Project Design Phase-II

Solu on Requirements (Func onal & Non-func onal)

Date	14 October 2022
Team ID	PNT2022TMID40778
Project Name	Project - IoT Based Safety Gadget for Child Safety Monitoring and No fica on
Maximum Marks	4 Marks

Func onal Requirements:

Following are the func onal requirements of the proposed solu on.

FR No.	Func onal Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	User Registra on	✓ Registra on through Gmail ✓ Registra on through phone number
FR-2	User Confirma on	✓ Confirma on via Email ✓ Confirma on via OTP
FR-3	App installa on	✓ Installa on through link ✓ Installa on through play store
FR-4	Se ngs geofence	✓ Se ng by user to find child loca on
FR-5	Detec ng child loca on	✓ Detec ng loca on via app ✓ Detec ng loca on via SMS
FR-6	User Interface	✓ User Login Form. ✓ Admin Login Form.

FR-7	Database	✓ Stored in cloud for seamless connec vity. ✓ Parents and kids link with the distance and the loca on values obtained from the mobile devices are stored here. ✓ The values include parent id,kid id,distance,longitude,la tude etc.

FR No.	Func onal Requirement	Sub Requirement
FR-8	Server	✓ It connects the database and the front end applica on. ✓ 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 loca on informa on 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 js as front end for our project. ✓ Node JS for the back end we are using node js.
FR-12	GPS modules	✓ It receives data directly from satellites.
FR-13	Ba ery 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-las ng.

FR-14	Loca on History	✓ The loca on history will help to track the child's ac vity so that the aren't will be updated. Loca on history will be there for 30 days.
		✓ For example if the child gets missing with the help of loca on history the aren't can track down their child's ac vity and also can find their child.

Non-func onal Requirements:

Following are the non-func onal requirements of the proposed solu on.

FR No.	Non-func onal Requirements	Descrip on
NFR-1	Usability	✓ Device have GSM can help to inform the parents or rela ves about the current situa ons 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 no fica on on your phone.
NFR-3	Reliability	✓ Portable ✓ Easy to use ✓ Flexibility
NFR-4	Performance	✓ Create a Child tracker which helps the parents with con nuously monitoring the child's loca on. ✓ The no fica on will be sent according to the child's loca on to their parents or caretakers. ✓ The en re loca on data will be stored in the database.

NFR-5	Availability	✓ Track your child even in a crowd ✓ Get travel details of kids at any me ✓ Know the current loca on
NFR-6	Scalability	✓ Gadget ensures the safety and tracking of the children. ✓ Parents need not worry about their children.
NFR-7	Valuability	✓ The system should be able to deliver promptly to the financing authority. In ✓ the case of non-profit organiza ons, the solu on should be 'advancing the mission'.

FR No.	Non-func onal Requirements	Descrip on
NFR-9	Dynamicity	✓ IoT devices may have the capability to adapt dynamically and change based on their condi ons.
NFR-10	Desirability	✓ Naviga on should be made easy. ✓ The user should be able to search and find the informa on he needs without much hassle.