PROJECT DESIGN PHASE-II

TECHNOLOGY STACK (ARCHITECTURE & STACK)

Date	13 May 2023
Team ID	NM2023TMID10372
Project Name	Remote gas pipeline tunnel temperature monitoring system

Technical Architecture:

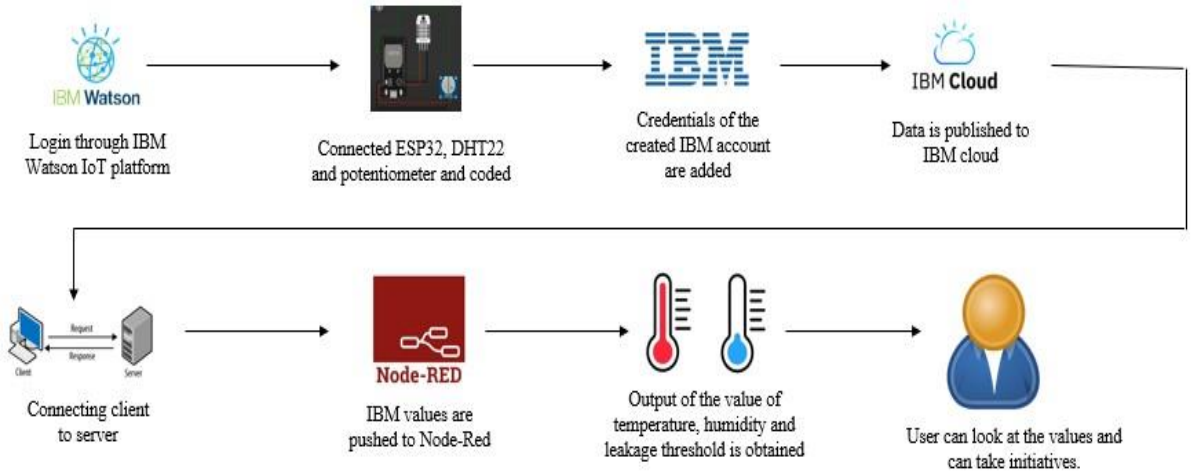

Table-1 : Components & Technology

SI. No	Components	Description	Technology
1	IoT Device	Connection of components such as potentiometer, ESP32, DHT22 virtually	WOKWI
2	Application Logic-1	Logic for a process in the application	IBM Watson
3	Cloud Database	Database Service on Cloud	IBM Cloud
4	Output Visualizer	Visualization tool	Node-Red

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1	Open-Source Frameworks	For programming the IoT device, C++ open source framework is used	C++ in WOKWI
2	Security Implementations	During logging in the IBM Cloud platform, verification code is sent to respective user. Every values are encrypted.	Encryption, Verification by code
3	Scalable Architecture	To operate this device in a seamless way, Wi-Fi technology is used by importing the library.	Wi-Fi
4	Availability	This device can be used by every user who have IBM account.	IBM Server
5	Performance	The performance is high since high precision sensor is used.	DHT22 Sensor, ESP32