

**Project Design Phase-I**  
**Proposed Solution Template**

Date	19 September 2022
Team ID	PNT2022TMID18337
Project Name	Project - 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)	The rate of child kidnapping and trafficking is increasing and there are only limited applications for child tracking and monitoring. Therefore, developing an IOT based safety gadget for child to track their location constantly to ensure the safety of the child.
2.	Idea / Solution description	A good solution to this issue would be to design a smart wearable Internet of Things sensor-based device for monitoring the environment of a child along with a mechanism for tracking the child. The gadget will make use of GPS and a python script to publish the location details to the IBM IoT platform. The wearable also functions to send immediate alerts to the user through in case if the child crosses the geofence.
3.	Novelty / Uniqueness	All the existing systems make use of GPS and a mobile app to track and receive alerts regarding the child's location, while this system make use of the IBM Watson IOT Platform and IBM Cloud Services which is reliable and efficient to maintain the database of the child's location. The parent can set geofence and receive alerts through the web application which is user friendly and secure created using the Node Red Service.
4.	Social Impact / Customer Satisfaction	The safety and security of the child is the main concern of the parents. This proposed solution does not involve so much of technology to operate, and it is simple. The motive of this wearable device is to facilitate the parent or guardian in continuous monitoring of the child's location with ease and ensuring their safety.
5.	Business Model (Revenue Model)	The main concern of any parent would be the safety and security of their kids. The design of this model does not mandate a lot of technical knowledge from the user to operate and it is simple. The purpose of this device is to facilitate the guardian or parents in locating their child with ease and ensuring its well-being.
6.	Scalability of the Solution	Due to lack of tracking application this solution is proposed. It has a location database to maintain the entire location history of the child and the parent can set the geofence to determine the safer boundary of the child. Further if any sensor can be added to increase the accuracy, it can be integrated, and the system can be run efficiently in the long way.