

## ONLINE ELECTRICITY BILLING SYSTEM

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### ABSTRACT

With the growing advancements in this technological era, convenience is becoming increasingly important for everyone. Nowadays, people prefer to use a digital system, rather than stand in long lines for hours. Many sectors have undergone change as a result of this digitalization, altering their traditional and hectic workflow. But, there are still some prominent sectors left that are not properly utilizing web technologies and the electricity department is one of them. In most regions, the electricity department is practicing manual workflow over a digital one.

Automated systems are required for all large electricity distributing companies throughout the country in order to provide more convenience to customers and employees. It has been discovered that there are many errors and mishandling of manual systems. In this paper, we propose a new adaptive mechanism that reduces all of the losses in the current system.

**Keywords:** Electricity Billing System, Bill Payment, Electricity Bill.

### I. INTRODUCTION

The project is a web-based application that allows users to receive an instant electricity bill and pay it online with a credit card, debit card, or UPI. The system automates the traditional process of paying an electricity bill in person. Users must stand in line to pay their bills and wait their turn. The procedure is tedious and time-consuming. They even have to wait for the bill to be delivered to their home, and this process is too complex for just some minor changes in their personal information too. As a result, the proposed system is designed to automate the calculation and payment of electricity bills for user convenience.

This project improves the user experience and reduces manual work for employees. It handles all the user requirements, such as bill payments, complaints, suggestions, and inquiries. This will eliminate the disadvantages of standing in line and gathering information.

### II. COMPARATIVE STUDY OF EXISTING SYSTEMS

Many changes have occurred in electricity departments over the last few years, but they continue to use manual billing systems. If you have ever gone to an electricity department office, then you must know how difficult and time-consuming it is to pay your bills and ask for other services, even if it is for small tasks such as an address change or name correction. You have to wait in a queue for a long time to access any of these services.

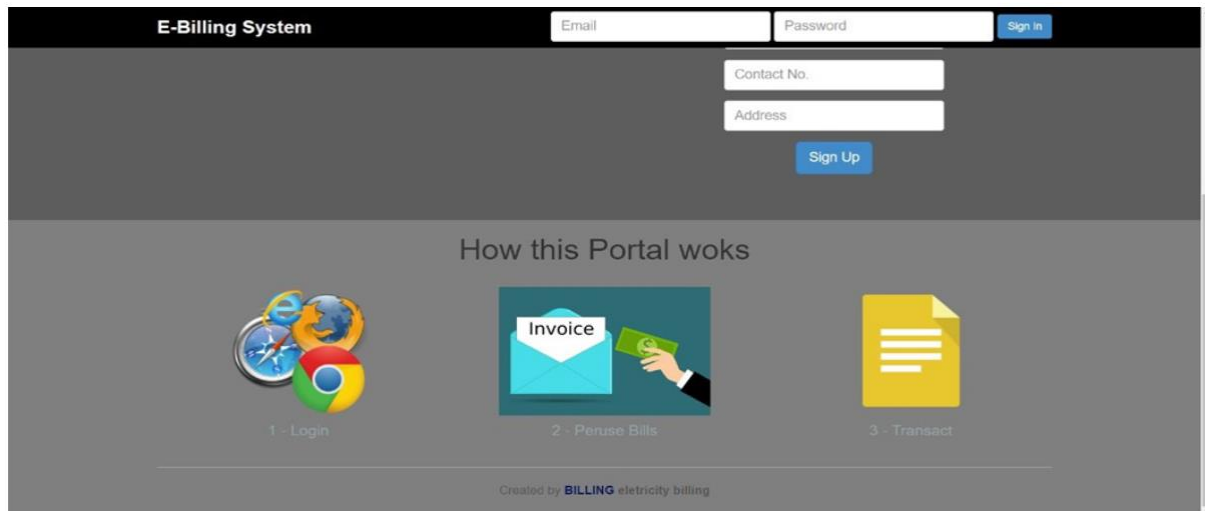


This manual system has a number of drawbacks, including billing errors, the ability to avoid punishment for late payments, the need for manpower to bill and collect bills, and the waste of paper billing. There are loops and an absence of systematic workflow. However, there are few automated mediums that are not well-built and fully functional.

### III. SMART ACCESSIBILITY MAP

#### Methodology

The system would have two logins: admin and user. Admin has access to user account details and can add or update items in their account. Admin must enter data on electricity usage into the system for each user's account. The information about each user is stored in a database. Every month, the system calculates the electricity bill for each user and updates the information in their account.



The user can then view their electricity bill and pay it on the spot before the end of the month. If the user is unable to pay the bill by the end of the month, it calculates a fine for each day. The users can also access some other services related to them. Users will receive detailed information about their bills and the units consumed, and the system will notify them of any missed payments and upcoming information.

#### Dependencies

The major requirement for the resources for designing and developing the proposed smart map is as follows.

- HTML
- CSS
- Javascript
- PHP
- MySQL

**HTML:** It stands for Hyper Text Markup Language. It is the standard markup language for creating web pages. It describes the structure of a web page. HTML consists of a series of elements. HTML elements tell the browser how to display the content.

**CSS:** It stands for Cascading Style Sheets. It describes how HTML elements are to be displayed on the screen, on paper, or in other media. It can control the layout of multiple web pages all at once and saves a lot of work. External stylesheets are stored as CSS files.

**JAVASCRIPT:** Javascript is a scripting language, primarily used on the Web. It is used to enhance HTML pages and is commonly found embedded in HTML code. JavaScript is an interpreted language. Thus, it doesn't need to be compiled. JavaScript renders web pages in an interactive and dynamic fashion.

**MYSQL:** MySQL is one of the most popular open-source databases. MySQL is easy to use, reliable, and fast. A DB management system that works on embedded systems as well as client-server systems.

The project's front-end was built with HTML, CSS, and JS, and the back-end was built with PHP. We also used MySQL to keep data in relational database management systems.

### IV. CONCLUSION

In this project, we've created a web application for users to pay bills digitally. This project will overcome the drawbacks of the existing electricity billing system and provide more convenience to the user. This software

helps users to pay electricity bill online as well as provide them access to do more tasks easily. The software will work automatically for a long time. Also, this will reduce human effort and make everything more specific.

This project does have a large scope, including one portal for the nation and one portal for each state and district. With the help of the government and high authorities, we can make this project very large scale by collecting data on a large scale and merging all existing systems.

## **V. REFERENCES**

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