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

Date	18 October 2022
Team ID	PNT2022TMID38545
Project Name	Project – IoT Based Safety Gadget for Child Safety Monitoring and Notification
Maximum Marks	4 Marks

Technical Architecture:

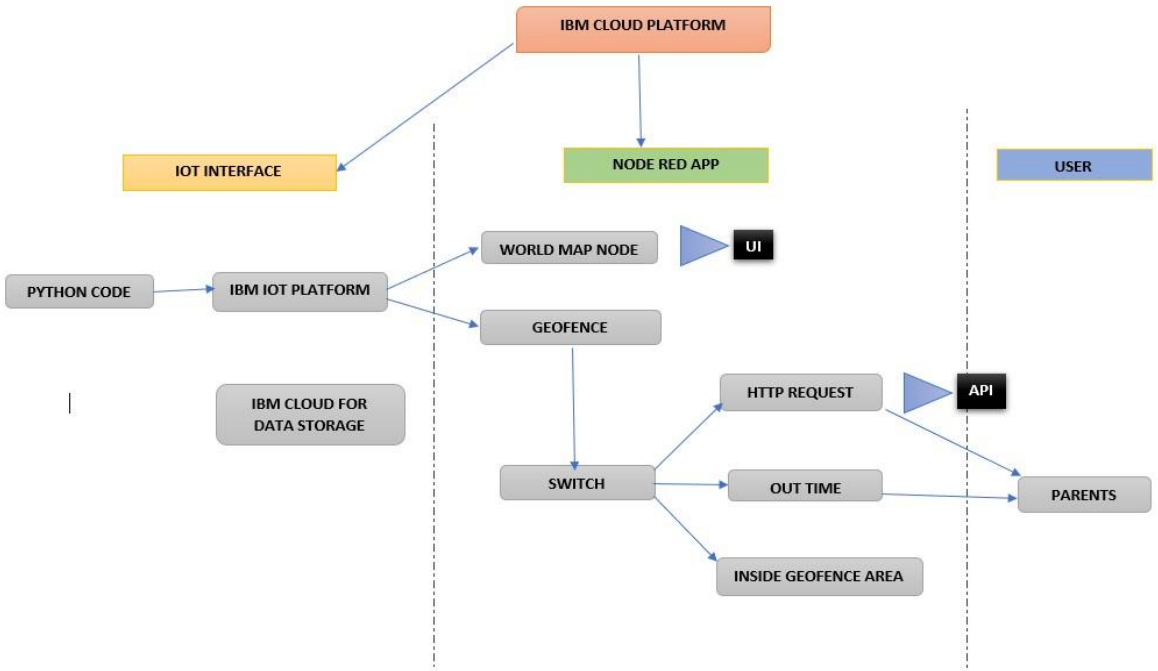

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	Coordinates mapped to location	World Map Node in NODE RED facility IBM Watson STT service (map)

2.	Application Logic-1	Updating geographical coordinates of the child's location to IBM IoT platform periodically (in this project we use static inputs)	Java / Python
3.	Application Logic-2	Checks if location in within safe zone radius or not Radius can be set as per requirements	Geofence Node in NODE RED facility IBM Watson STT service (map)
4.	Cloud Database	Database Service on Cloud	IBM Cloudant
5.	File Storage	File storage requirements	IBM Block Storage
6.	External API-1	To send message to parents if child is out of safe zone radius set	fast2sms API
7.	Infrastructure (Server / Cloud)	Deployment of NODE RED app and further usage	Cloud Foundry

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Scalable Architecture	We need to update the implemented application periodically	IOT (Internet Of Things)
2.	Availability	To make it available 24/7 for uninterrupted services we have implemented in distributed servers (cloud)	IBM CLOUD
3.	Performance	Network conditions should be stable even at worst conditions	High speed network plays a major role in efficiency