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

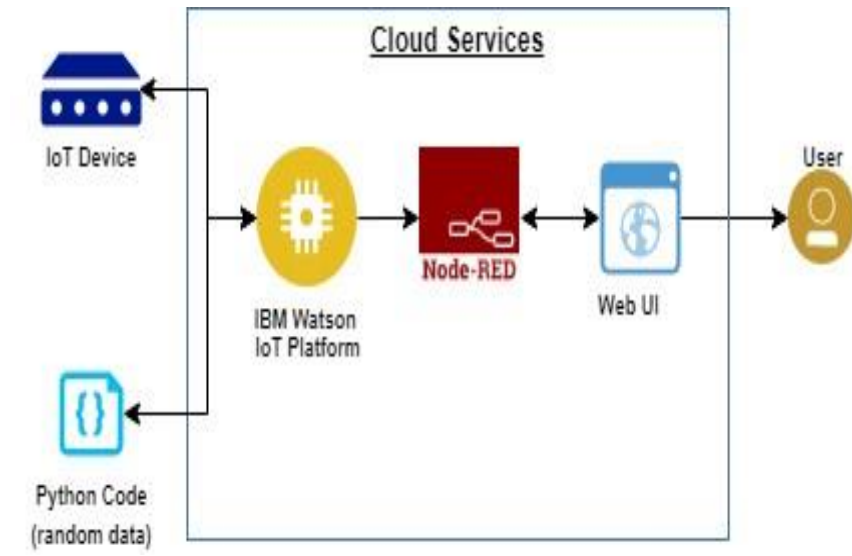|	
Date	03 October 2022
Team ID	PNT2022TMID49859
Project Name	Project – Smart Waste Management System
Maximum Marks	4 Marks

S.No	Component	Description	Technology
1.	User Interface	user interacts with application e.g. Web application, Mobile App	Python,C

2.	Application Logic-1	Developing application	Python

Technical Architecture:
Example: Smart waste Management System

Table-1 : Components & Technologies:

3.	Application Logic-2	To add speech transcription capabilities to application.	IBM Watson STT service
4.	Application Logic-3	To automate interactions with customers	IBM Watson Assistant
5.	Database	To create database	MySQL, NoSQL, etc.
6.	Cloud Database	Database Service on Cloud	IBM Cloudant
7.	File Storage	Storing data	IBM Block Storage or Other Storage Service or Local Filesystem
8.	External API-1	To deliver accurate and precious data	IBM Weather API, etc.

S.No		Description	Technology
9.	External API-2	To verify data	Aadhar API.
10.	Machine Learning Model	To identify and locate objects	Object Recognition Model
11.	Infrastructure (Server / Cloud)	To compile and run the apps locally	Local, Cloud Foundry.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	For wiring hardware devices,API and online services	Node RED
2.	Security Implementations	Advanced encryption standard , data encryption standard,RSA algorithm	Encryption
3.	Scalable Architecture	More number of users can be access the data	Automated bootstrapping

S.No	Characteristics	Description	Technology
4.	Availability	Increase the availability	Cloud computing
5.	Performance	High performance	Adaptive contention window

References:

https://www.ibm.com/cloud/architecture

https://aws.amazon.com/architecture https://medium.com/the-internal-startup/how-to-draw-useful-technical-architecture-diagrams-2d20c9fda90d