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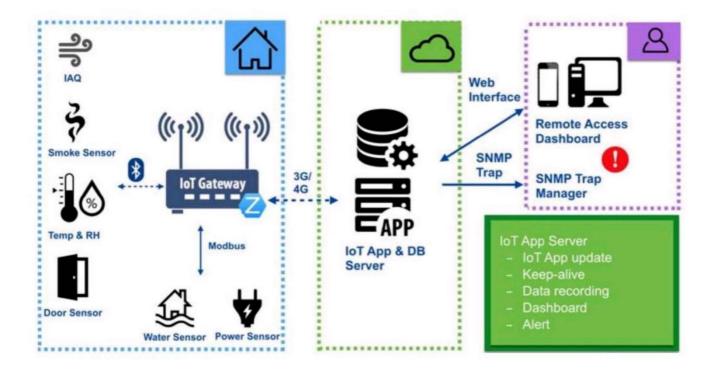


Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	Web UI, Mobile App, Chatbot, MIT inventor, sms alert etc.	HTML, CSS, JavaScript / Angular Js / React Js etc.
2.	Application Logic-1	Get the temperature using sensor and send it to the microcontroller for analysis and compare with standars values.	Java / Python
3.	Application Logic-2	Provide solution to monitor data and control the machine and units and provide API between user and devices.	IBM Watson Assistant

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4.	Database	IoT data comes in different types, based on the device generating it and the use case. Status data: Status data is basic, raw data that communicates the status of a device or system. The data will be temperature value at regular interval of time and the combustible gas levels and smoke levels. Location data: Location data communicates the geographical location of the device or system. It's frequently used in logistics, warehousing, and manufacturing.	MySQL, NoSQL, etc.
6.	Cloud Database	Using wifi module the measured data is sent to the cloud service.	IBM Cloudant
7.	File Storage	App code and IOT credentials are stored. Block storage is a technology that is used to store data files on Storage Area Networks (SANs) or cloud-based storage environments.	IBM Block Storage or Other Storage Service or Local Filesystem,Drop box.

8.	External API-1	A cloud API enables end users to	IBM cloudant
		access a cloud provider's application or	
		service, such as compute infrastructure,	
		storage resources or monitoring tools.	
		APIs define the possible features and	
		functions of that app or service, along	
		with the details needed to execute them	
9.	External API-2	The Passwords API allows you to	Password API
		lookup whether a given password	
		exists in our database of compromised	
		passwords. When users attempt to	
		establish a new password, you can	
		check it against the Passwords API to	
		determine if it is safe to use. If not, you	
		can steer them clear from using it and	
		require them to pick a different	
		password.	
10.	Infrastructure (Server / Cloud)	Application Deployment on LocalSystem / Cloud.	Cloud foundry
		J. G.	

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	It is an open-source IoT framework. The main purpose of the framework is data collection and device management. Further, it uses IoT protocols like HTTP, MQTT, and CoAP for device connectivity. It is also highly scalable as every type of device easily integrated.	Thingsboard.
2.	Security Implementations	Security Security is preventing all the data inside the system and preventing it from the unauthorized access. The IoT platform must ensure proper device management (via authenticationand authorization mechanisms), data privacy, integrity, and confidentiality via secure communication and encryption of data. Security is especially crucial foran IoT platform, as it will rely more on automated security.	e.g. SHA-256, Encryptions, IAM Controls, OWASP etc.

S.No	Characteristics	Description	Technology
3.	Scalable Architecture	This is very reliable as it monitors continuously and real time analysis of the particular area.also it provides hands on solution to the problem.	Progressive web apps(PWA),Cloud storage and Micro
4.	Availability	Availability explains how likely the system is available to a user.It describes the accessibility of a user at a certain time. You may also define it as a percentage of time the system is accessible for operation during some time period.	
5.	Performance	Performance describes the efficiency of the product. Product performance is described as the response of a product to external actions in its working environment. Our solution explains how long a user must wait before the target operation happens (the page renders, errors etc.,) given the overall number of users at the moment.	