

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

Date	16 October 2022
Team ID	PNT2022TMID27744
Project Name	HAZARDOUS AREA MONITORING FOR INDUSTRIAL PLANT POWERED BY IOT
Maximum Marks	4 Marks

Technical Architecture:

The Deliverable shall include the architectural diagram as below and the information as per the table1 & table 2

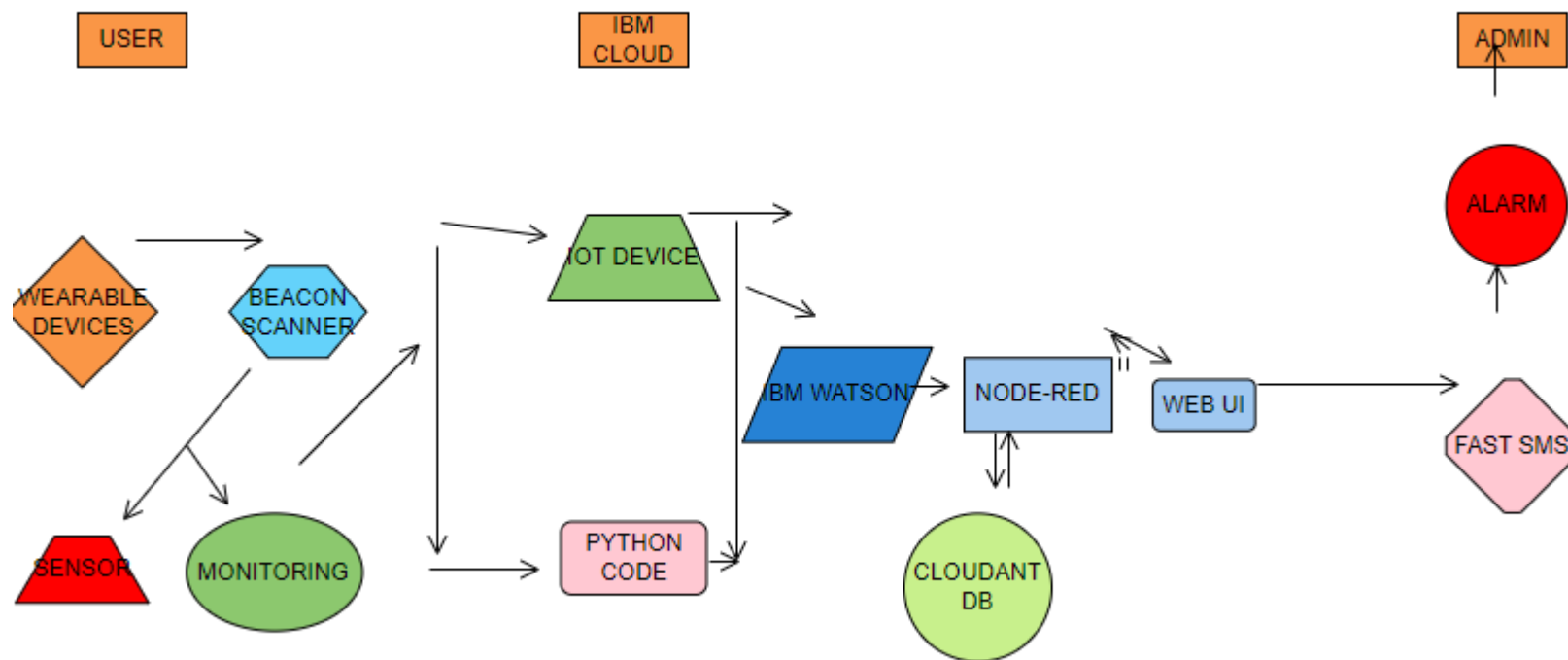


Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	Web UI, Mobile App	HTML, CSS, JavaScript / Angular Js

2.	Application Logic-1	To monitor the environmental parameters e.g:Temperature	Java / Python
3.	Application Logic-2	Beacon scanner to get the workers health condition	IBM Watson STT service
4.	Application Logic-3	Add the parameters and health condition	IBM Watson Assistant
5.	Database	MySQL is used to show the collected data	MySQL
6.	Cloud Database	IBM cloudant is used and user login credentials	IBM DB2, IBM Cloudant etc.
7.	File Storage	App code and IOT credentials are stored.	IBM Block Storage or Other Storage Service or Local Filesystem
8.	External API-1	To monitor the environment parameters.	IBM Weather API, etc.
9.	External API-2	To get the login credentials	Password API..
10.	Machine Learning Model	Admin got the alert message.	Object recognition model
11.	Infrastructure (Server / Cloud)	Application development on local system	Local, Cloud Foundry, Kubernetes, etc.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	MIT App is used to develop the application interface.	MIT App Inventor
2.	Security Implementations	Protect user login credentials	e.g. SHA-256, Encryptions, IAM Controls, OWASP etc.
3.	Scalable Architecture	To scale the application database	IBM Auto scaling
4.	Availability	To make use the application and data are available anytime.	IBM cloud load balancer
5.	Performance	To increase the performance.	IBM Instance

