Project Design Phase-I
Solution Architecture

Date	19 September 2022
Team ID	PNT2022TMID42565
Project Name	Project –Smart Waste Management Systems for Metropolitan Cities
Maximum Marks	4 Marks

Solution Architecture:

IOT device: IOT devices are hardware devices, such as sensors, gadgets, appliances and other machines that collect and exchange data over the Internet.

> ➢ GPS coordinates of the garbage bin values will be sent to the IBM IOT platform
> ➢ Location of the Bin along with bin status can be viewed in the Web Application
> ➢ Notifies the admin if the bin value crosses the threshold value.

To accomplish this, we have to complete all the activities and tasks listed below:

- Create and configure IBM Cloud Services

  > ➢ Create IBM Watson IoT Platform
  > ➢ Create a device & configure the IBM IoT Platform
  > ➢ Create Node-RED service
  > ➢ Create a database in Cloudant DB to store location data

- Develop a web Application using Node-RED Service

  > ➢ Develop the web application using Node-RED.
  > ➢ Develop a python script to publish the location details to the IBM IoT platform.
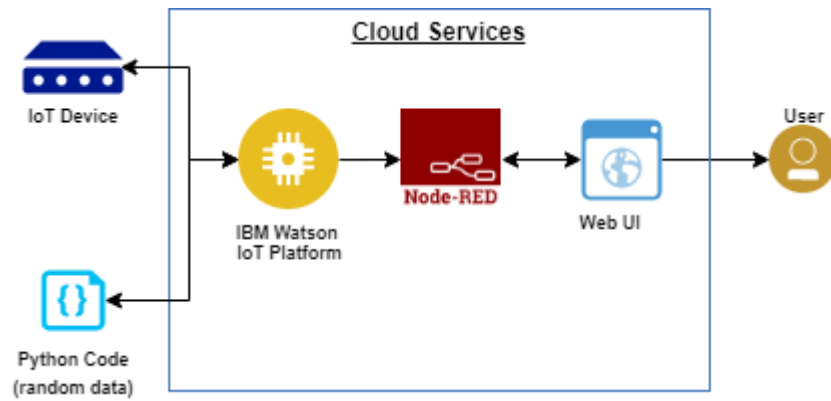
Technical Architecture:

Figure 1: Architecture and Work Flow of Smart Waste Management Systems Application