Project Design Phase-I Proposed Solution

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| Date | 19 September 2022 |
| Team ID | PNT2022TMID489805 |
| Project Name | IOT Based Safety Gadget for Child Safety  Monitoring & Notification |
| Maximum Marks | 2 Marks |

**Proposed Solution Template:**

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| **S.No.** | **Parameter** | **Description** |
| 1. | Problem Statement (Problem to be solved) | With the increasing rate of child kidnapping and trafficking and lack of tracking technology for child, there is limited Application for child monitoring. Hence an IOT based safety gadget for child safety is  probably the need most today |
| 2. | Idea / Solution description | A good solution to this issue would be to design a smart wearable IOT  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 and those don't show the exact location and they are unreliable, 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 by using the Node Red Service. |
| 4. | Social Impact / Customer Satisfaction | 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 wellbeing. |
| 5. | Business Model (Revenue Model) | The target audience of this device is majorly the parents. Considering the Tracking ability of the device, Hardware quality, used technology and sensors, the starting range of price would go  from Rs. 6000 and above. This type of wearable |

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|  |  | safety system is of at-most importance today and would be a must buy gadget in the market today. |
| 6. | Scalability of the Solution | With the present needs for monitoring the  child, the system is designed. 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. If there is a need for integrating additional sensors to improve accuracy, it can be done to make the system efficient in the  long run. |