Project Design Phase-I
Proposed Solution Template

Date	24 September 2022
Team ID	PNT2022TMID01821
Project Name	IOT Based Safety Gadget for Child Safety Monitoring and Notification
Maximum Marks	2 Marks

Proposed Solution Template:

Project team shall fill the following information in proposed solution template.

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	To help the parents to locate and monitor their children. If any abnormal readings are detected by the sensor, then an SMS and phone call is triggered to the parents' mobile.Also, updated to the parental app through the cloud
2.	Idea / Solution description	The parent can send a message to the GSM module, according to the message information the GSM module replies back with particular details of the children. The location can be seen on the Google map. When a particular child is facing an emergency situation, the device button should be pressed so that the device captures the image along with the user information to the enrolled mobile numbers. The life of the child can be saved within no time.The children point of view GPS, GPRS and GSM are used to monitor the speed andlocation tracking purpose. The system is fixed on the bus or car or in any vehicle so that whether the bicycle is going on a routine route or not can be identified by the GPS tracker, the speed of the bus can also be extracted. Now-a-days the digital technology plays a major role in connecting people via the internet. For tracking the children, the android based solution is provided to parents.

3.	Novelty / Uniqueness	In today's developing world, child safety is arising concern. Lack of information about child location. Need to know about the child's health condition. Need real-time information about abduction and to detectchild fall.
4.	Social Impact / Customer Satisfaction	In order to track and morning the movementactivities and health conditions for children who have chronic disease, Arduino microcontrollers used to integrate the important sensor kits. These sensors are connected to the Arduino to read sensing information immediately to send it through the internet layer. Information passes in three main conditions to give a decision to continue or sending health alerts to the healthcare providers andparents. This applied to reduce the workloadon the healthcare providers and to satisfied parent concerns on their children.
5.	Business Model (Revenue Model)	The device will also have the emergency key(SOS).In case of any emergency, if anyone presses the key, an automatic help message will be sent to any 3 registered mobile numbers on the server. Like any software product or design, there is still room for enhancement. Features can be added to enhance the system. To build these features in IoT devices and implementation of the device would reach the customer and help in child's safety. Wearables like watches, spectacles, mobile,IoT Device, etc...

6.	Scalability of the Solution	This research demonstrates Smart IoT devices for child safety and tracking helping the parents to locate and monitor their children. If any abnormal values are read by the sensor then an SMS is sent to the parents mobile and an MMS indicating an image captured by the serial camera is also sent. The future scope of the work is to implement the IoT device which ensures the complete solution for child safety problems. The child safety wearable device can act as a smart device. It provides parents with the real-timelocation, surrounding temperature, SOS light along with Distress alarm buzzer for their child's surroundings and the ability to locate their child or alert bystanders in acting to rescue or comfort the child. The smart child safety wearable can be enhanced much more in the future by using highly compact Arduino modules such as the Lily Pad Arduinowhich can be sewed into fabrics. Also, a more power efficient model will have to be created which will be capable of holding thebattery for a longer time.