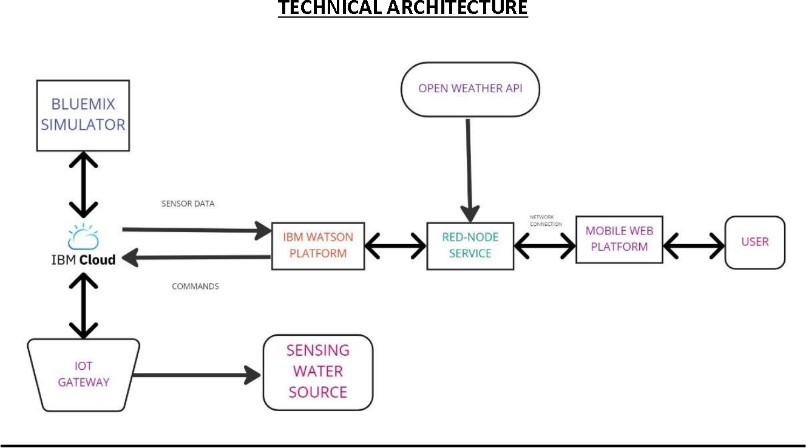
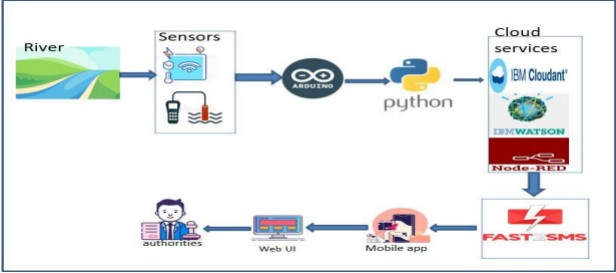
Project Design Phase-II Technology Stack (Architecture & Stack)

|  |  |
| --- | --- |
| Date | 15 October 2022 |
| Team ID | PNT2022TMID17590 |
| Project Name | Project - Real time River water monitoring and control system |
| Maximum Marks | 4 Marks |

# Technical Architecture:



**Table-1:**

# Components & Technologies:

|  |  |  |  |
| --- | --- | --- | --- |
| **S.**  **No** | **Component** | **Description** | **Technology** |
| 1. | User Interface | How user interacts with application e.g., Web UI, Mobile App, Chatbot etc. | HTML, CSS, Node-Red, Cloud, etc. |
| 2. | Application Logic-1 | Logic for a process in the application | Java / Python |
| 3. | Application Logic-2 | Logic for a process in the application | IBM Watson STT service |

|  |  |  |  |
| --- | --- | --- | --- |
| 4. | Application Logic-3 | Logic for a process in the application | IBM Watson Assistant |
| 5. | Database | Data Type, Configurations etc. | MySQL, NoSQL, etc. |
| 6. | Cloud Database | Database Service on Cloud | IBM DB2, IBM Cloud ant etc. |
| 7. | File Storage | File storage requirements | IBM Block Storage or Other Storage Service or Local Filesystem |
| 8. | External API-1 | Purpose of External API used in the application | IBM Weather API, etc. |
| 9. | External API-2 | Purpose of External API used in the application | Aadhar API, etc. |
|  | Machine Learning Model | Purpose of Machine Learning Model | Object Recognition Model, etc. |

11. Infrastructure (Server / Cloud) Application Deployment on Local System / Cloud Local Server Configuration:

Cloud Server Configuration:

# Table-2: Application Characteristics:

Local, Cloud Foundry, Kubernetes, etc.

|  |  |  |  |
| --- | --- | --- | --- |
| **S.**  **No** | **Characteristics** | **Description** | **Technology** |
| 1. | Open-Source Frameworks | List the open-source frameworks used | Technology of Opensource framework |
| 2. | Security Implementations | List all the security / access controls implemented, use of firewalls etc. | e.g., SHA-256, Encryptions, IAM Controls, OWASP etc. |
| 3. | Scalable Architecture | Justify the scalability of architecture (3 – tier, | Technology used |

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | Microservices) |  |
| 4. | Availability | Justify the availability of application (e.g., use of load balancers, distributedserversetc.) | Technology used |
| 5. | Performance | Design consideration for the performance of the application (number of requests persec, use of Cache, use of CDN’s) etc. | Technology used |