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

Date	03 October 2022
Team ID	PNT2022TMID19493
Project Name	Project – Smart waste management for metropolitan cities
Maximum Marks	4 Marks

Technical Architecture:

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

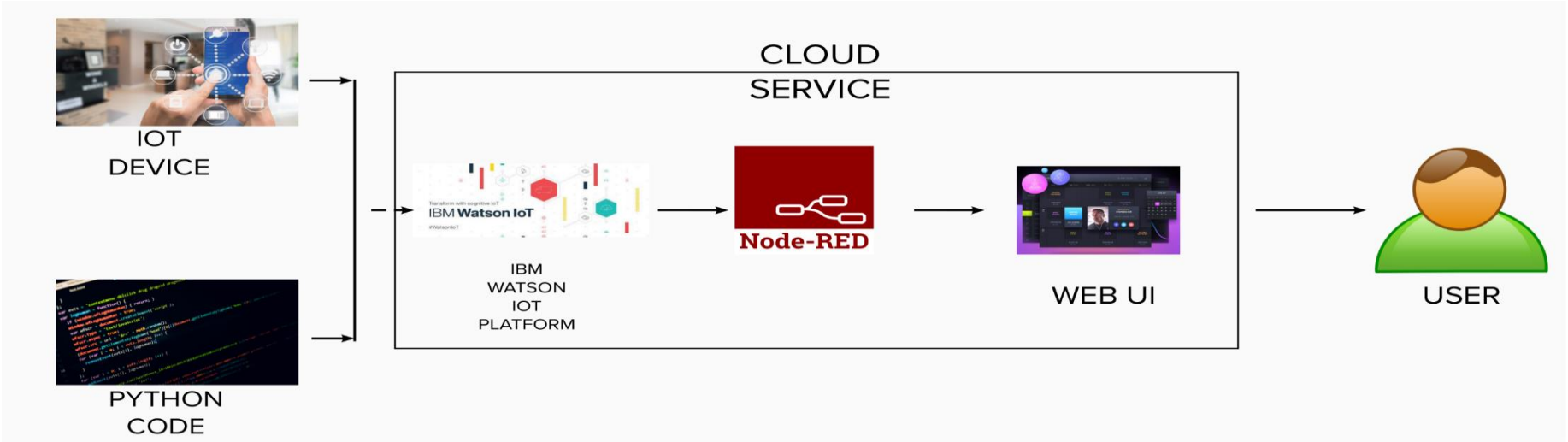

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	How user interacts with application e.g. Web UI, Mobile App, etc.	HTML, CSS, JavaScript / Angular Js / React Js 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 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.	IOT Model	Purpose of IOT Model	Smart waste 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 frameworks used	Opensource framework of IOT
2.	Security Implementations	IOT devices themselves provides the ability to implement features such as firewall to ensure	API security, PKI authentication

S.No	Characteristics	Description	Technology
		hackers cannot access the IoT devices they connect	
3.	Scalable Architecture	IoT applications can have the ability to support an increasing number of connected devices, users, application features, and analytics capabilities without any degradation in the quality of service	Embedded System, Wireless Sensor network, Automation
4.	Availability	This places new requirements to the reliability of the products, networks, and cloud services, such that the value created by the IOT system is available, when end clients needed	Embedded System, Wireless Sensor network, Automation
5.	Performance	IOT based smart sensors help you utilize smart bin sensor technology from the beginning. You can track the location with real-time data	Embedded System, Wireless Sensor network, Automation