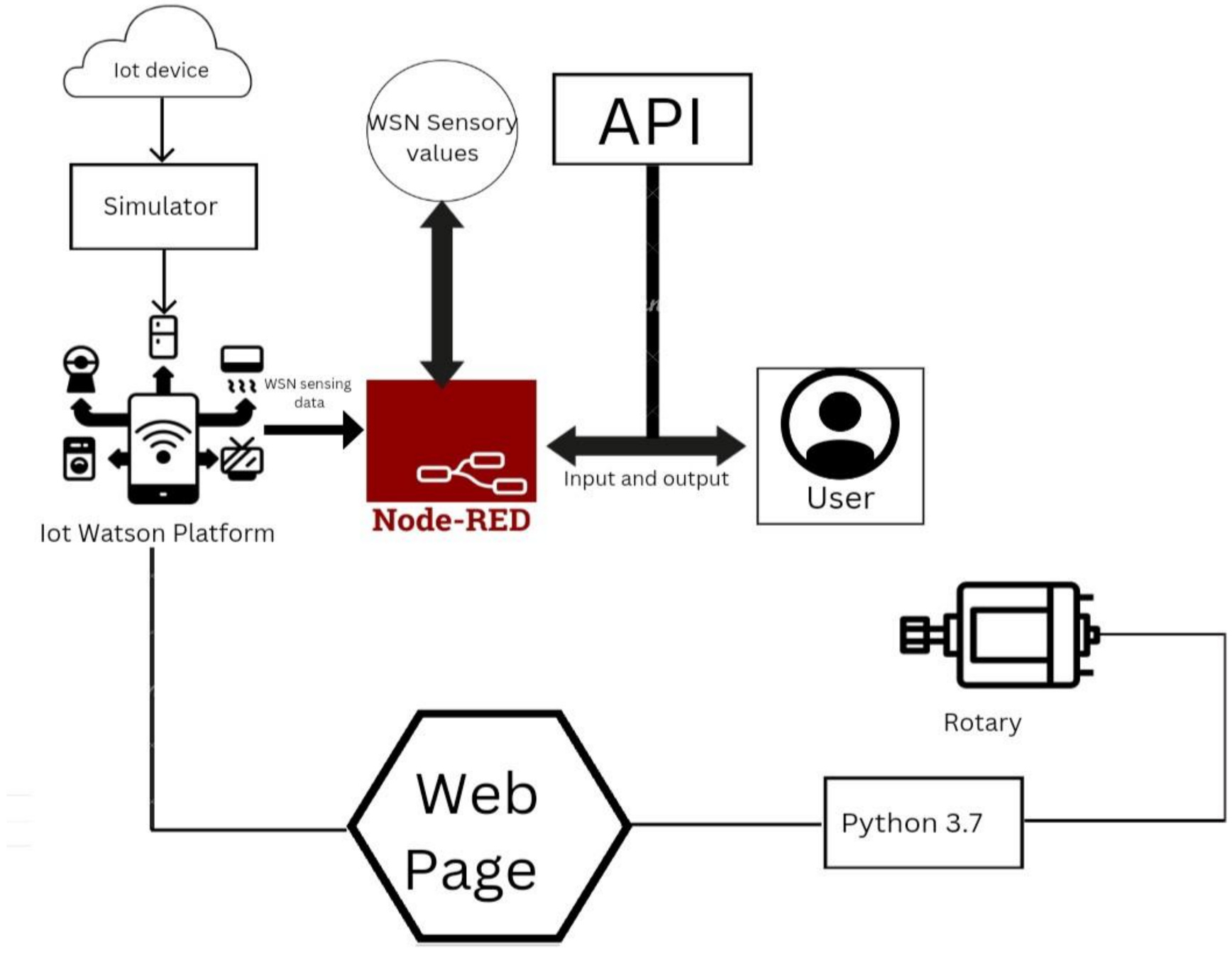
Project Design Phase-II
Technology Stack (Architecture & Stack)

Date	**01 October 2022**
Team ID	**PNT2022TMID50683**
Project Name	**Project -Real time river water quality monitoringand control system**
Maximum Marks	**4 Marks**

Technical Architecture:

The Deliverable shall include the architectural diagram as below and the information as per the table1 & table 2


Iot device
Simulator
WSN Sensory values
API
WSN sensing data
Input and output
User
Node-RED
Iot Watson Platform
Rotary
Web Page
Python 3.7

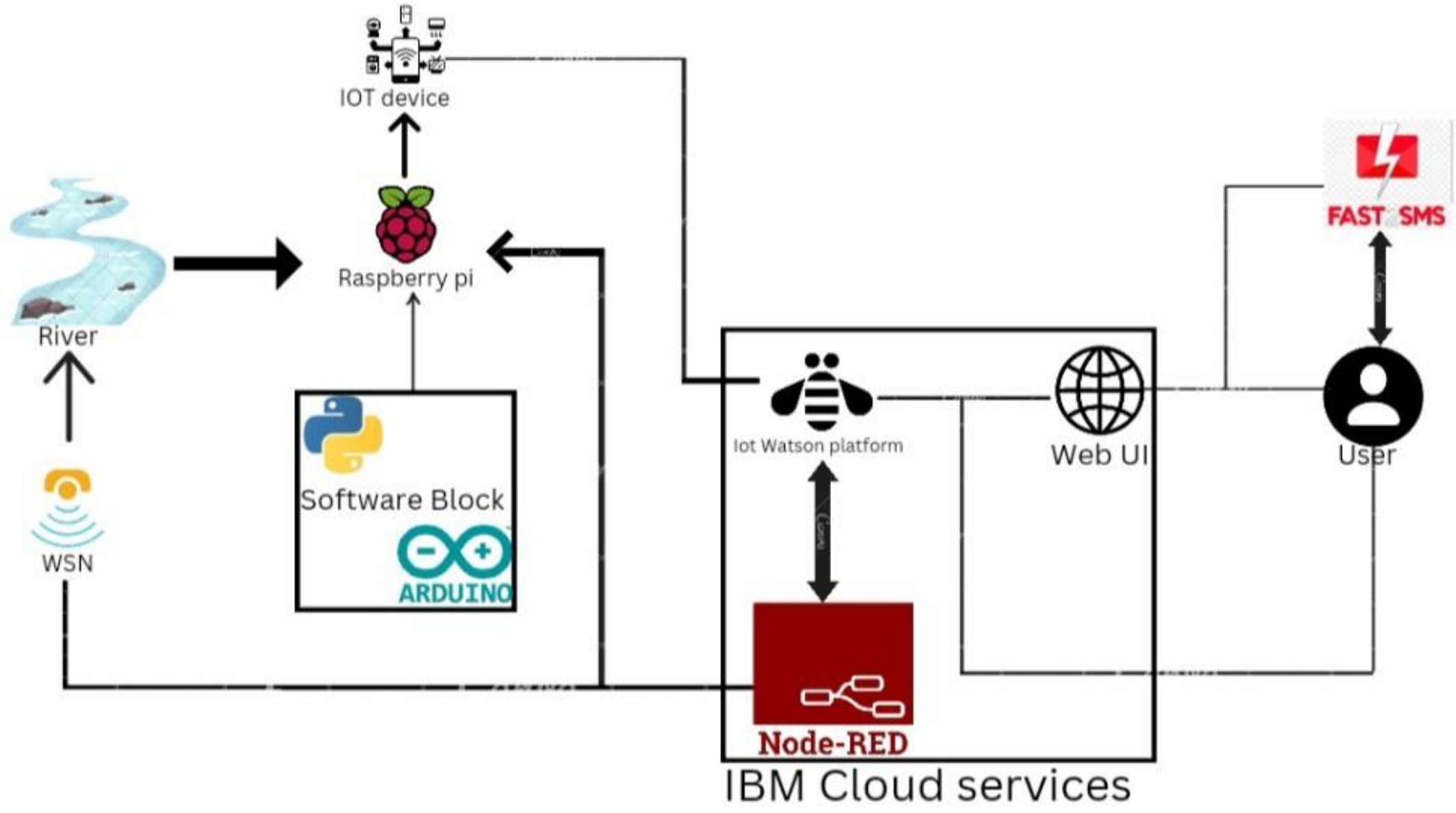

IOT device
River
Raspberry pi
FAST SMS
Software Block
ARDUINO
Iot Watson platform
Web UI
User
WSN
Node-RED
IBM Cloud services

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	**User Interface**	**How client collaborates with application for example** **Web UI, Portable Application, Chatbot and so forth.**	**HTML, CSS, JavaScript/Rakish Js/Respond Js and so forth.**
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 Cloudant 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.**
10.	**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 :**	**Local, Cloud Foundry, Kubernetes, etc.**

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	**Open-Source Frameworks**	**List the open-source systems utilized**	**Technology of Opensource framework**
2.	**Security Implementations**	**List all the security/access controls carried out, utilization of firewalls and so on.**	**e.g. SHA-256, Encryptions, IAM Controls, OWASP etc.**
3.	**Scalable Architecture**	**Legitimize the adaptability of engineering (3 - level, Miniature administrations)**	**Technology used**
4.	**Availability**	**Legitimize the accessibility of use (for example utilization of burden balancers, circulated servers and so on.)**	**Technology used**
5.	**Performance**	**Plan thought for the exhibition of the application (number of solicitations per sec, utilization of Store, utilization of Cdn's) and so on.**	**Technology used**