PROJECT DESIGN PHASE - II

TECHNOLOGY STACK(ARCHITECTURE & STACK)

HAZARDOUS AREA MONITORING FOR INDUSTRIAL POWER PLANT BY IOT

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TECHNICAL ARCHITECTURE:

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

GUIDELINES:

1. Include all the processes (As an application logic / Technology Block)

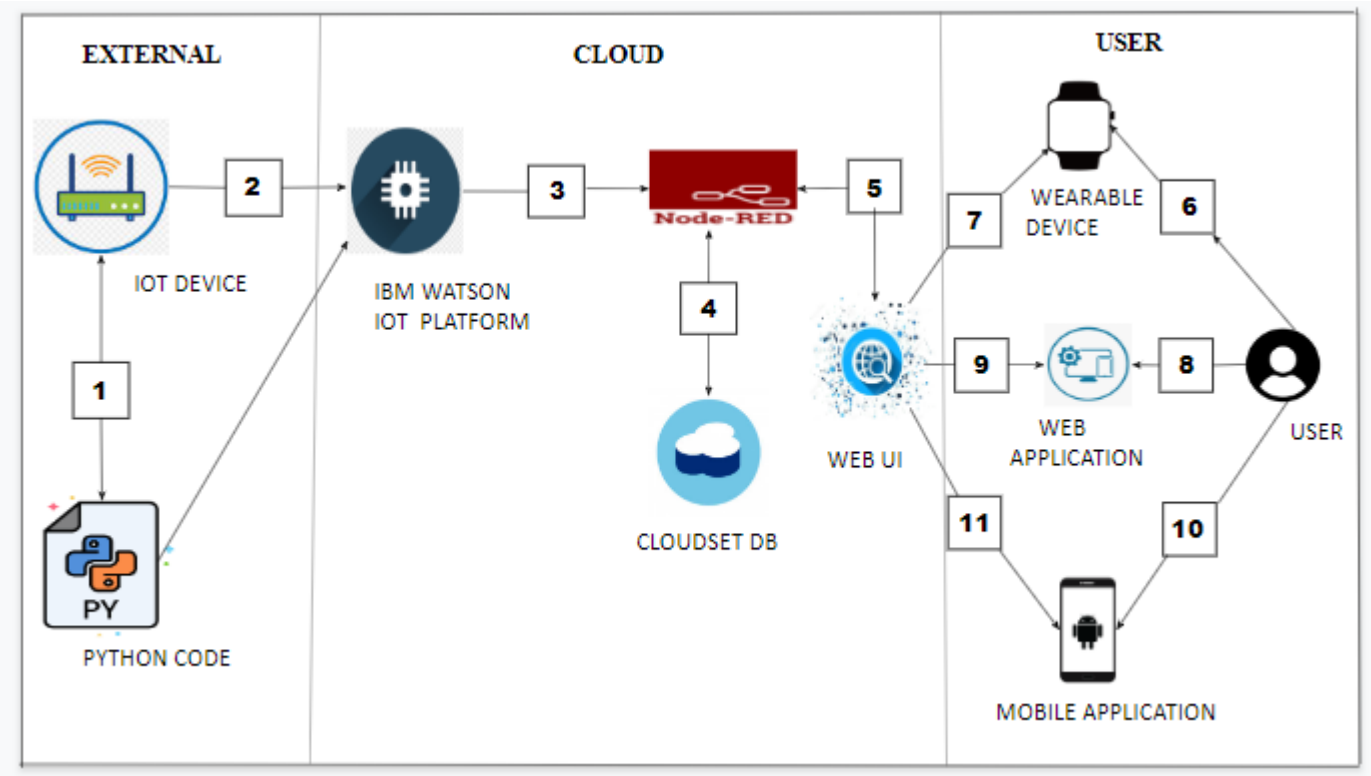

TABLE-1: COMPONENTS & TECHNOLOGIES:

S.No	COMPONENTS	DESCRIPTION	TECHNOLOGY
1.	**User Interface**	Using WEB UI,Mobile App,SMS service and wearable devices user can interact	Node -RED,Fast SMS,MIT App Inventor,HTML, CSS, Java,Python code
2.	**Application Logic-1**	Collecting input from smart beacons	C and Python
3.	**Application Logic-2**	Computing the input data to the cloud	IBM Watson IOT platform,Cloudant DB and Node-RED
4.	**Application Logic-3**	Exhibit the data to the user	WEB UI,Fast SMS and Mobile application
5.	**Database**	Real Time database	Cloudant DB
6.	**Cloud DataBase**	Database service built and accessed through a cloud platform.	IBM Cloudant
7.	**File Storage**	Storage Service	IBM Block Storage
8.	**External API-1**	To convey SMS to user	Fast SMS
9.	**External API-2**	Code for tasks can be composed for the working of smart beacon devices.	Python and C Modules
10.	**External API-3**	To access time	World Time APL
11.	**Smart Beacon**	To detect the area and update the data in the cloud.	NodeMCU and Sensors
12.	**Infrastructure(Server/Cloud)**	Establishing application on cloud	IBM Cloud Services

TABLE-2:APPLICATION CHARACTERISTICS:

S.No	CHARACTERISTICS	DESCRIPTION	TECHNOLOGY
1.	**Open-Source Frameworks**	To build web application,mobile application and circuit designing using Node-RED open source frameworks	App Inventor and Node-Red Framework
2.	**Security Implementations**	Unique login credentials should be given to the users	Email and respective password
3.	**Scalable Architecture**	The 3 – tier architecture used in the project has a separate user interface, application tier and the data tier makes the process easy	IBM WATSON
4.	**Availability**	The web application is highly available as it is deployed in cloud	IBM Cloud
5.	**Performance**	The performance of the web UI is improved using cache, security services	IBM cloud services