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

Date	14 October 2022
Team ID	PNT2022TMID48061
Project Name	Project - IoT Based Safety Gadget for Child Safety Monitoring and Notification
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	Temperature	If the temperature level exceeds the room temperature then the alert message will be sent using GSM to the specified users.
FR-2	Pulse sensor	The Pulse sensor is used to detect any abnormal feelings experienced by the child like fear, anxiety, nervousness, drowsiness and several other illnesses which manipulates the normal heart rate.
FR-3	GPS	GPS is used to track the live location of the child who is wearing that device.With the help of GPS, we can easily perform Geo-fencing concept, in which we can feed a particular boundary to that device.
FR-4	GSM	If the child goes beyond that particular boundary specified, the respective guardians will receive analert call using GSM.
FR-5	Web camera	we can monitor the child lively through live video streaming whenever we get notified in abnormal cases.
FR-6	Raspberry pi microprocessor	Raspberry Pi microprocessor in which all other sensors, GPS and GSM are integrated. The users are required to register using their credentials to use the application.

Non-functional Requirements: Following are the non-functional requirements of proposed solution.

FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	Enable tracking of the child's location and capturing data remotely such as temperature, pulse,respiratory rate and many more.
NFR-2	**Security**	To trigger the alarm and enable automatic video recording whenever the emergency button is pressed.
NFR-3	**Reliability**	Enable sending of notification, if the child is out of location or when the device realizes abnormal condition or situations
NFR-4	**Performance**	When a child is facing an emergency situation, device button should be pressed so that the device captures the image along with the user information to the enrolled mobile numbers
NFR-5	**Availability**	Child monitor, audio monitor, location monitor, video monitor
NFR-6	**Scalability**	If problem arises parents can see all the features like location, temperature, heart beat of the child along with live view around the children without hindrance