

WEB PHISHING DETECTION

**NALAIYA THIRAN PROJECT BASED
LEADER**

ON

**IOT BASED SAFETY GADGET FOR CHILD SAFETY
MONITORING & NOTIFICATION**

A PROJECT REPORT

SWVATHALAKA S	19106123
----------------------	-----------------

SUDHA S	19106119
----------------	-----------------

SUBAASRI S	19106117
-------------------	-----------------

SUSMITHA S	19106122
-------------------	-----------------

BACHELOR OF ENGINEERING

IN

ELECTRONICS AND COMMUNICATION ENGINEERING

HINDUSTHAN COLLEGE OF ENGINEERING AND

TECHNOLOGY

Approved by AICTE, New Delhi, Accredited with 'A' Grade by NAAC

(An Autonomous Institution, Affiliated to Anna University, Chennai)COIMBATORE –

TABLE OF CONTENTS

CHAPTER NO	TITLE	PAGE
	NOABSTRACT	i
1	INTRODUCTION	1
2	OBJECTIVE	2
3	IDEATION PHASE	3
	Literature Survey	3
	Empathy Map	6
	Ideation	7
	Problem Statement	9
4	PROJECT DESIGN PHASE I	11
	Proposed Solution	11
	Problem Solution Fit	13
	Solution Architecture	14
5	PROJECT DESIGN PHASE II	16
	Customer Journey Map	16
	Solution Requirements	19
	Data Flow Diagrams	20
	Technology Stack	22
6	PROJECT PLANNING PHASE	24
	Prepare Milestone and Activity List	25
	Sprint Delivery Plan	26
7	PROJECT DEVELOPMENT PHASE	28
	Project Development – Delivery of Sprint – 1	28
	Project Development – Delivery of Sprint – 2	31
	Project Development – Delivery of Sprint – 3	34
	Project Development - Delivery of Sprint - 4	34
8	CONCLUSION	35
9	REFERENCES	36

ABSTRACT

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

Internet of Things (IoT) is a set of systems and devices interconnected with real-world sensors and actuators to the Internet, according to It is able to make decisions via detecting the surrounding environment without human interaction. In this research, IoT is applied to propose a wearable smart band which helps parents to monitor and get known of their child's condition at anywhere and anytime even if they are not by their children side. Via the IoT smart band, children safety is guaranteed, and crime rate is reduced as immediate actions can be taken in case the child is in danger. Besides, unlike existing smart band, which is less focusing on child security aspect, the proposed system emphasizes in getting as much data as possible so that actual situation can be identified. The use of IoT in this device is motivated by the need of child security system in Malaysia due to child safety issues resulting from increasing cases on child related crime. In fact, IoT has been applied in domains such as smart home, smart city, smart factory, supply chain, retail, agriculture, lifestyle, transportation, emergency, health care, environment, energy, culture and tourism. However, it is seldom used to monitor child's safety in Malaysia. Actually, there is a need to use IoT-based child security system since the safety of children has become a major concern. In fact, crimes on children keep increasing despite actions have been taken by the government. Revealed by , the overall percentage of child abasements worldwide is about 80% nowadays, out of which 74% are girls and the remaining are boys. For every 40 seconds, a child is gone

missing in the world. Due to that, parents are worried for their children and perhaps, a hard challenge for them to guarantee safety of their children when they are out. To cope with the issue, the system is proposed with these objectives:

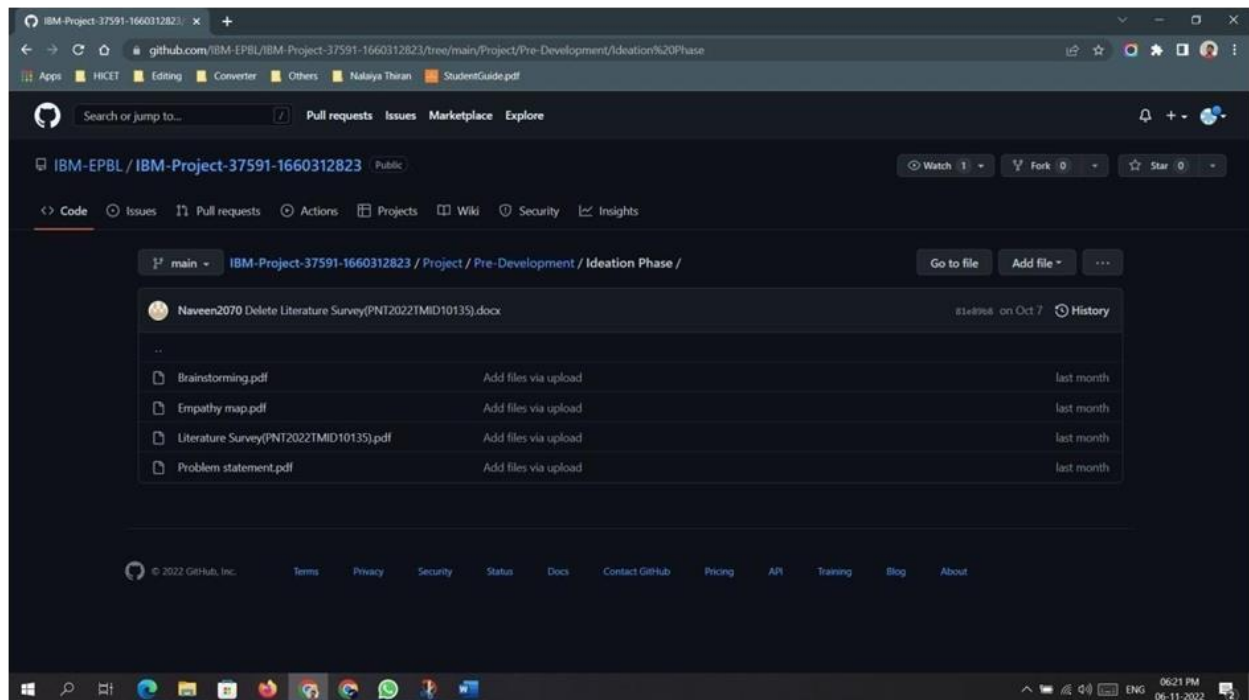
Enable tracking of the child's location and capturing of data remotely such as temperature, pulse, respiratory rate, quality of sleep and many more.

- > To show the child's actual data with reference values
- > Sending of notification if the child is out of location or when the device realizes abnormal conditions/situations
- > To trigger the alarm and enable automatic video recording whenever the emergency button is pressed. Then, emergency notification along with real-time video will be sent to and display in the parents' mobile apps.

2. OBJECTIVE

The objective is to monitor the child safety of the system, that consists of Wi-Fi module used to implement IoT and send all the monitored parameters to the cloud for android app monitoring on parental phone. Panic alert system is used during panic situations alerts are sent to the parental phone, seeking for help also the alert parameters are updated to cloud.

3. IDEATION PHASE



3.1 Literature Survey

3.2

PROTECTION AND PURSUING IOT-BASED SMART DEVICE

FOR CHILD SAFETY.

TEAM LEADER: SWVATHALAKA. S

TEAM MEMBERS: SUBAA SRI. S. R, SUDHA. S, SUSMITHA. S

GUIDE: SURESH KUMAR. P

. The overall percentage of child abuse cases filed nowadays in the world is about 80%, out of which 74% are girl children and the rest are boys. For every 40 seconds, a child goes missing in this world. Children are the backbone of one's nation, if the future of children was affected, it would impact the entire growth of that nation. Due to the abuse cases, the emotional and mental stability of the children gets affected which in turn ruins their career and future. These innocent children are not responsible for what happens to them. So, parents are responsible for taking care of their own children. But, due to economic condition and aims to focus on their child's future and career, parents are forced to crave for money. Hence, it becomes difficult to cling on to their children all the time. In our system, we provide an environment where this problem can be resolved in an efficient manner. It makes parents to easily monitor their children in real time just like staying beside them as well as focusing on their own career. With this motivation, 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 LinkIt ONE board programmed in embedded and interfaced with temperature, heartbeat, touch sensors and also GPS, GSM & digital camera modules.

Empathy Map

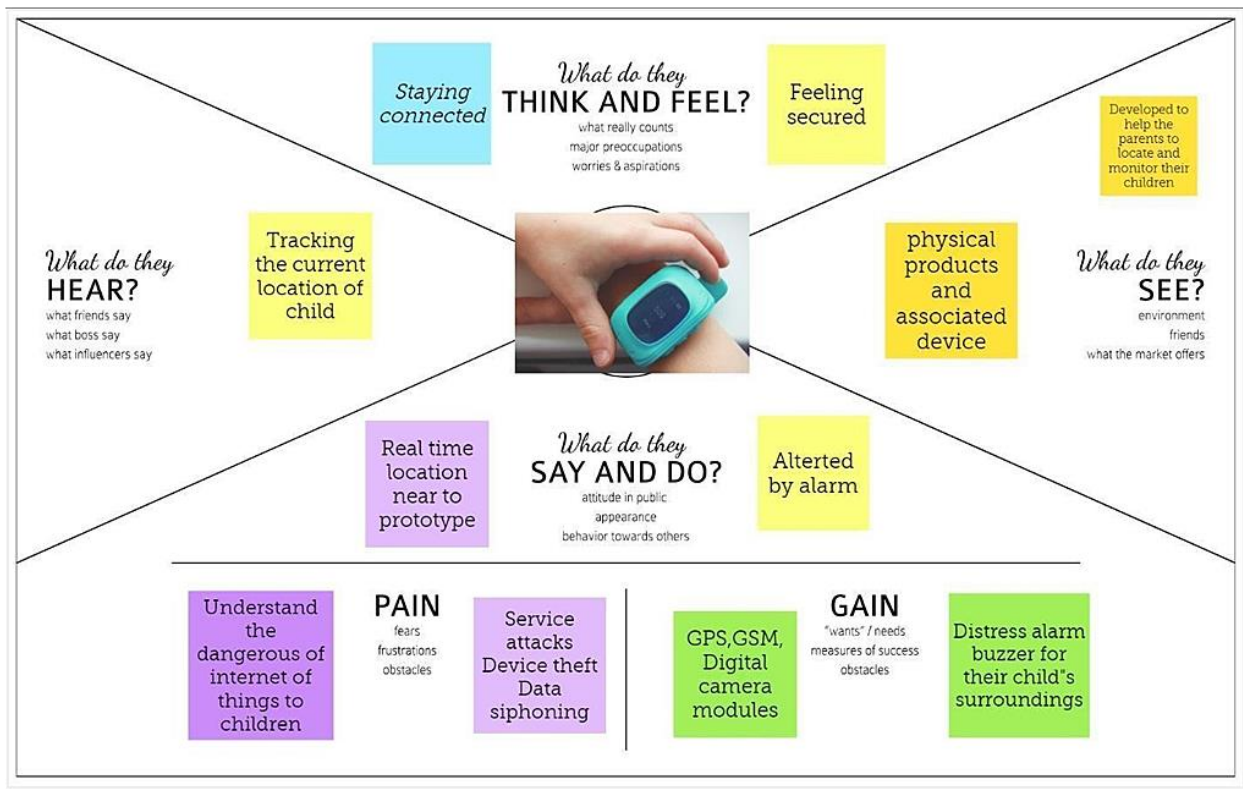


Figure 1 : Empathy Map



Before you collaborate

A little bit of preparation goes a long way with this session. Here's what you need to do to get going.

⌚ 10 minutes



Team gathering

Define who should participate in the session and send an invite. Share relevant information or pre-work ahead.



Set the goal

Think about the problem you'll be focusing on solving in the brainstorming session.



Learn how to use the facilitation tools

Use the Facilitation Superpowers to run a happy and productive session.

[Open article](#)



1

Define your problem statement

What problem are you trying to solve? Frame your problem as a How Might We statement. This will be the focus of your brainstorm.

⌚ 5 minutes

Facilitation

There are some specific roles people who are made and others could not take to a brainstorming session and find it difficult. To help them some people are appointed to help with it.



Key rules of brainstorming

To run a smooth and productive session



Stay in topic.



Encourage wild ideas.



Defer judgment.



Listen to others.



Go for volume.



If possible, be visual.

Team ID:
PNT2022TMID10208

Team Lead:
SWVATHALAKA

Team Members:
SUBAASRI
SUDHA
SUSMITHA



Brainstorm

Write down any ideas that come to mind that address your problem statement.

20 minutes

SWATHALAKA

SWATHALAKA



SUSMITHA



SUDHA



SUGALAKSHI



Group Work

Take turns sharing your ideas within a working session so related ideas are brought to the table. In one hour 10 minutes, your team should have a consensus that about 8-10 ideas are being shared. Try and use if you need to use it up into another task group.

20 minutes

Technology

Games and apps on tablets or smart phones can help give children the practice they need to find success down the road.

Model Analogy

Education and training to children teachers can provide assistance of safe and healthy environment by logistics measures.

children safety

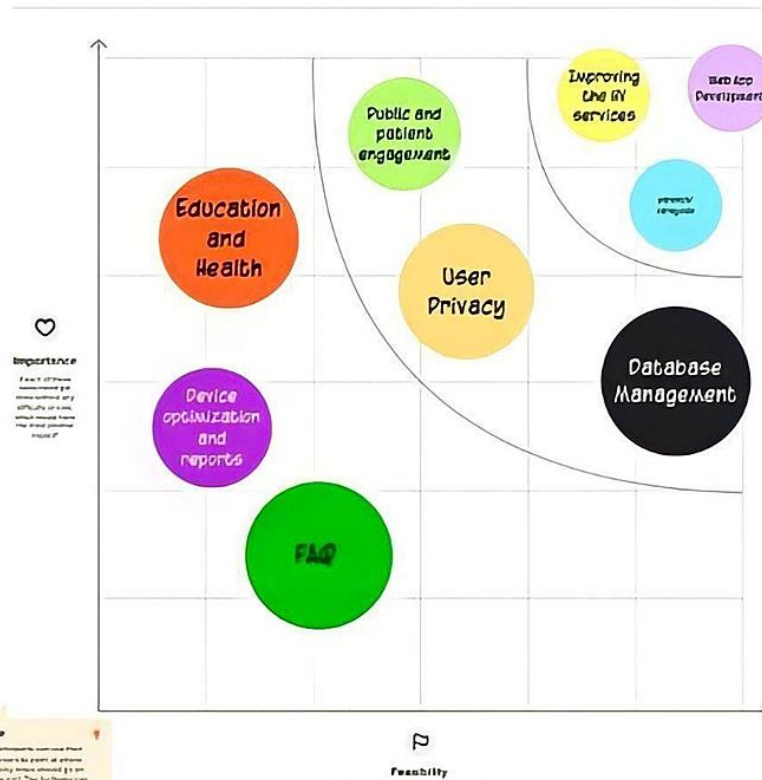
It helps to reduce their vulnerability in harmful situations and area concerned with limiting children's exposure.

4

Prioritize

Your team should all be on the same page about what's important moving forward. Place your ideas on the grid to determine which ideas are important and which are feasible.

20 minutes



TIP

Participants can use their markers to point at ideas along which they are on the grid. This is how you can drive the next by using the marker to find the next idea in the backlog.

Participants of their importance, effort, and time. Ranking from highest (top-left) to lowest (bottom-right).

5

After you collaborate

You can export the mural as an image or pdf to share with members of your company who might find it helpful.

Quick actions

1. **Share the mural**
There's a share link in the mural's top navigation bar that you can use to share the mural with others.
2. **Export the mural**
Export a copy of the mural as a PDF or PNG to share or archive, or as a CSV to share or archive.

Keep moving forward

- Strategy 11 anyone**
Get the 11 components of a strategy or strategy.
[Open the template](#)
- Customer experience journey map**
Understand your user needs, interests, and behaviors for an experience.
[Open the template](#)
- Strategy, weaknesses, opportunities & threats**
Analyze a strategy, weaknesses, opportunities, and threats (SWOT) to develop a plan.
[Open the template](#)

[View template feedback](#)

Table 1: Problem Statement

Ideation Phase
Define the Problem Statements

DATE	19 September 2022
TEAM ID	PNT2022TMID10208
TEAM LEAD	SWVATHALAKA
TEAM MEMBERS	SUBAASRI SUDHA SUSMITHA
PROJECT TITLE	PROTECTION AND PURSUING IOT-BASED SMART DEVICE FOR CHILD SAFETY

The flow diagram consists of five boxes connected horizontally:

- Box 1 (Light Blue):** I am Smart device
- Box 2 (Medium Blue):** I'm trying to To do a research to child safety using raspberry pi device
- Box 3 (Orange):** But need camera,sensor ,sound sensors,to do this
- Box 4 (Dark Blue):** Because It is difficult to monitor that smart device frequently
- Box 5 (Grey):** Which makes me feel stressed and fearful of the students

Figure 5

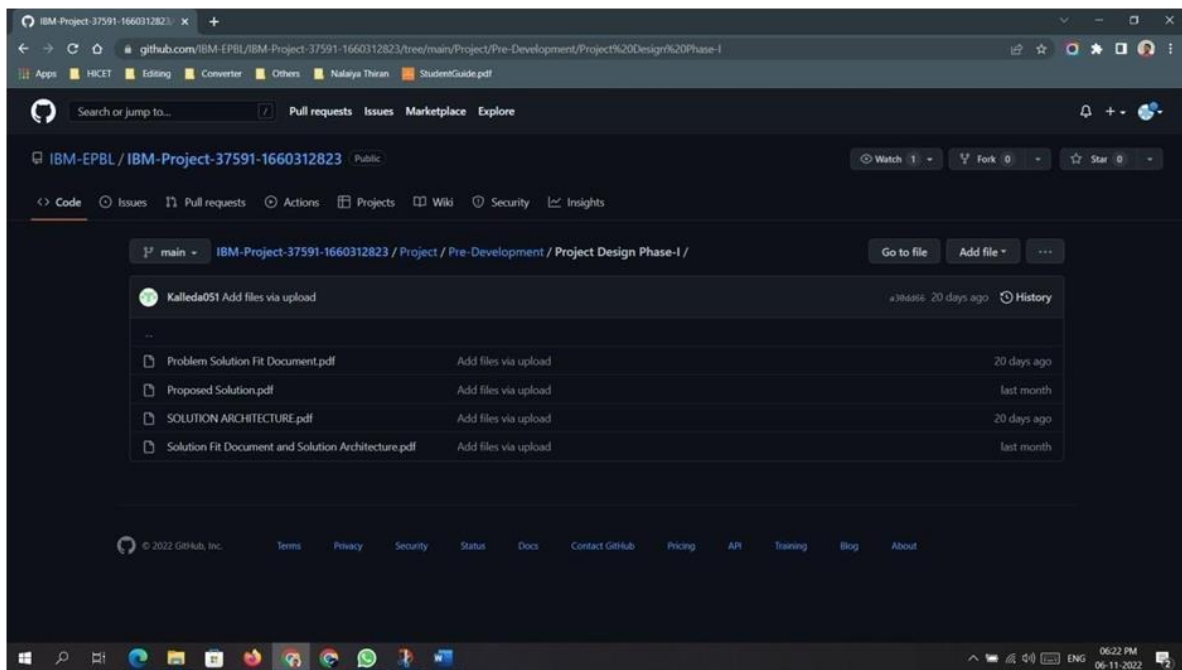
The flow diagram consists of five boxes connected horizontally:

- Box 1 (Light Blue):** I am Smart device
- Box 2 (Medium Blue):** I'm trying to To do a research to child safety using raspberry pi device
- Box 3 (Orange):** But need camera,sensor ,sound sensors,to do this
- Box 4 (Dark Blue):** Because It is difficult to monitor that smart device frequently
- Box 5 (Grey):** Which makes me feel stressed and fearful of the students

Problem Statement (PS):	The safety device protects individuals from potential harms and dangers .A research doneby proposed the child safety wearable deviceusing raspberry pi3.The raspberry pi 3 gathersdata from pi camera, pulsesensor andsound sensor. Then, send collected data to parents smart phones by SMS using GSM shield.
I am (USE R)	Smart device

I'm trying to	To do a research to child safety using raspberry pi device.
But	Need camera, sensor , sound sensor to do this.
Because	It is difficult to monitor that smart device frequently.
Which makes me feel	Stressed and fearful of the students.

4. PROJECT DESIGN PHASE I



Proposed Solution

Project Design Phase-I

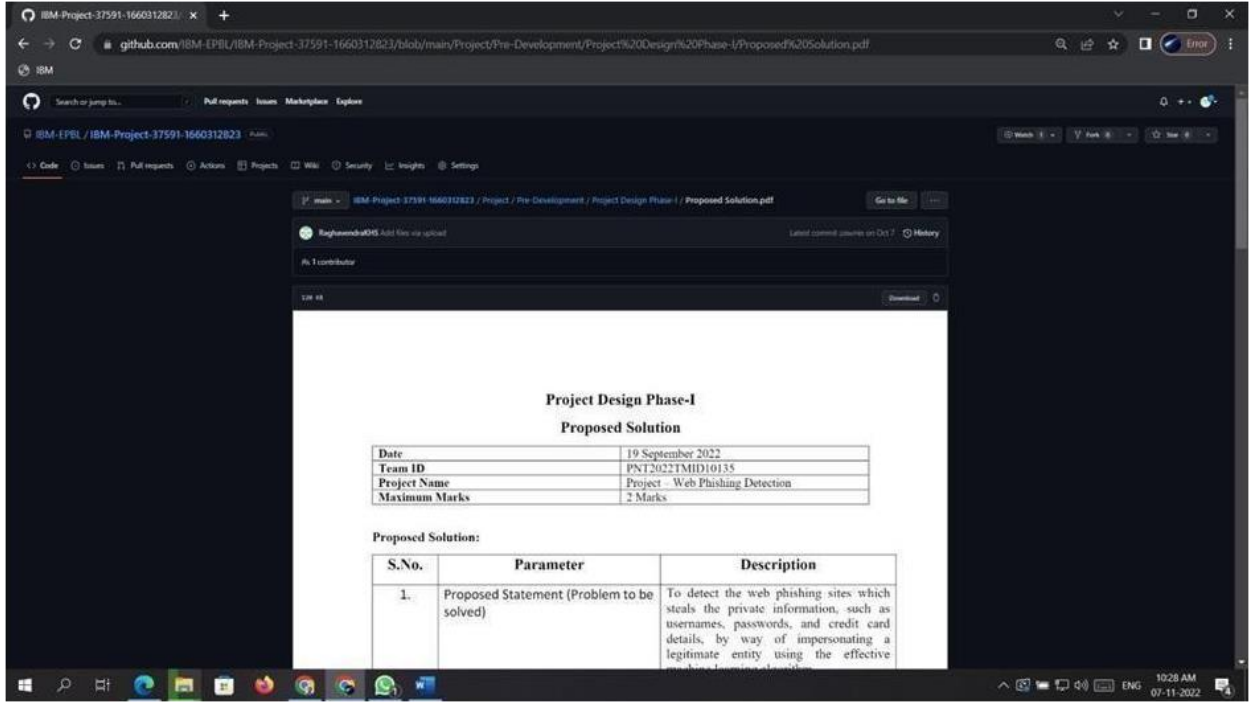
Proposed Solution

Date	26 September 2022
Team ID	FNT2022TMD10208
Project Name	Protection And pursuing IoT - Based Smart Device for Child Safety
Maximum Marks	2 Marks

Proposed Solution:

S.No.	Parameter	Description
1.	Proposed Statement (Problem to be solved)	The GPS module is used to record current location of the device which is used to track the device if the child is missing. Hence, this device provides a security cover to the child in today's time

Table 2: Proposed Solution



S.N o.	Paramet er	Descripti on
1.	Proposed Statement (Problem to be solved)	The GPS module is used to record current location of the which is used to track the device if the child is missing .Hence ,this device provides a security cover to the child in today's time.

2.	Idea / Solution Description	<p>The child safety wearable device is capable of acting as a smart IOT device. It provides parents with the real – time location, surrounding temperature, UV radiation index and SOS light along with distress alarm buzzer of their child's surroundings and the ability to locate their child or alert bystanders in acting to rescue or comfort the child.</p>
----	-----------------------------	---

3.	Novelty / Uniqueness	<p>The novel zig bee based temperature and also blood pressure monitoring system using wireless communication technology</p>
4.	Social Impact / Customer Satisfaction	<p>1. It will save the users from fraudulent websites and reduced global economical losses caused by web phishing every year.</p> <p>2. It provides the users a highly safe and secured environment to search through</p>

		<p>internet and make payment and otheractivities</p> <ol style="list-style-type: none"> 1. It gives a reliable way to detect web phishing and scamming sites 2. It provides a secured and Confidential environment fore-banking 3. It provides a completely Authenticated sites foruserssafe and protected transitions
5.	Business Model(Revenue Model)	<p>Cyber ThreatIntelligence it is a commercial web phishing protection software or web extension tool that helps and protects the user from web phishing by automatically detecting phishing sites by AI &ML based detection system</p> <p>Bank transactions</p>
6.	Scalability of the solution	<p>It will be usefulfor a wide range of usersfromindividual users to corporates, banksand universities. Helps in reducingeconomical loss caused by these web phishing incidents and also protects fromconfidential and personal information losses</p>

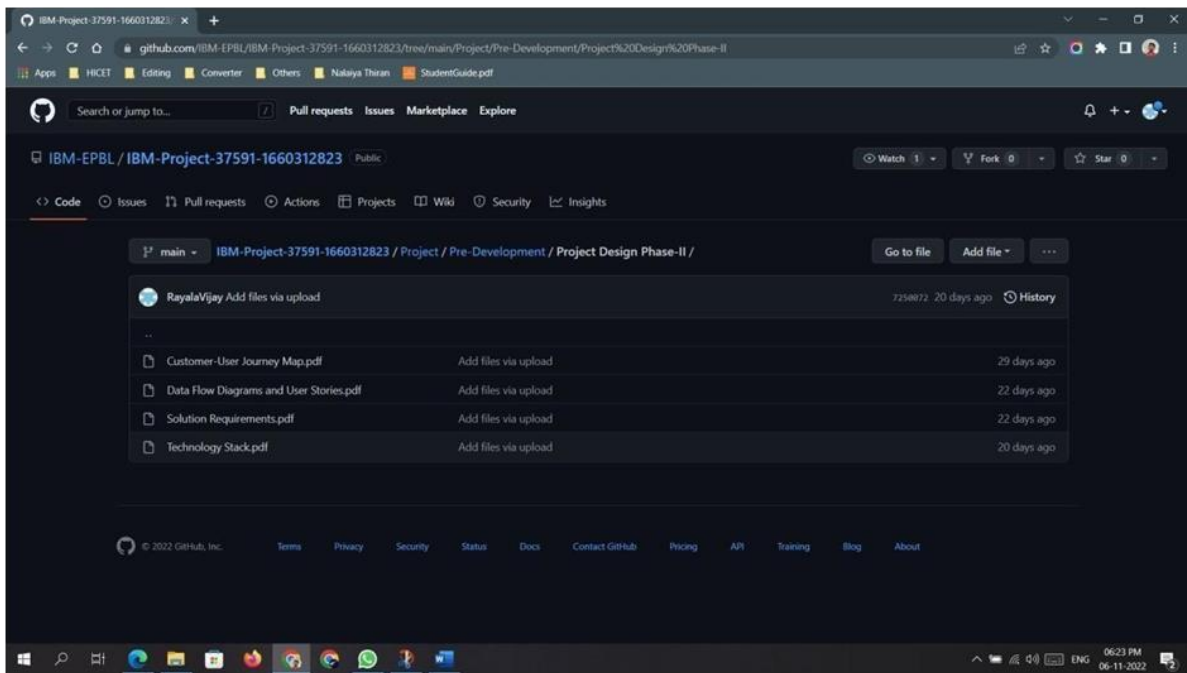
Problem SolutionFit

The screenshot shows a GitHub repository for 'IBM-EPBL / IBM-Project-37591-1660312823'. The file 'Problem Solution Fit Document.pdf' is displayed, showing a document with a grid of sections. The sections are:

- 1. CUSTOMER SEGMENTS:**
 - To order to do a banking and other type of payments online a webpage for an online platform is required.
 - Bankers cyber attacks not able to their advantage and make online with phishing sites.
 - These sites are hardly distinguishable from real sites in their appearance.
- 2. JOBS-TO-BE-DONE/PROBLEMS:**
 - Blacklisting requires that the developer to update the newly added phishing site URL to the list every time a new one is discovered.
 - Thus, they cannot defend/protect the user from newly built of phishing web sites.
 - Which led to the issue again because when the hackers knew that the sites are being discovered they change its URL to avoid detection.
- 3. CUSTOMER CONSTRAINTS:**
 - It is hard for the users to e-banking and to do any kind of online transactions due to the possibility of entering a phishing site.
 - This led the user to lose money and confidential information to hackers.
 - Thus, preventing them from using any kind of online transaction portals and banking.
- 4. AVAILABLE SOLUTIONS:**
 - To find these sites based on appearance is almost impossible hence we need a different method.
 - So, URLs are used to find these sites using a blacklisting method they are stopped by the windows defender and helps the user from entering using warning.
- 5. PROBLEM ROOT CAUSE:**
 - Main problem in blacklisting is that it cannot stop fresh or zero hour phishing attacks.
 - And the list is need to be updated regularly to reduce the damage cause by web phishing.
 - So, this method can only reduce or stop the phishing after one or many users are attacked thus it is not an effective method.
- 6. BEHAVIOUR:**
 - The users need to report phishing sites to cyber security dept or respective officers.
 - So that it can be added to blacklist.
 - This not only sufficient some users even don't report it and they stop using the platforms altogether.
- 7. TRIGGERS:**
 - User's financial losses are really huge due to
- 8. YOUR SOLUTION:**
- 9. CHANNELS of BEHAVIOUR:**
 - 6.1 Youtube

The document also includes a sidebar on the left with the text 'Problem CS, BS and CC' and a sidebar on the right with the text 'Existing CS, BS and CC'.

5.PROJECT DESIGN PHASE II



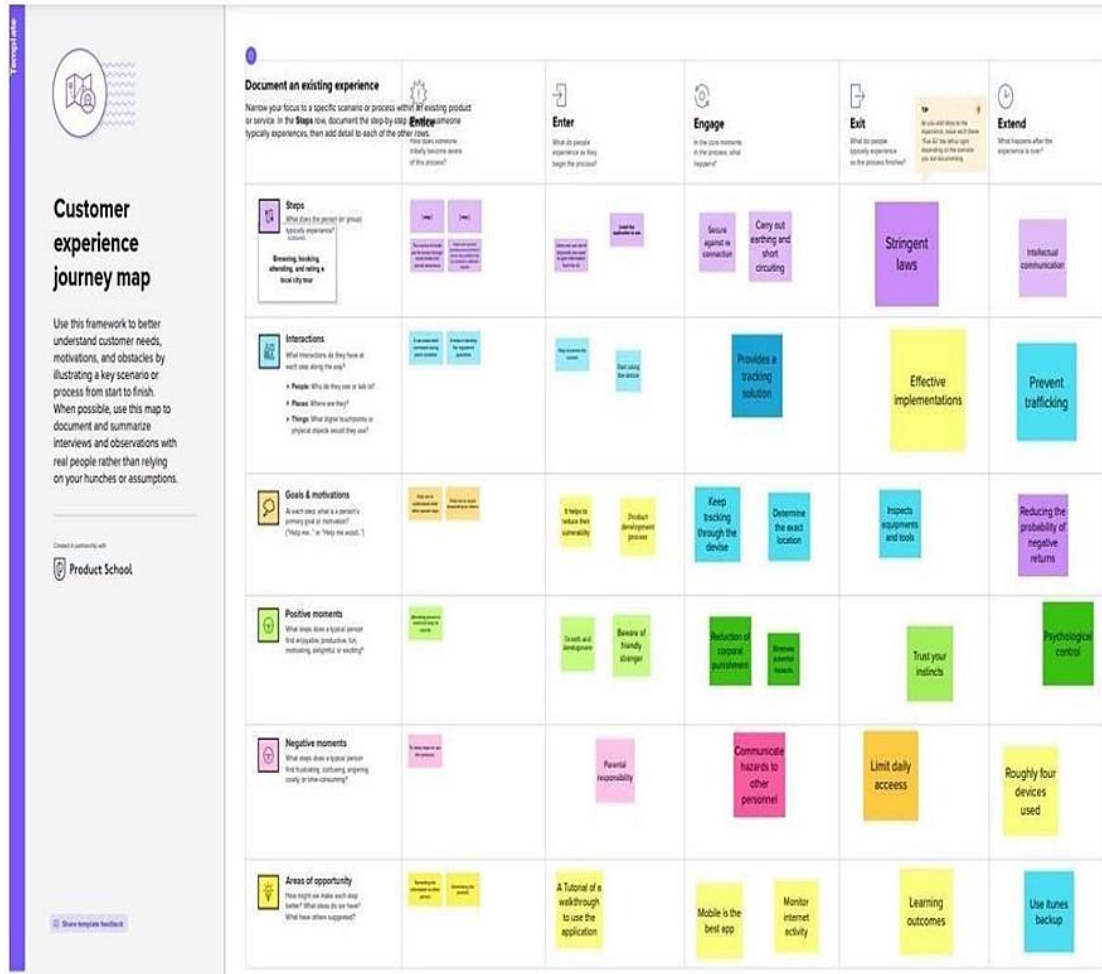
Customer Journey Map

Project Design Phase-II Customer Journey Map

Date	03 October 2022
Team ID	PNT2022TMID10208
Project Name	IOT BASED SAFETY GADGET FOR CHILD SAFETY MONITORING & NOTIFICATION.



Figure 8: Customer Journey Map



Solution Requirements

Project Design Phase-II Solution Requirements (Functional & Non-functional)

Date	03 October 2022
Team ID	PNT2022TMID10208
Project Name	Project – Protection and pursuing IOT-based smart device for child safety
Maximum Marks	4 Marks

Functional Requirements:

Table 3: Functional Requirements:

Following are the functional requirements of the proposed solution.

FR No.	Functional Requirement(Epic)	Sub Requirement (Story / Sub-Task)
FR-1	User Input	Camera , heartbeat sensor.
FR-2	Feature extraction	The data from camera is extracted and compared withhelp of IOT.The output of the sensor is extracted to check healthcondition of the child.

FR-3	Prediction	Compare to the data stored in API, the output of the gadget can be measured.
FR-4	Classifier	With the help of internet connectivity output from the sensor and camera, are categorized and classified under the category based on the child activity.
FR-5	Announcement	The model designs the output and visualizes the output. Based on the value, we can monitor and detect the child is in safe condition or unsafe condition.
FR-6	Accuracy	The output values are obtained for every set of data received.

Table 4: Non-functional Requirements:

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

FR No.	Non-Functional Requirement	Description
NFR-1	Usability	Users can give the input directly in the text bar provided in the interface.
NFR-2	Security	The application does not store any sensitive and personal data of the user.
NFR-3	Reliability	The predictions are made based on verified AI model which has been tested multiple times.

NFR-4	Performance	The accuracy is high and it can predict accurately than existing any traditional detection method.
NFR-5	Availability	It is available and compatible on all platform and devices.
NFR-6	Scalability	The application can be used among all people across worldwide and adapt elsewhere.

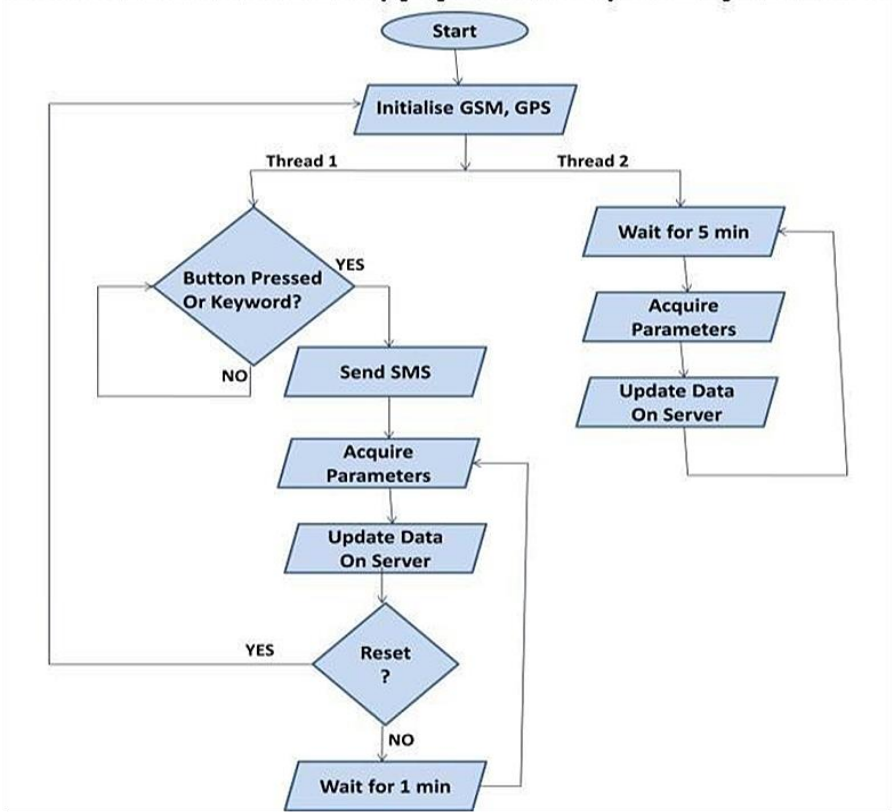
Figure 10: Data Flow Diagram

Project Design Phase-II
Data Flow Diagram & User Stories

Date	16 October 2022
Team ID	PNT2022TMID10208
Project Name	Project - IOT based safety gadget for child safety monitoring and notification
Maximum Marks	4 Marks

DATA FLOW DIAGRAM: IOT based safety gadget for child safety monitoring and notification

DATA FLOW DIAGRAM: IOT based safety gadget for child safety monitoring and notification



TechnicalArchitecture:

The Deliverable shall include the architectural diagram as below and the information as per the table1 & table 2

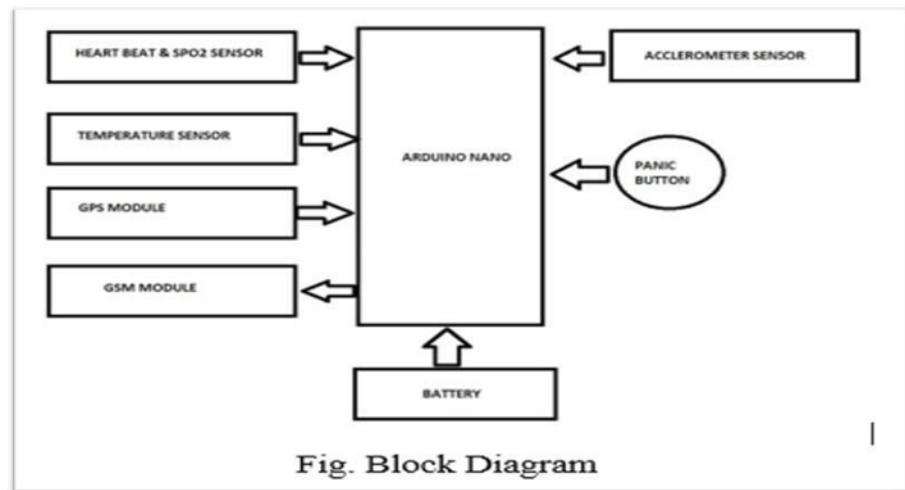


Figure 11: Technical Architecture

Table-5:Components & Technologies:

S.No	Component	Description	Technology
------	-----------	-------------	------------

1.	Gate way	An IOT gateway is a centralized hub that connects IOT devices and sensor to cloud based computing and data processing.	TCP IP protocol
2.	Temperature sensor	The temperature and wetness sensor detects the temperature and wetness of the baby and if it increases a particular level, the message will be sent to the parents.	Infrared (IR) sensor

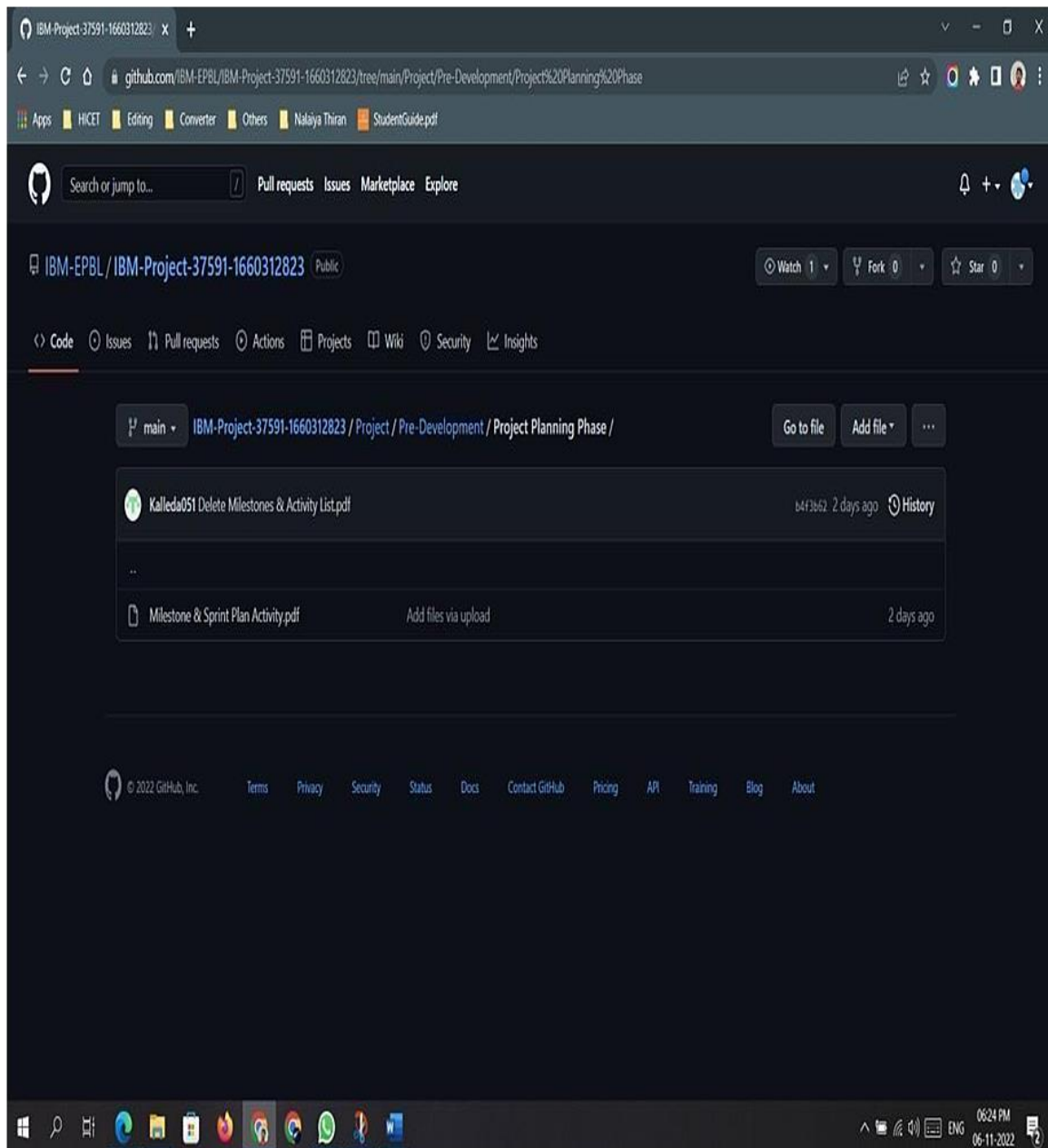
3.	Touch sensor	The NEO 6M GPS is used as the basis for a complete GPS module.	capacitive
4.	Heart sensor	Maxim's MAX30100 integrated pulse oximetry and a heart rate sensor.	Photo plethysmograph (ppg)
5.	GSM module	The global system for mobile communications module is monitoring.	Standard based low power wide area.

Table-6: Application Characteristics:

S.No	Characteristics	Description	Technology
------	-----------------	-------------	------------

1.	Real time location	IOT enabled child location tracking solutions use GPS and mobile data to allow parents or guardians to monitor.	Global navigation satellite system (GNSS) network
2.	Gadget plug and unplug monitoring	This feature is to keep monitoring if the safety gadget is plugged or not by monitoring.	chrome
3.	Stay connected feature	Stay connected feature is used to trigger call and predefined SMS anytime from gadget .	Technology used
4.	Gate way	GPS location sensor	Same technology is used .

6. PROJECT PLANNING PHASE



6.1 Sprint DeliveryPlan

Project Planning Phase

Project Planning Template (Product Backlog, Sprint Planning, Stories, Story points)

Date	18 October 2022
Team ID	PNT2022TMID10208
Project Name	Project - IOT Based Safety Gadget for Child Safety Monitoring&Notification
Maximum Marks	8 Marks

Product Backlog, Sprint Schedule, and Estimation (4 Marks)

Product backlog and sprint schedule

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-1	Registration	USN-1	As a user, I can register for the application by entering my email, and password, and confirming my password.	4	High	SUDHA
Sprint-1	Confirmation Email	USN-2	As a user, I will receive a confirmation email once I have registered for the application	4	High	SWVATHALAKA
Sprint-1	Authentication	USN-3	As a user, I can register for the application through Gmail and mobileapp.	4	Medium	SUSMITHA
Sprint-1	Login	USN-4	As a user, I can log into the application by entering email & password	4	High	SUBAASRI

Table 8: 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	Registration	USN-1	As a user, I can register for the application by entering my email and password and confirming my password.	4	High	SUDHA
Sprint-1	Confirmation email	USN-2	As a user I will receive a confirmation email once I have registered for the application.	4	High	SWVATHALAKA
Sprint-1	Authentication	USN-3	As a user I can register for the application through gmail and mobile app.	4	Medium	SUSMITHA
Sprint-1	Login	USN-4	As a user I can log into the application by entering email & password	4	High	SUBAASRI
Sprint-1	Dashboard	USN-5	As a user I need to be able to view the functions that I can perform.	4	High	SUDHA, SWVATHALAKA
Sprint-2	Notifications	USN-6	As a user, I should be able to notify my parent and guardian in emergency situations.	1	Medium	SUSMITHA, SUBAASRI

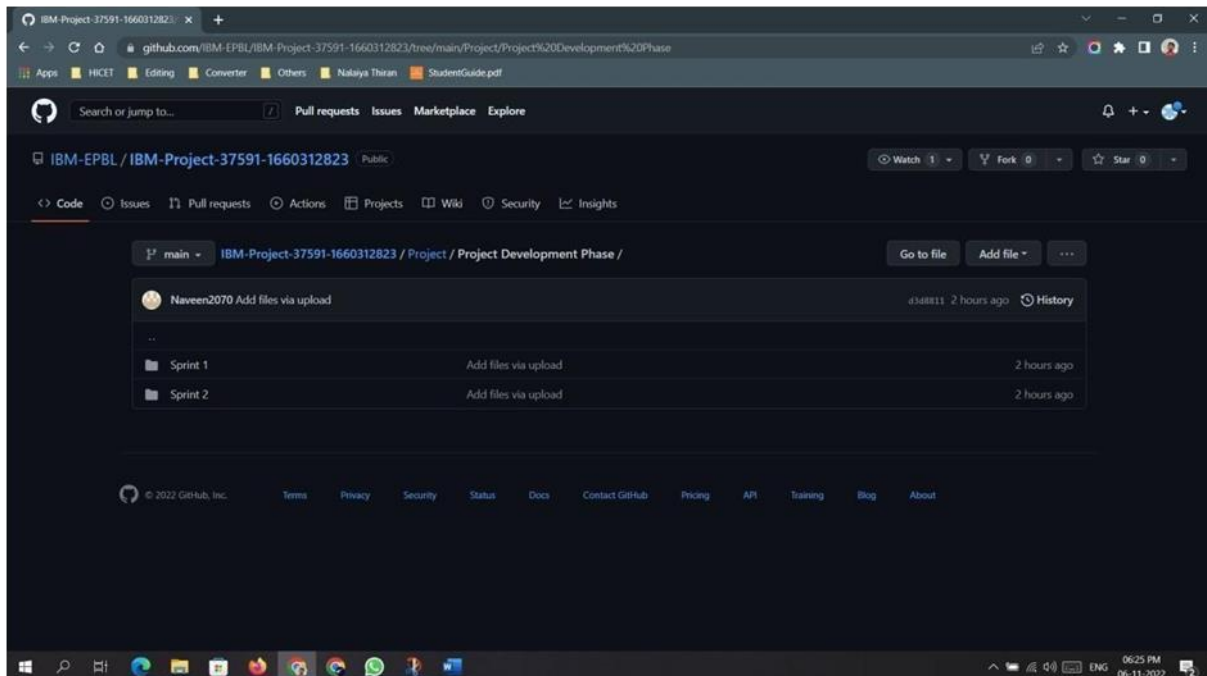
Sprint-2	Store data	USN-1	As a user I need to continuously store my location data into the database.	1	Low	SWVATHALAKA, SUBAASRI
----------	------------	-------	--	---	-----	-----------------------

Sprint-3	Communication	USN-4	As a user I should be able to communicate with myparents.	1	Medium	SUDHA,SU SMITHA
----------	---------------	-------	---	---	--------	-----------------

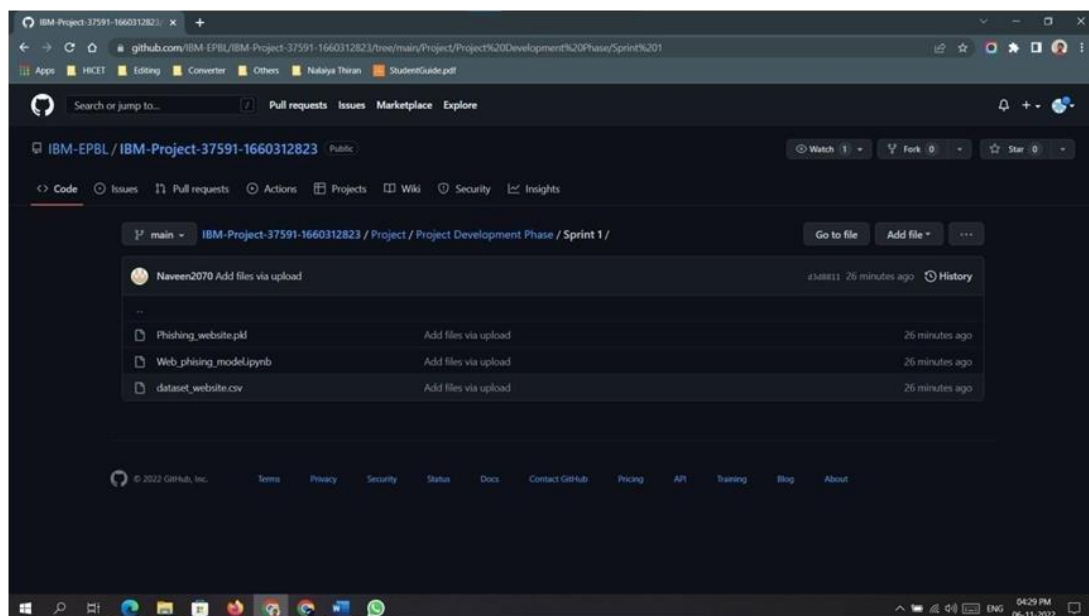
Table 9: Project Tracker,Velocit & BurndownChart: (4 Marks)

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

7.PROJECT DEVELOPMENT PHASE



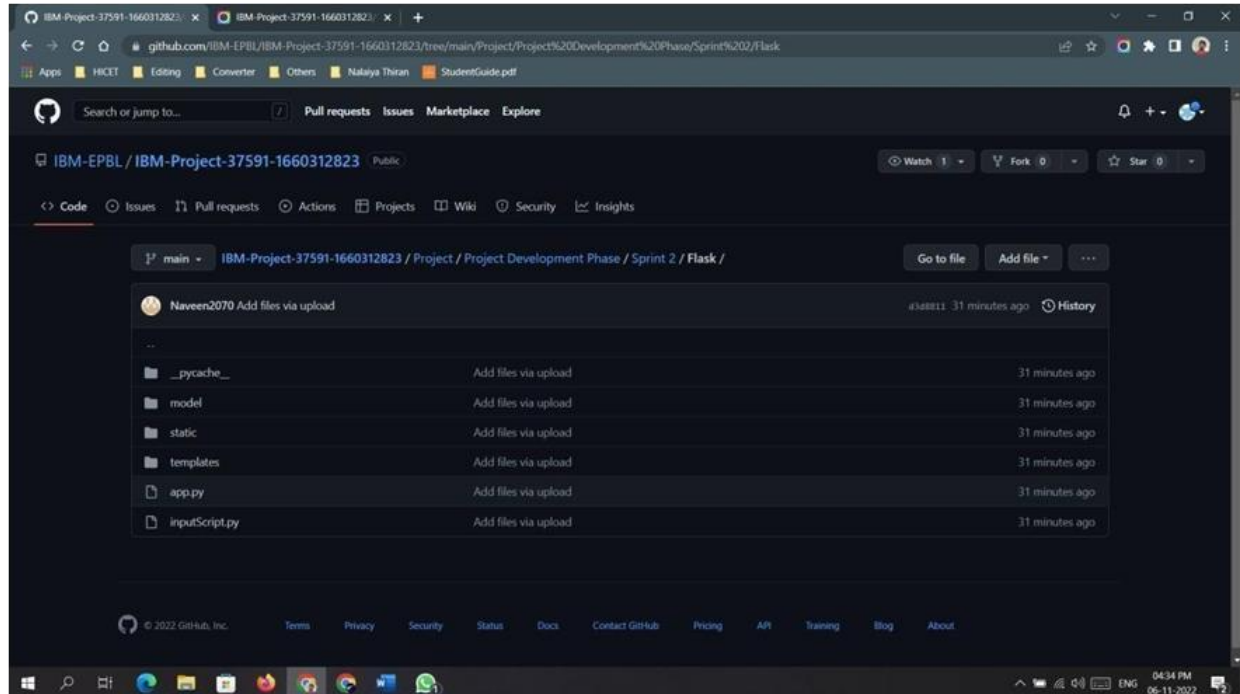
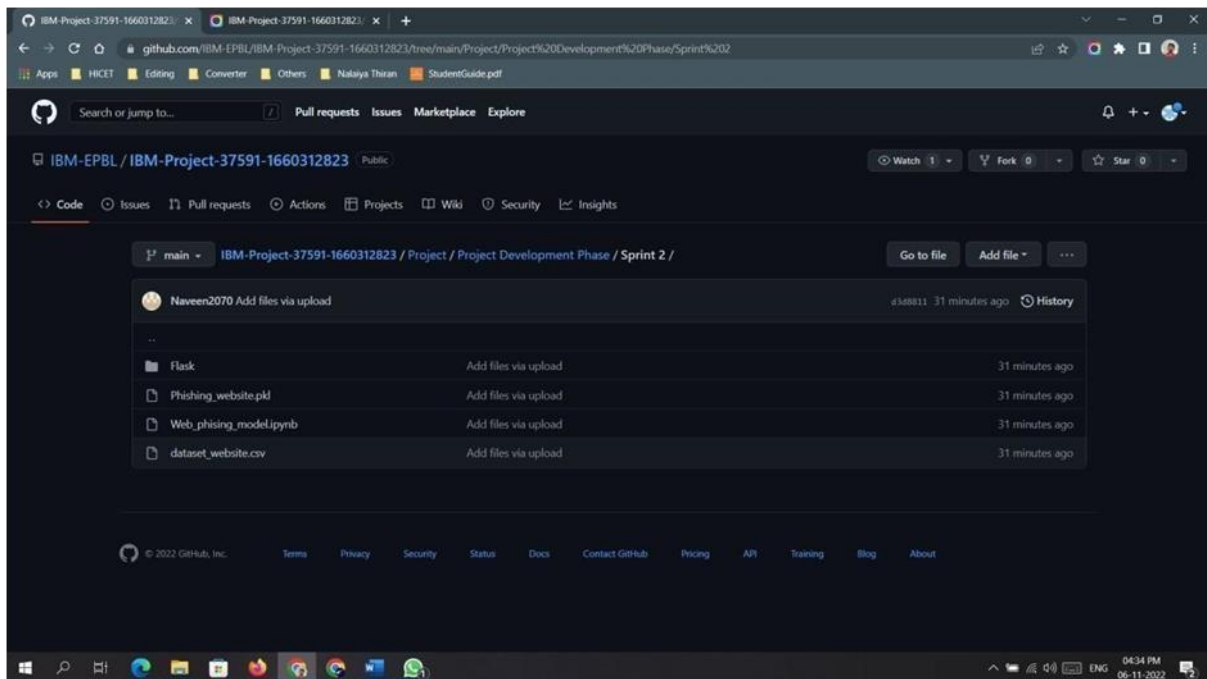
Project Development – Delivery of Sprint 1

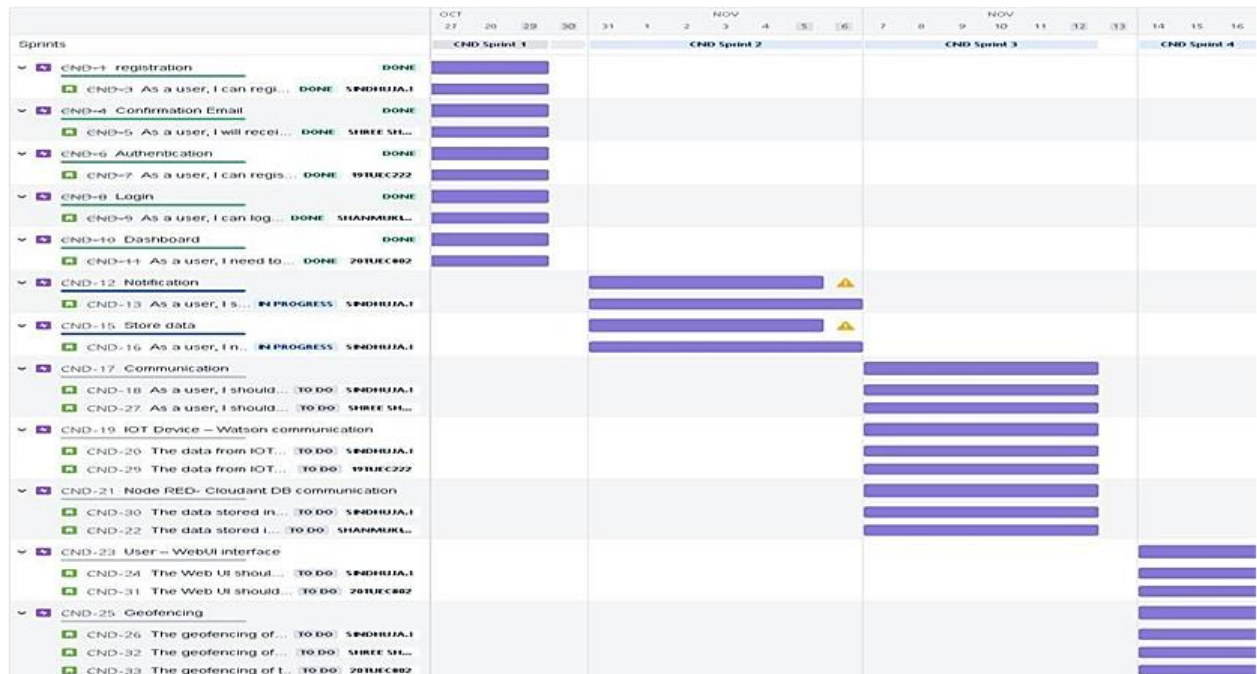


```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta http-equiv="X-UA-Compatible" content="IE=edge">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <link rel="stylesheet" href="/css/login.css">
  <title>Sign Up</title>
  <script>
    if (window.location.hostname !== "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">
```

Project Development – Delivery of Sprint 2





Project Development – Delivery of Sprint 3

(IN PROGRESS)

Project Development – Delivery of Sprint 4

(IN PROGRESS)

8. CONCLUSION

Early childhood development is crucial to how a person develops later on in life. Reasons for a how a person acts, behaves, and thinks can be traced back to their childhood circumstances and environment. Parents also play a very important role in a child's development. Parents not only need to love and understand their child, but also bear the responsibility for 'the upbringing and development of the child' (Article 18). The child's material standard of living should be adequate for 'the child's physical, mental, spiritual, moral and social development' (Article 27)

9. REFERENCES

1. Anderson, G. R. (1997). Introduction: Achieving permanency for all children in the child welfare system. In G. R. Anderson, A. Ryan, & B. Leashore (Eds.), *The challenge of permanency planning in a multicultural society* (pp. 1-8). New York: Haworth Press, Inc.
2. Ards, S., Chung, C., & Myers, S. (1999). The effects of sample selection bias on racial differences in child abuse reporting. *Child Abuse and Neglect*, 23 (12), 1211-1215.
3. Beeman, S., & Boisen, L. (1999). Child welfare professionals' attitudes toward kinship foster care. *Child Welfare*, 78 (3), 315- 338.
4. Benedict, M.I., Zuravin, S., & Stallings, R.Y. (1996). Adult functioning of children who lived in kin versus nonrelative family foster homes. *Child Welfare*, 75 (5), 529-549.
5. Boyd-Franklin, N. (2003). Race, class, and poverty. In F. Walsh (Ed.), *Normal family processes: a growing diversity and complexity* (pp. 260-279). New York: Guilford Press.
6. Courtney, M.E. (1997). The politics and realities of transracial adoption. *Child Welfare*, 76 (6), 749-779.
7. Deater-Deckard, K., & Dodge, K. A. (1997). Externalizing behavior problems and discipline revisited: Nonlinear effects and variation by culture, context, and gender. *Psychological Inquiry*, 8, 161-175.

8. Eckenrode, J., Powers, J., Doris, J., Munsch, J., & Bolger, N. (1988). Substantiation of child abuse and neglect reports. *Journal of Consulting and Clinical Psychology*, 56 (1), 9-16.
9. Garcia Coll, C., & Magnuson, K. (1997). The psychological experience of immigration: A developmental perspective. In A. Booth, A. Crouter & N. Landale (Eds.) *Immigration and the family: Research and policy on U.S. immigrants*. Mahwah, NJ: Erlbaum.
10. Hill, R. B. (2001). The role of race in foster care placements. Paper presented at The Race Matters Forum sponsored by the University of Illinois at Urbana-Champaign, Chevy Chase, MD.
11. Johnson, O., Rawle, M., Roberts, J., Morrill, W., & Ooms, T. (1995). Coordination, collaboration, integration: Strategies for serving families more effectively, Part two: State and local initiatives. Washington, DC: American Association for Marriage and Family Therapy.

FUTURE SCOPE :

GITUB LINK :

<https://github.com/IBM-EPBL/IBM-Project-34172-1660232118>

PROJECT DEMO LINK :

<https://youtu.be/l1R2ovVbVoA>