PROJECT DESIGN PHASE-II
SOLUTION REQUIREMENTS
(FUNCTIONAL & NON-FUNCTIONAL REQUIREMENTS)

DATE	10 OCTOBER 2022
TEAM ID	PNT2022TMID26623
PROJECT NAME	IOT BASED SAFETY GADGET FOR CHILD SAFETY MONITORING AND NOTIFICATION

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 Gmail Registration through phone number
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	Setting by user to find child location

FR-5	Detecting chil dlocation	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, kidid, distance, longitude, latitude etc.
FR-8	Server	It connects the database and the front end applicatio n. The backend server has been implemented to run as a service and is deployed in an IBM cloud instance. 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 thedatabase using an API.
FR-11	React JS	We are using react is as front end for us project. Node JS for the back end we areusing node is.

FR-12	GPS modules	✓ It receives data directly fromsatellites.
FR-13	Battery Life	✓ If the child or parent forgets to charge the device for a whole day then also the device will work. That's why we aim to make this device last the whole day with one charge. ✓ It should be long-lasting.
FR-14	Location History	✓ The location history will help to track the child's activity so that the aren'twill be updated. Location history will be there for 30 days. ✓ For example if the child gets missing with the help of location history the aren't can track down their child's activity and alsocan find their child.

NON-FUNCTIONAL REQUIREMENTS

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

FR No.	Non-functional Requirements	Description
NFR-1	Usability	Device have GSM can help to inform the parents or relatives aboutthe current situations of the child bydeliver the message immediately to save the child.
NFR-2	Security	Make children parents more assure about their kid’ s security, wehave a feature in our device called Geo-Fence. Whenever your child crosses thatspecific area, you will get an instantnotification on your phone.
NFR-3	Reliability	Portable Easy to useFlexibility
NFR-4	Performance	Create a Child tracker which helpsthe parents with continuously monitoring the child’ s location. The notification will be sentaccording to the child’ s location to their parents orcaretakers. The entire location data will bestored in the database.

NFR-5	Availability	Track your child even in a crowdGet travel details of kids at any time Know the current location

NFR-6	Scalability	✓ Gadget ensures the safety andtracking of the children. ✓ Parents need not worry about theirchildren.
NFR-7	Evaluability	✓ The system should be able to deliver promptly to the financingauthority. ✓ In the case of non-profit organizations, the ✓ solution should be 'advancing themission'.
NFR-8	Dynamicity	✓ IoT devices may have thecapability to ✓ adapt dynamically and change basedon their conditions.
NFR-9	Desirability	✓ Navigation should be made easy. ✓ The user should be able to search and find the information he needswithout much hassle.