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

Date	03 October 2022
Team ID	PNT2022TMID21482
Project Name	IoT based safety gadget for child safety and notification system
Maximum Marks	4 Marks

Functional Requirements:

Following are the functional requirements of the proposed solution.

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	User Registration	Registration through message Registration through website Registration through App Registration through Call
FR-2	User Confirmation	Confirmation via Email Confirmation via OTP Confirmation via Call
FR-3	App Installation	Installation through QR Link on Device Installation through Play Store/App Store
FR-4	Detecting Child Location	Detecting location via app Detecting location via SMS Detecting location through Website
FR-5	Database	Location information is stored in the cloud dynamically Values include distance, latitude, longitude
FR-6	User Interface	User Emergency Contact List User login form Admin login form
FR-7	User Notification	Notification through Mobile Notification through Gmail

Non-functional Requirements:

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

FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	A simple device which works with the mobile app that sends Emergency notification to parents. The IOT device has a GSM module that helps informing parents about the current location of their kids. This device can easily be controlled and operated by parents effortlessly.

NFR-2	**Security**	The main aim of the device is to build a safer environment for kids to spend more time outside. There is a guaranteed assurance to parents that their children are safer with their gadget.
NFR-3	**Reliability**	The device is transportable, easy to use and also tensile. The data from the GPS module is highly reliable which is stores in the cloud, which helps the parents to monitor their child with ease.
NFR-4	**Performance**	Th performance of the device should be very consistent that is the location of the child should be updated every 5 seconds or less. The objective of the system is that it spontaneously alerts the parents by sending a notification or an SMS when the child crosses a threshold distance or in crisis. A more advanced GSM module is required to continuously send the GPS data to cloud even in a less network connectivity area.
NFR-5	**Availability**	The device is used to keep track of the child everywhere in the city. The child's live location is updated constantly in parent's mobile app which ensures reliability. The parents just need to have a good internet connection for the tracking purpose.
NFR-6	**Scalability**	The device can be further enhanced or scaled to a higher level by installation of a small camera inside it, providing extra protection as the parents can see the live feed but this will require more power. Improved and advanced GSM and GPS modules can be used to detect the location more precisely and send data at faster speeds