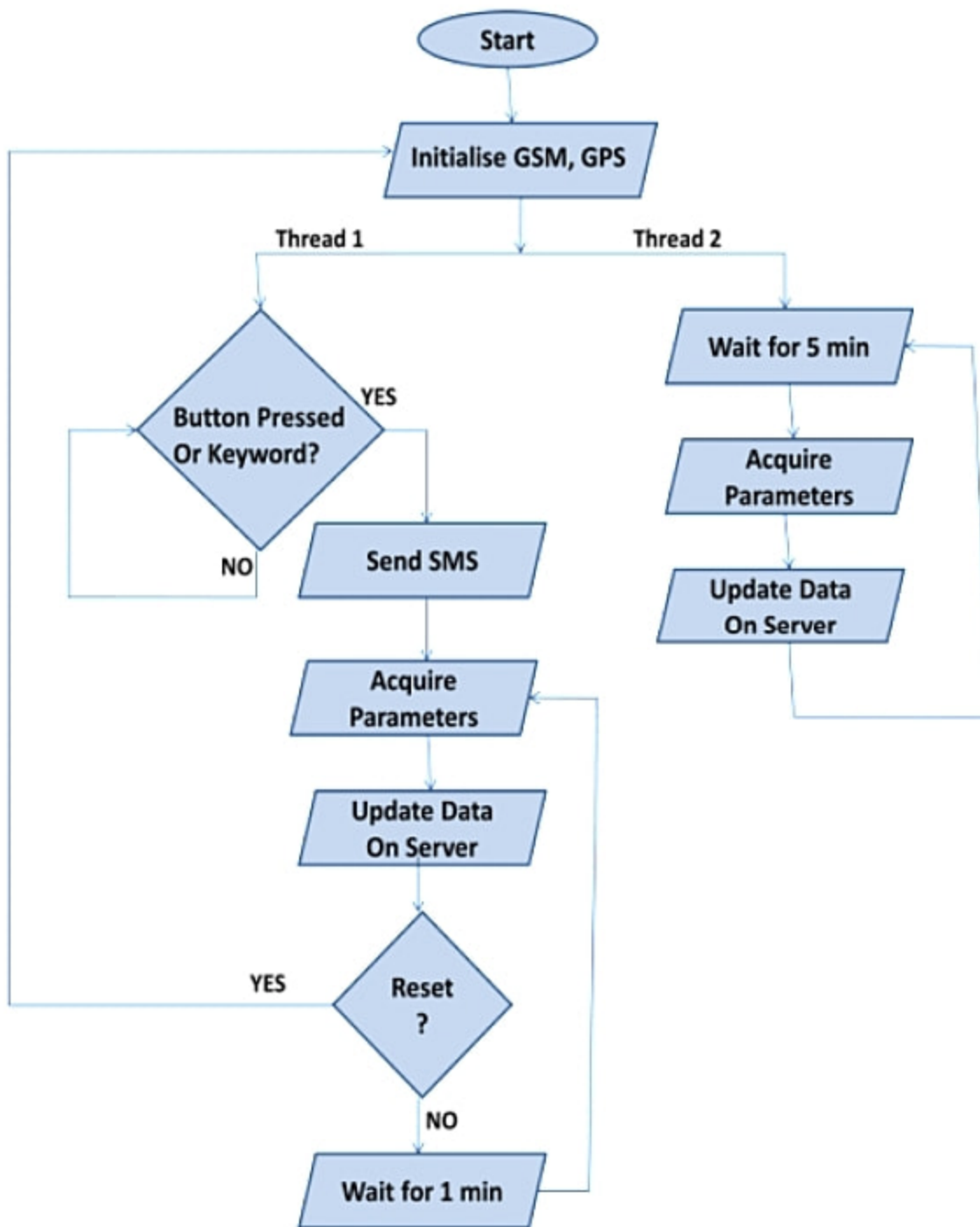
5.2 Solution & Technical Architecture

Solution Architecture

Solution architecture is a complex process – with many sub-processes –

That bridges the gap between business problems and technology solutions. Its goals Are to:

● Find the fastest tech solution to solve existing business problems.

● Describe the structure, characteristics, behavior, and other aspects of the

Software to project stakeholders.

● Define features, development phases, and solution requirements.

● Provide specifications according to which the solu on is defined, managed, and Delivered.

Technical Architecture
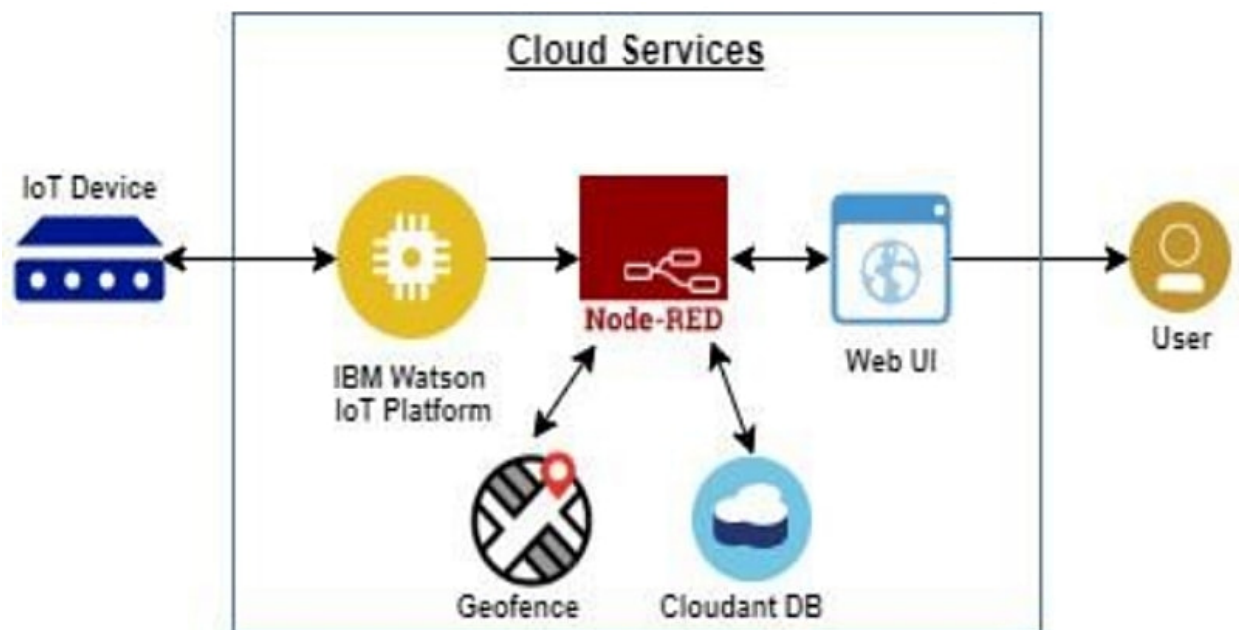
5.3 User Stories

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	----

6 PROJECT PLANNING & SCHEDULING

6.1 Sprint Planning and estimation

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-1	Registration	USN-1	As a Parent/Guardian,I can register for the application by entering my email, password, and confirming my password.	2	High	Bhuvaneshwari.V.B
Sprint-1		USN-2	As a Parent/ Guardian, I can register for the application through Gmail	1	Medium	Hameed Jahufar Haja Alaudin.N.H
Sprint-1	User Confirmation	USN-3	As a parent I will receive connection , location in sms / mail once I have entered this application	1	High	Nafisa Mahira.K.M

Sprint-1	Login	USN-4	As a parent/ guardian , I can log into the application by entering mail and password.	2	High	Shalini.S

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	4 Days	24 Oct 2022	27 Oct 2022	20	29 Oct 2022
Sprint-2	20	5 Days	28 Oct 2022	01 Nov 2022	20	04 Nov 2022
Sprint-3	20	8 Days	02 Nov 2022	09 Nov 2022	20	11 Nov 2022
Sprint-4	20	9 Days	10 Nov 2022	18 Nov 2022	20	19 Nov 2022

7. CODING & SOLUTIONING (Explain the features Added in theproject along with code)

7.1 Feature 1 :(Adding Geofence)

● Geofence is like a round wall covering the given location. So parents can use Them to mark the location where their children are going .

● Multiple Geofence can be added.

CODING:

Package

com.example.geofence; import

android.app.PendingIntent; import

android.content.Context; import

android.content.ContextWrapper;

import android.content.Intent;

import android.widget.Toast;

import

com.google.android.gms.common.api.ApiException;

import com.google.android.gms.location.Geofence;

import

com.google.android.gms.location.GeofenceStatusCodes;

import

com.google.android.gms.location.GeofencingRequest;

import com.google.android.gms.maps.model.LatLng;

public class GeofenceHelper extends ContextWrapper {

private static final String TAG = "GeofenceHelper";

pendingIntent pendingIntent;

public GeofenceHelper(Context base) {

   super(base);

}

```
public GeofencingRequest getGeofencingRequest(Geofence geofence) { return
new GeofencingRequest.Builder() .addGeofence(geofence)
.setInitialTrigger(GeofencingRequest.INITIAL_TRIGGER_ENTER) .build();
} public Geofence getGeofence(String ID, LatLng latLng, float radius, int
transitionTypes) { return new Geofence.Builder()
.setCircularRegion(latLng.latitude, latLng.longitude, radius)
.setRequestId(ID) .setTransitionTypes(transitionTypes)
.setLoiteringDelay(5000) .setExpirationDuration(Geofence.NEVER_EXPIRE)
.build(); } public PendingIntent getPendingIntent() { if (pendingIntent != null)
{ return pendingIntent; } Intent intent = new
Intent(this,GeofenceBroadcastReceiver.class); pendingIntent =
PendingIntent.getBroadcast(this, 2607,
intent,PendingIntent.FLAG_IMMUTABLE); return pendingIntent; } public
String getErrorString(Exception e) { if (e instanceof ApiException) {
```

ApiException apiException = (ApiException) e; switch (apiException.getStatusCode()) { case GeofenceStatusCodes .GEOFENCE_NOT_AVAILABLE: return "GEOFENCE_NOT_AVAILABLE"; case GeofenceStatusCodes .GEOFENCE_TOO_MANY_GEOFENCES: return "GEOFENCE_TOO_MANY_GEOFENCES"; case GeofenceStatusCodes .GEOFENCE_TOO_MANY_PENDING_INTENTS: return "GEOFENCE_TOO_MANY_PENDING_INTENTS"; } } return e.getLocalizedMessage();

7.2 Feature 2 (Alert Notification)

● Once geofence is added , when the child enters the geofence a notification will be sent.

● When the child leaves the geofence a notification will be sent .

package com.example.geofence; import android.content.BroadcastReceiver; import android.content.Context; import android.content.Intent; import android.location.Location; import android.os.CountDownTimer; import android.util.Log; import android.widget.Toast; import com.google.android.gms.location.Geofence; import com.google.android.gms.location.GeofencingEvent import java.util.List; import android.os.Handler; public class GeofenceBroadcastReceiver extends BroadcastReceiver { private static final String TAG = "GeofenceBroadcastReceiv"; @Override public void onReceive(Context context, Intent intent) { // TODO: This method is called when the BroadcastReceiver is receiving // an Intent broadcast//. /*Toast.makeText(context, "GEOFENCE_ENTERED", Toast.LENGTH_SHORT).show(); final Toast mToastToShow;

int toastDurationInMilliSeconds = 1200000; mToastToShow = Toast.makeText(context, "GEOFENCE_EXITED", Toast.LENGTH_LONG); // Set the countdown to display the toast CountDownTimer toastCountDown; toastCountDown = new CountDownTimer(toastDurationInMilliSeconds, 100000) { public void onTick(long millisUntilFinished) {

```java
mToastToShow.show(); } public void onFinish() { mToastToShow.cancel(); } };
// Show the toast and starts the countdown mToastToShow.show();
toastCountDown.start();*/ NotificationHelper notificationHelper =
newNotificationHelper(context);
notificationHelper.sendHighPriorityNotification("GEOFENCE_TRANSITIO
N_ENT ER", "", MapsActivity.class); GeofencingEvent geofencingEvent =
GeofencingEvent.fromIntent(intent); if (geofencingEvent.hasError())
Log.d(TAG, "onReceive: Error receiving geofence event..."); return; } List
geofenceList = geofencingEvent.getTriggeringGeofences (); for (Geofence
geofence: geofenceList) { Log.d(TAG, "onReceive: " +
geofence.getRequestId()); } // Location location =
geofencingEvent.getTriggeringLocation(); int transitionType =
geofencingEvent.getGeofenceTransition(); switch (transitionType) {

case Geofence.GEOFENCE_TRANSITION_ENTER:
notificationHelper.sendHighPriorityNotification("Entered the Location", "",
MapsActivity.class); break; case
Geofence.GEOFENCE_TRANSITION_EXIT:
notificationHelper.sendHighPriorityNotification("Exited the Location ", "",
MapsActivity.class); break;

}

 }

 }
```

8. TESTING

8.1 Test Cases

Test case ID	Feature Type	Compon ent	Test Scenario	Pre-Requisite	Steps To Execute	Test Data	Expected Result	Actual Result	Stat us	Comments	TC for Automation(Y/N)	BUG ID	Executed By
LoginPage_TC_0 01	Functional	Home Page	Verify user is able to see the Login/Signup popup when user clicked on App		1.Enter App 2.Verify login/Signup popup displayed or not		Login/Signup popup should display	Working as expected	Pass		Y		SnehaShri , Swetha
LoginPage_TC_0 02	UI	Home Page	Verify the UI elements in Login/Signup popup		1.Enter App 2.Verify login/Signup popup with below UI elements: a.email text box b.password text box c.Login button d.New customer? Register		Application should show below UI elements: a.email text box b.password text box c.Login button with orange colour d.New customer? Register	Working as expected	Pass		Y		Shanmugapriya , Shrutha
LoginPage_TC_0 03	Functional	Home page	Verify user is able to log into application with Valid credentials		1.Enter App 2.Enter Valid username/email in Email text box 3.Enter valid password in password text box 4.Click on login button	Username: abcd@gmail.com password: Testing123	User should navigate to user account homepage	Working as expected	Pass		Y		Shakthi
LoginPage_TC_0 04	Functional	Login page	Verify user is able to log into application with InValid credentials		1.Enter App 2.Enter InValid username/email in Email text box 3.Enter valid password in password text box 4.Click on login button	Username: abcd@gmail password: Testing123	Application should show "Login error. There is no user record corresponding to the identifier"	Working as expected	pass		Y		Shakthi , Shanmugapriya
LoginPage_TC_0 04	Functional	Login page	Verify user is able to log into application with Valid credentials		1.Enter App 2.Enter Valid username/email in Email text box 3.Enter Invalid password in password text box 4.Click on login button	Username: suef9ac020@vsinsettsp.ad a.in password: Testing123678686786876 878	Application should show "the Password is invalid"	Working as expected	Pass		Y		Shretha D, SnehaShri
LoginPage_TC_0 05	Functional	Login page	Verify user is able to log into application with InValid credentials		1.Enter App 2.Enter InValid username/email in Email text box 3.Enter Invalid password in password text box 4.Click on login button	Username: abcd password: Testing123678686786876 878	Application should show "Login error. There is no user record corresponding to the identifier"	Working as expected	Pass		Y		Swetha
Dashboard	Functional	Dashboard	Adding geofence in the location need		1.Enter App 2.Enter the valid username and password		Application show a red circle around the location	Working as expected	Pass		Y		Sneha Shri
Alert Notification	Functional	Notification	Notification when the user entered the geofence		1.Enter App 2.Enter the valid username and password 3.Add the Geofence		Application sent the notification " Entered the location"	Working as expected	Pass		Y		Shanmugapriya , Shrutha
Alert Notification	Functional	Notification	Notification when the user exited the geofence		1.Enter App 2.Enter the valid username and password		Application sent the notification " Exited the location"	Working as expected	Pass		Y		Shakthi , Swetha

8.2 User Acceptance Testing

1 .Defect Analysis

Resolu on	Severity 1	Severit y2	Severit y3	Severit y4	Subtotal
By Design	11	4	2	2	19
Duplicate	1	1	2	0	4
External	2	3	0	1	6
Fixed	10	2	3	20	35
Not Reproduc ed	0	0	2	0	2
Skipped	0	0	2	1	3
Won't Fix	0	5	2	1	8
Totals	24	15	13	25	77

2. Test Case Analysis

Sec on	Total Cases	Not Tested	Fail	Pass
Print Engine	5	0	1	4
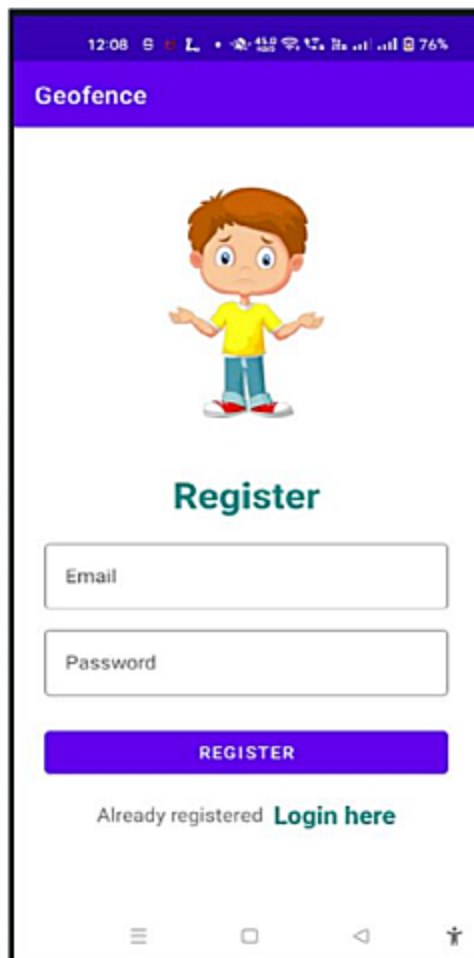
Client Applica on	47	0	2	45
Security	3	0	0	3
Outsource Shipping	2	0	0	2
Excep on Repor ng	11	0	2	9
Final Report Output	5	0	0	5
Version Control	3	0	1	2

9. RESULTS

1.User Registration :

Users get registered to the app using their mail and create their password. On the user is registered a verification mail will be sent to the user mail id. The user needs to verify the account. All user details are stored in the firebase and verification mail is sent by firebase authentication .

Registration Page :

Verification mail:

2. User Login:

Users with their registered mail and password will login to the account . As the details are stored in firebase, when invalid email or password is entered a message say invalid email or password occur .

Login page :

User Details:
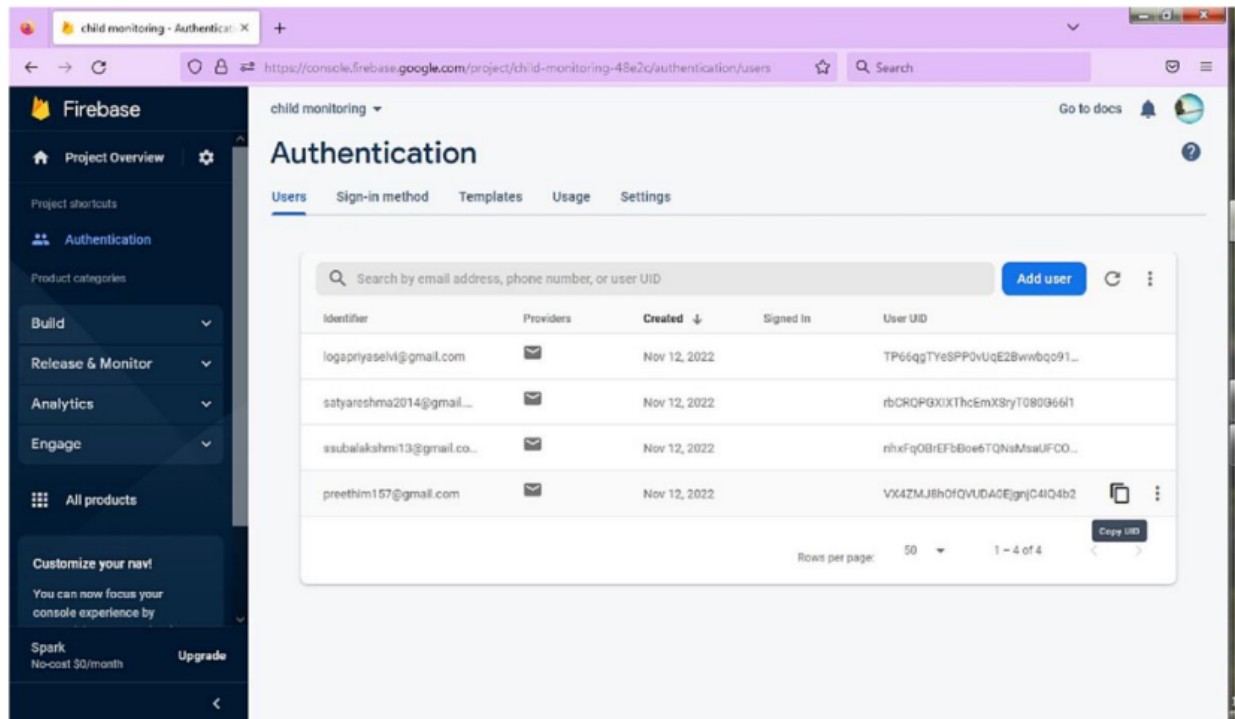
3. Adding Geofence and Alert Notification:

Users can add geofence in the location where they want to add or where their child is going to play so they can monitor the child location . Once the child enters the geofence alert notification says entered the location will be displayed . When the child leaves the geofence alert notification says exited the location will be displayed.

Geofence
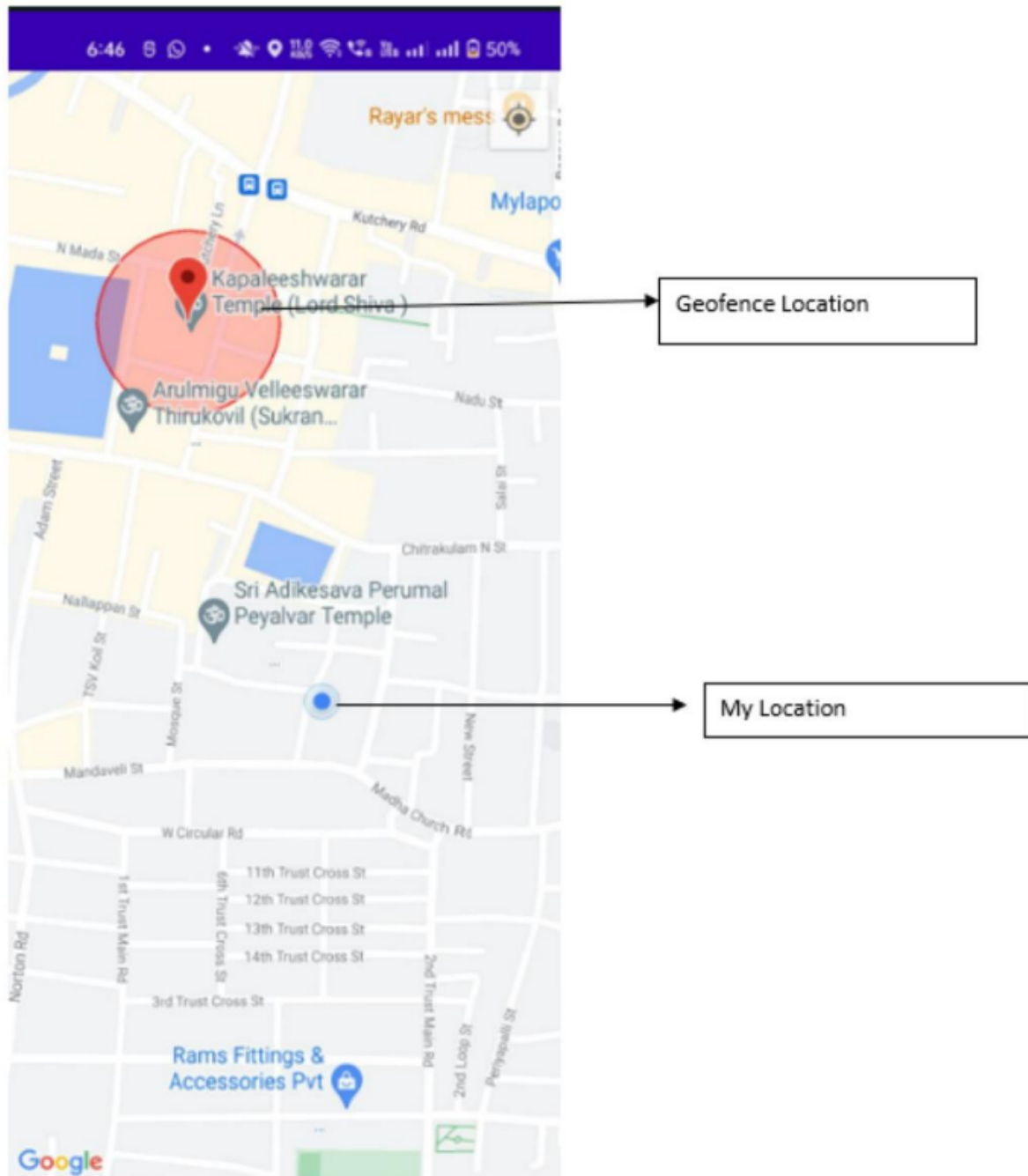
Notification
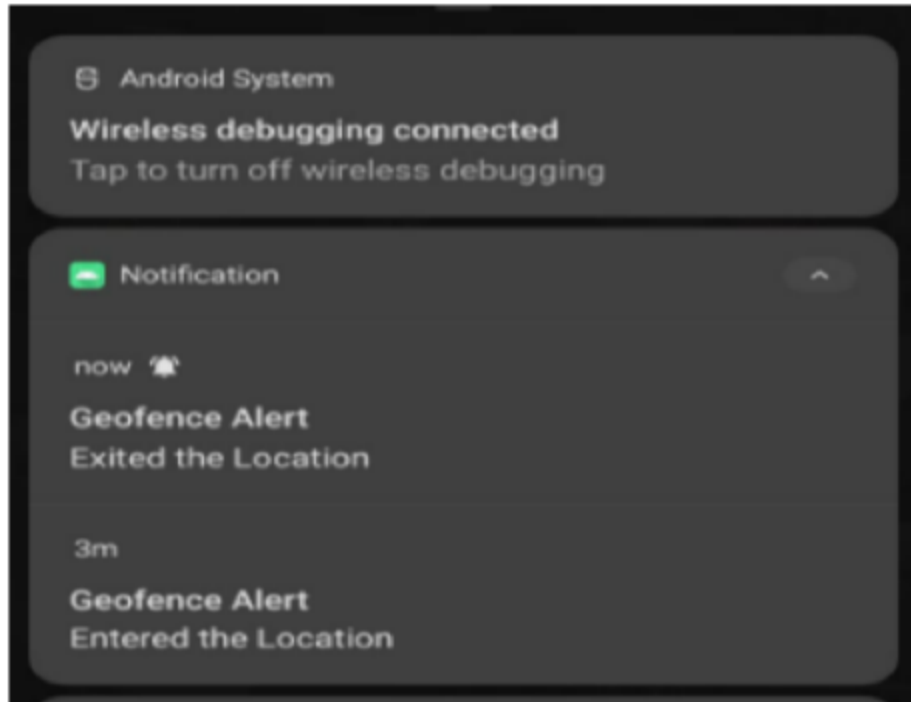
10. Advantages and Disadvantages

The parent can monitor their child from anywhere at any time, and also get a notification when the child goes away from the permitted radius. It also allows the parent to know if their child is in any dangerous situation. The disadvantages of this system are that the child could not produce the exact alert command during a panic condition. The command produced may not match the previously stored command. This project requires manual intervention.

11. Future Scope

In our system, we use the Internet of Things, GPS, GSM, and Raspberry Pi to automatically monitor the youngster in real time. When we utilize a web camera and GPS to actively monitor, this system needs network connections, satellite communication, and a high-speed data connection. It is challenging to keep an eye out for any network problems or satellite connection problems. Additionally, there is a lag when streaming videos through the server. The Zigbee concept or accessing the system without the internet and employing high-speed server transmission can
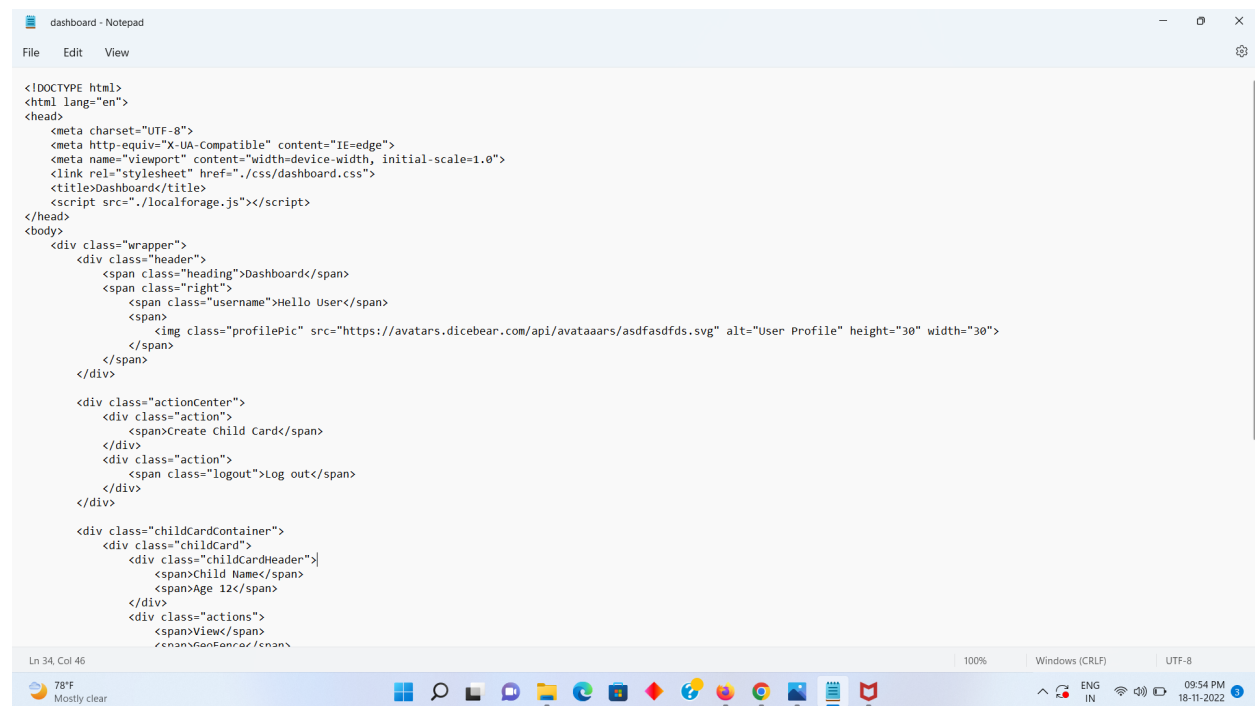
therefore be used in the future to solve these problems.

12. Conclusion

Future is similar to the word children. Young people are the future pillars of one's nation, as Dr. A.P.J. Abdul Kalam once said, thus it is important to protect today's children's dreams and lives in order to give them a better future. Therefore, every parent should take good care of their own children to prevent them from being victims of abuse that will completely harm them on a physical, mental, and emotional level, wrecking our future. Due to the significance of our future, our product makes it simple for parents to track their kids and regularly visually monitor them, enabling them to assure their safety and lowering the incidence of child abuse.

13 Appendix

13.1 Source code

File   Edit   View

```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="/css/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">
            <span>Login to Continue</span>
            <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="Last Name" 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">
                    <input class="loginButton" type="submit" value="Sign Up">
                </form>
            </div>
            <div class="loginWithFireContainer">
                <button type="button" class="fire" title="Login with Fire 🔥" id="fire">Login with Fire 🔥</button>
            </div>
            <a class="hyperLink" href="/login">Already have an Account? Login ↗</a>
```

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File   Edit   View

```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="/css/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">
            <span>SignUp To Continue</span>
            <div class="traditionalLoginContainer">
                <form class="signupForm" action="/" method="post">
                    <input type="email" name="email" placeholder="Email" id="email">
                    <input type="password" name="password" placeholder="Password" id="password">
                    <input class="loginButton" type="submit" value="Login">
                </form>
            </div>
            <div class="loginWithFireContainer">
                <button type="button" class="fire" title="Login with Fire 🔥" id="fire">Login with Fire 🔥</button>
            </div>
            <a class="hyperLink" href="/register">Don't have an Account? Register ↗</a>
        </div>
    </div>
    <script>
```

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```html
<!DOCTYPE html>
<html lang="en" style="height: 100%; margin: 0;">
    <head>
        <meta charset="UTF-8" />
        <meta name="description" content="The Home Page after Logged 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,
                Oxygen, Ubuntu, Cantarell, 'Open Sans', 'Helvetica Neue',
                sans-serif;
            "
    >
        <div
            class="wrapper"
```

OUTPUT

13.2 GitHub and Project demo link

Github Link:

https://github.com/IBM-EPBL/IBM-Project-42508-1660665509

Demo Link:

https://drive.google.com/drive/folders/1hjksa-SFldASWIhOBp-5gWlDq_hEdXcQ