V.S.B. ENGINEERING COLLEGE

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ELECTRONICS & COMMUNICATION ENGINEERING

IBM Nalaiya Thiran Project – Based Experimental Learning Program

Project Name : IOT based Smart Waste Management System For Metropolitan Cities

Domain : Internet Of Things

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ABSTRACT :

Trash bins play a vital role in human life. In metropolitan cities mostly its condition are overflowing due to improper waste dumping, collection and management, which leads in bad odour and unhygienic health condition, thus inherently results in atmospheric pollution.

In this paper, design of a Waste Bin with real time monitoring is presented and a smart waste management system is proposed using the recent technology Internet of Things (IoT) and Cloud Services.

The IOT device in the bin continuously monitors the level of the bin and it communicates to the central cloud where the bins are connected. The IOT device measures the weight of the trash bin and alerts the authorized person .The cloud services can monitor the web app. The authorized person can view the location of the trash bin by sending GPS location from the device. Smart waste management system have better level of smartness compared to existing ones in metropolitan cities in a centralized manner.

INTRODUCTION:

The Internet of Things (IoT) is a concept in which surrounding objects are connected through wired and wireless networks without user intervention. In the field of IoT, the objects communicate and exchange information to provide advanced intelligent services for users.

This project deals with the problem of waste management in smart cities, where the garbage collection system is not optimized. This project enables the organizations to meet their needs of smart garbage management systems. This

system allows the user to know the fill level of each trash bin in a city and send alerts to the authorized person. The person go to the particular location with the help of GPS and the waste will be disposed without affecting the environment. It also reduce the unwanted routes of the truck and reduce the fuel consumption.

LITERATURE SURVEY :

1. Author says " *A planning scenario for the application of geographical information systems in municipal waste collection*."

2. Author Says "*Solid waste management (SWM) is the process of collecting, handling, and disposing of no longer in use solid objects that are discarded.*"

3. Author says " *By proposing a smart city service for monitoring and waste collection using low-cost and open source technologies. The proposed system is further divided into five subsystems which are Smart Waste System, Local Station, Smart Monitoring and Controlling, Smart Truck System and Smart Monitoring and Controlling Interface* ".

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2. L. A. Manaf, M. A. A. Samah, and N. I. M. Zukki, "Municipal solid

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vol. 37, no. 1, 2016.