Smart Complaint Management System

[1]Devika Radhakrishnan, [2]Nisarg Gandhewar, [3]Ruchita Narnaware, [4]Prayas Pagade, [5]Arpan Tiwari and [6]Pooja Vijaywargi,
[1,3,4,5,6]B.E. Final Year, [2]Assistant Professor,
[1,2,3,4,5,6]Department of Computer Science and Engineering, S. B. Jain Institute of Technology, Management and Research, Nagpur, Maharastra, India

Abstract: In our country we have government bodies (Municipal Corporation) which are responsible for maintaining and running cities. It's all their responsibilities to address the complaint of citizens. For this municipal Corporation has 2 ways, in first cameras or other surveillance devices have to be installed and second way is that citizens could report their problem to the municipal corporation. The second way is mostly used because it is cheaper as compared to first one. But it takes paper work and time too because the citizens has to visit the ward office and report problem faced by them which can be solved by municipal corporation or as due to the emergence of internet and its various capabilities ,there has been rise in the number of complaint sites which provides citizens a platform to lodge a complaint online. As mobile application is mostly used by people ,this app will help people to lodge a complaint through it and can attach a picture of things which are causing problem and location will be tracked using GPS(Global Positioning System).The app also provides a user facility to view status of lodge complaint until is resolved , while online system will help officers at Municipal Corporation to solve/reject complaint with reasons and monitor the status of complaint. The Aim for creating this Application is to simplify the process of lodging complaint to respective Municipal Corporation and make it quick and cheaper.

Keywords- Municipal Corporation, Gps, Mobile Application, Cameras Internet, Online, Complaint, Citizen.

I. INTRODUCTION

Nagpur Municipal Corporation is responsible for providing Nagpur's citizens basic urban service which lies with Nagpur Municipal Corporation. So NMC is responsible for administration and providing basic infrastructure for the city. For Lodging Complaint in NMC, much time is require and victim needs to go to municipality office and stand in queue.

'SMART COMPLAINT' app is introduced to provide user a platform to lodge a complaint easily. So SMART COMPLAINT reduces people's efforts. Complaint Lodger can share location using GPS. This app deals with internal processing of complaints. The main purpose of this System is to help the public in knowing their place details and getting their problems solved online without going to the office regularly until the problem is solved.

A. Goals or Objectives

- To simplify the process of lodging complaint into the municipal corporation.
- To reduce efforts of going to municipal office for lodging complaint.
- To share location of Complaint lodger using GPS.
- To automate the complaint lodging process.

II. LITERATURE SURVEY

www.nmcnagpur.gov.in

This is the Official website of NMC ,this website provides different information about city, department ,services, news. From this website we are getting the idea of different departments in the NMC and how the complaint related to the respective departments are forwarded to that department. The website consists of much detailed information. It consists of various departments like Water ,sewage ,tax and property, slum, social welfare, education etc. This website also consist of detailed information about NMC. This website also provide the details about the ongoing projects. In this website we can see the complaint lodging process and complaint lodging form which will be useful for working in the proposed system. As the proposed system is based on municipal corporation this site is useful for getting the details of departments list i.e the department name list.

www.gunturcorporation.org :

This site provides basic idea to register a complaint and also to check the complaint status whether the complaint is solved or not. In the website user can lodge a complaint online. User can submit their complaint and provide contact details such as address, email-id.

The website shows the procedure of lodging complaint and its further process .What are the steps taken when a user lodges the complaint and how the complaint is forwarded.

www.consumercomplaint.in

This website is useful for the consumer to file their complaints online. A complaint message is assumed by consumercomplaint.in to   be   a description of a situation experienced by a consumer. A complaint is only a personal opinion by a consumer, a perception of a consumer. That personal perception and/or opinion based on their own personal experience can be powerful, or meaningless, in the opinion of ConsumerComplaints.in, depending   upon   the context and content of what is written. We're not responsible for the way that information is interpreted by whoever reads it. Which of course varies from person to person, depending on whom they are, their own personal experiences,   biases, opinions, etc.

www.icomplaint.com-

iComplaints is a platform to create free online complaints using the power of Internet to transform society and organization. It gives a chance to an ordinary people to speak, raise his voice for faulty services or products and get support from others. It provides all tools and a huge community to listen your voice for your online complaints.

www.nagpurpulse.com-

In a major step to keep the city clean and green Nagpur Municipal Corporation has come up with an innovative solution by lodging complaints through the website and providing fast service to people of Nagpur. If your garbage is not collected SMS your name, Mobile number and address of

bin and your will receive a confirmation from NMC regarding the registration of your complaint.

"Voice enabled Android application for vehicular complaint system using GPS and GSM-SMS technology,"- The paper presents the application that is based on complaint system which is useful for government. The complaint procedure is made online and priority is set based on the receiving complaint .The paper also presented the way of lodging the complaint also the sms and email facility for the proposed system.[1]

Application of Mobile Phones and Social Media to Improve Grievance Redressal in Public Services- This paper is all about peoples who suffers from the day to day problem and has given the solutions for it. Most government departments exhibit poor grievance redressal performance. It is common to hear people complain about broken roads and poor drainage in their neighborhood, but their complaints often go unregistered, and even if they are registered and attended it often happens that the same problems reoccur because of systemic flaws in service provisioning. They approached this problem with the assumption that if the poor quality of grievance redressal was made public via different media channels, it could impose public pressure on government agencies to improve their functioning. This approach would be scalable both in terms of data collection for immediate action on complaints, and data analysis for identification of reoccurring flawed patterns to systemically improve the handling of complaints within government departments.[2]

It next describes four initiatives they pioneered with this underlying philosophy in mind, and outline our learning and conclusions

1. Public grievance campaign through mobile phones
2. Citizen based monitoring of public services
3. Community driven complaint management system
4. News-over-phone service for rural area

Mobile Application Interface to Register Citizen Complaint –

In this paper they proposed an Android Application Mobile interface which can be used to lodge complaints. The main idea is to make use of the existing web infrastructure and to provide an easy, cheap and quick mode of complaint registration. The proposed system will enable the citizens of city to lodge complaints anytime, anywhere.[3]

Using Six Sigma to Improve Complaints Handling The objective of the project was to improve the process of analysis of defective products through the identification of the variables that influence the process and proposes improvements to reduce the time of analysis to defective products. Results are positive and can encourage managers from other industry sectors or even services to improve their customer complaints handling process using Six Sigma.

Six Sigma is an organised and systematic methodology used to improve processes or products' performance with impact on customers, and is based on scientific and statistical methods. This methodology is applied to repetitive, systematic and well known processes [4].

Decentralization and Delegation of Authority at Nagpur Municipal Corporation (NMC) Nagpur

This paper is useful for meaningful decentralization of any urban local body, the three types of decentralization i.e. Political, Administrative and Fiscal Decentralization is required. The City of Nagpur Corporation (CNC) Act 1948, which governed the working of Nagpur Municipal Corporation (NMC) until 2012 also envisaged decentralization of NMC, i.e. decentralization of zone into wards and constitution of WCs for better linkages with citizen. In this paper, authors have focused on type and extent of Political, Administrative and Fiscal Decentralization which has taken place in NMC after its decentralization during the time period from 2004 to 2010 [8].

Applications android Based Complaint Management System For Municipal-

The paper is based on working of sms service. In order to implement the procedure of sms service the paper provides the way to send sms to complaint lodger providing current status of the complaint that whether it is in process or solved or rejected. Every details will be provided to the user with the help of sms services.[12]

Research paper on Android based regulatory complaint –

The paper presents the actual problem that exist in the current system. How the existing system works so that proposed system can be made more effective by avoiding the problems that is faced by existing system. Also what all components can be used in the proposed system was referred from the research paper. Paper also presents the feasibility study in technical as well as economic way. Also referred the system architecture in order to ease the implementation process in the proposed system. The application provides an interface to register one's complained and follow it up. The interface will be provided with camera module which help clicking up a picture of any generalized problem that people are facing and will upload this photo along with the complaint. The location of complaint is tracked by Global Positioning System (GPS). This module provides exact location of that particular issue.[13]

III. PROPOSED WORK

According to the proposed system it saves time of people by directly launching complaint with the help of proposed system. They need not go to the government office for launching the complaints. People can get their problems/issues solved by directly posting it to the proposed system. People can post their suggestions.

The proposed system contains the following facilities over the present system:

1. People can launch their complaints from anywhere with the help of mobiles.
2. People can capture image or upload videos.
3. GPS facility will be provided so that users location can be tracked easily.
4. Simple and easy complaint launching page so that even a common layman can also use the system easily.

A. Flow of the System

There are sections that are divided as commissioner, grievance officer, head of the department and employee each have their individual login section. When the user launches complaint ,it is forwarded to grievance officer. It's the duty of grievance officer to forward the complaint to the

respective head of the department if the complaint is genuine. Then the head of the department will view the complaint and forward it to their employee and finally the employee will allot the problem to the co-worker. Co-worker will visit the place and check whether the problem is true or not if true then he will solve the problem.

There will be particular time span assigned in each stage. If in any stage they fail to solve the problem or in case complaint is not forwarded within the time span then the complaint will be directly forwarded to commissioner. In case the complaint received is fake then grievance officer or employee has the right to reject the complaint All the status will be visible to the person who has launched the complaint. User will be able to see whether there complaint is solved, pending or rejected. The process of forwarding the complaints among officer and employee will be kept hidden from the user.

Fig:2.2 flow of complaint process
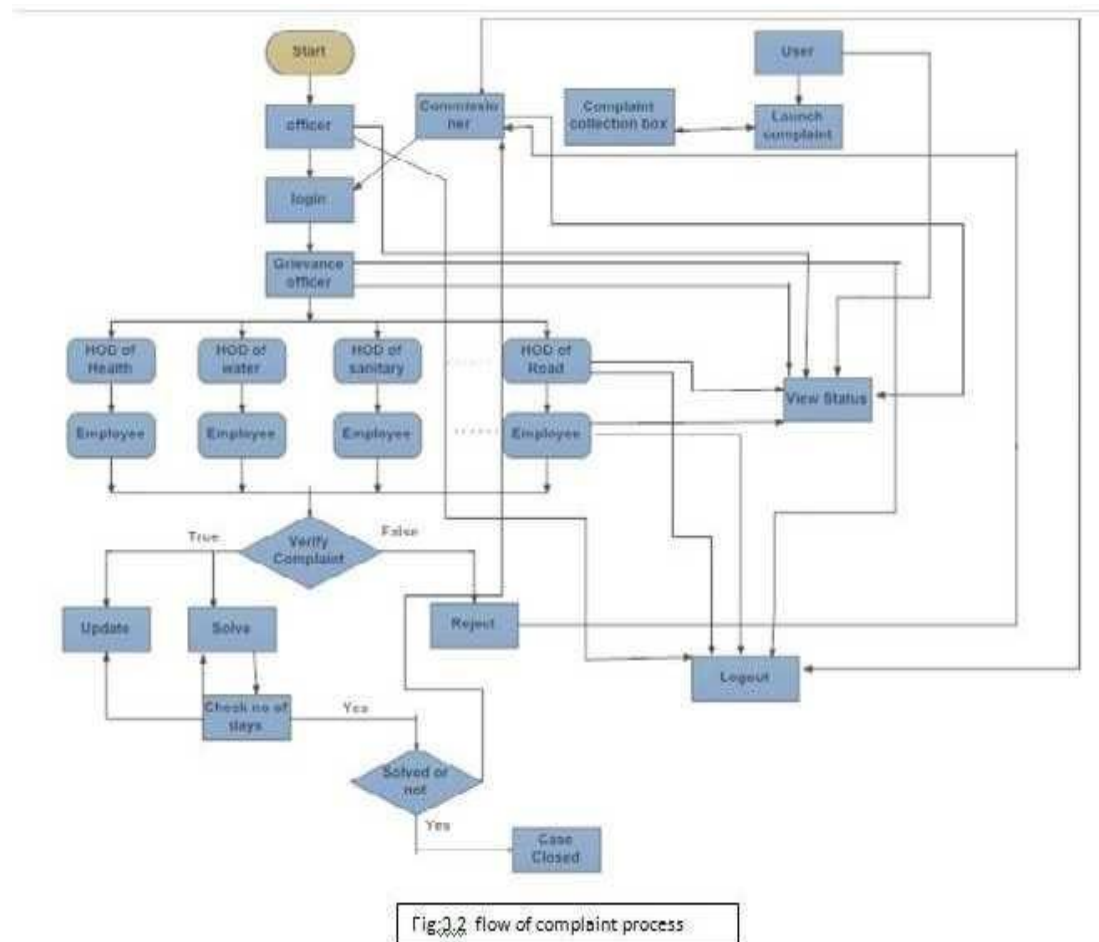
B. Functional Modules

The whole system is divided into the four modules. They are Registration or Login Module, Questions Entering Module, Test Module and Result and Analysis Module.

1 Complaint module

In this module user can launch their complaints. . The complaint form will be simple so that a common layman can use it. In complaint form user can upload photos and can even upload videos. User has to give the complaint details. Gps facility is provided so that users location can be tracked.

2 Login modules:

Individual login facility is there for every officers and employee so that they can see the complete procedure of complaint and can even solve the complaints. The procedure of forwarding the complaints and solving complaints will not be visible to the user. The user will only get to know the status.

3 Location tracking modules:

The application will be built in such a way that it will provide the current location of the person lodging the complaint can be tracked and will be visible to the admin in the server side.

4. Department wise login

Admin has been created based on the different Department in the database. The Admin within the different department can View the complaint that is being launched to that particular department. Also the current status will be visible.

5. Complaints management and updating:

Admin based on the different department can view the complaints that is being launched to particular department. The Admin has the authority to open or close the complaint. Then Admin can also reply to the user in the form of notification that is being created when the admin update the complaint and will be made visible .

IV. ADVANTAGES OF PROPOSED SYSTEM

1. In this technological world, this system is useful for the people to file a complaint with the help of mobile application which will save time of people.
2. It will reduce the time and effort of registering the complaint manually by lodging complaint online.
3. Also the status of the complaint lodged can be tracked easily i.e whether the complaint is rejected, accepted, processing or solved.

4. Location of user can be tracked easily with the help of GPS system.
5. It is user friendly and cost effective/
6. A remainder system will be there which will be helpful for the pending complaints. It will keep on reminding the officer about the pending problems or unsolved problems. So, that each and every problem must be solved effectively.

CONCLUSION

We proposed and introduced a mobile application for citizens to register complaints against the problems they're facing which can be solved by municipal corporations. As nowadays android phones are much used by people so we created an app which can be used to lodge a complaint in a very simple way by uploading a picture of suspected place and use GPS to provide the location of that place into respective Municipal Corporations. The system proposed by us also has a web portal which provides user interface to citizens to lodge complaint and also make helps Municipal Corporation officers to solve the complaint easily by simplifying the process of forwarding complaint to sub officers. This system also provides employee a facility to update the status of the complaint about processing of the complaint which the lodger of the complaint can view using the id which will be provided to him/her after lodging complaint as a text message . The privilege is assigned to the employee and grievance officer to reject the complaint but with a reason. It also has a module which counts the number of solved, processing and rejected complaints and plots a graph to show the performance of Municipal Corporation.

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