Revamp Of Property Tax (VMC)

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Introduction

- These days, we don't need to go to a certain office to pay the bills and collect all those paperwork, therefore the answer to some social problems is extremely effective. With the use of the internet, managing your property tax is quite simple in the modern era.

- Applications enable us to lower the barrier between the public from the government with the use of an online property tax unit. Many problems have been solved more quickly than normal thanks to transparency between the user and the authorities. By reducing time and cost, the Online Property Tax module offers an online solution for both consumers as well as the VMC.

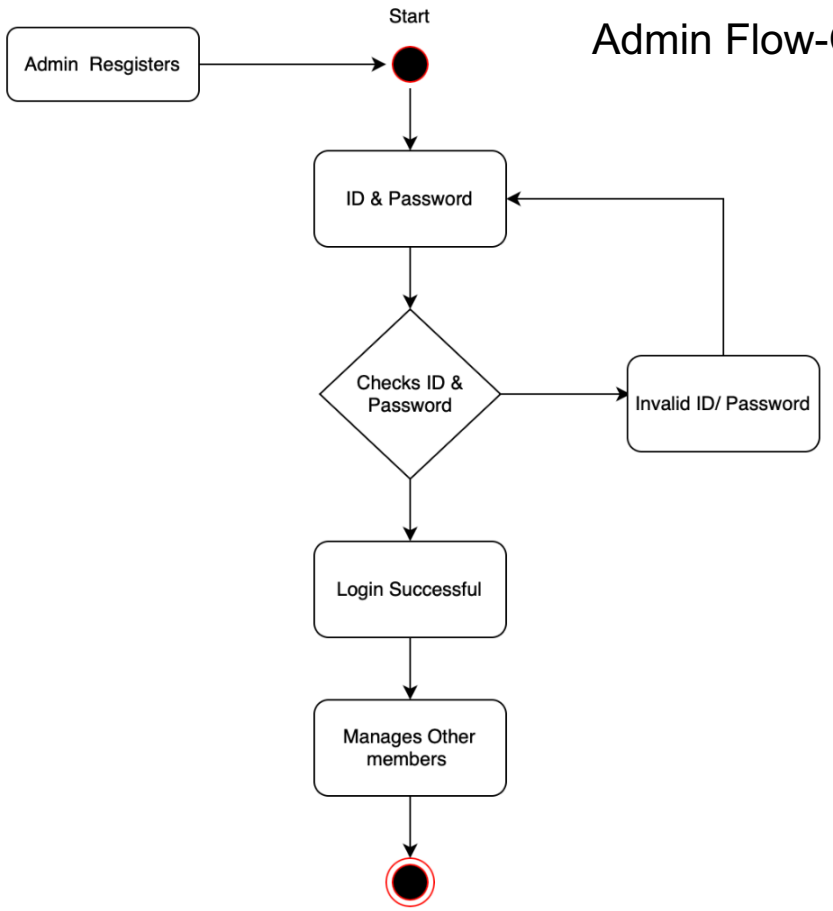
Problem Statement

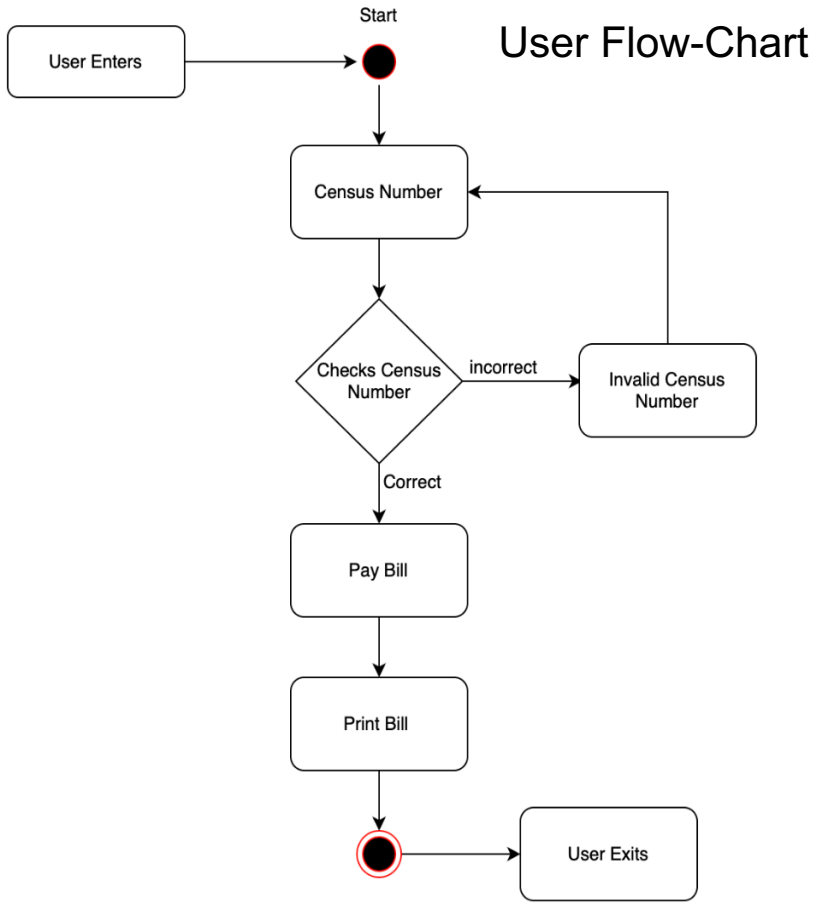
- We are attempting to improve the property tax module that is currently operational in VMC (Vadodara municipal corporation)
- The primary justification for working on this issue is that the module they are utilizing is out-of-date and only supports Windows XP.
- Second, the system now in use at VMC has a number of faults.
- Therefore, our primary goal is to revamp the entire application and make it work in a new version with increased security so that the VMC and users can access the portal from any device and can manage their taxes without any difficulties. Additionally, because many citizens don't understand the language, we plan to add multiple language options so that everyone can easily access the module.

Summary

Sr. number	Paper Title	Publisher	Year	Take-away points
1	**Implementation of Online Tax System**	Prayoga Bestari, Obsatar Sinaga, Mohd Haizam, Mohd Saudi	2018	Implementation of Online Tax System. Journal of Advanced Research in Dynamical and Control Systems, 10(Special Issue 3), 1104-1112.
2	**An empirical study on the impact of quality antecedents on tax payers' acceptance of Internet tax-filing systems**	I-Chiu Chang, Yi-Chang Li, Won-Fu Hung and Hisn-Ginn Hwang	2006	The National Tax Administration (NTA)
3	**e-payment system for municipal services**	B. V. Desai and P. R.Vakharia.	2011	The system architecture, database design, and implementation specifics are covered in the article.
4	**The Incidence of the Property Tax and Property Tax Preferences.**	Borg, MaryO., Stranahan, Harriet A., and William Voorhees.	1983	The property tax assessment system—more particularly, property tax appeals—affects vertical equity in property taxes.

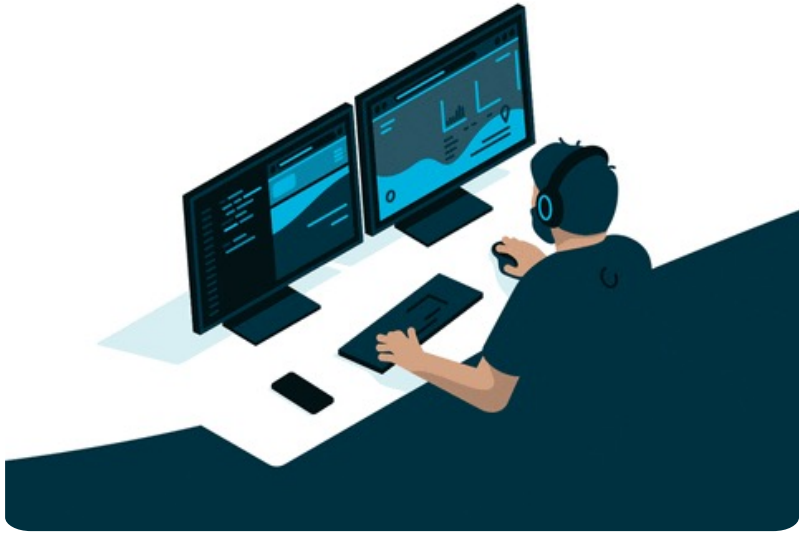
Flowchart of the system





Implementation Details

- As we moved towards the establishment of logic, we began to analyze the method for calculating taxes from many sources, mostly from the information supplied by the government itself, in that we learned a significant amount of information after a quick analysis of the resources.
- Additionally, programming logic was added to the formulae to make the website functional and capable of appropriately calculating taxes.



- The Vadodara Municipal Corporation (VMC) will be able to easily collect taxes and even change a few aspects in the future thanks to the big addition of several new capabilities to the web-app that we have made in addition to the work done on the UI.
- In this section, we worked closely on both the admin and user panels.
- Users can evaluate the entire bill they got through examining the payment details, the bill, and the circumstances that caused it in detail.
- As in admin, we've introduced several features including the ability to give responsibilities to members, fill out aakarni forms, update factors, and print an entire ward's worth of user bills at once.

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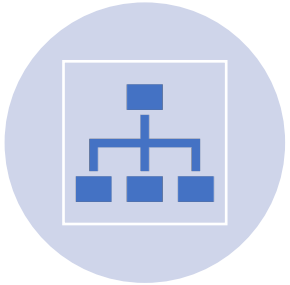

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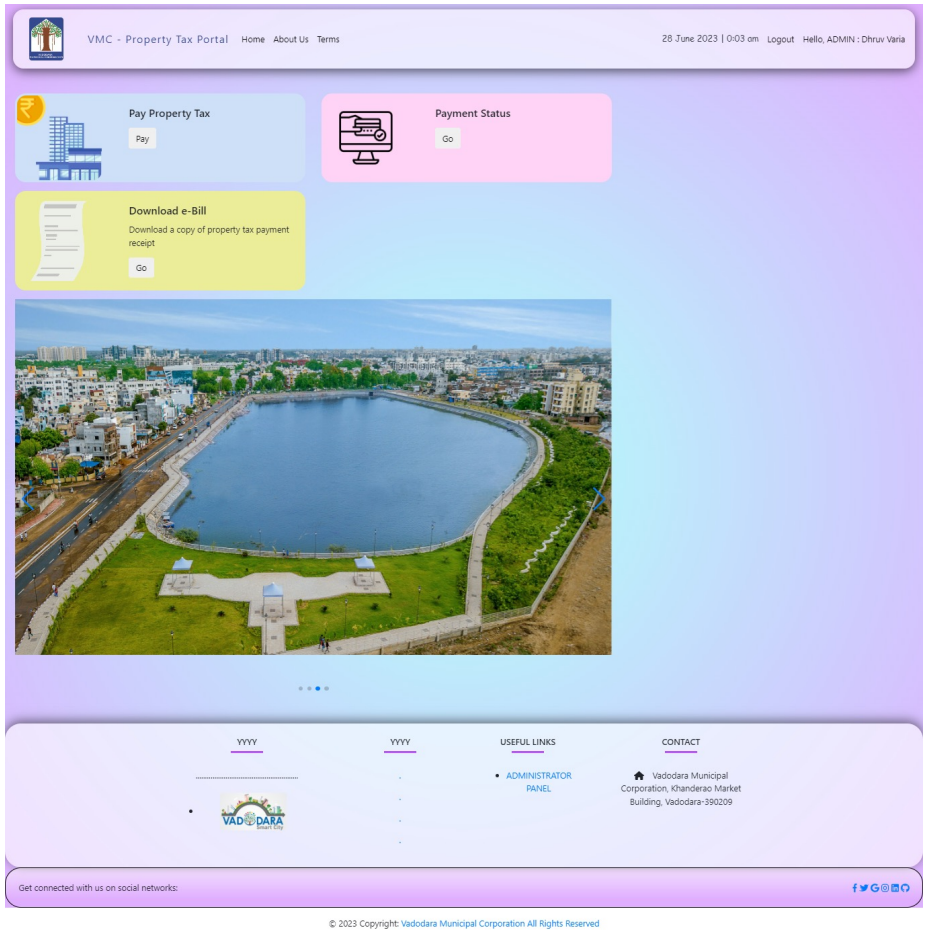
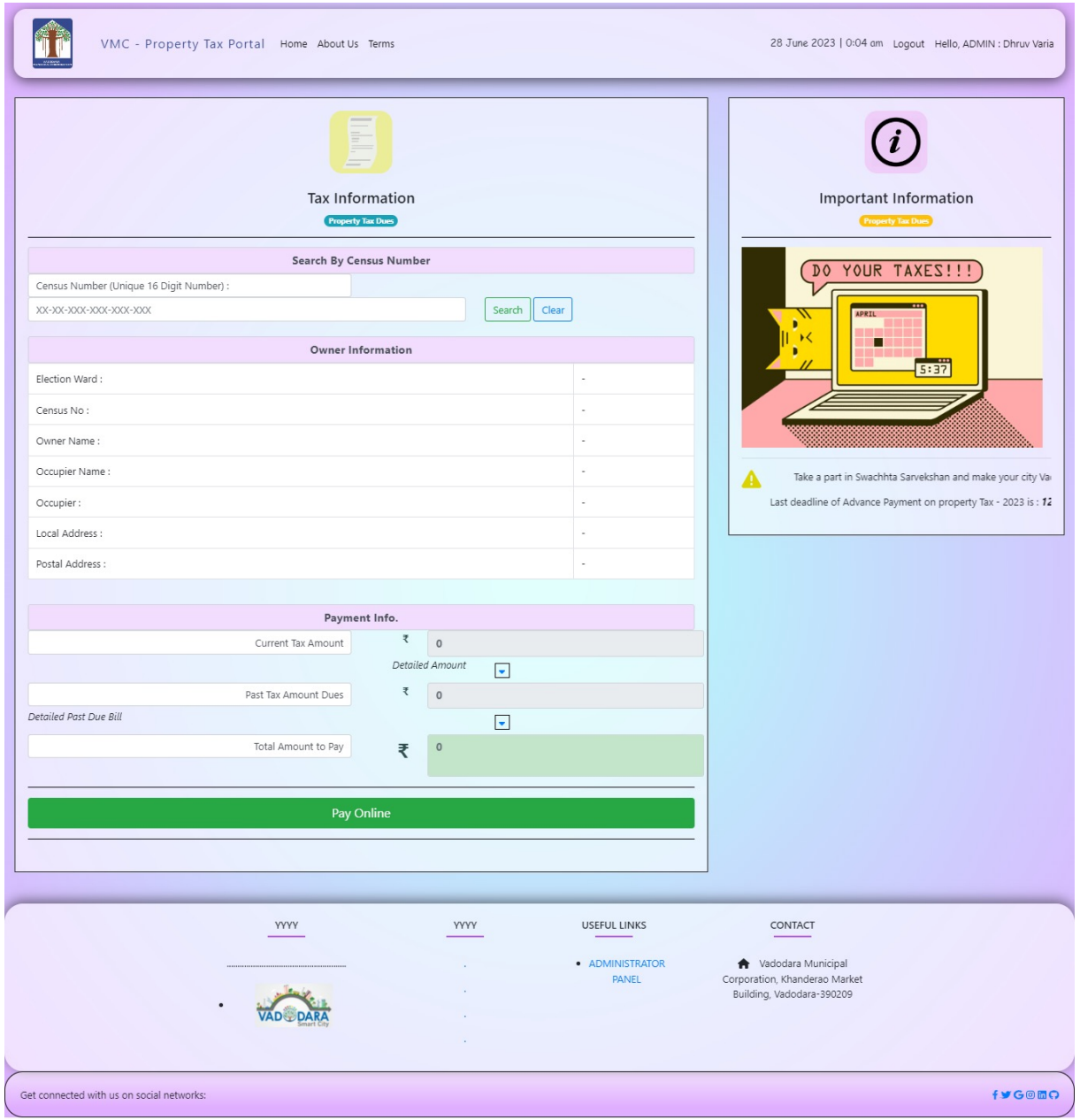


Screen shots of implemented work

❖ Web App UI changes:-

- As with the previous design, everything was operating flawlessly, but after a little research, we learned that there may be some people who have color blindness or another ailment that prevents them from seeing dark colors, so we altered the entire UI to a bright theme.

User Panel :-


VMC - Property Tax Portal
Home
About Us
Terms
28 June 2023 | 0:04 am
Logout
Hello, ADMIN : Dhruv Varia
Tax Information
Property Tax Dues
Search By Census Number
Census Number (Unique 16 Digit Number) :
XX-XX-XXX-XXX-XXX-XXX
Search
Clear
Owner Information
Election Ward :
Census No :
Owner Name :
Occupier Name :
Occupier :
Local Address :
Postal Address :
Payment Info.
Current Tax Amount
Detailed Amount
Past Tax Amount Dues
Detailed Past Due Bill
Total Amount to Pay
Pay Online
Important Information
Property Tax Dues
DO YOUR TAXES!!!
Take a part in Swachhta Sarvekshan and make your city Va
Last deadline of Advance Payment on property Tax - 2023 is : 12
YYYY
YYYY
USEFUL LINKS
ADMINISTRATOR PANEL
CONTACT
Vadodara Municipal Corporation, Khanderao Market Building, Vadodara-390209
Get connected with us on social networks:
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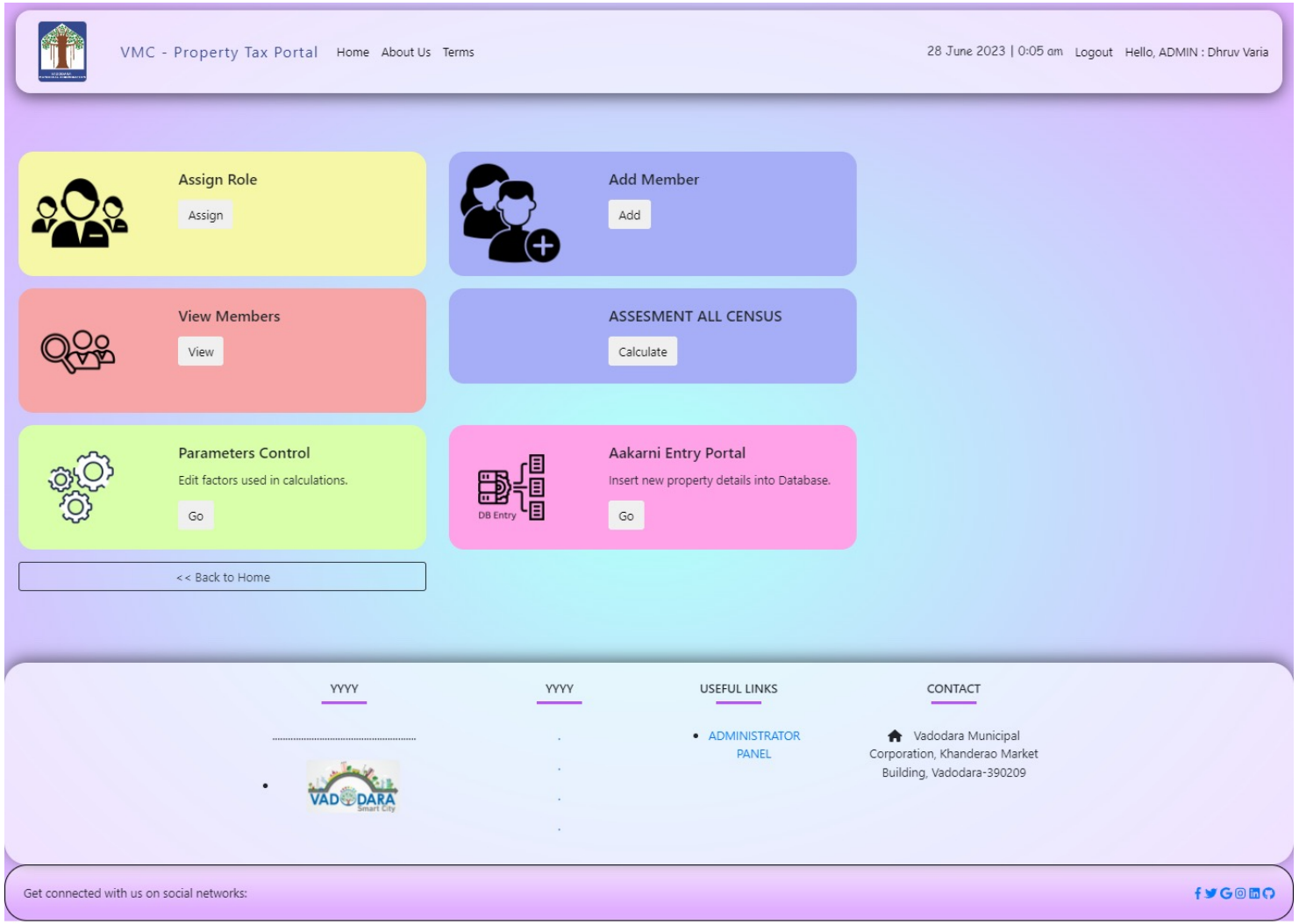
VMC - Property Tax Portal
Home
About Us
Terms
28 June 2023 | 0:05 am
Logout
Hello, ADMIN : Dhruv Varia
Assign Role
Assign
Add Member
Add
View Members
View
ASSESMENT ALL CENSUS
Calculate
Parameters Control
Edit factors used in calculations.
Go
Aakarni Entry Portal
Insert new property details into Database.
DB Entry
Go
<< Back to Home
YYYY
YYYY
USEFUL LINKS
ADMINISTRATOR PANEL
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Vadodara Municipal Corporation, Khanderao Market Building, Vadodara-390209
Get connected with us on social networks:
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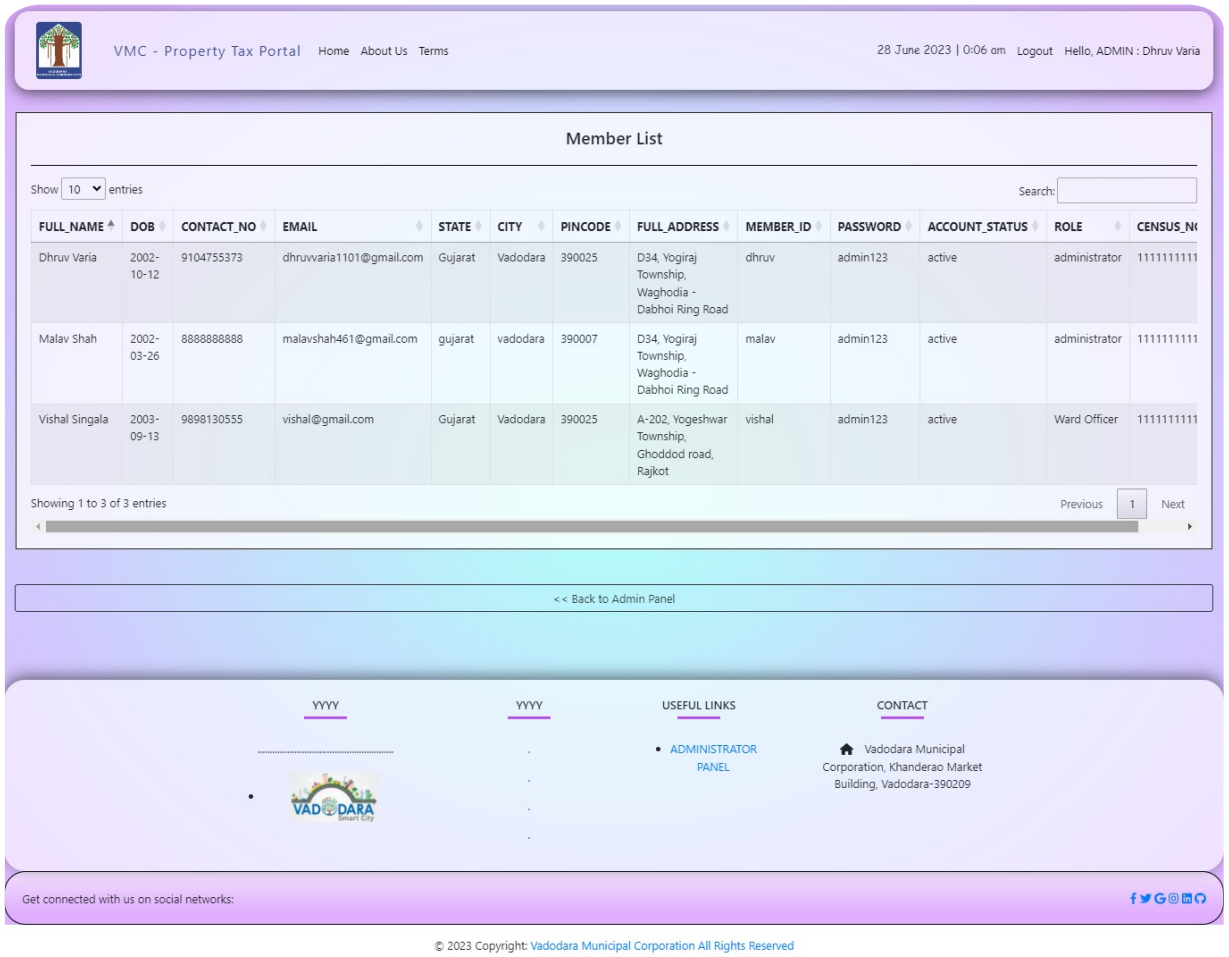
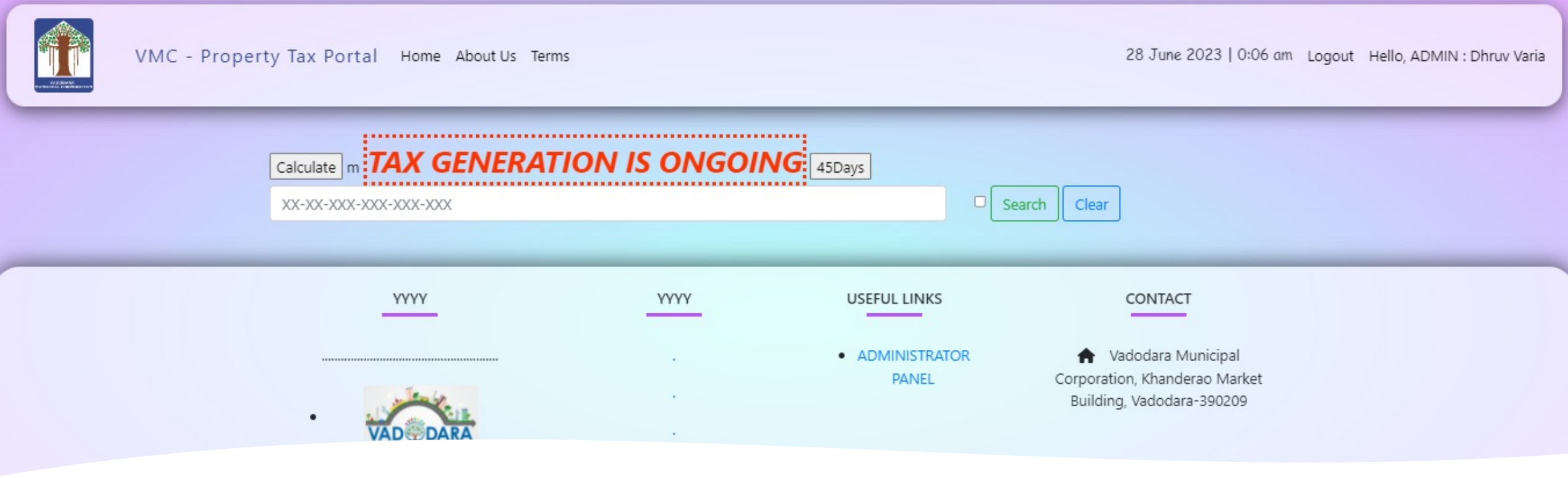
Admin Panel:-



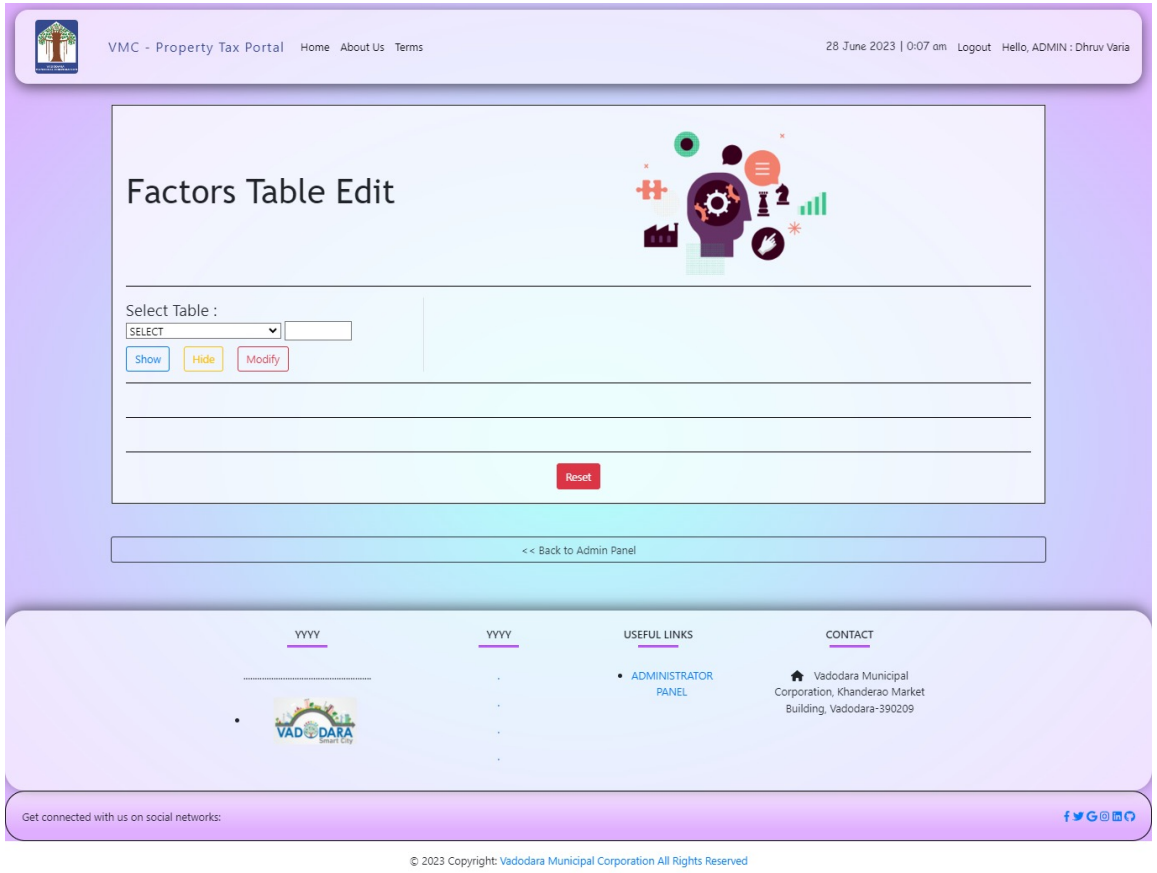
View Members:- (Admin Panel)

- The administrator will be able to view all the members and their duties in this module.



Bill Generation :- (Admin Panel)

- With this module, the administrator may easily produce all the invoices for the citizen with only one click.

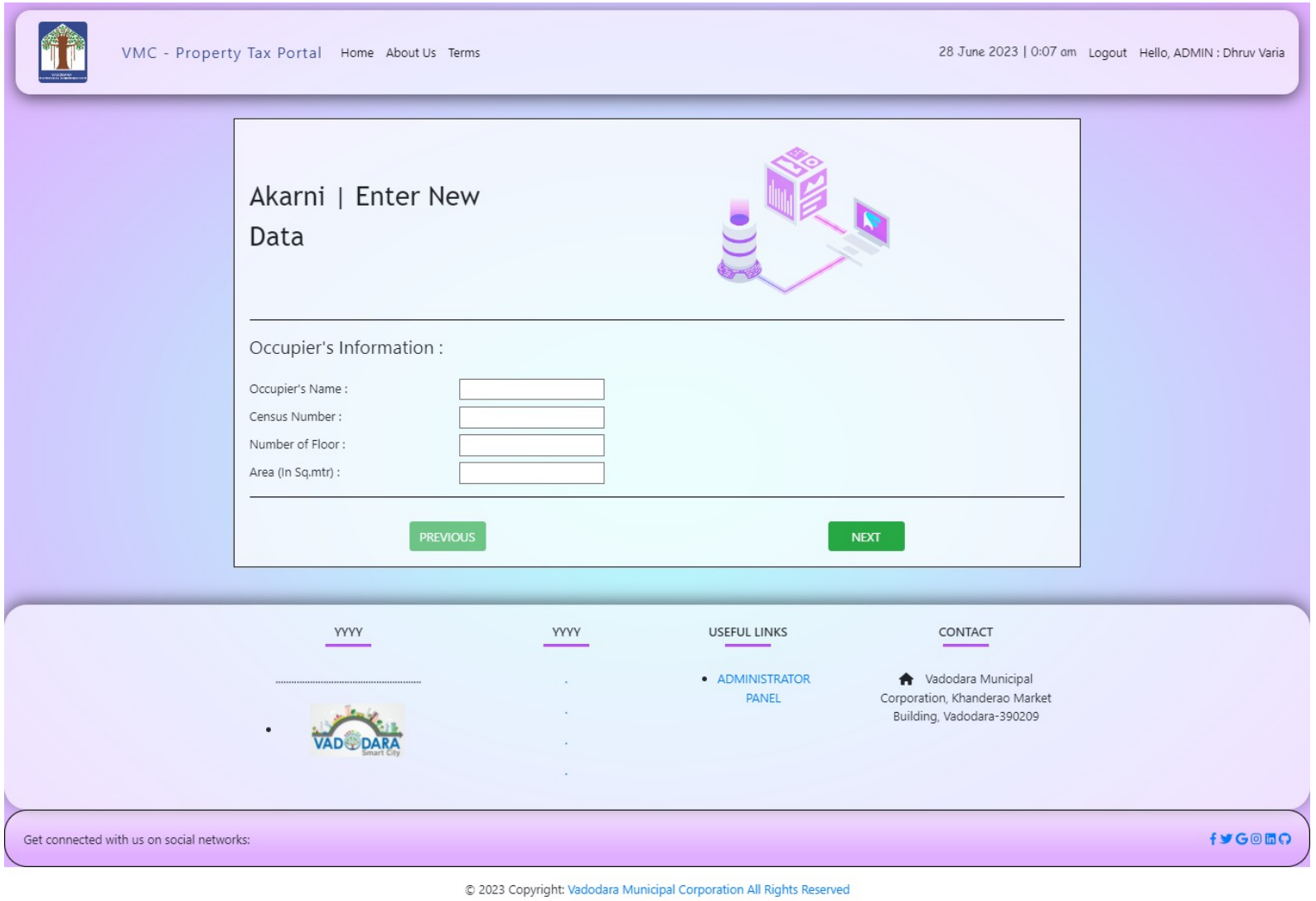


Factor control:- (Admin Panel)

- The administrator will be able to alter every single factor that determines the bill's total in this.
- It will make it possible to adjust the value according to a new scheme rolled out by the government without having to update the internal code.

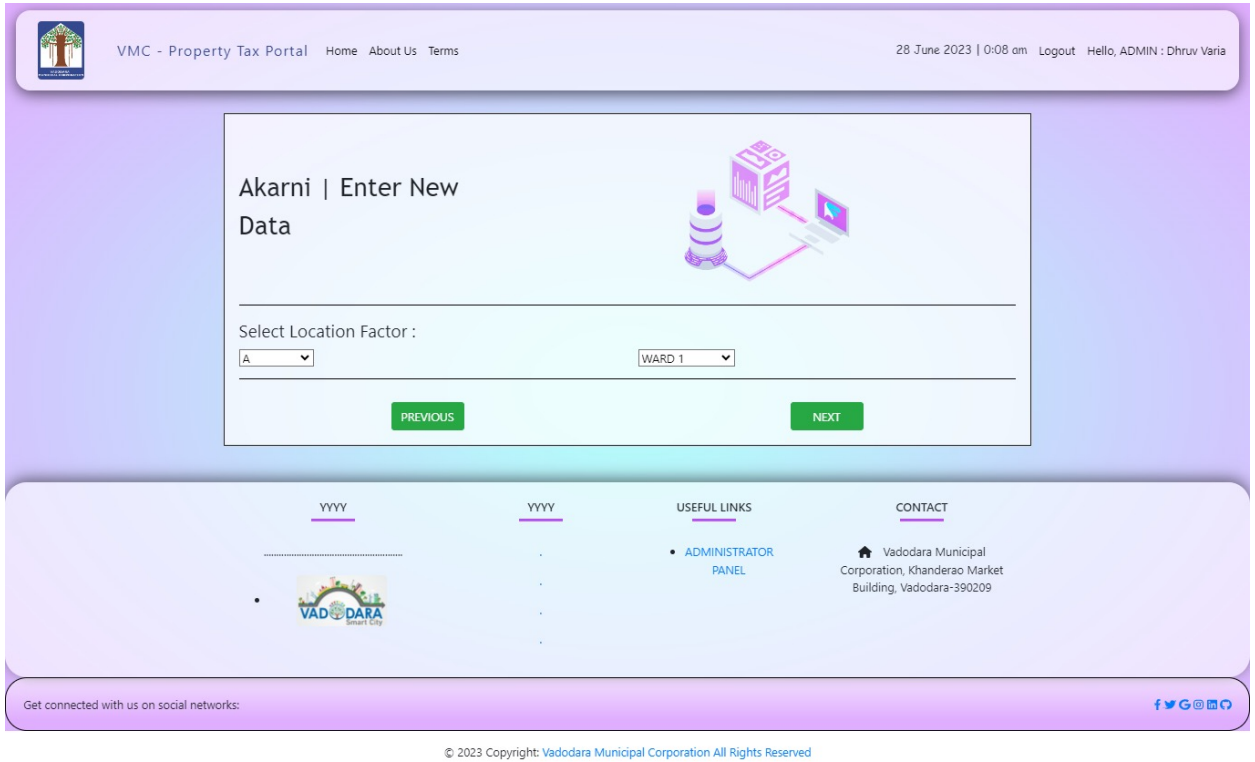
Aakarni form :- (Admin Panel)

- For new building in the city, aakarni forms are completed and reviewed by officials to produce appropriate bills based on the construction's area and many other factors.
- This module has been broken down into different sections to allow the individual entering data to do it accurately and without making mistakes that might effect the bill.
- Aakarni forms were previously filled out on paper in a physical manner, therefore we sought to convert them to digital form so that the task may be completed immediately in the database.

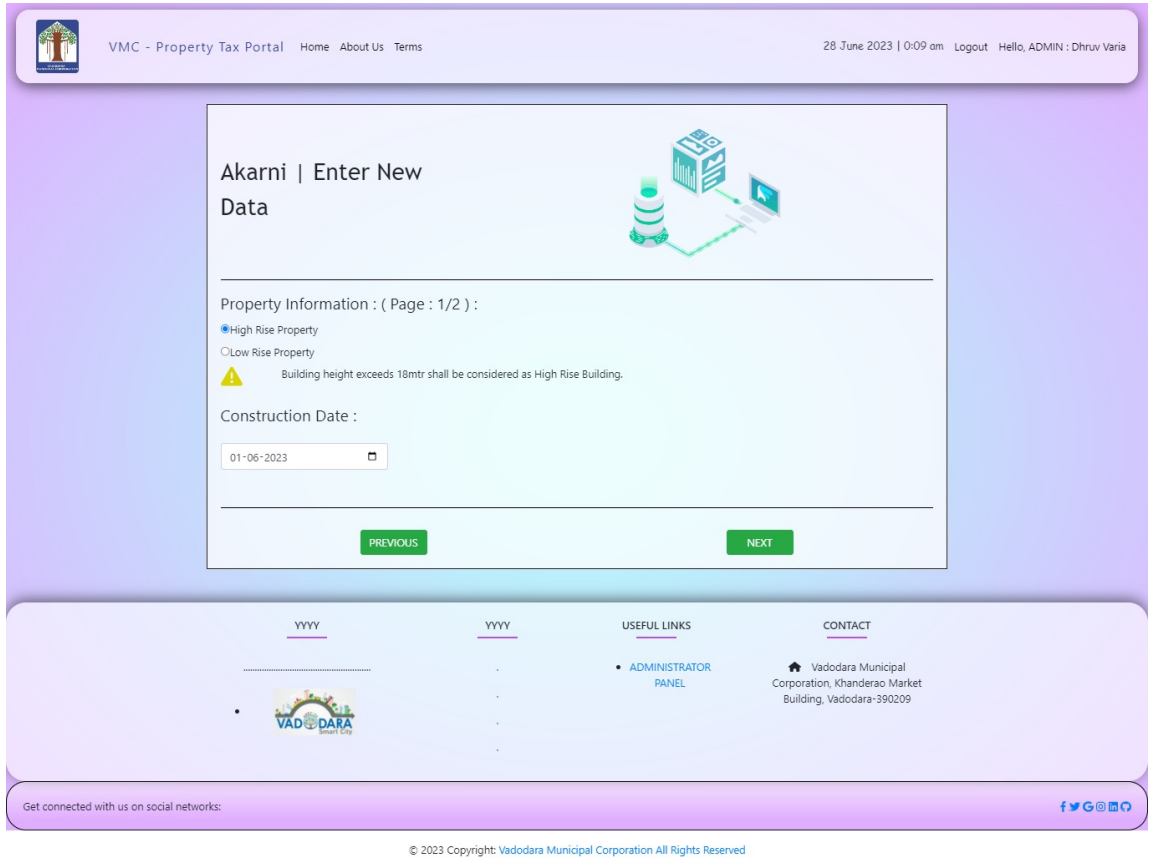


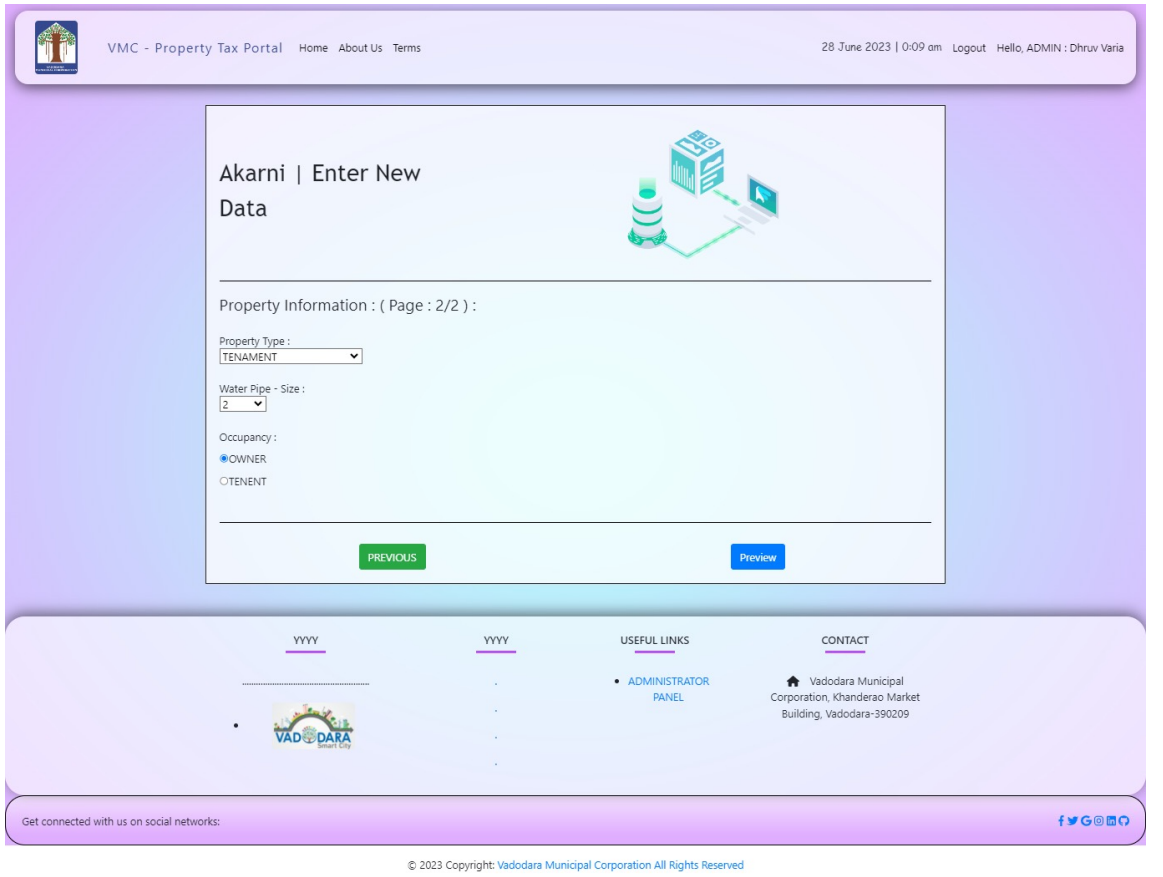
Aakarni form:- (Page-1)

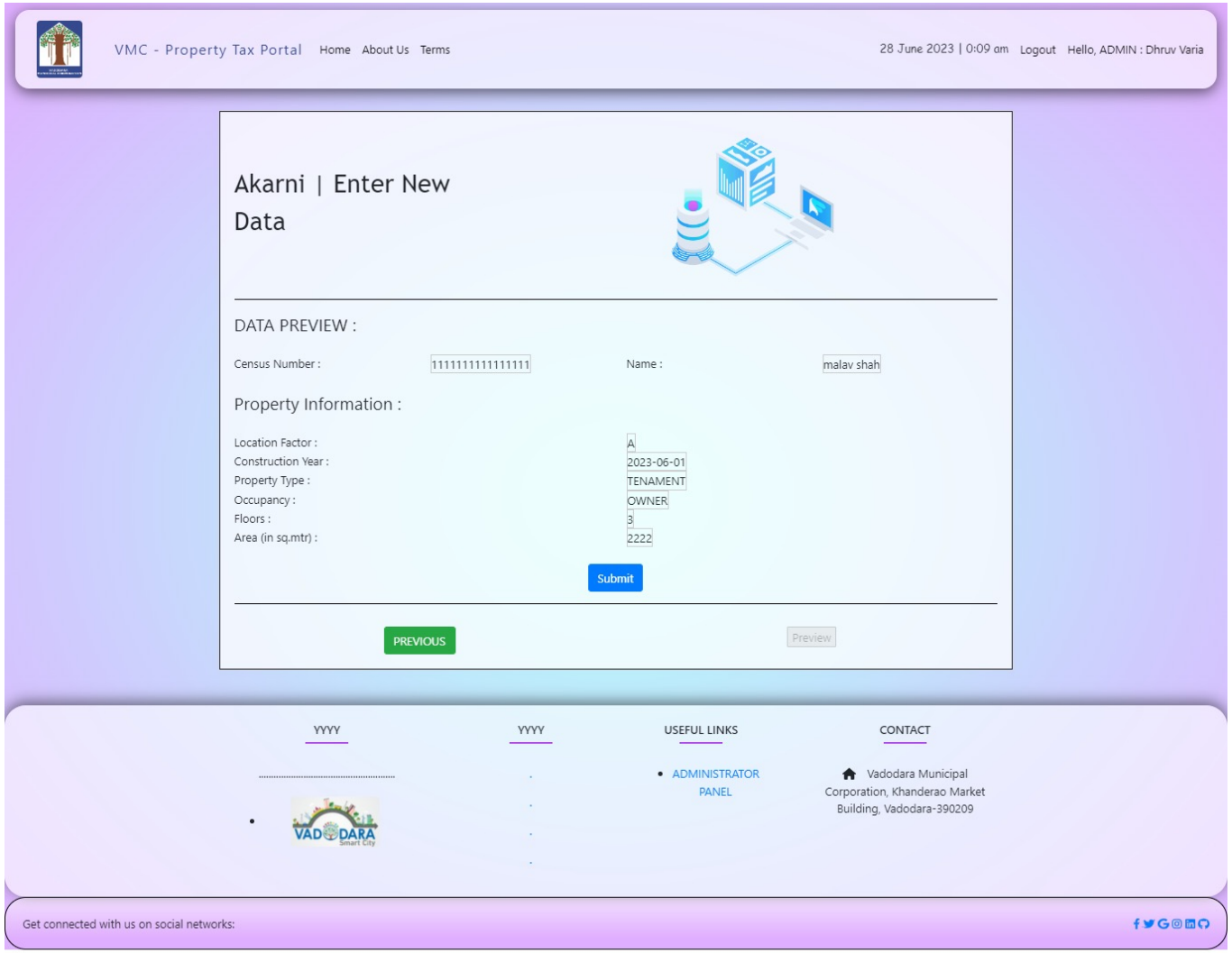
Aakarni form:- (Page-2)



Aakarni form:- (Page-3/4)







Aakarni form:- (Page-5)

Conclusion

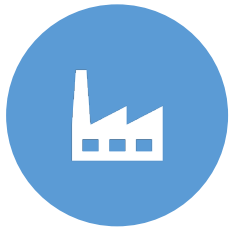
- Many find it challenging to find time in their hectic schedules to visit government offices. We are developing a website that will serve as a platform for online tax payments, allow users to take advantage of any reductions straight from the website, and facilitate communication between the government and users/individuals.
- As a result, assist the sponsors in identifying the occasions where they might promote their goods or services. The online tax module for VMC needs to be updated in order to cut costs and the perceived barrier between the public and government. Taxes are without a doubt the most strategically significant source of state income, particularly for local governments. Several adjustments have been made to tax collection campaigns and practices to make it easier for customers to pay their municipal taxes.
- The implementation of an electronic tax system, or online tax, is one of these advancements. Information technology might be used to advocate taxes and, in this case, increase taxpayer compliance. Therefore, this web portal will affect thousands of people.

Future Work

WE WILL EVALUATE THE DATA FROM THE REMAINING WARDS IN THE FUTURE AND CLEAN UP THE NOISY DATA.

WE ARE BUILDING A STRONG SYSTEM THAT WON'T BE VULNERABLE TO SECURITY THREATS.

WE WILL BE FOCUSING ON THE INDUSTRIAL SIDE OF CALCULATIONS .



DEVELOPING THE FRONT END FOR INDUSTRIAL TAX.

ENHANCING THE COMPUTATION METHODS.

References

[1] Bestari, P., Sinaga, O., Haizam, M., & Saudi, M. (2018). Implementation of Online Tax System. Journal of Advanced Research in Dynamical and Control Systems, 10(Special Issue 3), 1104-1112.

[2] Chang, I-C., Li, Y-C., Hung, W-F., & Hwang, H-G. (2006). An empirical study on the impact of quality antecedents on tax payers' acceptance of Internet tax-filing systems. Information & Management.

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Thank you