Project Design Phase

Technology Stack (Architecture & Stack)

DATE	30 October 2022
TEAM ID	PNT2022TMID03762
PROJECT NAME	Real-Time River Water Quality Monitoring and Controlling System

TECHNICAL ARCHITECTURE
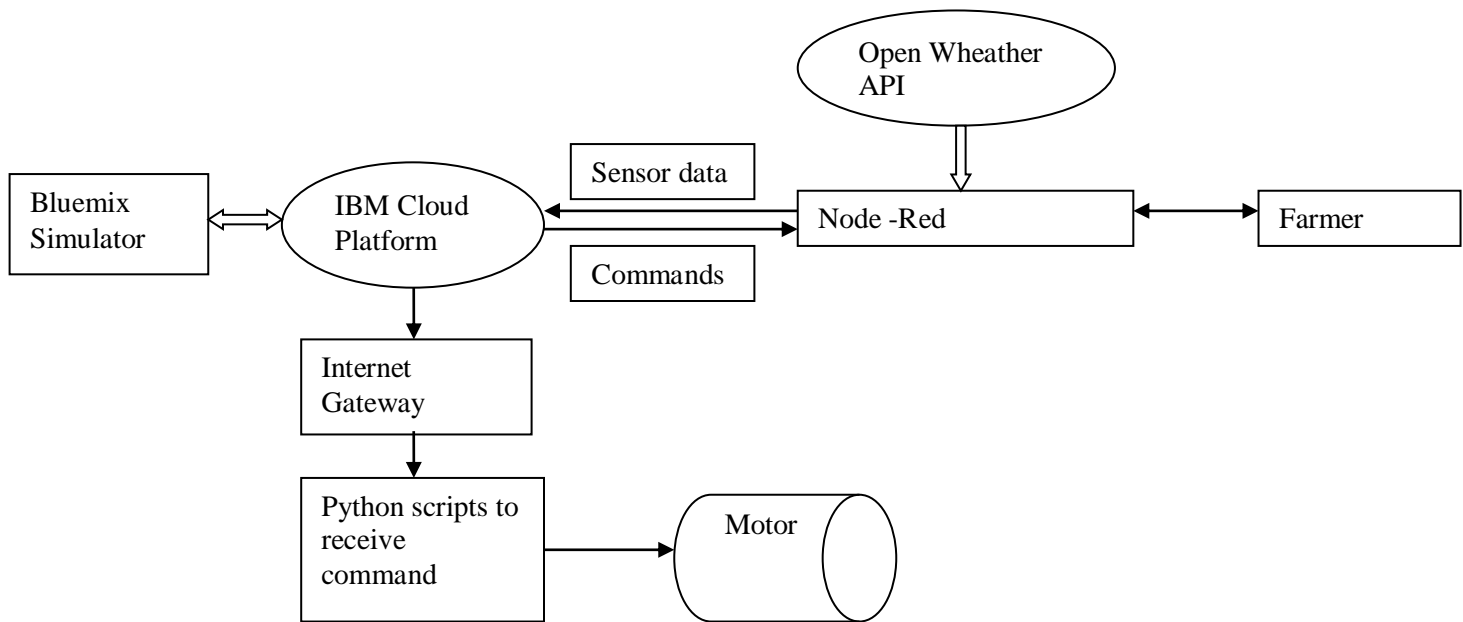
BlueMix Simulator:

Bluemix is the IBM open cloud platform that provides mobile and web developers access to IBM software for integration security transaction and other key functions as well as software from business partners.

Bluemix provides the following features:
- A range of services that enable you to build and extend web and mobile apps fast
- Processing power for you to deliver app changes continuously
- Fit-for-purpose programming models and services
- Manageability of services and applications
- Optimized and elastic workloads
- Continuous availability

Features Of IBM Cloud:

- Proven security, compliance and governance
- Build and run anywhere with consistency
- Automate, predict and modernize workflows
- Leverage the latest innovations

Internet Gateway:

An Internet gateway is a network "node" that connects two different networks that use different protocols (rules) for communicating. In the most basic terms, an Internet gateway is where data stops on its way to or from other networks. We can communicate and send data back and forth with each other.

Motor:

One that imparts motion specifically prime mover.

Any of various power units that develop energy or impart motion: such as
a: a small compact engine
b: INTERNAL COMBUSTION ENGINE *especially* **:** a gasoline engine
c: a rotating machine that transforms electrical energy into mechanical energy

Components & Technologies:

- User Interface - HTML, CSS, Node-Red ,Cloud, etc..
- ApplicationLogic-1 - JAVA/PYTHON
- ApplicationLogic-2 - IBM WATSON STT services
- Database - MySQL,PostgresSQL
- Cloud Database - IBM DB2,IBM Cloudant, etc..
- File Storage - IBM Block Storage or Other Storage, Service or Local Filesystem
- External API-1 - IBM Weather API, etc
- Machine Learning Model - Object Recognition Model, etc..
- Infrastructure(Server / Cloud) - Local, Cloud Foundry, Kubernetes, etc**.**

Application Characteristics:

- Open-Source Frameworks
- Security Implementations
- Scalable Architecture
- Availability
- Performance