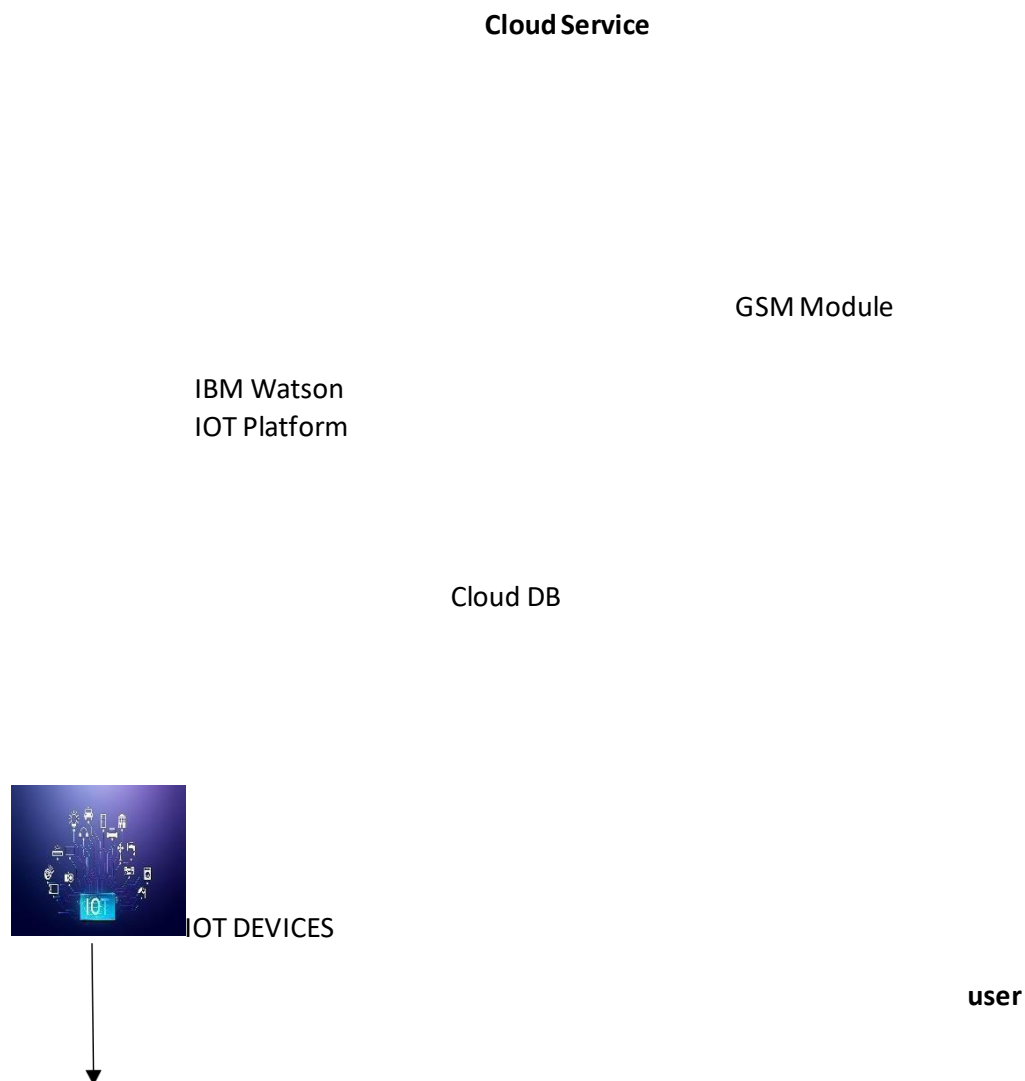


## Project Design Phase-II Technology Stack (Architecture & Stack)

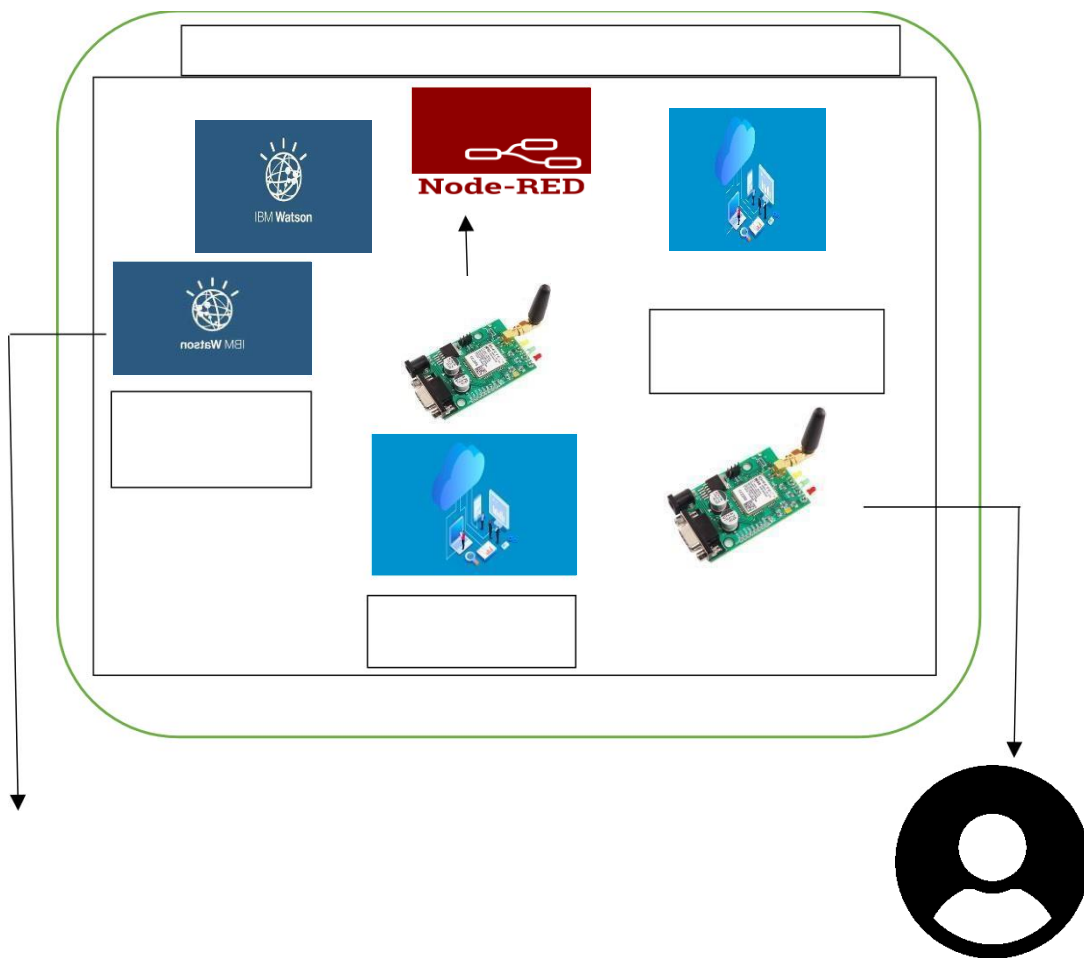
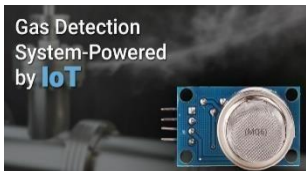
### Technical architecture:

Date	19 October 2022
Team ID	PNT2022TMID18315
Project Name	Project – Gas Leakage Monitoring and Alerting System
Maximum Marks	4 Marks

Figure: Gas Leakage Monitoring and Alerting System



Gas Detection  
System-Powered  
by IoT



**Table-1 : Components & Technologies:**

S.No	Component	Description	Technology
1.	User Interface	User has to register and we can able to view the other device. ex: using web UI, mobile app etc.,	HTML, CSS, JavaScript
2.	IOT Application Logic-1	Owner's device should be connected to the system	Python
3.	IOT Application Logic-2	Owner's device should be in on condition	IBM Watson STT service
4.	IOT Application Logic-3	If gas leakage is detected the owner	IBM Watson Assistant
5.	Database	Data type can be any form such as from cloud IOT core device etc.,	SQ lite, In Flux DB
6.	File Storage	File with be labelled with what they contain and how long they should be kept	IBM Block Storage or Local File system
7.	External API-1	Purpose of External API used in the device is to use the internet for communicating and conducting allotted operations efficiency.	Aadhar API, etc.
8.	Machine Learning Model	IOT and machine learning delivers insights otherwise hidden in data for rapid automated response and improved decision making	Object Recognition Model, Danger prediction Model etc.

**Table-2: Application Characteristics:**

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Device that removes much of the manual work needed to write and configure code. It provides rapid development ,is easy to setup and has a strong support base	IOT Zeta for nonstop streaming of detecting gas leakage level,
2.	Security Implementations	Alert notification Enabled with GPS module received in owner mobile.	e.g. SHA-256, Encryptions of data regarding gas level, firewalls, Antivirus, data loss prevention etc.,
3.	Scalable Architecture	If a problem arises owner can see the problems and check gas level simultaneously	Multiple Data store Technologies , Reliable, Micro services Automated Bootstrapping
4.	Availability	*sensor to detect the show gas level	GSM module, raspberry pi

S.No	Characteristics	Description Technology	
		*whenever the gas leakage is sensed the message is delivered to the owner	
5.	Performance	*the alert notification is sent after detection.	High durable device battery