Project Design Phase-II
Technology Stack (Architecture & Stack)

Date	03 October 2022
Team ID	PNT2022TMID14810
Project Name	Project - IoT Based Safety Gadget for Child Safety Monitoring & Notification
Maximum Marks	4 Marks

Technical Architecture:

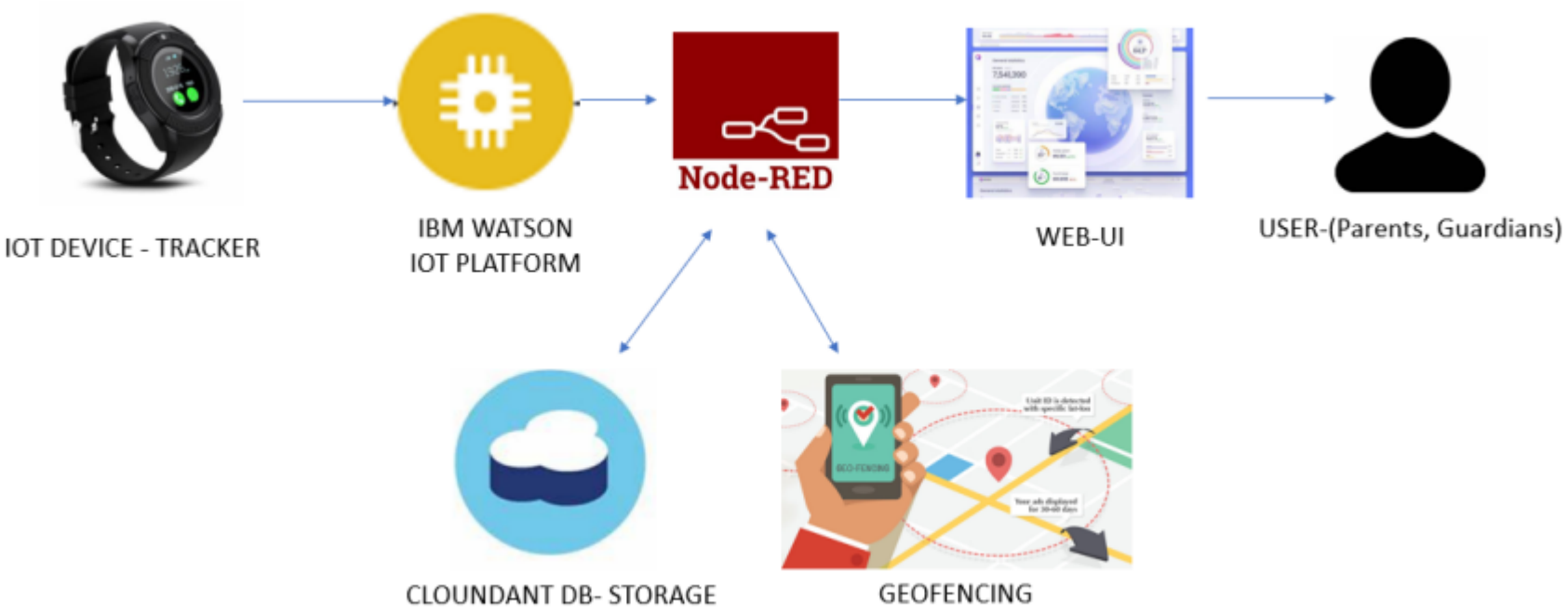

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	Users react with the Application,Web UI/Chatbot.	HTML, CSS, JavaScript / Angular Js / React Js etc.
2.	Application Logic-1	Registration of children and parents details in the application.	Python,C.
3.	Application Logic-2	Children's device GPS should be always ON. So the location can be shared to the parents.	IBM Watson STT service, IBM Watson Assistant
4.	Application Logic-3	The information of the child's health and location should be alerted to the parents through GSM with the help of GPS.	IBM Watson Assistant, IBM Watson STT service,
5.	Database	Data Type, Configurations etc.	MySQL, NoSQL, etc.
6.	Cloud Database	Database Service on Cloud	IBM DB2, IBM Cloudant etc.
7.	File Storage	File storage requirements	IBM Block Storage or Other Storage Service or Local Filesystem
8.	External API-1	Purpose of External API used in the application	IBM Weather API, etc.
9.	External API-2	Purpose of External API used in the application	Aadhar API, etc.
10.	Machine Learning Model	Purpose of Machine Learning Model	Object Recognition Model, etc.
11.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud Local Server Configuration: Cloud Server Configuration :	Local, Cloud Foundry, Kubernetes, etc.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	List the open-source frameworks used	Technology of Opensource framework

S.No	Characteristics	Description	Technology
2.	Security Implementations	Alarm notification and continuous video recording monitoring whenever the emergency button is pressed. The wifimodules are of assistance in sending the monitoring particulars, the user will be notified with and update if any errors are found,for the efficient functioning of the device.	e.g. SHA-256, Encryptions, IAM Controls, OWASP etc.
3.	Scalable Architecture	Justify the scalability of architecture (3 – tier, Micro-services)	Technology used
4.	Availability	Justify the availability of application (e.g. use of load balancers, distributed servers etc.)	Technology used
5.	Performance	Design consideration for the performance of the application (number of requests per sec, use of Cache, use of CDN's) etc.	Technology used