A Saas Application for Optimizing E-Governance of Municipalities

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*Abstract—Our Project primarily aims on solving the municipal issues faced by every citizen in our state in their day to day's life. For the above constraint ,We aim to provide a Saas application through mobile and web application which helps every single user to bring out the issues (e.g.-**Damaged Roads , Street Lights Malfunction ,Litter to be cleaned , drainage malfunction**) and post them on our SaaS application and get the attention of the municipal head of their locality so that they get it solved as soon as possible.The citizens of the respected municipalities are not to be blamed because of the negligence of the government officials who are in charge of solving the above issues. By implementing this SaaS application we could completely erase the petition system which is currently being operated by the government which would take nearly 1-2 months to solve the mentioned problems i.e.) Speeding up the process that would solve most of the municipal issues faced by our citizens.*

Keywords—*saas,municipalities,e-governance*

1. INTRODUCTION

Municipal governance in India has existed since the year 1666, with the formation of Madras Municipal Corporation, and then Calcutta and Bombay Municipal Corporation in 1726. In the early part of the nineteenth century almost all towns in India had experienced some form of municipal governance. In 1882 the then Viceroy of India, Lord Ripon's resolution of local self-government laid the democratic forms of municipal governance in India.

In 1919, a Government of India act incorporated the need of the resolution and the powers of democratically elected government were formulated. In 1935 another Government of India act brought local government under the purview of the state or provincial government and specific powers were given.

Responsibilities of urban local bodies

The municipal bodies of India are vested with a long list of functions delegated to them by the state governments under the municipal legislation. These functions broadly relate to public health, welfare, regulatory functions, public safety, public infrastructure works, and development activities.

Public health includes water supply, sewerage and sanitation, eradication of communicable diseases etc.; welfare includes public facilities such as education, recreation, etc.; regulatory functions related to prescribing and enforcing building regulations, encroachments on public land, birth registration and death certificate, etc.; public safety includes fire protection, street lighting, etc.; public works measures such as construction and maintenance of inner city roads, etc.; and development functions related to town planning and development of commercial markets. In addition to the legally assigned functions, the sectoral departments of the state government often assign unilaterally, and on an agency basis, various functions such as family planning, nutrition and slum improvement, disease and epidemic control, etc.

The Twelfth Schedule of Constitution (Article 243 w) provides an illustrative list of eighteen functions, that may be entrusted to the municipalities.

Besides the traditional core functions of municipalities, it also includes development functions like planning for economic development and social justice, urban poverty alleviation programs and promotion of cultural, educational and aesthetic aspects. However, conformity legislation enacted by the state governments indicate wide variations in this regard. Whereas Bihar, Gujarat, Himachal Pradesh, Haryana, Manipur, Punjab and Rajasthan have included all the functions as enlisted in the Twelfth Schedule in their amended state municipal laws, Andhra Pradesh has not made any changes in the existing list of municipal functions. Karnataka, Kerala, Madhya Pradesh, Maharashtra, Odisha, Tamil Nadu, Uttar Pradesh and West Bengal states have amended their municipal laws to add additional functions in the list of municipal functions as suggested in the twelfth schedule.

There is a lot of difference in the assignment of obligatory and discretionary functions to the municipal bodies among the states. Whereas functions like planning for the social and economic development, urban forestry and protection of the environment and promotion of ecological aspects are

obligatory functions for the municipalities of Maharashtra, in Karnataka these are discretionary functions.

Provision of water supply and sewerage in several states has either been taken over by the state governments or transferred to state agencies. For example, in Tamil Nadu, Madhya Pradesh and Gujarat, water supply and sewerage works are being carried out by the state level Public Health Engineering Department or Water Supply and Sewerage Boards, while liability for repayment of loans and maintenance are with the municipalities. Besides these state level agencies, City Improvement Trusts and Urban Development Authorities, like Delhi Development Authority (DDA), have been set up in a number of cities. These agencies usually undertake land acquisition and development works, and take up remunerative projects such as markets and commercial complexes, etc. The Municipal bodies in most cases have been left only with the functions of garbage collection, garbage disposal, street lighting, construction and maintenance of roads, etc.

In terms of fiscal federalism, functions whose benefits largely confine to municipal jurisdictions and may be termed as the essentially municipal functions. Similarly, functions that involve substantial economics of scale or are of national interest may not be assigned to small local bodies. For valid reasons, certain functions of higher authorities are appropriate to be entrusted with the Municipalities – as if under principal-agent contracts and may be called agency functions that need to be financed by intergovernmental revenues. Thus instead of continuing the traditional distinction between obligatory and discretionary functions the municipal responsibilities may be grouped into essentially municipal, joint and agency functions.

The cloud as we know is used to store data in servers that are located in the cloud. We use the cloud's advantages to present the complaints platform to the users.

II. **RELATED WORKS**

A. *EXISTING SYSTEM WITH DE-MERITS*

- As of now there is a petition system where the citizen can make a complaint.

- But the major drawbacks of the current system which is being handled by the government is negligence by the municipal board and procrastination in solving them. It takes nearly months to get our roads laid or our street lights fixed where the habitants are given a phone number which is hardly picked up by any.

- We are allowed to post a personal email to the concerned officer regarding the problem where we don't get any confirmation and we have no idea about the progress. There are even chances of the issue not getting solved at all.

- We are also provided with the contact info of the respective officers who can solve these issues so that we could call them and inform them about it.

B.PROPOSED SYSTEM WITH MERITS

- Our SaaS Application acts as a middle man between the municipal board and the habitants of the respective municipality

- It is somewhat similar to that of the notice board where every single municipal issue comes under surveillance.

- We have imposed queuing technique so that the issue with the highest priority(Max no.of. Likes) comes first in the list and to be solved first.

- We also provide an automated messaging system which sends a message about the issue with highest priority and notifies the municipal head or the person in-charge everyday until the issue is being solved

- We also provide a mobile app for the users so that they can post their municipal issues in an easier accessible way.This SaaS Application would help citizens to be aware of the unsolved issues in their respective municipalities and would act as a catalyst in getting them solved.

III. *ARCHITECTURE OF SAAS APPLICATION*
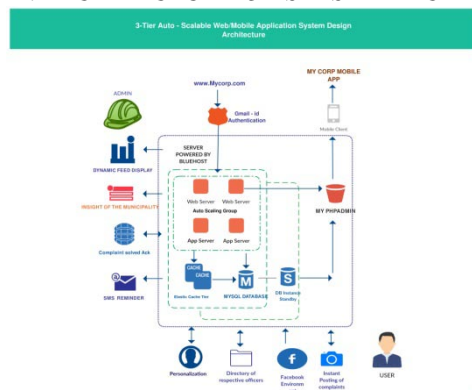
- By implementing this system, it is to deal with small scale municipal issues there would be a error free environment and also it would help to bring
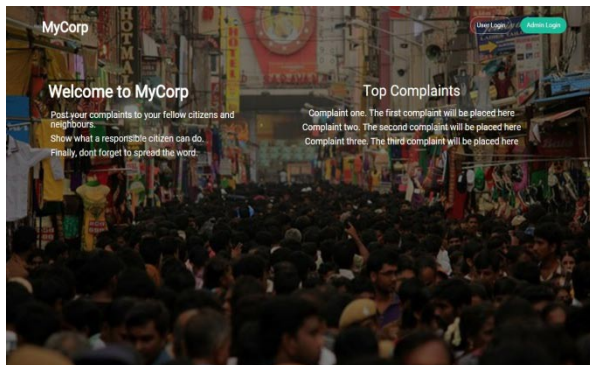
the social officers behind the solving of these issues to spotlight for their negligence in work

- This SaaS application architecture helps to sort out several features of this application using certain attributes and properties ofdata retrieval and analysis.
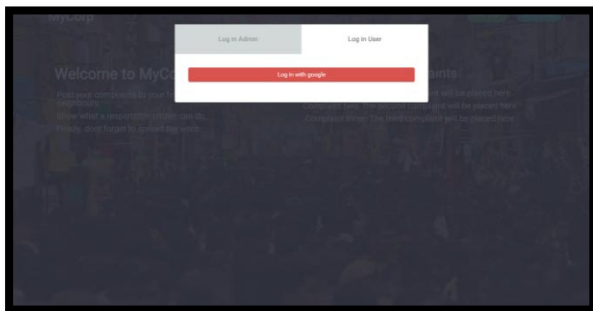
IV.METHODOLOGY

A.)USER SIDE

1.)HOME PAGE

To start with the homepage! It somewhat looks like this where the user gets to view three major issues happening in his municipality without logging in. The user gets to login to the feed through google login.

2.)AUTHENTICATION

A safe Google Authentication approach where the user will be able to login into our application with his/her G-mail account .We acquire the user details from Google OAuth Api which is anApi provided by Google. This enhances the security of the application.

3.) SOCIAL FEED
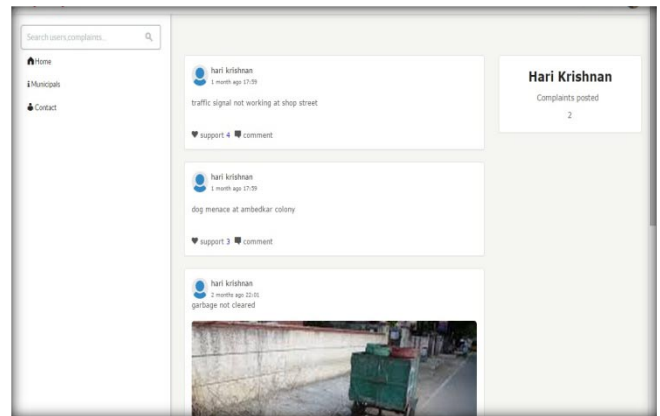
Once you're logged into our application it will somewhat look like the concept similar to that of the face book wall. where we have used queuing technique so that the issue with maximum number of supports would top the list and it would be sent to the admin side for processing.

4.)QUEUING SYSTEM
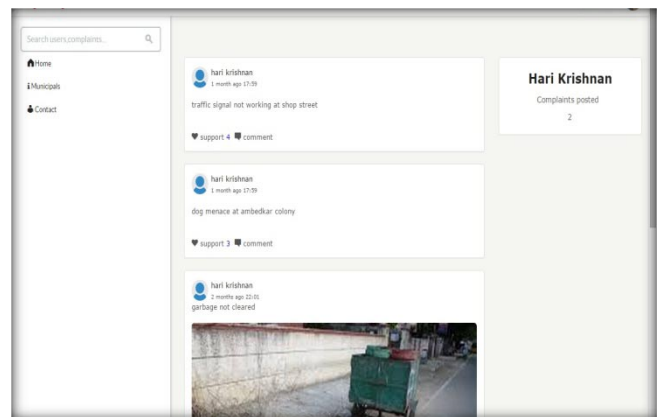
Once you're logged into our application it will somewhat look like the concept similar to that of the face book wall..where we have used queuing technique so that the issue with maximum no. of supports would top the list and it would be sent to the admin side for processing. This is how it looks!
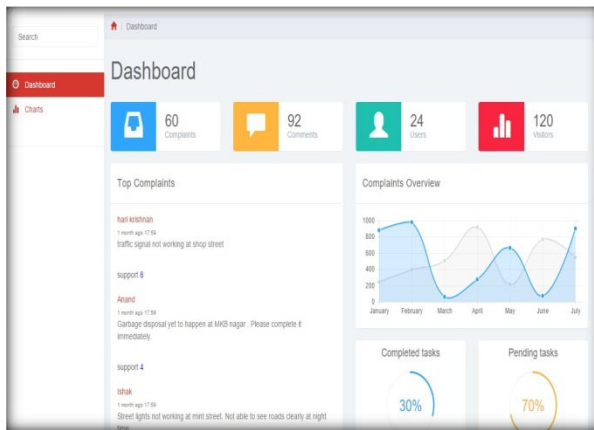
5.)COMPLAINTS
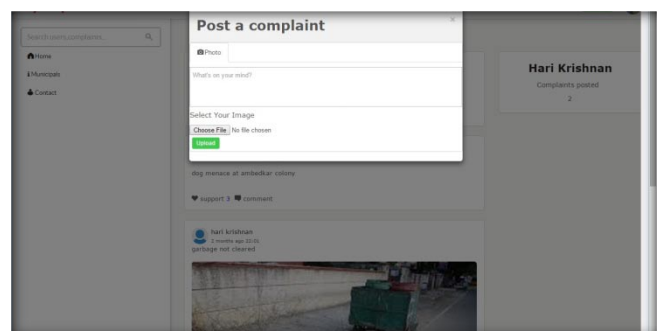
So all you have to do is post a complaint briefing about the exact location in your municipality and we also provide an option to upload a photo along with the complaint.

So if many people are dealing with the same issue in your municipality they would press the support button. So more no. of supports would make the issues top the issues list and be processed before the others. (A queuing system is implemented behind this feed).

B.) ADMIN SIDE

- We would say simply making the SaaS application live on the internet is a way of implementing

- But the admin side can either be handled by the municipal officers of respective localities with government's approval

- After the user post his complaint , it will go to the admin side who's operator would be the municipal officer / any official who can fix these issues in your municipality. Our admin side portal is the game changer!

- The municipal officer who is handling this admin login would get each and every detail of what's happening in his municipality and which problem is being faced by his citizens. So the issue with most no. of supports would be displayed here and notify the officer to get it solved. We also provide with the graph which gives the municipal officer an idea which month/week gives him the most no.of complaints and how he should allocate his men based on that.

- We are not done with this**! We also provide an automated SMS messaging system which would notify the municipal officer on a regular basis with the details of the issue which tops the list until it gets solved**

- We also provide with the contact info of every single staff who is responsible in cleaning the municipality or getting the malfunction repaired. So that every single citizen from the respected area

would get direct contact to the respected professionals and get the job done.

V.PROPOSEDSCHEME

A.OBJECTIVE

When was the last time you actually took efforts to repair the damaged roads, bad street lights , stray dog menace etc ? We the citizens of the respected municipalities are not to be blamed because of the negligence of the government officials who are in charge of solving the above issues. As college students have come with up an interactive application to solve the problems in our localities which we overcome in our day to day life

B.DATA FLOW
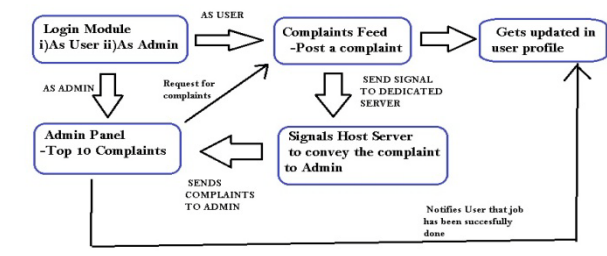
The beginning module comes with two logins one for the user and one for the admin. Once a user logs in they get a complaints feed that can be viewed by each and every citizen. The user can post a complaint which will get added to the complaint feed. He/she can also support and comment on the complaint. In the admin panel the top most complaints gets sorted based on the number of supports. The admin also gets to view the insights of his municipality based on the data collected from the complaints such as the number of complaints, number of comments, supports and also a graph displaying the number of complaints received every month. Once the work for the complaint gets completed , the admin can shift the complaint to the completed complaints feed. The user now gets to verify the complaint and once verified the complaint is removed from the feed. If a user wants to directly contact the respective municipal officer he/she gets to see a complete table of information containing the contact number of the respective officers.

V.RESULTS

With the current petition system. It takes a week's time to get the problem solved. But with our complaints feed made public and producing the complaint directly to the respective officer we get 60% better results than the current system

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VI.CONCLUSION

• India has never been clean or fixed in every aspect regarding municipal issues! So to get that solved within days and with the least amount of work put in to get it solved, Our SaaS Application would be a helping hand.

• When it comes to making money out of this we have a batter plan , But this application would help thousands of people out there who is facing difficulties in their municipalities while going to their college/school/office

• You may ask us what if the municipal officer never logs in to the application and is very negligent about the issues ! The whole world is coming to know about this issue when you post it on our applicationand how reluctant people are in fixing those. So atleast keeping that in mind officers would be responsible for once and do their job for what they are being paid for.

• We also provide a mobile app which is the replicate form of the application where people get even more easier access for posting complaints and having them processed.

REFERENCES

[1] F u n k Te,Daniel Muller,Irena PletikosaCvijikj
An E-Government Service as PaaS Application to Serve Switzerland's Municipalities,2016.

[2] Dr. BadrAlmutairi, Dr. Ahmad Raza Khan. Persistent architecture for optimizing
web service for
e-government implementation,2016.

[3]https://en.wikipedia.org/wiki/Municipal_governance_in_India.

[4] http://www.chennaicorporation.gov.in/complaints/

[5]http://www.thehindu.com/todays-paper/tp-national/tp-tamilnadu/municipality-opens-helpline-for-complaints/article6671397.ece

[6]http://stackoverflow.com/questions/8185006/how-to-create-a-newsfeed-ajax-newsfeed

[7]http://ieeexplore.ieee.org/xpl/articleDetails.jsp?arnumber=6011397&queryText=Website&newsearch=true

[8]http://www.ijettjournal.org/archive/ijett-v44p20 "The Cloud and SOA-Creating Architecture for Today and for the Future"-T.Suganya, T.NIthya, A.C.Sountharraj