VSB ENGINEERING COLLEGE, KARUR-639111

Department Of Electronics And Communication Engineering

Design Phase II

Technology Stack

TITLE : IOT-Based Safety Gadget For Child Safety Monitoring And Notification

DOMAIN NAME : Internet Of Things

TEAM ID : PNT2022TMID33608

TEAM LEADER : Sindhuja J

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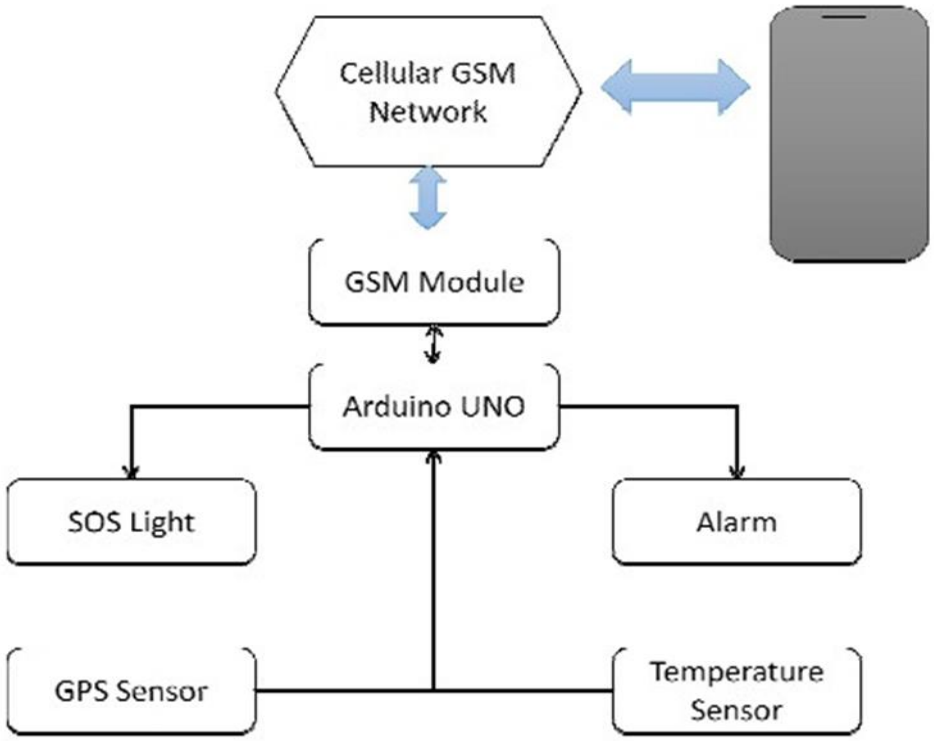
Technical Architecture:



Guidelines:

- Include all the processes (As an application logic / Technology Block)
- Provide infrastructural demarcation (Local / Cloud)
- Indicate external interfaces (third party API's etc.)
- Indicate Data Storage components / services
- Indicate interface to machine learning models (if applicable)

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
	User Interface	Web UI, Mobile App, Chatbot etc.	HTML, CSS, JavaScript / Angular Js / React Js etc.
1.	Application Logic-1	Logic for a process in the application	Python
2.	Application Logic-2	Logic for a process in the application	IBM Watson STT service
3.	Application Logic-3	Logic for a process in the application	IBM Watson Assistant
4.	Database	Data Type, Configurations etc.	MySQL, NoSQL, etc.
5.	Cloud Database	Database Service on Cloud	IBM DB2, IBM Cloudant etc.
6.	File Storage	File storage requirements	IBM Block Storage or Other Storage Service or Local Filesystem
7.	External API-1	Purpose of External API used in the application	IBM Weather API, etc.
8.	External API-2	Purpose of External API used in the application	Aadhar API, etc.
9.	Machine Learning Model	Purpose of Machine Learning Model	Object Recognition Model, etc.
10.	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	*The Internet of Things System (IoT) refers to the set of devices and systems that stay interconnected with real-world sensors and actuators to the Internet	Internet of Things.
2.	Security Implementations	*we can use sensors for detecting heartbeat and temperature of the child. *We can use the GPS and GSM to track the live location.	Sensing technology.
3.	Scalable Architecture	*It is clearly explained the IoT concept ,child safety issues and the need of using child security System, *Child safety can be ensured and crime rate will be reduced,	Internet of Things
4.	Availability	*This system is developed using board programmed in embedded C and interfaced with temperature ,heartbeat. *It is available in online.	Microchip technology
5.	Performance	*The novelty of the work is that the system automatically alert the parent/caretaker by sending Sms ,when immediate attention is required for the child during emergency. *The parameter such as touch, temperature and heartbeat of the child are used for parametric analysis,	Infrared temperature sensor.