Vidyavardhini's College of Engineering & Technology

Department of Information Technology Engineering

Certificate

This is to certify that the following students

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have submitted mini project report entitled

ELECTRICITY BILLING SYSTEM

as a part of their mini-project in partial fulfillment of ***Course (Code) ITM301: Mini Project*** *of Semester _III_ of Bachelor of Engineering in Information Technology during academic year 2023-2024.*

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Electricity Billing System

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***Abstract*—** Electricity consumers are often face with the problem of inaccuracy and delay in monthly billing due to some drawbacks. Thus, it is essential to have an efficient system for such purposes via electronic platform with consideration to proximity. The proposed system automates the conventional process of paying electricity bill by visiting the Electricity Board which is tiresome and time consuming. It is also designed to automate the electricity bill calculation and payment for user convenience. The system is developed with Java swings as the base programming language which can be used to develop websites, web applications and web services. The Microsoft Structured Query Language (SQL)server is also used for creating back-end database. The system would be having two logins: the administrative and user login. The administrator can view the user's account details and can add the customer's information of consuming unitsof energy of the current month in their account. The Admin must feed the systemwith the electricity usage data into respective user's account. The system then calculates the electricity bill for every user and updates the information into their account every month. Users can then view their electricity bill and pay before themonth end

I. INTRODUCTION

Electricity Billing System is a software-based application.

i. This project aims at serving the department of electricity by computerizing thebilling system.

ii. It mainly focuses on the calculation of units consumed during the specified timeand the money to be charged by the electricity offices.

iii. This computerized system will make the overall billing system easy, accessible,comfortable, and effective for consumers.

To design the billing system more service oriented and simple, the following featureshave been implemented in the project. The application has high speed of performance with accuracy and efficiency.

The software provides facility of data sharing, it does not require any staff as in the conventional system. Once it is installed on the system only the meter readings are to be given by the admin where customer can view all details, it has the provision of security restriction.

The electricity billing software calculates the units consumed by the customer and makes bills, it requires small storage for installation and functioning. There is provisionfor debugging if any problem is encountered in the system.

The system excludes the need of maintaining paper electricity bill, administrator does not have to keep a manual track of the users, users can pay the amount without visiting the office. Thus, it saves human efforts and resources.

II. PROBLEM STATEMENT

The manual system is suffering from a series of drawbacks. Since whole of the bills is to be maintained with hands the process of keeping and maintaining the information is very tedious and lengthy to customer. It is very time consuming and laborious process because, staff need to be visited the customers place every month to give the bills and to receive the payments. For this reason, we have provided features Present system is partially automated(computerized), existing system is quite laborious as one must enter same information at different places.

III. DETAILED DESCRIPTION

A. Application :

It is an application where we have used core concepts of JAVA like swing on NetBeans and for database MY SQL (MICROSOFT SQL server)

B. Requirement:

Standard personal computer or laptop with sufficient processing power and memory for development and testing

IV. FEATURES OF THE PROJECT

a. This project system excludes the need of maintaining paper electricity bill as allthe electricity bill records are managed electronically.
b. Administrator doesn't have to keep a manual track of the users. The systemautomatically calculates fine.
c. Users don't have to visit to the office for bill payment.
d. There is no need of delivery boy for delivery bills to user's place.
e. Thus, it saves human efforts and resources.

V. LITERATURE SURVEY

1. **Introduction to Electricity Billing Systems:**
   - Overview of electricity billing systems.
   - Importance and significance of accurate and efficient billing systems.
2. **Electricity Metering Technology:**
   - Types of electricity meters (analog, digital, smart meters).
   - Advancements in metering technology.
3. **Billing Methods and Tariffs:**
   - Different billing methods (flat-rate, time-of-use, demand-based).
   - Tariff structures and pricing models.

VI. METHODOLOGY

As per our approach, we have made use of Java and MySQL for development of the Electricity Billing System.

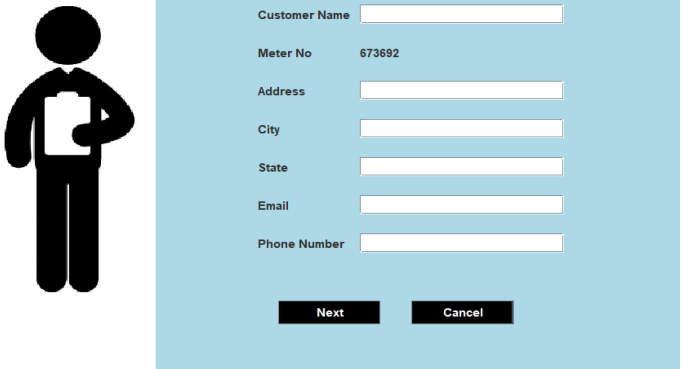
VII. RESULTS

As a result, the java application is created. The glimpse of the generated result are as follows:

LOGIN PAGE:

ADMIN LOGIN PAGE:

New Customer Page:



LOGIN PAGE:

VIII. CONCLUSION

After all the hard work is done for electricity bill management system is here. It is a software which helps the user to work with the billing cycles, paying bills, managing different details under which are working etc.

This software reduces the amount of manual data entry and gives greater efficiency. The User Interface of it is very friendly and can be easily used by anyone.

It also decreases the amount of time taken to write details and other modules.

IX. REFERENCES

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