Project Design Phase-I

Date	27 Oct 2022
Team ID	PNT2022TMID33339
Project Name	Project - IOT Based Safety Gadget for ChildSafety Monitoring and Notification

Proposed Solution Template:

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	Nowadays, the crime rate associated with children keeps increasing due to which draws people's attention regarding child safety. This research is conducted to propose a child security smart band utilizing IoT technology. A smart band has been proposed to monitor the safety of children. By this, parents know what is happening remotely and can take actions if something goes wrong.
2.	Idea / Solution description	The future improvements of this device will be adding functions and software to make it work like a phone such as messaging, gallery, Google, YouTube,meanwhile, adding more child security features so that child safety is guaranteed. The system is developed using LinkIt ONE board programmed in embedded C and interfaced with temperature, heartbeat, touch sensors and also GPS, GSM & digital camera modules.
3.	Novelty / Uniqueness	provides a tracking solution for the parent to keep tracking their child's location outdoors by using GPS as it allows them to determine the exact location of the child. It, therefore, helps to minimize this tragedy to reoccur in the future. Our main contribution is to preserve the privacy of an end-user while enhancing the accuracy of the child's location to 3 m.

4.	Social Impact / Customer Satisfaction	Monitoring customer satisfaction allows early identification of problems relating to the quality, performance and functionality of the product or services and unmet customer expectations.
5.	Business Model (Revenue Model)	The revenue model helps to find children by tracking and monitoring by parents(customer) strategies such as to track the location, environmental situation and some response from the child by sensors and Therefore adding additional features by customer feedback. According to that, the revenue will be decided.
6.	Scalability of the Solution	The security requirements of a child-care and safety service and establish a conceptual model satisfying the requirements. Based on the system model, we propose a privacy-preserving location supporting protocol for a child-care and safety service using wireless sensor networks. While addressing the above problems, our protocol can be operated over various networks (e.g., Wi-Fi and UWB) providing an RSSI (received signal strength indication) without any modification. Through performance and security analysis of our protocol, we show that our protocol is efficient and secure. More precisely, our protocol reduces the computation and communication overhead of the existing infrastructures to support better scalability.