PROJECT DESIGN

TECHNOLOGICAL ARCHITECTURE

PHASE 2

Date	27th October 2022.
Team ID	PNT2022TMID41040
Project Name	Smart Waste Management System For Metropolitan Cities.
Maximum Marks	4 Marks

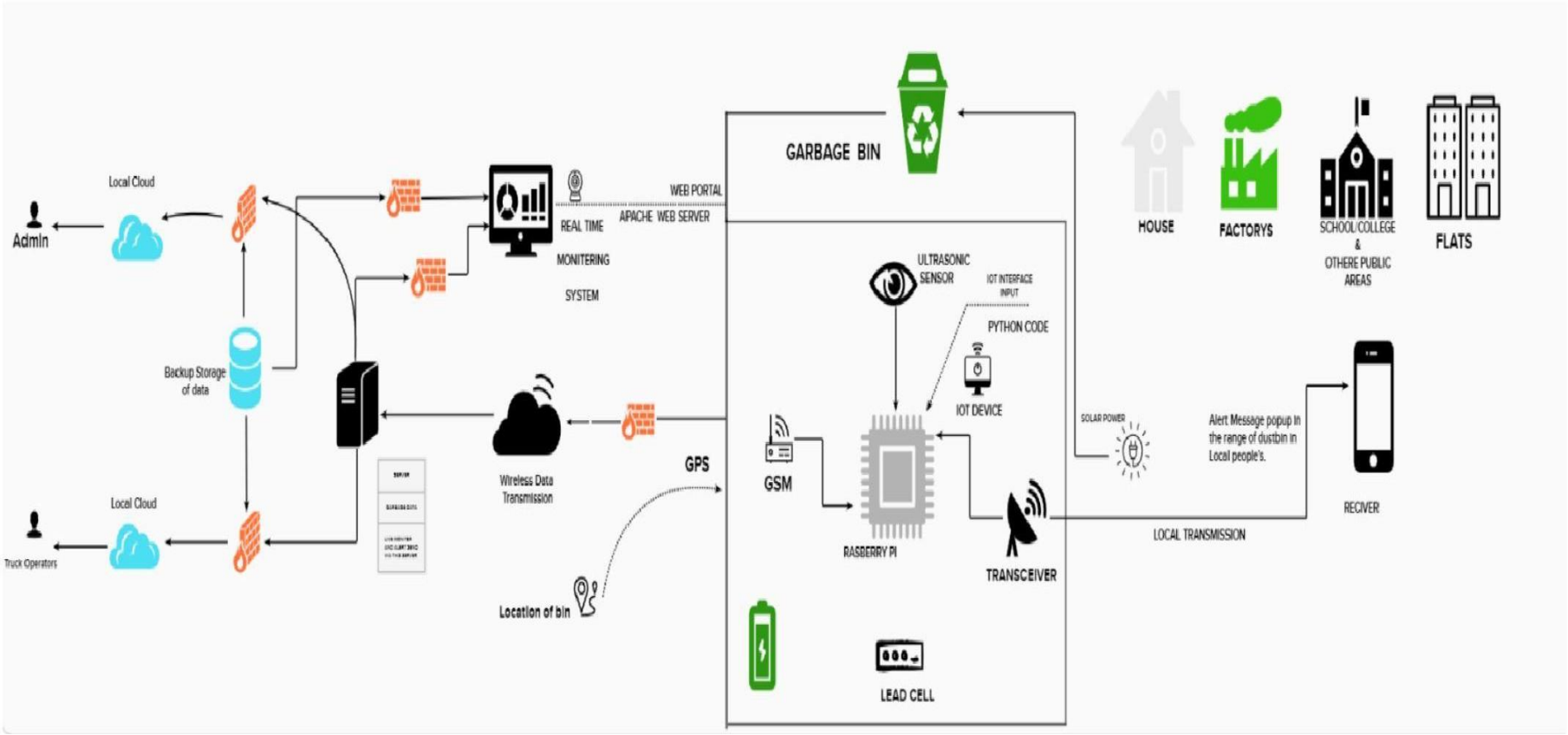
GARBAGE BIN
HOUSE
FACTORYS
SCHOOL/COLLEGE & OTHERE PUBLIC AREAS
FLATS
Local Cloud
Admin
WEB PORTAL
APACHE WEB SERVER
REAL TIME
MONITERING
SYSTEM
ULTRASONIC SENSOR
IOT INTERFACE INPUT
PYTHON CODE
IOT DEVICE
Backup Storage of data
Wireless Data Transmission
GPS
GSM
RASBERRY PI
SOLAR POWER
Alert Message popup in the range of dustbin in Local people's.
RECIVER
LOCAL TRANSMISSION
TRANSCEIVER
Local Cloud
Truck Operators
Location of bin
LEAD CELL

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.	Python.
3.	Application Logic-2	Logic for a process in the application.	IBM Watson service.
4.	Application Logic-3	Logic for a process in the application.	IBM Watson Cloud service.
5.	Database	Data Type and Configurations etc….	MySQL and NoSQL.
6.	Cloud Database	Database Service on Cloud.	IBM Cloudant.
7.	File Storage	File storage requirements.	Stored Area Network .
8.	External API-1	Purpose of External API used in the application.	Location Tracking.
9.	External API-2	Purpose of External API used in the application.	Waste Monitoring.
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 and the Cloud Server Configuration.	Local, Cloud Foundry, Kubernetes, etc.

Table-2: Application Characteristics:

S.No	Characteristics	Descriptions	Technology
1.	Open-Source Frameworks	List the open-source for frameworks used.	Monitor and clean.
2.	Security Implementations	List all the security / access controls implemented, use of firewalls etc….	Encryption.
3.	Scalable Architecture	Justify the scalability of architecture (3 — tier, Micro-services).	To help prevent the clean environment.
4.	Availability	Justify the availability of application (e.g. use of the load balance, distributed servers etc…)	Available at the any time.
5.	Performance	Design consideration for the performance of the application (number of requests per sec, use of Cache, use of CDN's) etc.	Monitor and dispose the waste.