Trash Management System

Problem Description

Trash management has become a crucial topic now which needs to be looked at. The knowledge of differentiation of waste is important. By getting the information of the waste collected we can also estimate the impact of new development on the local waste stream. As aimless disposal of waste in the populated community would cause health problems, the trash management system is a prime factor to improve the environment. The activities that are involved from the starting point of waste generation to disposal are listed below.

- ➢ Waste Generation
- ➢ Collection of Waste
- ➢ Onsite handling and processing of waste
- ➢ Differentiation of waste into Biodegradable, Non Biodegradable, Plastic, Metallic, Recyclable, Non Recyclable, Hazardous waste, Industrial Non-hazardous waste, Construction and demolition debris
- ➢ Transportation of waste
- ➢ Disposal
- ➢ Required waste to be transferred to the specific companies

Process

We will buy the waste from the customers and they will receive the funds on the basis of the weight of the waste they are giving. Then that waste will be bifurcated into different divisions like Recyclable, Non recyclable, Biodegradable, Non Biodegradable, Plastic, Metallic, etc and further the companies will buy that waste from us as per their needs for their distinctive use.

Business Goals

- ➢ From the pincode we can figure out which area produces what kind of waste the most.

- ➢ By the collected waste we can also know which type of waste is generated the most.

- ➢ We can figure out which day the waste was produced the most.
- ➢ We can also figure out which company requires what kind of waste the most.
- ➢ Department can get a waste report for each type of waste and use it to compare profit/loss.
- ➢ From the report we can predict which kind of waste is produced the most by the client and which kind of waste is high in demand for the consumer.

Data Description

In this section we describe a sample database application, called trash management, which serves to illustrate the basic ER model concepts and their use in schema design. We list the data requirements for the database here, and then create its conceptual schema step-by-step as we introduce the modeling concepts of ER model. The trash management database keeps track of a company's Employee, Department, Transportation Vehicles. After the requirement collection and analysis phase, the part of the company that will be represented in the database are as follows.

The company is organized into departments. Each department has its unique ID, Number, department name, and minimum 2 employees working in it. The department has one location. The department processes payments as well as assigns vehicles which have unique ID, Model Number and make which are parked at a location which has its own unique ID, Longitude and Latitude.

We store each employee's name, Unique ID, Birth date, Gender, and their multiple address, multiple phone number and multiple email. An employee works in one department, but can collect more than one type of waste. An Employee has a vehicle assigned to him/her which they use to transport the waste.

The clients are the users that get paid for giving us the waste which have their own name which is further divided into first name and last name, their own unique ID, Birth date, Gender, and their multiple email, multiple phone numbers and multiple address. They receive payment from us every time they give us waste.

Clients generate different types of waste which have it's unique ID, and the information about the day they generated the waste, quantity, pincode, and the type of waste is also stored so that it can be used for future analysis. The weight of the waste generated by the client is noted down so that in future it can be used to determine the quantity of the waste generated in particular pincode. This waste generated is further collected by the consumers which have their unique ID, Name, and multiple address, multiple email and multiple phone numbers. The consumers pay us money every time they buy waste from us.

Client

Sellers would be the users that sell us their waste.
Each seller will have CID, Client_Name, Client_PHNO, Client_Email, Client_Age, Client_BD ,Client_Address, Client_Sex.

Consumer

Buyers will be the Companies that will buy the waste from us for their own use.
Each company will have COID, Consumer_Name, Consumer_PHNO, Consumer_Email, Consumer_Address.

Department

Each department will have DID, D_Name, DNO.

Transportation Vehicle

Each vehicle for waste transportation will have TID, V_ModelNo, V_Make.

Employee

Each employee will have EID, E_Name, E_Sex, E_PHNO, E_Email, E_BD, E_Address, E_type, E_Age.

Types of waste

It will have Waste_Type, TID, Pincode, Quantity, Waste generation date.

Payment

P_Date, PID

Location

I has its own LID, Latitude, Longitude