POWERCOM

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Abstract

Powercom is a python-based project. PowerCom is a platform which provides you the solution for the very basic issues related to Electricity faced by the people, which has the characteristics of being large-scale data and real-time, as well as requiring a high level of security. Nonetheless, there are concerns about the security of systems administration and protection of correspondence data.

Here, the client establishes a connection with the server, this implies that the TCP protocol is being used. For each new arriving Client, the Server should create a new thread, to accomplish this feature we took care of concurrent thread, that is, when the number of connections is made with the server, that time each thread doesn't interfere with one another. Therefore, we synchronized the threads. Bringing transparency in the existing system is very urgent and has turned into a famous theme now a days. This system puts a lot of trust in the Electricity Department. It manages the security of information during the enrolment of the users and maintaining the record of their data and giving them right and factual information. It brings everyone on a same platform, no one will get the information on priority basis and they will be treated equally. It additionally guarantees that the citizen is an enlisted and interested user who is ready to enjoy the features of the Powercom. The execution result shows that it is a practical and secure Powercom framework, which takes care of the issue of lack of transparency in the current system.

1. INTRODUCTION

Electricity is one of the most important sources in the life of a human. Especially now that we have entered the 21st century, there is hardly anything that does not work on electricity. However, due to the huge demand for electricity worldwide it has become difficult to manage. However, if proper steps and measures are taken to Save Electricity then it is possible that both mankind that is to come and the mankind currently existing can use them.

There are few platforms regarding electricity but mainly they include bill payments and, Usually, users only use online platform for payment services.

Today's generation needs everything on their phone with all the needed features. Features that can ease the day today life of people.

Many old offline services, including payment, and instalment, are migrating to digital websites due to improvements on the Internet, information technologies, and data breakthroughs developed. Powercom is another name for online electricity services. It provides you the solution for the very basic issues related to Electricity faced by the people. Users of Powercom are citizens of India that breathe eat and sleep in this country. PowerCom will provide you the following information-1. When there will be a Power cut. 2.When electricity will get restored. 3.Users can see the live billing of their Meter Box. 4. Bill payments option for the user. 5.You can register complaints related to supply and also view status of your complaints/requests. The citizen can see his/her data digitally from the powercom without visiting any offline office and standing in the queue and giving their precious time and effort to a thing that can now be solved through powercom which is getting more and more attention instead of the conventional way of handling electricity work. Powercom is directly linked to the electricity suppliers or we can say that they act as a middleman between electricity department and people. With

the advancement of the Internet, powercom will become the part of day-to-day life.

Now a days, there is a 24*7 need of the electricity but still due to some irregularities or faults we get to face problems. With the help of powercom we can at least reduced the number of problems. Due to the current opaque system, it is difficult to organize data and show to the users. Powercom is a moving assignment to guarantee to bring transparency between the people and the Electricity department with Accuracy, Simplicity, robustness, security, and dependability of the client and the framework. To give people the right information we need all the user's information and its application modules should be put in the Cloud framework, and it should be completely secure that unauthorized persons cannot access it. With the increase in usage of cloud computing services, data security and integrity are a major concern among various organizations. The purpose of the research here is to ensure security and reliability using Database in the Powercom. The proposed systems do not reveal any information to the intruders at any level of the polling system and hence the outcome can be achieved using the online system with Security, Confidentiality, and integrity.

2. MOTIVATIONS

During 2020 or in the middle of the covid pandemic, people were experiencing innumerable electricity disconnections. Owing to this, the devastation to common people was that nobody knew for how long these electricity failures were. For example, on a commercial level, the warehouses were also losing their electricity backups due to long power cuts. If they would know the time of these frequent electricity failures, they would be able to manage work accordingly, maybe in shifts. One of the major reasons for the downfall in electricity is that it was supplied to farmers at peak times for agricultural needs. In this regard, if there was transparency in the system of electricity usage, many would be able to plan work effectively and also saved money resources. Overall, in my view, there is a lack of accessibility to common people about electricity consumption

information regularly as no data is being present to them in this way, except for getting bills every month end. This way, people are unaware of how much electricity they consume. This also raises a big question if people have that transparency, they might be able to use electricity by keeping a vouch on it, without wasting it and saving it for future needs. These limitations related to electricity information have given us the vision to put on a major need of powercom to be introduced.

3. PROJECT DESCRIPTION

The main reason to create PowerCom is to bring transparency between the people and the Electricity department. Govt. and Private companies that provide electricity will get benefitted as they can found the Electricity Bill Defaulter with the live billing(cable hooking). People can frequently check their power consumption. It leads to transparency in the system. Time and money can also be saved as Factories can utilize the time when there will be no electricity. The web-based framework ought to fulfil the essential prerequisites like the product utilized ought to be relied upon should be trusted and secure. It will be a secure framework because the registered users can login without the interference of any third party. This Powercom platform is extremely easy to use and very efficient. This system does not require much effort. Once the system is understandable to everyone then this would be a transformational change.

4. SOFTWARE DESIGN

I. A secure server that only allows clients with authentic Id.

II. Server checks for the authenticity of the client & also checks if the client has logged in or not.

III. Users are registered by admin and the user's data is stored in database.

IV. Server can take the client's name and password and add it in the database.

V. If details match, then the user is redirected to the its homepage.

VI.   The users can pay the bill through the bill payments section.

VII.   The system (server) can handle multiple clients and creates a new thread for each of them.

VIII. One client can have one id only.

5. TOOLS USED

- Technology: Python

- IDE: Pycharm/Atom

- Client-Side-Technologies: HTML, CSS, JavaScript, Bootstrap

- Server-Side-Technologies: Python

- Data Base Server: Sqlite

- Operating System: Micro. Windows/Linux

6. IMPORTANT MODULES

I.   CLIENT MODULE – It includes a login number that is already there for the user that he or she can use to access the platform. The admin will deliver this to the client. After the client has successfully signed in, he will be able to use the facilities that powercom provides.

II.   ADMIN MODULE – It comprises a login name and password of the admin through which the system will be connected to the server and further processes will be executed such as registration of the new user and admin home page window.

7. DISCUSSIONS

By doing this undertaking We could bring another framework to make people's life easier. With the incoming innovation and the Internet in our everyday life, we could offer propelled casting a transparent framework to people both in the nation and outside through our web-based framework.

8. CONCLUSION

Powercom is a platform which can provide solution for the very basic issues related to Electricity faced by the people. As it will provide the following information that when there will be a Power cut and when electricity will get restored. Moreover, users can see the live billing of their Meter Box. Also, it will provide bill payments option for the user. Finally, one can register complaints related to supply and also view status of your complaints/requests.

The main reason to create powercom is to bring transparency between the system and user.

Powercom platform offers the most helpful facilities for domestic and commercial use. Powercom provides various facilities on a single platform makes the life people easier.

9. ACKNOWLEDGEMENT

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