DECISION SUPPORT SYSTEM FOR SOLID WASTE MANAGEMENT: A CASE STUDY OF MADURAI CORPORATION

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INTRODUCTION

- The Urban Waste Information System (UWIS) is developed in the present case aims in providing the information of solid waste collection, transportation and disposal for Madurai Corporation.

- The corporation officer must be in a position to know timing for completion of segregation on the number of men at work, working hours, cycle Time, efficiency of work men, vehicle information and disposal.

- The corporation officer should also be able to monitor the garbage generated at different wards and he should be informed about the subsequent status of solid waste at the phase of generation.

- All these needs are mapped into features and features are mapped to various use cases through which these features are implemented.

- UWIS is integrated with Information Management System (IMAS) database and assures of very good performance, while trying to access the database and to perform data manipulation by way of adding, modifying or retrieving various data information.
AIM

To develop a user friendly tool (UWIS) for managing urban solid wastes to the

(i) Madurai Corporation
(ii) Municipalities of Madurai districts namely

1. Thirumangalam
2. Usilampatti
3. Mellur Municipality
OBJECTIVES

To generate a database with the integrated information related to

1. Ward
2. Vehicle
3. Garbage quantity at temporary station
4. Water quality
5. Air quality
6. Disposal process at the land fill site
METHODOLOGY

- The project UWIS has been done using VB 6.0 as front end, and MS Access as back end.

- It can be used in the process of urban waste disposal process.

- This system helps to manage all the activities related to urban waste disposal in Madurai Corporation using computers.

- Currently all the works are done manually, by computerizing all the activities related to urban waste management, which can be managed easily and effectively.
RESULTS AND DISCUSSION

- Owing to its user friendly, all the employees can easily learn and understand the entire process by using the software.

- Time saving (i.e.) the user is free from referring the varieties of ledger at every time for the essential information. So user can get the necessary information in very less time.

- The output can be taken in neat printed form.

- Facilities like editing, deleting the information are carry out by the administrator privilege.
In this form all Municipality names will be listed. To view Municipality details Click the name of the Municipality which is listed. To Add, Delete or Modify Click on “Click here to Add/Change”.
If we click “Click here to Add/Change Municipality” in Home the above form will appear. In this screen we Add, Modify or Delete a Municipality.
From this form we can move to the appropriate form by clicking on the button (Name) for which they want to move. For Ex., we can move to Ward Information by Clicking on Ward Information button.
This form is used to Add, Remove or Modify Ward Information for the Municipality. Saved Ward Information will be listed in the Grid.
This form is used to Add, Remove or Modify Air Quality information for the Municipality. Saved Air Quality information will be listed in the Grid.
This form is used to Add, Remove or Modify Water Quality information for the Municipality. Saved Water Quality information will be listed in the Grid.
This form is used to Add, Remove or Modify Vehicle Information for the Municipality. Saved Vehicle Information will be listed in the Grid.
This form is used to Add, Remove or Modify Segregation Details for the Municipality. Saved Segregation Details will be listed in the Grid.
This form is used to Add, Remove or Modify Accident Details for the Municipality. Saved Accident Details will be listed in the Grid.
CONCLUSION

- The UWIS application overcomes the problems occurred in the manual system by retrieving all the information regarding collection, transportation and generation of solid waste at a single place.

- The UWIS software consists of four main menus namely, Forms, Reports, Move and Exist. It also allows the user to enter the data, edit, update and manipulate.

- The main objective of the UWIS application is to give all information regarding solid waste management at different levels such as zone wise, ward wise etc.

- The user are allowed to query and the UWIS has the option to edit and update the existing information, adding information etc., in essence to say, when UWIS applied to the Corporation of Madurai results in computerizing the entire information related to urban solid waste.