PROJECT DESIGN PHASE-II

Technology Stack (Architecture and Stack)

Date	10 September 2022
Team ID	PNT2022TMID46169
Project Name	IOT BASED SAFETY GADGET FOR CHILD MONITORING AND NOTIFICATION
Maximum Marks	4 Marks

TECHNOLOGY STACK ARCHITECTURE

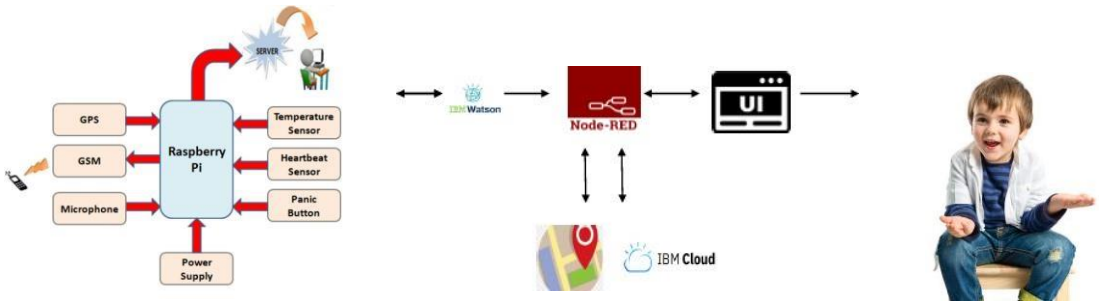


TABLE 1 : COMPONENTS AND TECHNOLOGIES

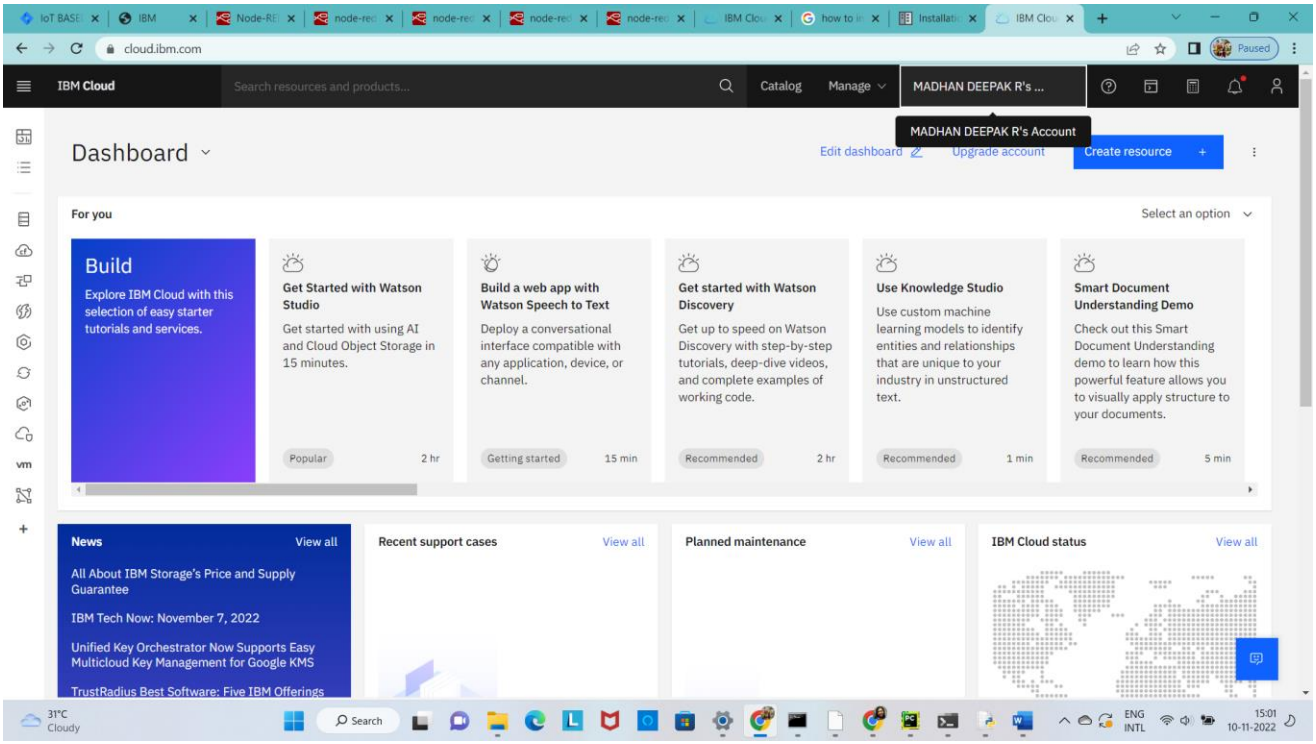
S.NO	Component	Description	Technology
1.	User Interface	Web UI, Mobile App.	HTML, CSS, JavaScript
2.	Application Logic-1	Code development phase	Python
3.	Application Logic-2	Interfacing purpose	IBM Watson Assistant
4.	Cloud Database	Database Service on Cloud	IBM Cloudant
5.	File Storage	Usage of IBM Cloud Storage	IBM Block Storage
6.	Browser based flow editor	Visual programming	Node Red
7.	Infrastructure (server/cloud)	Application deployment on Local Server	Cloud Platform
8.	Third party API	API related to project	IBM weather API, Aadhar API, etc...

TABLE 2: APPLICATION CHARACTERISTICS

S. No	Characteristics	Description	Technology
1	Open-Source Frameworks	A template for software development that is designed by social network	IBM Watson Platform, Node Red
2	Security Implementations	Each and every parent should take care of their own children, without letting them to fall into the dark world of abuses, which entirely ruin them physically, mentally and emotionally destroying our future. Hence, considering the importance of our future, our project makes it easy for parents to track their children and to visually monitor them on regular basis, which makes them ensure the safety of their children and reduces	Notifications and alerts
3	Scalable Architecture	The rate of incidents of child abuse. If any abnormal values are read by the sensor, then an SMS is sent to the parents mobile and an MMS indicating an image captured by the serial camera is also sent. The future scope of the work is to implement the Iot device which ensures the complete solution for child safety problems.	Implementation using Software
4	Availability	The solution represented takes advantage of Open- source Platform	NODE RED, IBM cloud, IBM Iot Platform
5	Performance	GPS is useful for tracking child and GPS also provides the information where the child is currently located as well as it also informs the parents how long his child is far away from his parents. SMS services used when smart phones do not support internet connectivity in this case child is able to send a text message or exact location in the parents. This system is going to help the parents to track the location of their children without informing them because their movement is displayed on the parent's phone	GPS

Cloud Deployment:

- We have deployed Cloud for our Project for developing the project.
- From that credentials IBM Watson and node red API are created with cloud deployment for further workflow.



Analysis, Interpretation and Modelling

Analysis:

From the given Objective of our project, we have identified that if the child crossed the geofence the latitude and longitude of the child is updated to the concerned authorities through fast2SMS.

Interpretation:

From the analysis it is clearly interpreted that to solve the issue we have to work with security of the concerned child through the security provisions we have given through our project…The guideline should be followed to secure the child. For that we have created the design using IBM IoT platform using web application

Modelling:

The main objective of this work is to create a wearable IOT device for the security and shielding of children. This is accomplished by the examination of child behavior by analyzing the geofence location of the children.