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

Date	18 MAY 2023
Team ID	NM2023TMID12350
Project Name	GAS PIPELINE MONITORING SYSTEM IN HOSPITAL MANAGEMENT SYSTEM

Technical Architecture:

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	Web Portal	HTML, CSS, JavaScript ,NodeRed,Framework_Boot strap, server side- PHP,MYSQL
2.	Application Logic-1	i)To calculate the amount of gas and show the real time level of gas in gas pipeline the information will be getting via ultrasonic sensor Ii) the alert message activate with python script to web portal.	Ultrasonic sensor and Python is the technology used in application iogic-1
3.	Application Logic-2	i) To calculate the amount of gas and showthe real time weight in web portal, this info getting via load cell	Load cell and python is the technology used in AP-2
4.	Application Logic-3	Getting direction of gas via the globalPositioning system or GSM technology.	GPS and Global System Mobile communication
5.	Cloud Database	Database Service on Cloud	IBM DB2, IBM Cloud Service etc.
6.	File Storage	File storage requirements	Git Hub, Local filesystem

7.	External API-1	Firebase is a set of hosting service for any type of application	Firebase
8.	Ultrasonic Sensor	To throw alert message when garbage is getting full.	Distance recognition model.
9.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud Local Server Configuration: localhost,Firebase Cloud Server Configuration : public,private cloud.	Localhost, Web portal.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	It was built to help developers quickly build and deploy sophisticated application.	IBM Watson iot platform
2.	Security Implementations	Act of securing internet devices & the network they re connected to from threats and breaches.	e.g.Azure iot Hub
3.	Scalable Architecture	Use separate system call web workers where the pool can dynamically grow for data storage and analysis.	Web worker