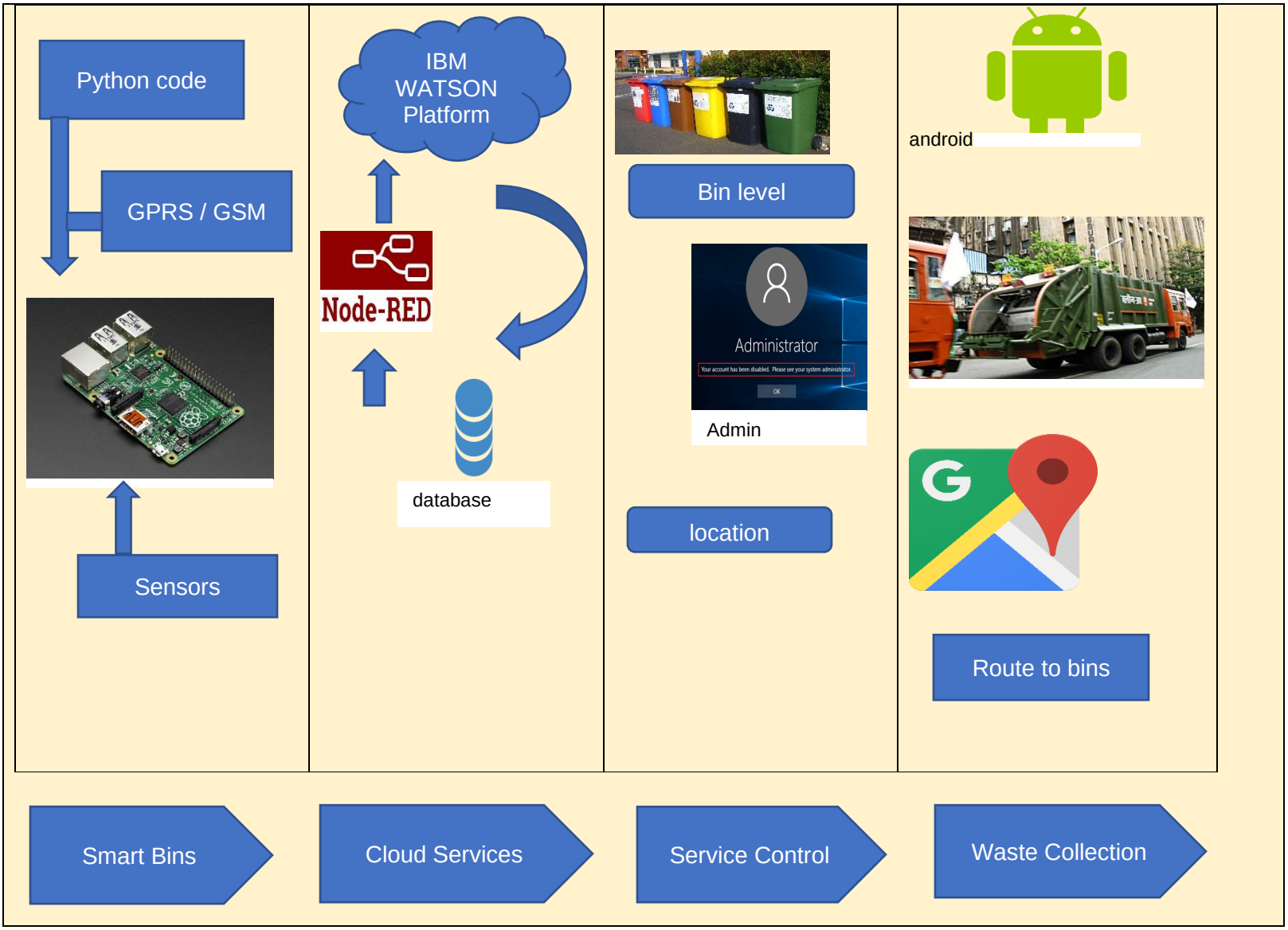
Project Design Phase-II Technology Stack (Architecture & Stack)

Date	28 October 2022
Team ID	PNT2022TMID28587
Project Name	Smart Waste Management System for Metropolitan Cities.
Maximum Marks	4 Marks

TECHNOLOGY ARCHITECTURE:



Components & Technologies:

S.No	Component	Description	Technology
1.	Android Application	It is the platform for interaction of user with the admin (municipality corporation)	HTML, Python
2.	Ultrasonic Sensor	It measures the distance of top of garbage to the base of it using ultrasonic waves.	a transducer to send and receive ultrasonic pulses
3.	GPS	They receive the data from the satellites regarding the location of garbage to be collected	GPS satellites
4.	Database	For the storage of user info, location of garbage bins etc.,	IBM DB2, IBM Cloud etc.
5.	Wifi- Module	The ESP8266 WiFi Module is a self contained SOCwith integrated TCP/IP protocol stack that can giveany microcontroller access to your Wifi network.	IEEE 802 protocol
6.	Transport	A vehicle for the collection of bins.	Waste collecting truck

Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source	Template for software development that is designed by a social network of software developers. These frameworks are free for public use	Python
2.	Security	provides the technical security policies, requirements, and implementation details foreliminating the security weaknesses	GSM/GPRS.
3.	Scalability	scalable architecture supports higher workloadswithout any fundamental changes to it.	Node Red.
4.	Availability	The quality or state of being available trying toimprove the availability of affordable housing.	Cloud,
5.	Performance	The execution of an action	IBM Waston IoT Platform.