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

Date	03 October 2022
Team ID	PNT2022MID51674
Project Name	Smart Waste Management System 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.

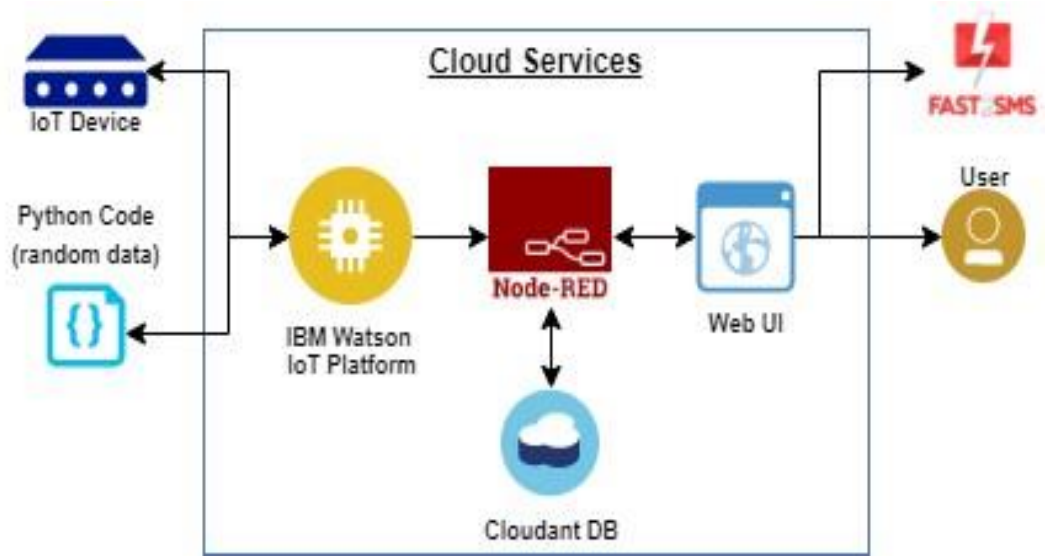

Table -1: Components &Technologies:

S.NO	Component	Description	Technology
1.	User Interface	How user interact with application e.g., web UI, Mobile app etc.	Python, HTML, CSS, JavaScript
2.	Application Logic -1	• Get data from the server • Present data to the user • Put data to server	Python

3.	Application Logic -2	Cloudant DB is used to store data in an efficient manner	Cloudant DB -cloud storage
4.	Database	NoSQL is used to store the user data in the database	IBM Cloudant DB
5.	Cloud Database	The database service deployed in the cloud	IBM Cloudant DB -cloud storage
6.	File Storage	The mobile app must have at least of 10MB space	Local file system
7.	External API-1	It is used to integrate all the IoT devices	IBM Node Red
8.	Machine Learning Mode	To forecast the waste to be filled in the particular data based on streaming of the data	Python, IBM Watson cloud
9.	Infrastructure (server, cloud)	Application deployment on local system/cloud local service configuration or cloud service configuration	Local, IBM Watson cloud

Table-2: Application Characteristics:

S.NO	Characteristic	Description	Technology
1.	Open-source Frame works	NODE-RED	Node.js
2.	Security Implementations	Device and data process, Cognitive risk management, Cloud firewalls,	encryptions
3.	Scalable Architecture	Ability to support an increasing number of connected devices, users, application features, and analytic capabilities, without any degradation in the quality of services	Cloud and data centres, gateways, sensors
4.	Availability	The application available for 24/7	IBM Cloud
5.	Performance	System can book 15000 tickets a minute and can handle 3 lakh concurrent users	IBM Watson