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

Date	15 October 2022
Team ID	PNT2022TMID04334
Project Name	Gas leakage monitoring and alerting system for industries
Maximum Marks	4 Marks

Technical Architecture:

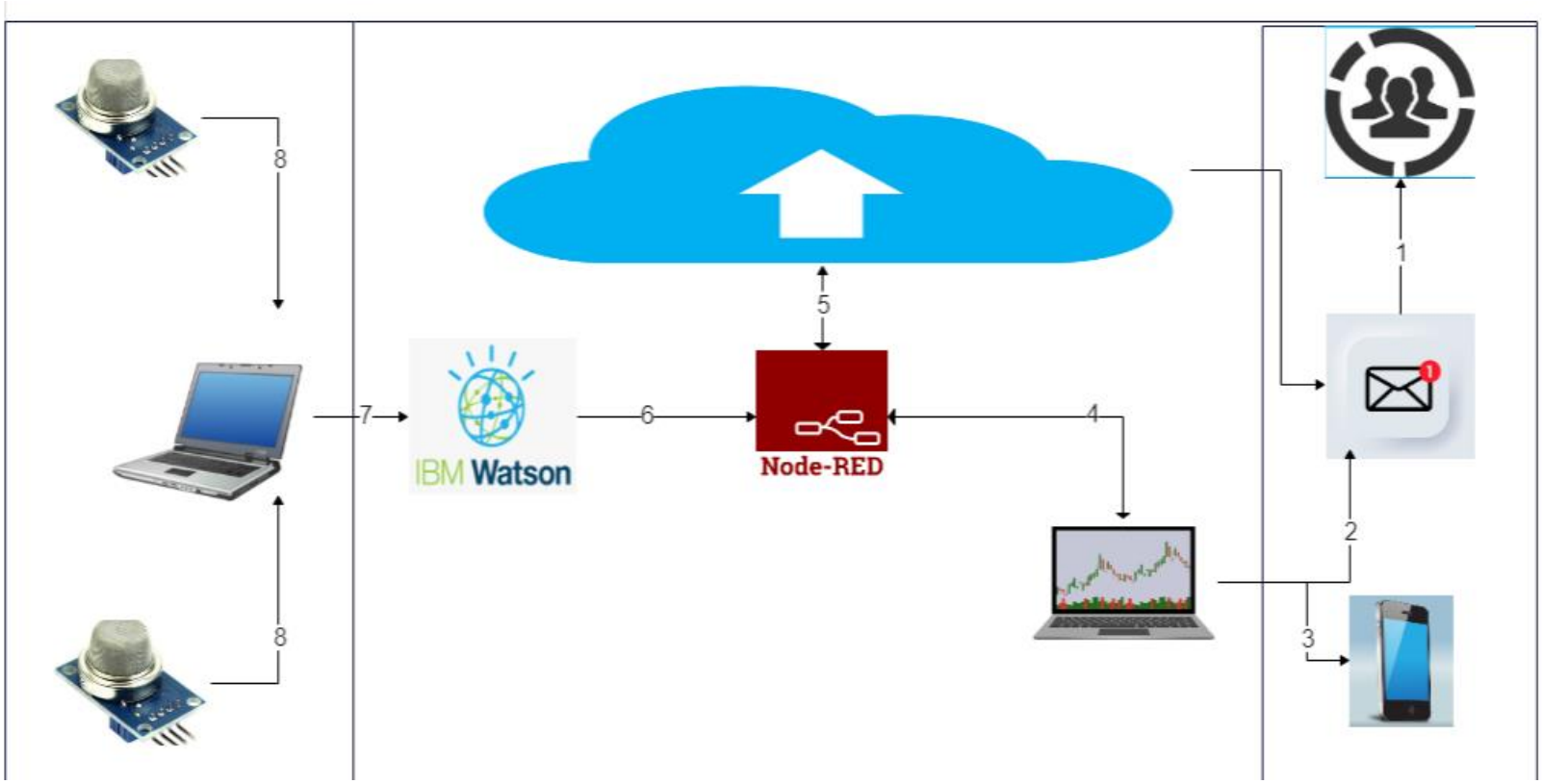

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface-1	Mail to user	Gmail
2.	User Interface-2	Via mobile app	HTML, CSS, JavaScript
3.	User Interface-3	web	HTML, CSS, JavaScript
4.	Application Logic-1	Logic for a process in the application	Python
5.	Infrastructure (Server / Cloud)	Cloud Server Configuration :	Cloud Foundry
6.	Application Logic-2	Logic for a process in the application	IBM Watson STT service
7.	Application Logic-3	Logic for a process in the application	IBM Watson Assistant
8.	Sensors	Sends data	Detects ppm of gas
9.	Cloud Database	Database Service on Cloud	IBM Cloudant.
10.	File Storage	File storage requirements	IBM Block Storage
11.	External API-1	Purpose of External API used in the application	IBM Weather API
12.	External API-2	Purpose of External API used in the application	Aadhar API

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	The open-source frameworks used	Chrome, web-mail
2.	Security Implementations	The security / access controls implemented, use of firewalls etc.	IBM cloud Encryptions
3.	Scalable Architecture	Justify the scalability of architecture (3 – tier, Micro-services)	Auto-scalable with the user's usage.
4.	Availability	Availability of application (e.g. use of load balancers, distributed servers etc.)	24/7
5.	Performance	Performance of the application (number of requests per sec, use of Cache, use of CDN's) etc.	Since it is auto-scalable, its performance is increased with respect to number of users.