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

Date	03 October 2022
Team ID	PNT2022TMID50843
Project Name	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.

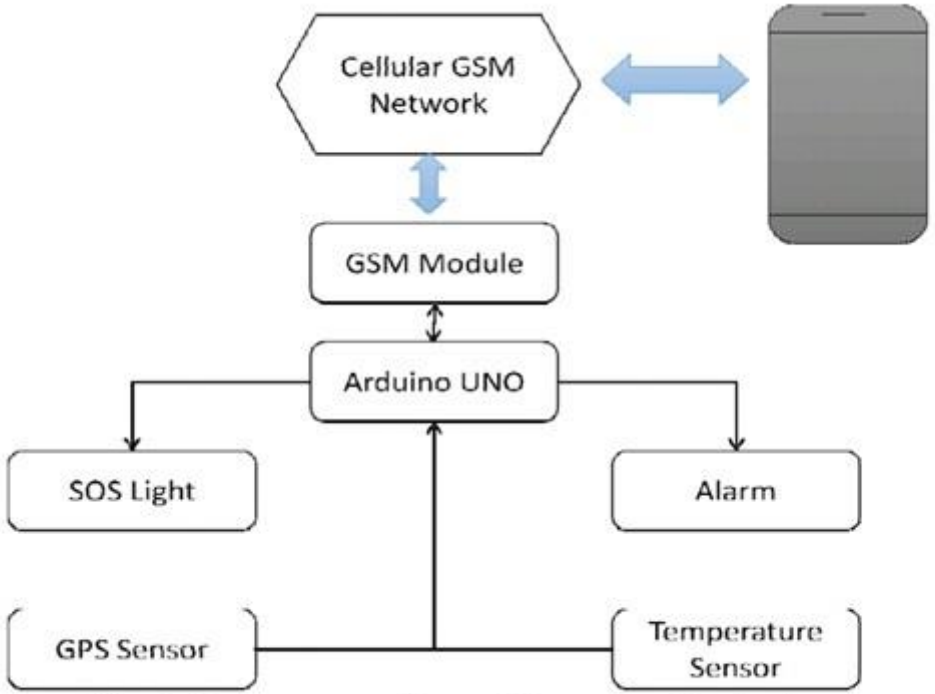

Fig. 1 System overview of the wearable device.

Guidelines

1. A smart wearable Internet of Things sensor network for monitoring the environment of a child**.**
2. A portable device which will have a pressure switch.
3. We can use both web application as well as mobile application.
4. User interface, cloud, and database as the back end for storing and retrieving information.
5. It send current location of the children.

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	GPS	GPS is used to track the live location of the child who is wearing that device.	GPS works through a technique called **trilateration**. Used to calculate location, velocity and elevation, trilateration collects signals from satellites to output location information.
2.	GSM	If the child goes beyond that particular borders specified, the respective guardians will receive an alert call using GSM.	Telecommunications Standards Institute to describe the protocols for second-generation digital cellular networks used by mobile devices such as mobile phones.
3.	Temperature sensor	The Temperature sensor is used to sense the surrounding temperature of the device. If the temperature level exceeds the room temperature then the alert message will be sent using GSM to the specified User.	Temperature and humidity module for Arduino and Raspberry Pi .
4.	Pulse sensor	The Pulse sensor is used to detect any abnormal feelings	A pulse wave is the change in the volume of a blood vessel that occurs when the heart pumps blood, and a detector that

			monitors this volume change is called a pulse sensor.
5.	Web camera	These values are used to alert the specified guardians.	A webcam is an input device that captures visual data and sends it onto your computer. It uses an image sensor chip or video camera to capture moving images then converts them to a format your computer's processor understands.

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