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

Date	**October 2022**
Team ID	**PNT2022TMID38320**
Project Name	**Smart Waste Management System For Metropolitan Cities**
Maximum Marks	**4 Marks**

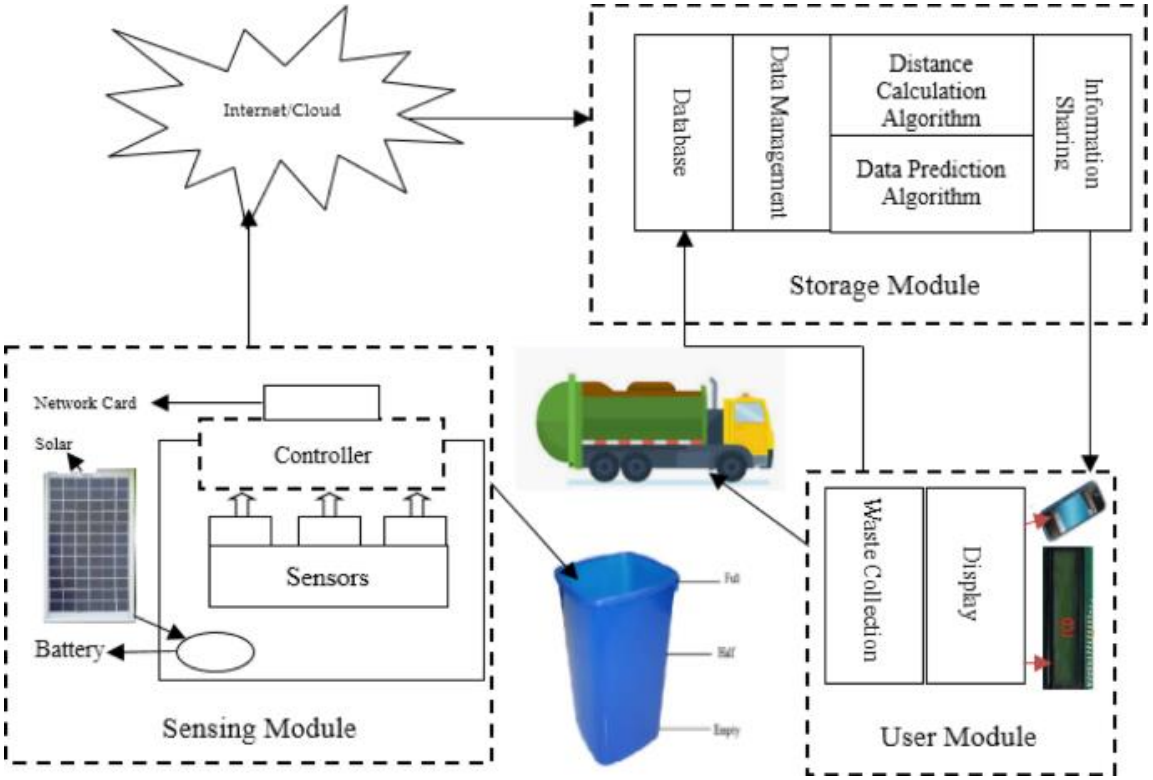

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	Web Application	HTML, CSS, JavaScript, React Js
2.	Application Logic-1	Python is used to calculate the real-time weight of the bins, show it on the web site, and notify the authorities using data from the load cell and weight sensor.	Weight sensor /Load cell Python
3.	Application Logic-2	Python is used to calculate the real-time weight of the bins, show it on the web site, and notify the authorities using data from the load cell and weight sensor.	Level Sensor Python
4.	Application Logic-3	To find the trash cans	GPS module
5.	Cloud Database	Cloud database service	IBM DB2 IBM Cloudant
6.	File Storage	requirements for file storage	Git Hub Repository
7.	External API-1	When the bins are filled, load cell and level sensors are employed to monitor and send out alerts.	Sensor Technology
8.	External API-2	Give verification id	Aadhar API, etc.
9.	Infrastructure (Cloud)	Application Deployment on Local System / Cloud Configuration Local Server: localhost Cloud Server: IBM Configuration	Local, Web application

Table-2: Application Characteristics:

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.	Technology used
3.	Scalable Architecture	Justify the scalability of architecture (3 – tier, Micro-services)	Technology used
4.	Availability	Justify the availability of application (e.g. use of load balancers, distributed servers etc.)	Technology used

S.No	Characteristics	Description	Technology
5.	Performance	Design consideration for the performance of the application (number of requests per sec, use of Cache, use of CDN's) etc.	Technology used