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Android Based Smart City Application

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ABSTRACT

Services which are provided by the smart cities try to support the day to day life of inhabitants. Unfortunately, the traditional way of introducing a new service usually implies a huge investment to deploy the necessary background infrastructure. Today the IoTs are designed in to support the smart city , which try to use the most advanced communication methods to provide support for the services that are provided by the administration of the city and for the citizens. Based on the general categories the different components of a smart city can be classified as smart transportation, smart governance, smart waste management, smart water management, smart health care, smart power and emergency. These components are that help to make a city smart and efficient. In this paper we try to combine all the components together in form of an android application. Which will try to bridge the gap in between the administration and the fellow citizens?

Keywords: service functions and management, Smart Cities, Challenges, Assessment, Transportation, Water supply, Garbage, Electricity, public, emergency.

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I. INTRODUCTION

Cities are the main poles of human and economic activity. They hold the potential to create various opportunities for great development for their inhabitants. However, they also create a lot of problems which are difficult to handle as they are large in size and a magnitude. Cities are also the places where the are lot of differences and if they are not handled properly the negative ones will surpass the positive one. These problems are not faced when we convert a city in a smart city.

What is a smart city ? A simple explanation, a smart city is a place where traditional networks and services are made more flexible, efficient, and sustainable with the use of information, digital, and telecommunication technologies to improve the city's operations for the benefit of its citizens. Smart cities are greener, safer, faster, and friendlier. To provide a platform for the citizens of the city to post their complains regarding various problems faced by them in the city and to establish a direct communication between the citizens and the Municipal Corporation Authority.

The various goals that need to achieved in creation of a smart city are listed below :

- We have to define the Smart City concepts and understand how they will able to achieve the urban development .

- We have to develop a method that can used to access and prioritize the Smart City projects.

- We have to develop guidelines that will help in implementation and management of the projects.

- We have to characterize City Challenges and to develop a transferability strategy of Smart City projects. This objective will be part of the other three above.

Most of the services provided by the Government go unnoticed and the general public is not able to utilize them. In the similar manner the various complaints of the common people go unnoticed as there are no proper means to communicate with the respective authorities. Most of the services are not hindered by technical issues, but rather by the lack of a widely accepted communication and service architecture that can abstract from the specific features of the single technologies and provide harmonized access to the services. We aim to develop a citizen Engagement

Platform with an Android app integrated with Google map for location based services for making Pune a "Smart City".

II. RELATED WORK

There have been many attempts for creating centralized system for providing all the information about the government policies and complaint registration. Mostly websites were developed for that purpose but they were incompetent.

The websites developed were bulky and most people are not able to retrieve information quickly.

An excellent example of these websites is the Pune Municipal corporation website for complaint registration. The website has a lot of features but is complicated for the common user.

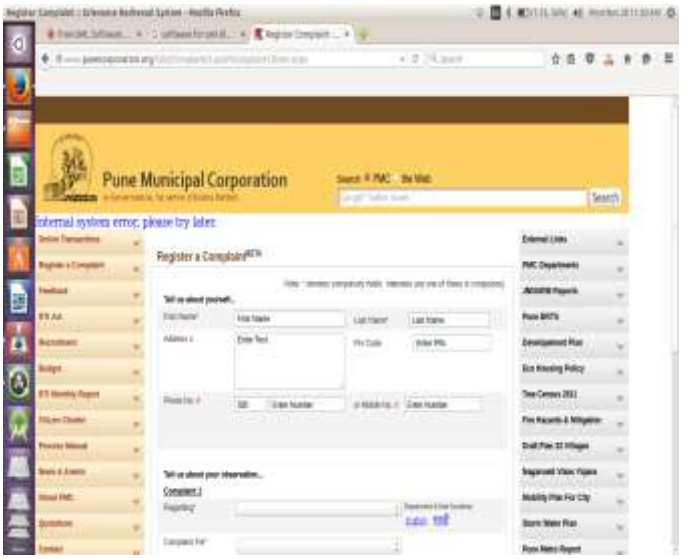

Fig 1. Complain Registration And Information System Of PMC.

III. PROPOSED SYSTEM

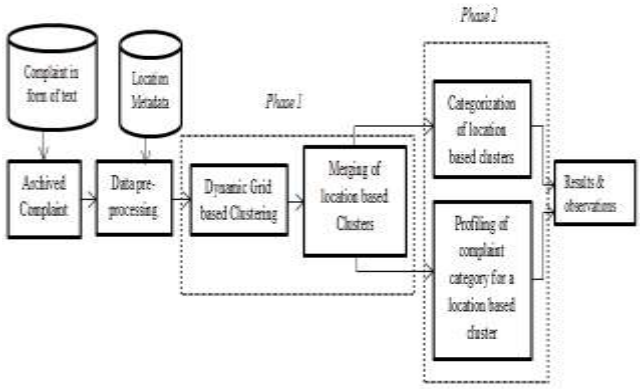

Fig 2. System Architecture

Modules.

User:
User can use his account to access information .He will able to post complaints along with specific details. He can also get information about various government schemes.

Admin:
Admin is divided into various department admins.
These admins look over various complaints posted by the people. The admin can also post updates regarding the various schemes.

Super admin:
The super admin has control over all the admins in the system. The super admin has the power to look over the working of all the departments.

Database :
The Database can be used to store all the complaints .The various updates that are posted are also stored in the database.

Validation:
Validation is the final stage of the system. If any user given wrong input the our system will check all details. If authorized person the it will be access otherwise abort.

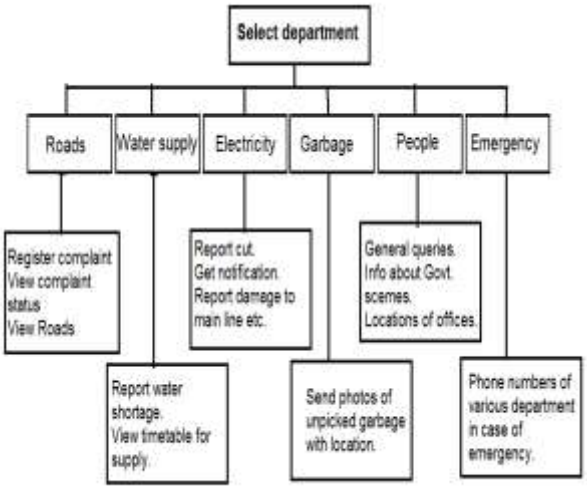

Fig 3. Various Functionalities.

Mathematical model:

Let S1 be a set of parameters for Selecting File
S1= {File_Size ,File_Upload}

Uploading File data rate:- R=((N-NP) S/L)/N=S/L

where, R is Binary data rate, N is Size of file, NP is size of data which carries the parameters, S is Small positive integer and L is size of binary data in file data.

Where,
Authentication = password

Condition/Parameter	Operation/Function
If Authentication ==Allowed	f1:Proceed()
Else..	Retry Operation

If password type is valid then proceed Else Retry operation
2) Complaint Register Module
Lets S2 be a set of Key

S2={Complaint}
Where,
Complaint= Text Data or Image

Condition/Parameters	Operation/Function
If(complaint Registers)	F2:Proceed()
Else	Fail

If the user is Registered then only proceed Else compliant not Register

3) Acknowledgement module

Let S3 be the set of parameters to Acknowledgement
S3: {Text message , Mail)
User receives an email as an acknowledgement which also confirms the time required to solve the issue.

IV. CONCLUSION

In this project we are able to bridge the gap between the citizens and the government for the betterment of the city and hence making a city smart. This project will be able to provide a platform for the citizens of the city to post their complaints regarding various problems faced by them in the city and to establish a direct communication between the citizens and the Municipal Corporation Authority

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