Project Design Phase-II

Technology Stack (Architecture & Stack)

Date	03 October 2022
Team ID	PNT2022TMID09639
Project Name	IOT based Safety Gadget for Child Safety Monitoring and Notification
Maximum Marks	4 Marks

Technical Architecture:

The Deliverable shall include the architectural diagram as below and the information as per the table1 & table 2

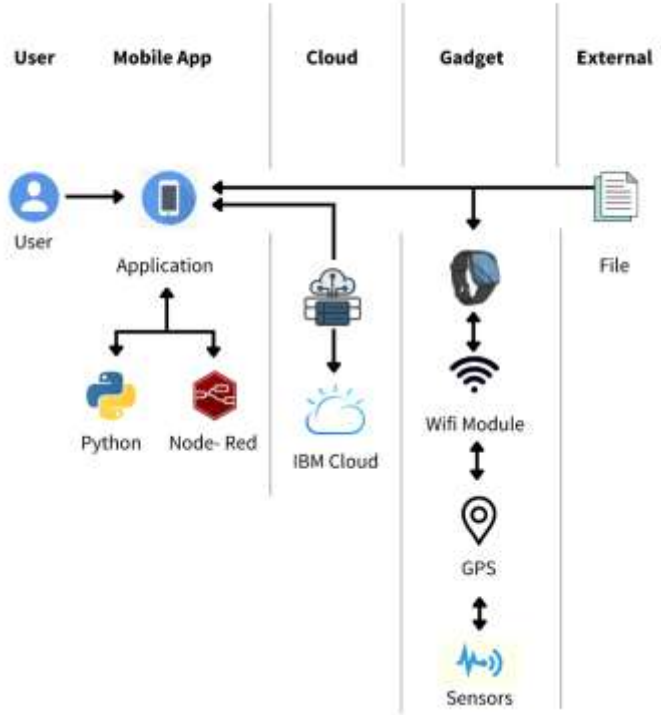

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	How user interacts with application e.g. Web UI, Mobile App, Chatbot etc.	HTML, CSS, JavaScript / Angular JS / React JS, Node Red, Android Studios etc.
2.	Application Logic-1	Logic for a process in the application	Python
3.	Application Logic-2	Logic for a process in the application	IBM Watson STT service
4.	Application Logic-3	Logic for a process in the application	IBM Watson Assistant
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 GPS API, etc.
9.	External API-2	Purpose of External API used in the application	Mobile number API, etc.
10.	Modules	Modules required for the system	WIFI module, GPS module
11.	Sensors	Sensors required for the system	LM 75 Temperature sensor & MAX 30102 Heart rate Sensor
12.	Wearable device	Wearable device for the child	Wear OS by Google

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	List the open-source frameworks used	Python and Node Red
2.	Security Implementations	List all the security / access controls implemented, use of firewalls etc.	256-bit AES algorithm
3.	Scalable Architecture	Justify the scalability of architecture (3 – tier, Micro-services)	High accuracy GPS, temperature & heart rate sensors
4.	Availability	Justify the availability of application (e.g., use of load balancers, distributed servers etc.)	Low-cost device, High battery life, User-friendly application
5.	Performance	Design consideration for the performance of the application (number of requests per sec, use of Cache, use of CDN's) etc.	Akamai – CDN