



## CLOUD BASED COMPLAINT MANAGEMENT SYSTEM

Simran G.Rai<sup>1</sup>, Sharayu Nagre<sup>2</sup>, Tejashri Babre<sup>3</sup>

Student, Dept. Of Computer Science and Engineering ,J.D.I.E.T, Maharashtra, India, [simran98rai@email.com](mailto:simran98rai@email.com)

Student, Dept. Of Computer Science and Engineering ,J.D.I.E.T, Maharashtra, India, [sharayunagre1803@email.com](mailto:sharayunagre1803@email.com)

Student, Dept. Of Computer Science and Engineering ,J.D.I.E.T, Maharashtra, India, [babretejashri5@email.com](mailto:babretejashri5@email.com)

### Abstract

A complaint system is a set of procedures used in organizations to address complaints and resolve disputes. Complaint systems in the US have undergone several innovations especially since about 1970 with the advent of extensive workplace regulation. The objective is to provide the public in knowing their place details and getting their problems solved in online without going to the officer regularly until the problem is solved. By this system the public can save his time.

This provided mobile support to these kinds of systems which has to deal with volumes of data as it will be beneficial. Previously a desktop/ laptop for using the system built for complaint management.

Mobiles have taken place of the Laptops / Desktops due to their on the fly nature which helps an individual to communicate or work on his personal tasks. However mobile devices on their own do not possess sufficient level of resources for dealing with such level of computations that are done on the data. Hence I have cloud computing utilized for this kind of systems which will take care of the heavy computational stuff leaving mobile phone to efficiently function while people are using such a system aims to develop a mobile based complaint management system which will be provided as a service to the users of the system.

Cloud based complaint management system makes easier to coordinate ,monitor,track,and resolve and make easy target problem area monitoring, complaints handling performance and make imorovment of process and also facilitate any other feedback. Admin can even get the information of area by GPS system through the system.

**Keyword:** Monitoring, , Cloud based, complaint, Admin,online

\*\*\*

### 1. INTRODUCTION

"CBCMS" is a cloud based complaint management system is web application which is facilitate citizen to enters the public compaint which make them trouble and also facilitate administrator to make clear monitoring of compaint and make possible to administrator to take clear step toward resolution.

In India we don't have any direct communication between the government and public in an efficient way for solving the problems i.e In order to overcome this problem previously " National Informatics Centre "has launched a site named "Prajavani " through which public can post the petitions or complaints in the site and get them solved in a specified time and can also know the status of the complaint or petition he has lodged at any time. Initially phones were merely use to calling and texting.

One of the fundamental parts is user complaint management.This system is work in city level.

As it is webApp so it has two main side

- User side
- Admin side

**User side:** It is an android application built to used by Citizen of city to enter the complaints.Gives detail description about compaints.

**Admin side:** The functions from registering a complaint to resolution of complaint there are administrative bodies: It is side visible to Admin. It is built as website. Hence the process of filing a complaint by a customer till it gets resolved by a regulatory body is conventional.Cloud based complaint management system (CBCMS) is a step towards compliance management.

Registration of the user complaints is done using an account that will be created by user for registering a complaint. Use selects the product for which he wants to issue a complaint and will issue the complaint for the same. After the registration of the complaint, the complaint automatically gets

assigned to appropriate Manager handling the complaints related to the department.

Registration of the User complaint through an android application. Automatic and immediate assignment of User complaint to specific Manager Makes Intercommunication between service man and User.

Displaying complaint status information for User as well as Manager. Both the User of a Complaint and the Departmental working on the complaints issued on that particular Complaint has the facility to communicate with each other so that the complaint gets addressed. Complaints visible both but in different sides.

## 2. Literature Review

In (2011). *Complaints Management System*, Michael Armbrust, Armando Fox. work on the aim of the present study is to highlight the key features of an effective complaint management process, as a less expensive system of diagnosing and learning a company's weaknesses. Results focus on customer complaining behaviour and subsequently on the development and implementation of the service recovery strategy.

Vishesh K. Kandhari and Keertika D. Mohinani in this paper proposed that, The system incorporates GPS functionality into the existing complaint registration systems. The complaint is registered via a mobile application and sent over the internet to a central server. A web interface is used to view and plot the complaints on a map. The system has been developed for civic complaints. It can be extended to include incident reporting to improve the efficiency of emergency services. The mobile application can be enhanced to display the location of the local administrative office, police station and other offices of the area in which the device is located.

Kim Nee Goh, Yin Ping Ng, Kamaruzaman Jusoff, Yoke Yie Chen and Yoon Yeh Tan have developed an architecture for GPS based road management system . The proposed system obtains GPS coordinates on a cellphone supporting Assisted GPS. The complaint along with the GPS information is send via an SMS to an SMS server over the GSM network. The data in the SMS is retrieved and stored in a database. This information is then plotted on Google Maps.

## 3. Analysis of Existing systems

As the system aim to provide multiple department level functionality so problem analysis all three department.

### 3.1 Nagar parisad department

- The Swachhata application is a fourth generation complaint redressal mobile and web platform.
- It is a quantum leap in how complaints and grievances are being redressed by Municipal Corporations in India. This solution is for all the 4041 towns and cities of India.

### 3.2 Civil department

- The Pradhan Mantri Gram Sadak Yojana (PMGSY), was launched by the Govt. of India to provide connectivity to unconnected Habitations as part of a poverty reduction strategy.
- Govt. of India is endeavoring to set high and uniform technical and management standards and facilitating policy development and planning at State level in order to ensure sustainable management of the rural roads network.
- PMGSY programme, about 1.67 lakh Unconnected Habitations are eligible for coverage under the programme. This involves construction of about 3.71 lakh km. of roads for New Connectivity and 3.68 lakh km. under upgradation.

### 3.3 Power department

- Rajasthan Electricity Power Cooperation or VIDYUT VITRAN NIGAM LIMITED (JVVN) supplies electricity in major 12 districts of Rajasthan.
- If any person is having any problem regarding JVVN Online complaint or queries for Rajasthan District. JVVN Online Complaint is also functionalized

## 4. Problem of existing system

- Large scale implementation .
- Very small city are not in concern.
- Approches directly country development.
- Complex and wast while implementation.

### 4.1 Proposed system

This system is built to concern of effective imementation of process in small cities .

As it implement on small city so system is built with including different department .

## 5. PROPOSED WORKING

In the proposed system the citizen need not go to the government office for getting his problem solved. He can get his problem solved by posting his problem in this proposed system and he can suggest a possible solution to the problems posted on the system. Our proposed system provides solution to existing system by extending its facilities as follows:

- Registration is provided so that officer can solve the problems easily .
- Complete information regarding the place is displayed.
- Can suggest a solution for solving the problems in a better way.
- Can comment on the government's decision

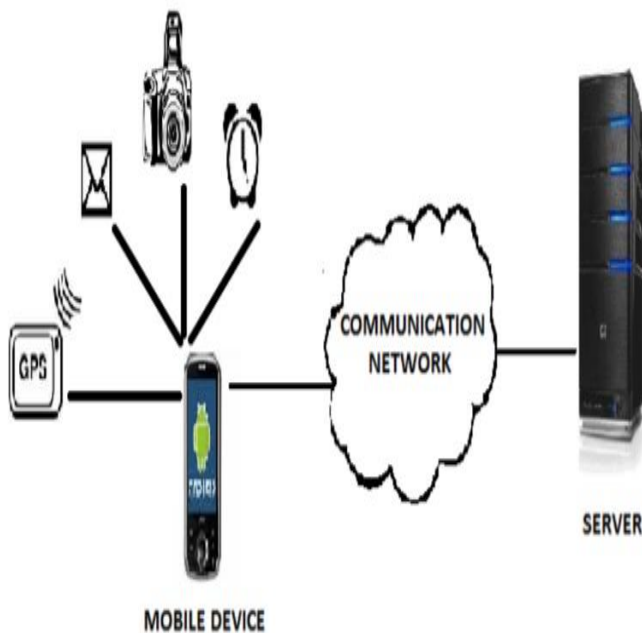


Figure 5.1: Block of Proposed work

## 5.1 COMPONENTS OF SYSTEM:

**5.1.1 MOBILE APPLICATION :** Consumer will have mobile application .She/he can register a complaint related to specific zone where he/she finds a problem. Consumer can embed an image with the complaint. Consumer can also use this application to send news to news agencies as we are providing connections to news agencies too. This application provides a user friendly UI interface. Mobile application contains GPS tracking system too.

**5.1.2 COMMUNICATION NETWORK :** Communication network provides connection between: • Mobile unit and server by using internet protocols.

- GPS tracker and Mobile unit
- Camera module and server

**5.1.3 SERVER :** It accepts the complaint request from citizen and processes it.It redirects it to specific departments for processing its request.

**Received request can contain:**

- Image (not mandatory)
- Text (mandatory)
- GPS location (automatically generated)

**5.1.4 GLOBAL POSITIONING SYSTEM :** The GPS system is used to track the location of mobile device from which complaint is being registered. We are going to place complaint by using mobile application. Along with these request we will embed the location from which request are getting placed. This is going to work by GPS tracking system. It will make use of Google Maps and API's

**5.1.5 CAMERA:** We will connect mobile application with camera module so that one can embed images with the complaints so as give a better idea regarding the complaint registered. The user can attach photos regarding the complaint such as the garbage accumulated in your locality, broken street lights, overflowing drainages, etc.

**5.1.6 MESSAGE GENERATION SYSTEM:** E-mail generation system will generate e-mail when

- A complaint is register.
- When a department receive a particular complaint request.
- If any complaint is not followed up between specific period.

### 5.2 Use Diagram

This diagram showing communication between user, Manager and user.

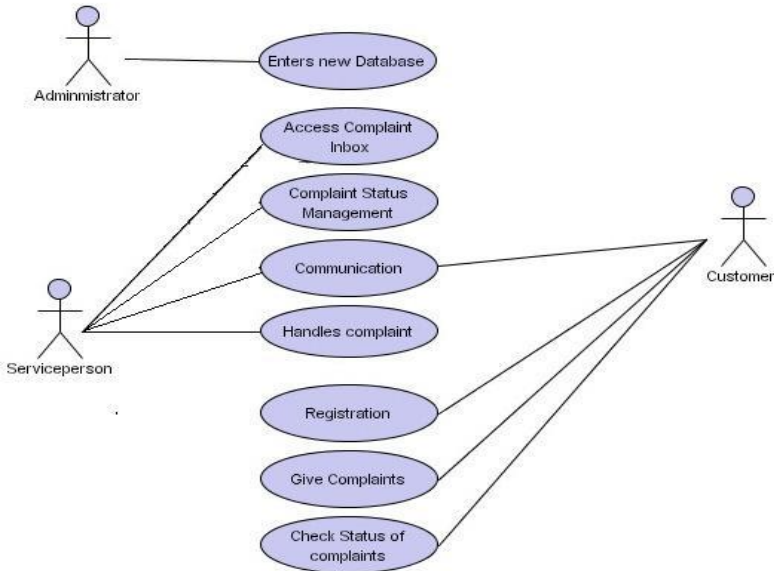


Figure 5.2: Use case diagram

	communicated with each other
Access complaints	The complaint is directly routed in the complaint inbox of the service man
Modification s in data base	The administrator is provided with full access to the system so that he can make necessary changes as when required.

TABLE 2.USE CASE DESCRIPTION

### 5.3 Description of Sequence

The sequence of the events that takes place in the system is as follows:

- User signs in.
- Validation of the user takes place through Authentication Subsystem
- Registration of the complaint takes place.
- The database stores the complaints.
- The complaint handling system assigns the complaint to an appropriate serviceman.
- User communicates with the customer for fast resolution of the complaint.
- Once the complaint is resolved the serviceman updates the s
  - Status of the complaint.
- Administrator manages the system.

## 6.PROJECT IMPLEMENTATION

### 6.1 Generic work flow of the application

User interacts with the system using the mobile client. User enters the data on the mobile. For example: user enters the Username and Password on the mobile client for authentication. The Rest calls contain a URL to the server which is stored in a string on the user.

Forexample:String  
 url="http://10.0.2.2:8080/CMS/rest/users/1/" +

Use cases	Description of use cases
Registration	Customer creates an account in the system in using this function.
Give complaints	Customer logs his/her complaint using this module once he is authenticated.
Handles complaints	The complaint is handled by the serviceman.
Communication	With the help of this module the customer as well as the serviceman

Username:

The user sends the appropriate data with the id of the organization that the user is customer of and the information is sent to the desired server using the above URL. The data standard used for communication is either in XML or JSON format. When the data reaches the server, the Resource modules created on the server first filters out the module that needs to be executed i.e. in our current case the username along with the tenant\_id first reaches the application through this link <http://10.0.2.2:8080/CMS> and then going through the address embedded in the URL it eventually reaches the module where the Username is validated.

The User resource module then calls the appropriate function mentioned in the data access object which opens a database connection and uses SQL queries for fetching the data i.e. in our case the user specific data will be fetched and stored in a user object and then the user object is returned to the resource module. After the reception the data in the user object will be converted in XML or JSON data format using the Jersey framework and is sent as a result string to the client. After the data is received on the client the data is parsed in a way that it extracts the data only in JSON format and stores it in appropriate variables. And then the data in the variables is

## 7. CONCLUSION

This project has seen the development of an effective complaint management solution for use by the government. Therefore to overcome this limitation, cloud computing was used where in most of the computation and processing was done on the server which is hosted on the cloud where the problem of heavy computation won't arise as cloud computing will take care of it by managing the resources leaving the mobile to display the final outcome of the computation performed. While working on building such cloud based system has helped me learn various technologies like the cloudwinapps which is a web service that provides flexible processing capacity, RESTful architecture which is used for communication between the client and the server, and Android which has served as the platform for creating our client.

## ACKNOWLEDGEMENT

A successful & satisfactory completion of any significant task is the outcome of invaluable contribution of efforts by different people in all directions explicitly or implicitly. Vast varied and valuable reading efforts leads to considerable gain of knowledge via books.

We wish to extend modestly my heart-felt gratitude to all those, whose sincere and timely aids have helped, materialize this paper. We feel great pleasure in expressing my deepest sense of gratitude and sincere thanks to our paper guide **Prof.S.M.Inzalkar** for all his guidance and timely help provided towards the goal of this paper.

We also express my thanks towards Head of Department **Prof. D. N Choudhary, Department of Computer Science & Engineering** who helped me time to time with great pleasure and encouragement during the work of paper.

I am indebted to my proactive guide **Prof. S. M. Inzalkar**, Assistance Professor of CSE Department because without their valuable guidance this work would not have a success.

I am also thankful to **Dr.R.Tatwawadi sir** Respected Principal Sir, **Jawaharlal Darda Institute of Engineering & Technology, Yavatmal**, for being constant source of inspiration.

Last but not least, we would also like to thank all teaching, non-teaching staff and my colleagues who have directly or indirectly helped a lot for the success of this paper

## REFERENCES

- 1.Complaints Management System.Retrieved from:cloud based complaint <http://www.workpro.com/complaints-management-system>.MichealArmbrust,Armando Fox.(2017)
- 2.Prassanna Pathmanathan, Ryan Poulter:International Conference On Smart Technologies For Smart Nation (SmartTechCon)(2017)
3. Vishesh K. Kandhari , Keertika D. Mohinani "GPS based Complaint Redressal System" 2014 IEEE Global Humanitarian Technology Conference - South Asia Satellite (GHTC-SAS) | September 26-27, 2014 | Trivandrum.
4. Kim Nee Goh, Yin Ping Ng, Kamaruzaman Jusoff, Yoke Yie Chen and Yoon Yeh Tan. "Architecture of a GPS-Based Road Management System," World Applied Sciences Journal 12 (Special Issue on Computer Applications and Knowledge Management), pp. 26-31, 2011

Issue

ISSN: .....-.....