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

Date	15 October 2022
Team ID	PNT2022TMID00975
Project Name	IOT Based Safety Gadget for Child Safety Monitoring and Tracking
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 Form • Registration through Gmail • Registration through LinkedIN
FR-2	User Confirmation	•Confirmation via Email •Confirmation via OTP
FR-3	App installation	• Installation through link • Installation through play store
FR-4	Settings geofence	• distance coverage can be changed.
FR-5	Detecting child location	• Detecting location via app • Detecting location via SMS
FR-6	User Interface	• User Login Form. • Admin Login Form.
FR-7	Database	• Stored in cloud for seamless connectivity. • Parents and kids link with the distance and the location values obtained from the mobile devices are stored here. • The values include parent id, kid id, distance, longitude, latitude etc.
FR-8	Server	• It connects the database and the frontend application. • The backend server has been implemented to run as a service and is deployed in an IBM cloud instance.
FR-9	GPS tracking	• The system is implemented with a GPS module, which acquires the location information of the user and stores it to the database.
FR-10	API	• The value collected is sent to the database using an API.
FR-11	React JS	• We are using react as a front end for ourproject. • Node JS for the back end .
FR-12	GPS modules	• It receives data directly from satellites.
FR-13	Battery Life	• It is chargeable. • Charge may last for a whole day.
FR-14	Location History	• The location history will help to track the child's acitivity. Location history will be there for 30 days.

		• For example if the child gets missing, with the help of location history they can track down their child's activity and also can find their children.

Non-functional Requirements:

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

FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	• Device have GSM can help to inform the parents or relatives about the current situations of the child by deliver the message immediately to save the child.
NFR-2	**Security**	• Make children parents more assure about their kid's security, we have a feature in our device called Geo-Fence. • Whenever your child crosses that specific area, you will get an instant notification on your phone.
NFR-3	**Reliability**	• Portable • Easy to use • Flexibility • Compatible • Real time Tracking
NFR-4	**Performance**	• Create a Child tracker which helps the parents with continuously monitoring the child's location. • The notification will be sent according to the child's location to their parents or caretakers. • Crime rates can be reduced.• The entire location data will be stored in the database.
NFR-5	**Availability**	• Track your child even in a crowd • Get travel details of kids at any time • Know the current location
NFR-6	**Scalability**	• Gadget ensures the safety and tracking of the children. • Location accuracy can be increased and the size of the device is small.• Parents need not worry about their children.