International Journal of Recent Trends in Engineering & Research
ISSN (ONLINE) : 2455 – 1457
IMPACT FACTOR : 4.101

RESPONSIVE ONLINE CLEANLINESS MANAGEMENT SYSTEM

Shruti Mishra[1], Saniya Ansari[2], Hardik Joshi[3], Prof. Nidhi Sanghavi[4], Prof Yogita Mane[5].
[1,2,3,4,5]Information Technology Engineering, U.C.O.E

Abstract— Sanitation is one of the primary problem that the world faces irrespective of the case of developed or developing country. A harmonious and balanced relationship between human and nature on the earth is vital for the survival of life and sustainable growth. . The waste generation rates are increasing and the characteristics are changing with increase in population explosion, Industrial development, and living standards, particularly in growing cities. Due to financial constraints a proper municipal waste collection and disposal mechanism is not in place. It in turn leads to various hazards such as bad odor & ugliness to that place which may be the root cause for spread of various diseases. To avoid all such hazardous scenario and maintain public cleanliness and health this work is mounted on this web application. The domains used in this project are Web Development, Network Security, Data Mining. This web application is specially designed for maintaining cleanliness in our area. With the help of this application the users can directly state their problem pertaining to cleanliness they face, to the municipal corporators and can also check the status of the problem.

Keywords— Sanitation, Cleanliness Management, Web Application, Digital Connection.

I. INTRODUCTION

The project belongs to a web application named as “Clean My Area”. The application enables citizens to report local problems such as potholes, illegal trash dumping, faulty street lights, and broken tiles on sidewalks. The submitted issues are displayed on the officer’s dashboard. Users can add photos and comments. Moreover, they can suggest solutions for improving the environment of their neighborhood. Through the application local government agencies enable citizens and local actors to take action to improve their neighborhood. Reported cases then go directly into the municipal corporator work order queue for resolution, and users are informed how quickly the case will be closed. When cases are resolved the date and time of the resolution is listed, providing users with the sense that the officials is on the job. The main idea behind creating this project is to increase the awareness regarding cleanliness among the people. This website is limited to a very small area(the area in governance with one municipal corporator), so that it is easy to get every aspect of the area covered and also there will be less maintenance costs and less overhead on the officials. All the problems pertaining to cleanliness will be listed at one place, which will prove easy for the officials to get the problems acknowledged and to resolve.

II. LITERATURE SURVEY

Literature survey has been done on various cleanliness management systems designed till date. It also covers the importance and necessity of cleanliness in our surroundings and daily lives. At present malaria is the Third World's most dreaded killer. It kills over 1 million people and causes 300-500 million episodes of illness. In India, malaria-reported deaths have shown an upward trend. In 1955, a drive to eradicate malaria was launched in India. But after initial success it failed and malaria made a comeback. Malarial mosquitoes generally prefer unpolluted natural breeding sites but now they have adapted to the changed urban environment. About 2,185 households belonging to different income groups were sampled. The differences in the occurrence of malaria in the different income households (in 87% low, 69% lower-middle, 65% middle, 14% upper-middle, and 5% upper) suggest

that most of these differences are related to the environmental conditions existing inside and outside their homes, such as poor drainage system, poor sullage disposal, open blocked drains, waterlogging and indoor water storage in open containers.

There are many smart garbage collections system has been designed, which is based on sensors. In this scenario if the sensors get damaged the whole system gets stopped. It is not cost efficient.N. Sathish Kumar, B. Vuayalakshmi,R, Jenifer Prarthana, A. Shankar[3] There is Arduino based smart dustbin monitoring system which can be operated using a local area network (LAN) server. The Arduino Uno controller is used to read the dustbin levels with the help of Ultrasonic sensor. After 100% filling of dust and waste items, vehicle is sent to that area to collect the garbage deposited. Arduino Uno contains Atmega328p-pu IC. Arduino Ethernet shield is used to send the data to server in order to monitor the dustbin level. Embedded C is used to program the controller and html is employed for creating the web page. The problem with this system includes, there is one point failure. The cost of maintenance and overhead of this system is very high. This is difficult to install at every lanes and streets. While in case of web application, all problems will be listed at one place. The website designed "Clean My Area" especially designed to eradicate the problems faced due to unclean environment. This approach also solves the problems of cost efficiency and one point failure. It also connects every person with the municipal officials to share the problems faced by them, through this website. Consumer oriented growth combined with rapid product obsolescence and technological advances are new environmental challenge - the growing threat of "Electronics Waste" or "E-waste" that consists of obsolete electronic devices. E-waste is a complex mixture of Ag, AU, Pb and Pt as precious metals; C u, Al, Ni, Si, Zn and Fe as base metals; Hg, Be, Cd, Cr (VI), As, Sb and Bi as metals of concern due to their toxicity along with halogens and combustible (plastics, flame retardants)many of which are toxic (Hagelüken and Art, 2006). E-waste has been a problem of great concern not only forthe government but also for the public due to their hazardous material contents (Cui and Forssberg, 2003; Niu and Li, 2007). Currently, the main options for the treatment of electronic waste are involved in reuse, remanufacturing and recycling, as well as incineration and land filling.

III. PROPOSED SYSTEM

The website design will be such that it will be used for the people of our local area. Website will be governed by our area's municipal corporator. It will have privacy features for maintaining system integrity and security of data. Identity of the users will not get disclosed in the officer's dashboard. System will have 3 logins: a) User Login. b) Officer Login c) Admin Login. It will have registration page, login page, Users dashboard, Officer's Dashboard, Admin Dashboard. User dashboard will consist of user id, date of complaint, image of problem, description, location of complaint. Officer dashboard consists of user id, date of complaint, image of problem, description, location of complaint. User will be able to check the status of the problem. Initially the state of the problem will be pending, as the problem will get resolved the state will change from pending to resolved. Officer can update the status from officer dashboard.

3.1. System Architecture

A system architecture or software architecture is the conceptual model that defines the structure, behavior, and more views of a system. An architecture description is a formal description and representation of a system, organized in a way that supports reasoning about the structures and behaviors of the system. Figure 3.1 elaborates the system architecture of the proposed system.

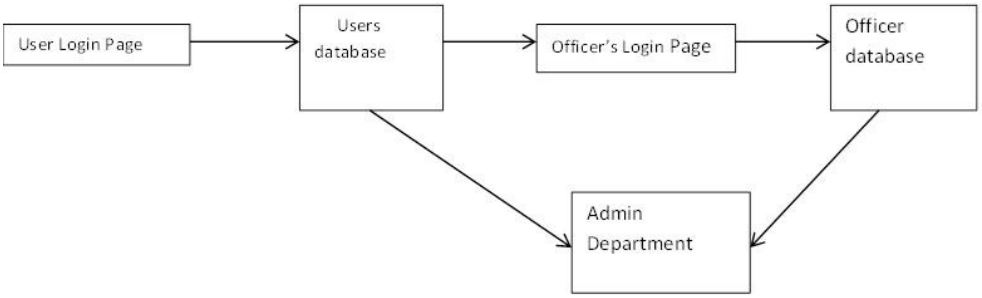


Figure 1. Architecture of the system

3.2. The proposed system will work as follows.

The user will be initially directed to the Homepage. The Homepage of our web application is shown below.

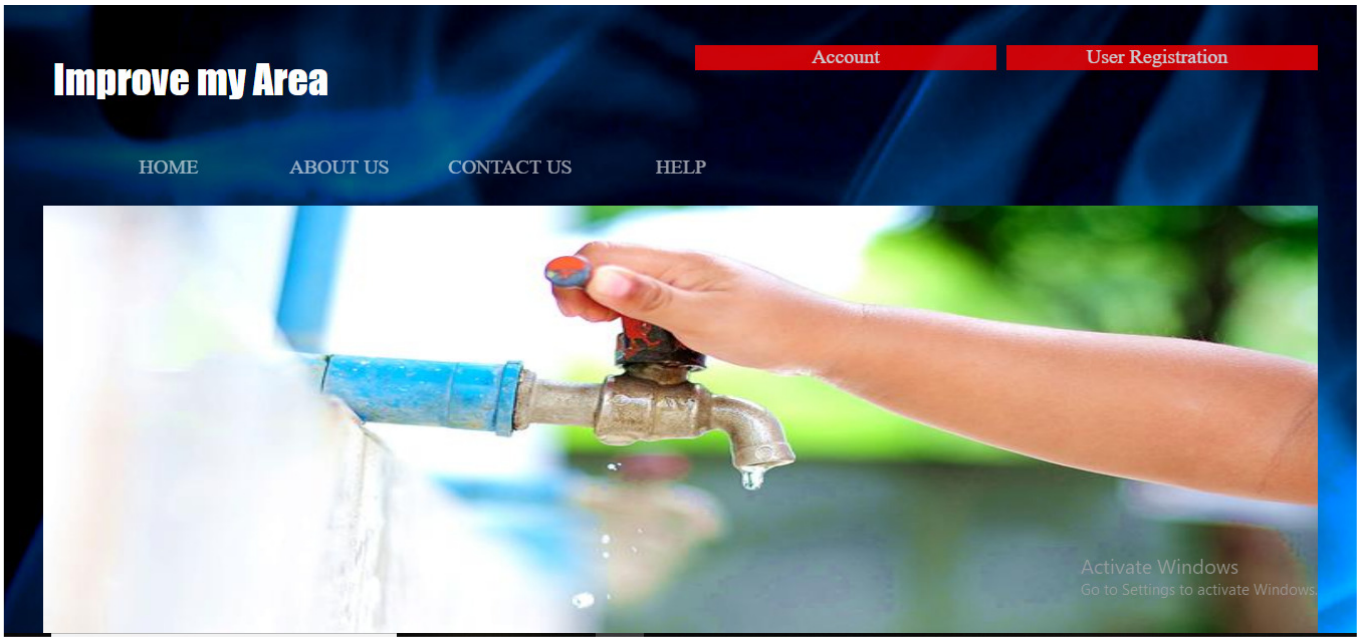


Figure 2. Homepage.

- Now the user can register if he is a new member to the web application. Registration page:
- New user will be registered by providing all the essential credentials. Next the user will login in the system
- These are the details used to specify the user credibility.

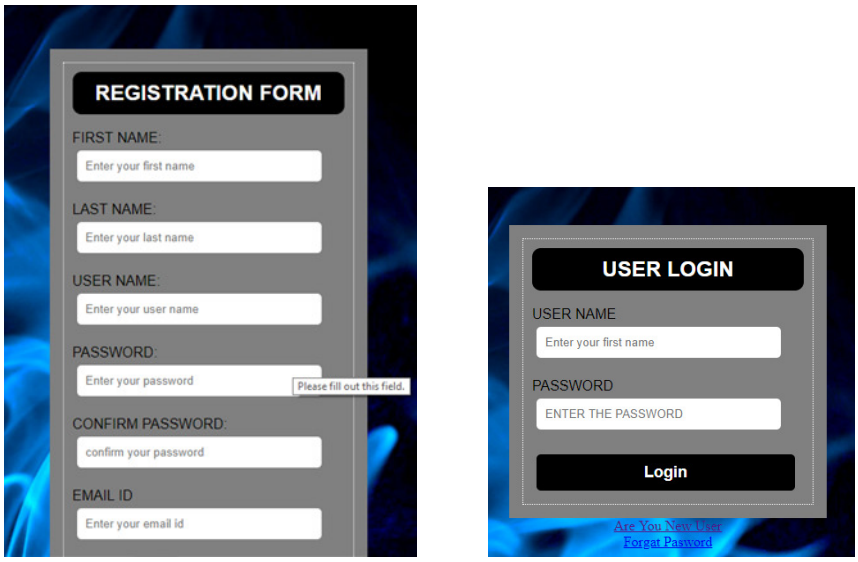


Figure 2. Registration and login page.

- **User dashboard**: The attributes of users dashboard are complaint id, date, complaint, description, Location of problem, image. After filling all this information the user will click on submit and the data will get send in officers dashboard.

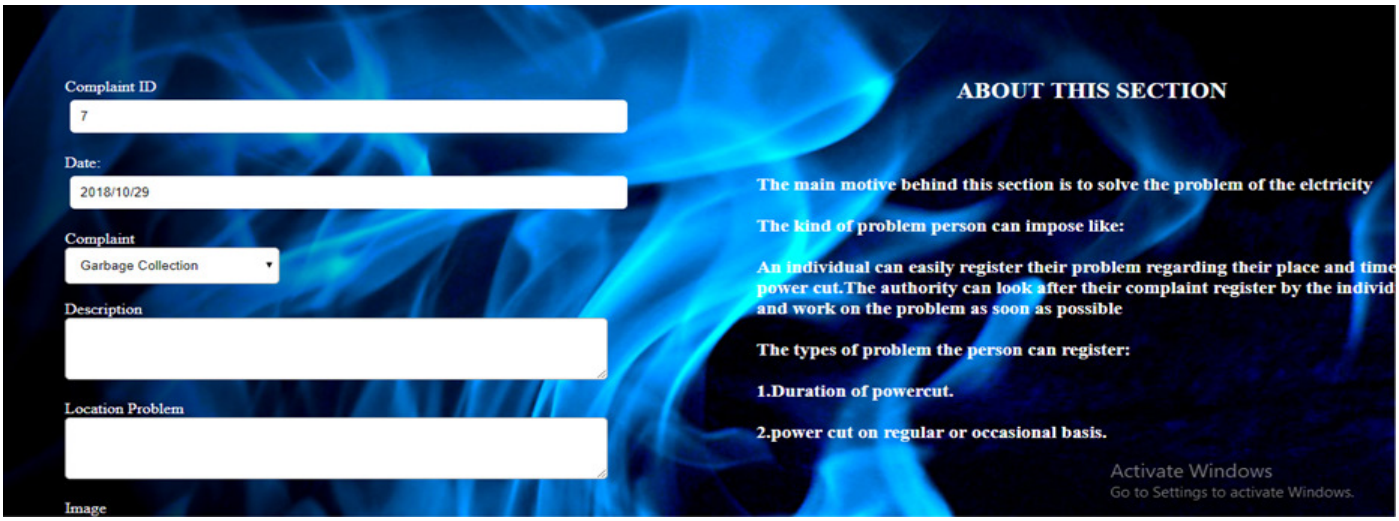
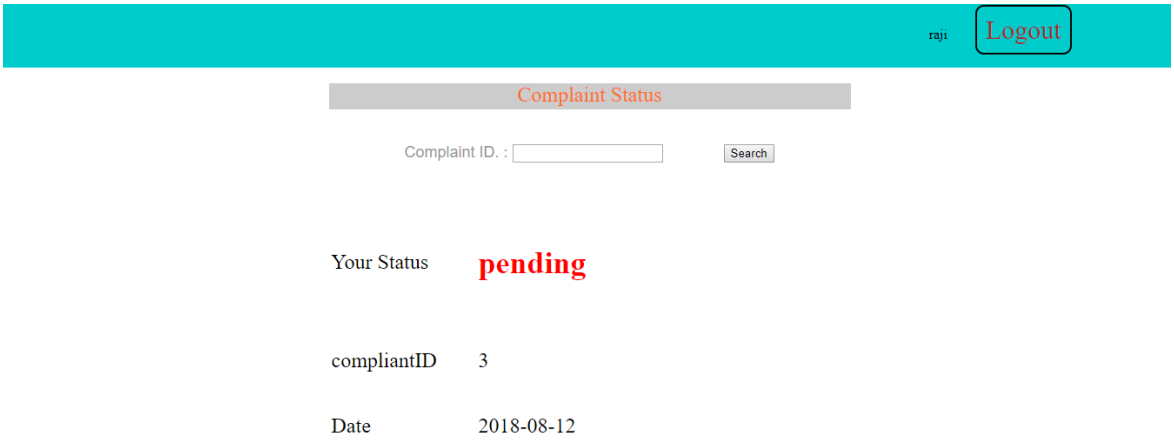


Figure 3. User's Dashboard.

After clicking on verify button it will check all credentials with the database. If the data provided is true and after clicking on submit button.

User can check the status of the problem by providing user id.



- **Officer dashboard**: Officer Dashboard has characteristics of redundancy of data. Same problem by different people in one area will not be reflected in officer's dashboard. Unique problems by people will get reflected. Officer can update the status of the problem from dashboard

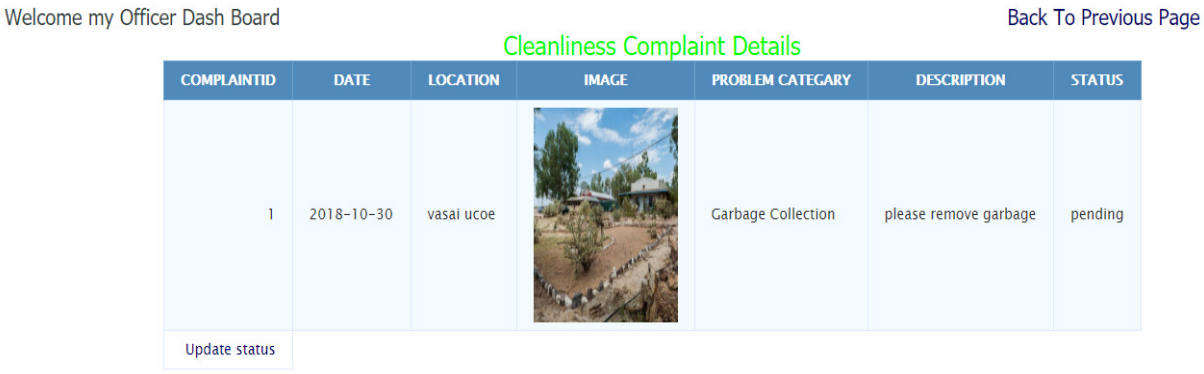


Figure 4. Officer's Dashboard.

- **Admin dashboard**: Admin will manage the proper working of the website. The attributes of the admin dashboard are complaint id, date, complaint, description.

Figure 5. Admin's Dashboard.

IV. FUTURE SCOPE

In future, System may get update with some new features. Such as Peoples can use this web application for more areas. This application will be used in future and will enable users to make it more effective and efficient. It will enable to maintain cleanliness all around the city and on much larger scale.

REFERENCES

[1] Dr. Sathish Kumar, B. Vuayalakshmi,R, Jenifer Prarthana, A. Shankar[3], ieee explore.
[2] Dr.Amanda Skaff,Dr.Lisa Schwartz,Dr.Lisabeth Goble,Dr.Jillian Stien, "Sustainable evelopment", APRIL(2014)
[3] CLEAN INDIA - GREEN INDIA: A MODEL OF SUSTAINABLE DEVELOPMENT Jayanta Kumar Dash1, Ph. D. & Ratnaprava Barik2, Ph. D.
[4] http://php.net/manual/en/function.hash.php
[5] https:// http://www.cleanmanagementsolutions.com.au
[6] http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/install-LAMP.html
[7] http://w3schools.com/HTML
[8] http://stackoverflow.com/questions/9030272/notification-when-new-record-is-added-indatabase-php-jquery/38242060#38242060
[9] http://www.w3schools.com/bootstrap/bootstrap tables.asp
[10] https://w3schools.com/CSS/CSS3

