

Electricity Billing System :

INTRODUCTION

Electricity Billing System is a Desktop-based application.

- This project aims at serving the department of electricity by computerizing the billing system.
- It mainly focuses on the calculation of units consumed during the specified time and the money to be charged by the electricity offices.
- This computerized system will make the overall billing system easy, accessible, comfortable, and effective for consumers.

The main aim of our project is to satisfy customer by saving their time by payment process, maintaining records, and allowing the customer to view his/her records and permitting them to update their details

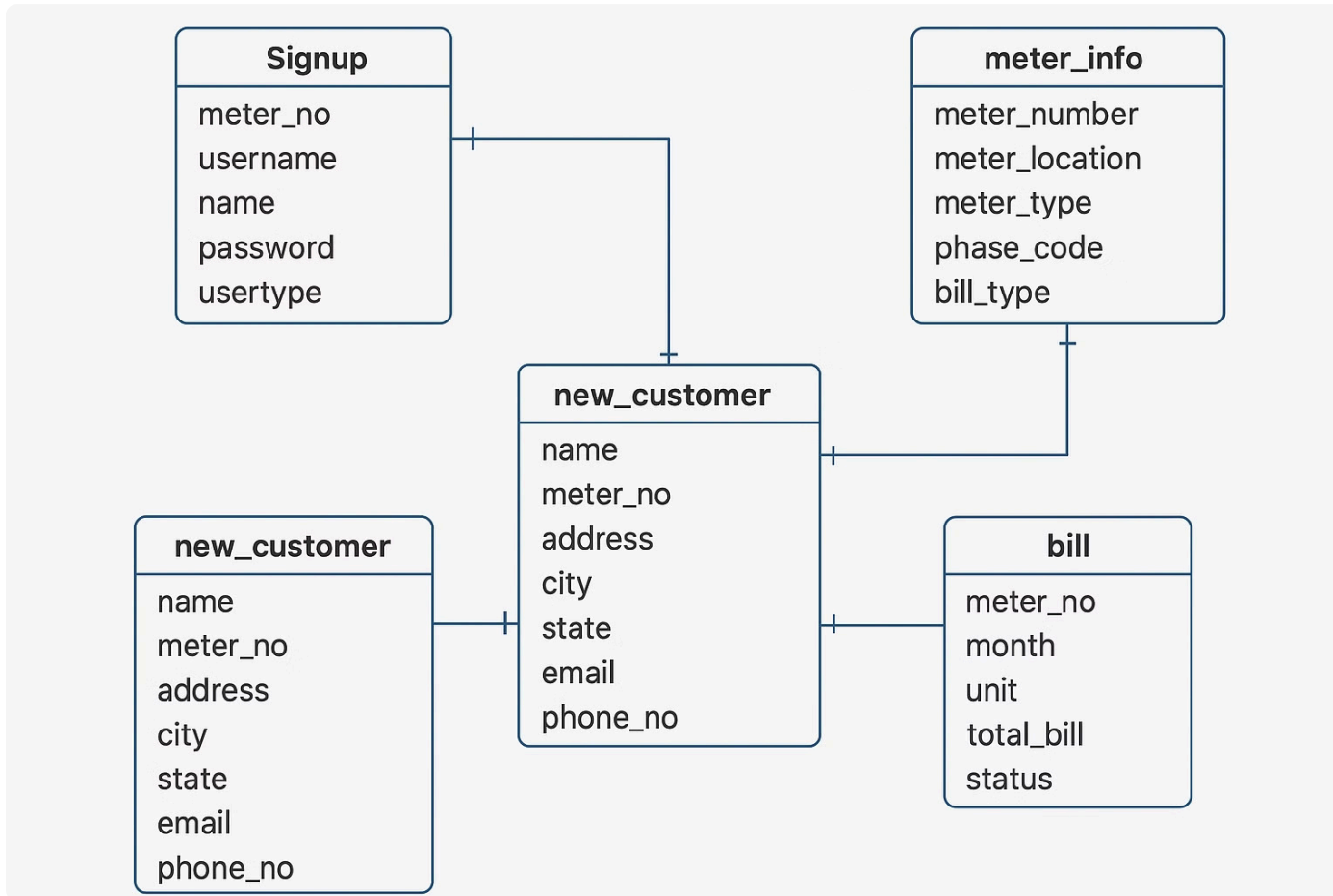
Objective Of The Project

- To keep the information of consuming unit energy of current month.
- To keep the information of Customer.
- To keep the information of consuming unit energy of previous month.
- To calculate the units consumed every month regularly.
- To generate the bills adding penalty and rent.
- To save the time by implementing payment process online.

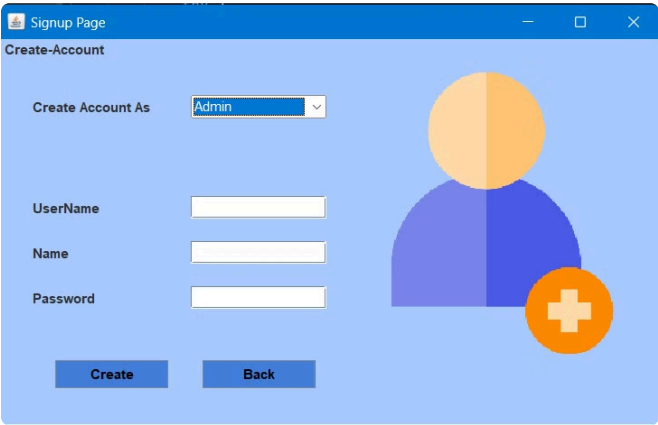
Technology Stack

- Frontend: Java Swing
- Backend: JDBC (Java Database Connectivity)
- Database: MySQL
- IDE: IntelliJ / Eclipse

ER Diagram:



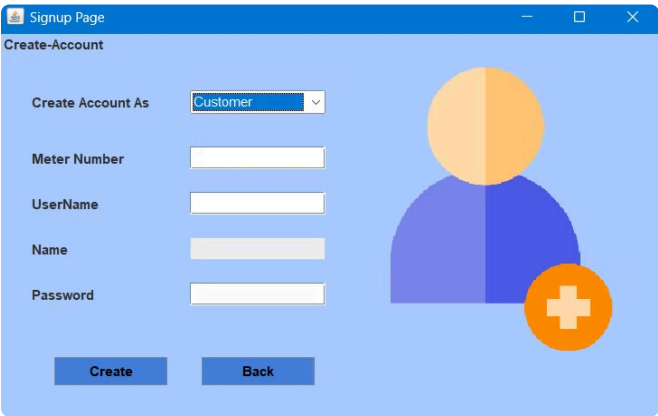
Sign Up



The screenshot shows a web browser window titled "Signup Page" with a "Create-Account" sub-header. The "Create Account As" dropdown menu is set to "Admin". Below this, there are three input fields: "UserName", "Name", and "Password". To the right of these fields is a large orange circle with a white plus sign, representing a profile picture placeholder. At the bottom of the form are two buttons: "Create" and "Back".

- Here New customers/Admin will signup to access their accounts.
- Customers User have to enter meter-no, username, name, password.
- Admin User have to enter username, name, password

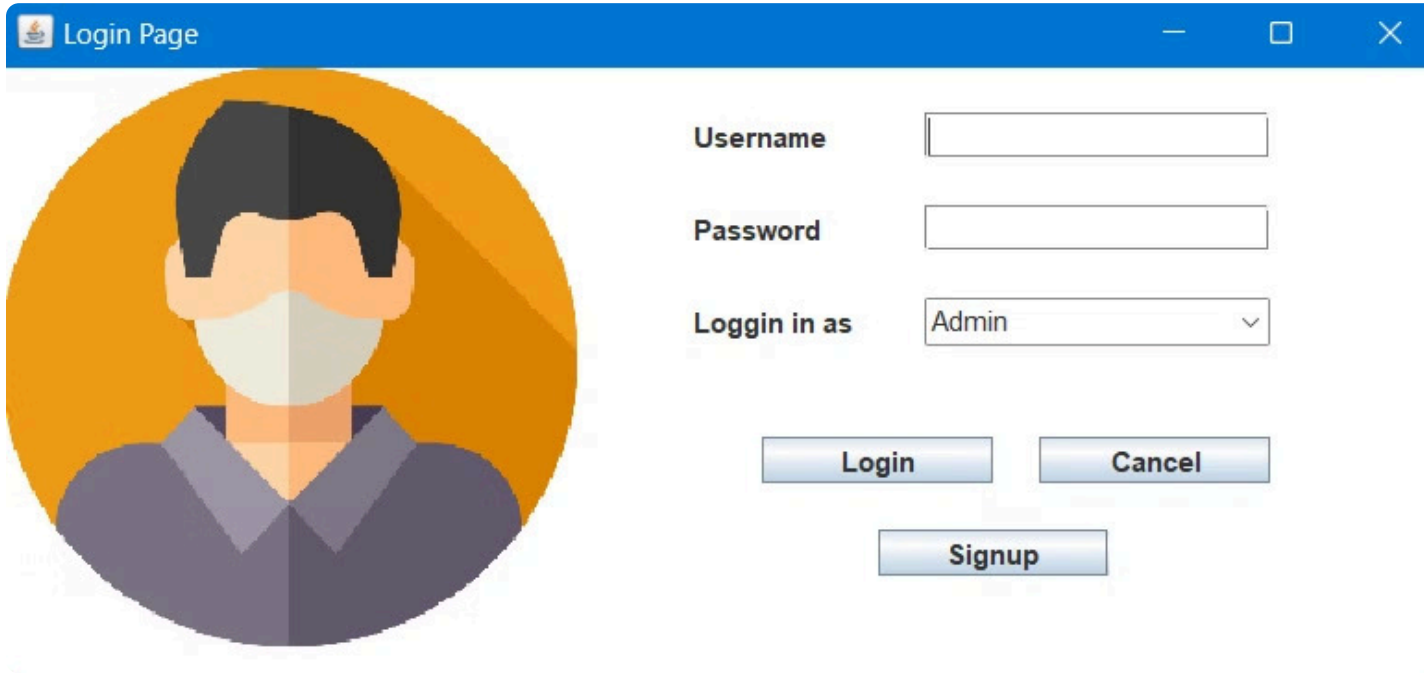
Admin



The screenshot shows the same "Signup Page" but with the "Create Account As" dropdown menu set to "Customer". In addition to the "UserName", "Name", and "Password" input fields, there is now a "Meter Number" input field at the top. The profile picture placeholder and the "Create" and "Back" buttons remain the same.

Customer

Login

A screenshot of a web browser window titled "Login Page". On the left is a circular profile picture of a person with dark hair and a beard, wearing a grey shirt, set against an orange background. To the right of the profile picture are three input fields: "Username" (a text box), "Password" (a text box), and "Login in as" (a dropdown menu with "Admin" selected). Below these fields are three buttons: "Login", "Cancel", and "Signup".

Login Page

Username

Password

Login in as

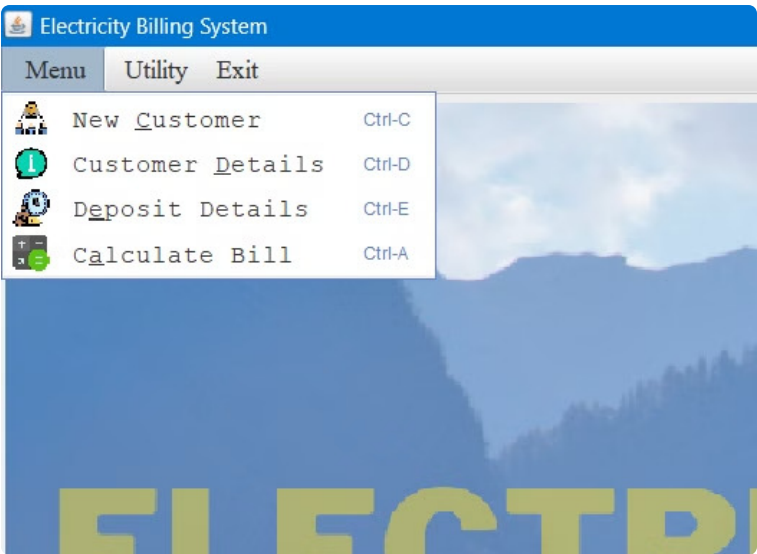
Login Cancel

Signup

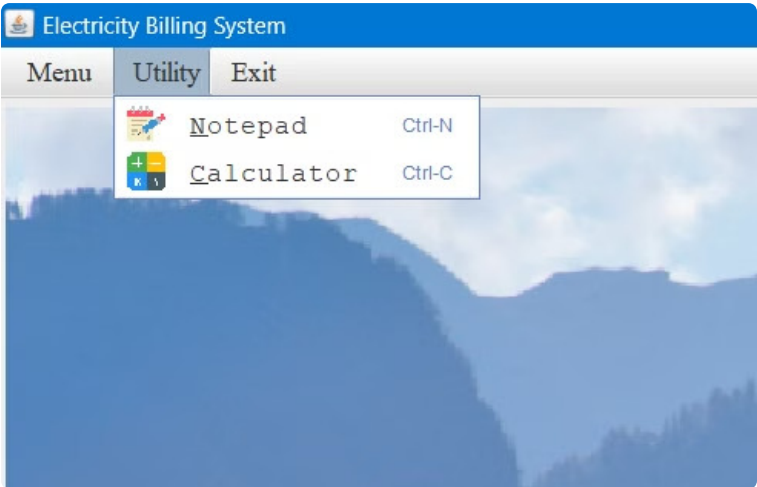
- Here Customer and Admin can login to their respective accounts.
- The dropdown menu allows to choose whether to login as an admin or as a customer.

Admin's Home Screen:

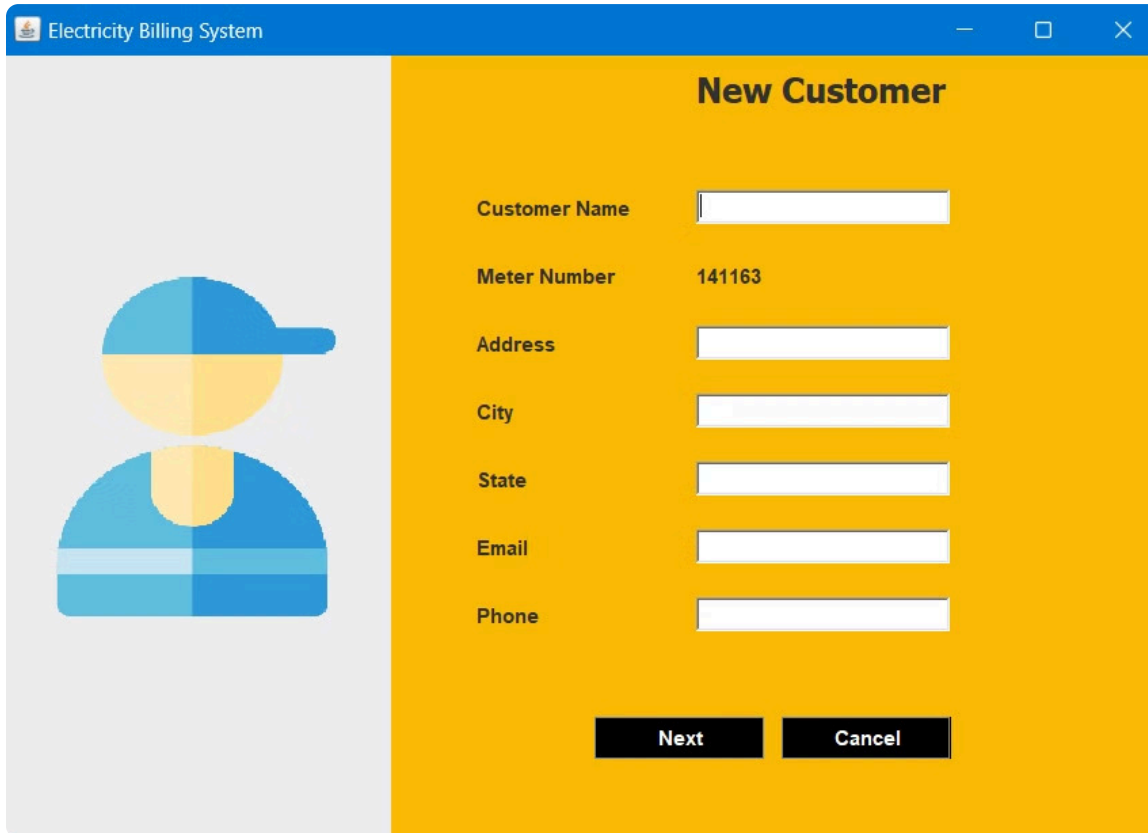
Admin



- Admin lands on this page after successful login
- This Screen Contains various fields like in menu section New Customer, Customer Details, Deposit Details, Calculate Bill.
- In Utility section we have Notepad, Calculator
- Exit is for Logout.



New Customer



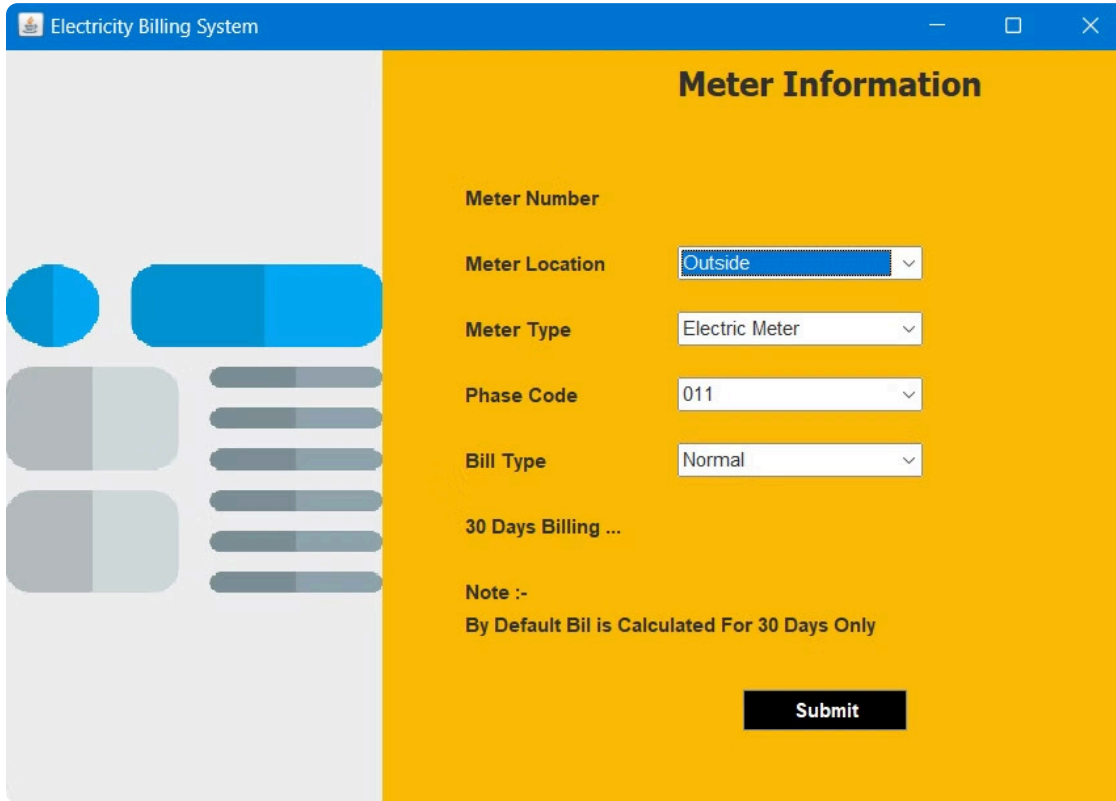
The image shows a software window titled "Electricity Billing System". Inside, there is a "New Customer" form. On the left side of the form area, there is a stylized icon of a person wearing a blue cap and a blue shirt. The form itself has a yellow background and contains the following fields:

- Customer Name:
- Meter Number: 141163
- Address:
- City:
- State:
- Email:
- Phone:

At the bottom of the form, there are two buttons: "Next" and "Cancel".

- This program will allow the admin to enter the customer details and automatically generates unique meter number.
- If customer name, address, city, state, email and phone number is entered, insert the values into customer else print error

Meter Information



The screenshot shows a web application window titled "Electricity Billing System". The main content area has a yellow background and is titled "Meter Information". On the left side of the window, there is a sidebar with a blue header and several grey and blue rectangular buttons. The form fields are as follows:

- Meter Number: (empty text input)
- Meter Location: (dropdown menu with "Outside" selected)
- Meter Type: (dropdown menu with "Electric Meter" selected)
- Phase Code: (dropdown menu with "011" selected)
- Bill Type: (dropdown menu with "Normal" selected)
- 30 Days Billing ...: (empty text input)
- Note :-
By Default Bil is Calculated For 30 Days Only
- Submit: (black button with white text)

- Here Admin selects the location and type of meter installed at the customers end.
- Admin also selects the phase code and Bill type i.e. Residential or Commercial/Industrial

Customer Details

Customer Details

Search BY Meter Number

830821

Search BY Name

rv

Search

Print

Close

name	meter_no	address	city	state	email	phone_no
rv	830821	Bihar	Bihar	Bihar	rv@gmail.com	6207533381
ritesh	513674	Ara	Ara	Bihar	riteshk19229@g...	6207533381
	815982					
riteshkumar	961965	tiwari chak	ara	bihar	riteshk19229@g...	6207533381

- This program will allow the admin to view customer details.
- If we need to print the details that has been viewed click onto print option

Deposit Details:-

Deposit Details

Search By Meter Number

656791

Search By Month

January

Search

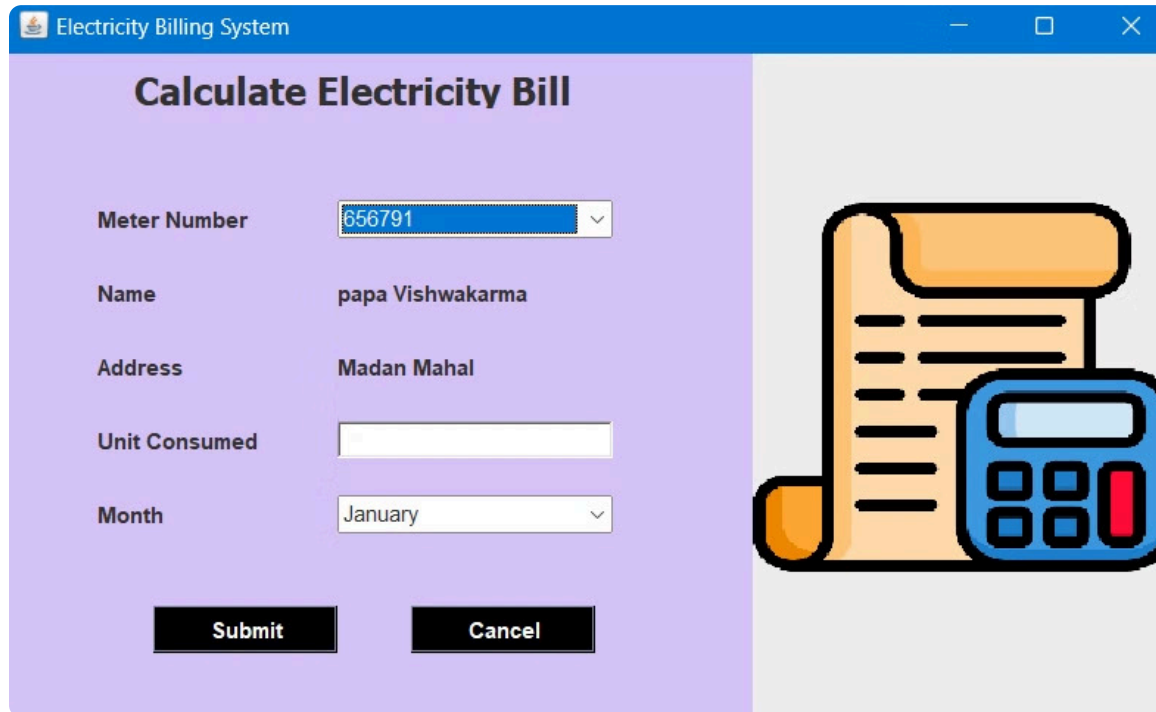
Print

Close

meter_no	month	unit	total_bill	status
656791	January	130	1320	Paid
656791	February	500	4650	Paid
656791	March	800	7350	Not Paid

- This program will allow the admin to view bill details. If we need to sort the details based on meter_no and month.
- If we need to search the particulars that has been viewed click onto search option.
- If we need to print the particulars that has been viewed click onto print option.

Calculate Bill



The screenshot shows a web application window titled "Electricity Billing System" with a sub-header "Calculate Electricity Bill". The form contains the following fields:

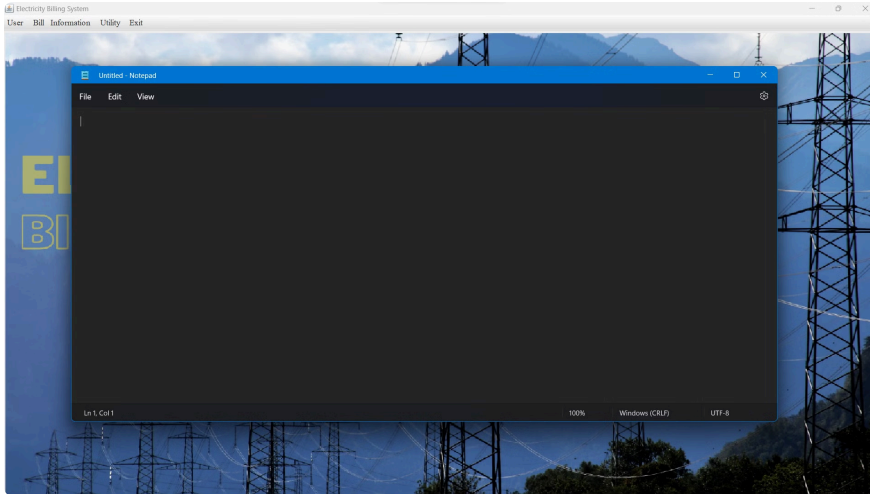
- Meter Number:** A dropdown menu with the value "656791".
- Name:** A text input field containing "papa Vishwakarma".
- Address:** A text input field containing "Madan Mahal".
- Unit Consumed:** An empty text input field.
- Month:** A dropdown menu with the value "January".

At the bottom of the form are two buttons: "Submit" and "Cancel". To the right of the form is a large illustration of a rolled-up bill and a blue calculator.

- This program will allow the admin to calculate total bill when units consumed are inserted where meter-no and month is selected.
- Submit the details of tax that has been entered by clicking onto submit button.
- If we need to cancel the details that has been entered click onto cancel option.

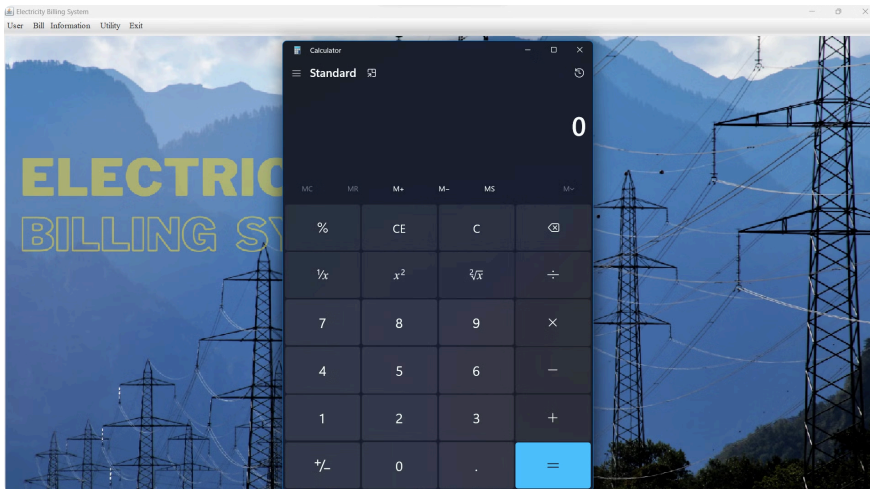
Notepad

When user clicks on notepad option under utilities section, its launches the notepad.



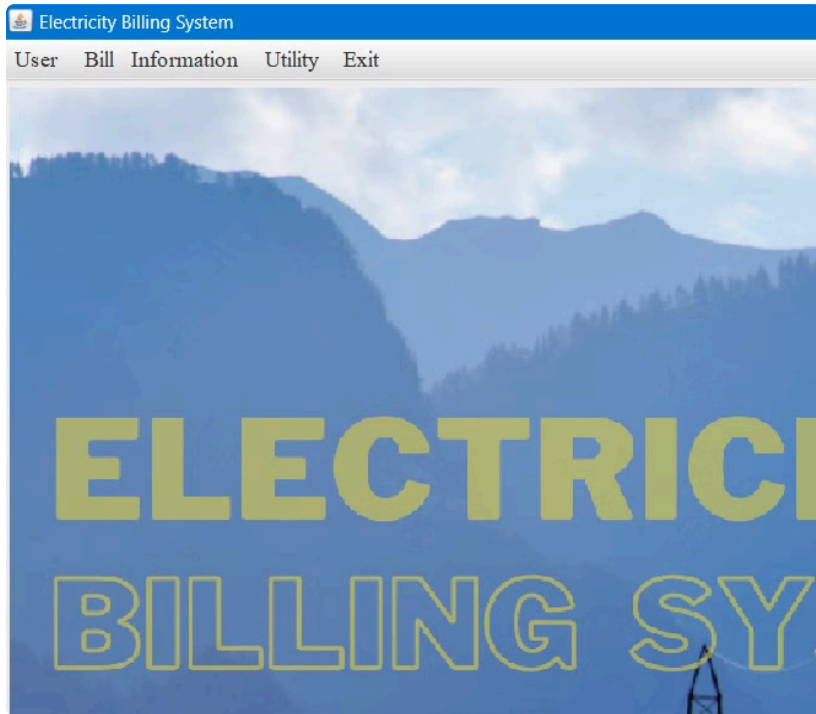
Calculator

When user clicks on calculator option under utilities section, its launches the calculator.



(This both feature is available to both Admins and Customers)

Customer



- Customer lands on this page after successful login
- This Screen Contains various fields like in user section Pay Bill, Bill Details
- In Bill section we have Generate Bill Slip.
- In Information section we have Update Information, View Information.
- In Utility section we have Notepad, Calculator
- Exit is for Logout.

Pay Bill

Meter Number

Name

Name

Units

Total Bill

Status

January

Pay

Back

- Here customers pay their bills by selecting appropriate month.

Pay Bill

Bill Details

- Here every customer can check the status of their bills, whether they have paid the bills or not.

meter_no	month	unit	total_bill	status

Bill Details

Generate Bill Slip.

Generate Bill Slip 215624 January

Reliance Power Limited
ELECTRICITY BILL FOR THE MONTH OF January ,2021

Customer Name: Ajit Kulkarni
Meter Number: 315624
Address: 103 ABC
State: Maharashtra
City: Dombivli
Email: ajit@gmail.com
Phone Number: 1928374655

Meter Location: Outside
Meter Type: Solar Meter
Phase Code: 022
BW Type: Residential
Days: 30

Cost per Unit: Rs 9
Meter Rent: Rs 47
Service Charge: Rs 22
Service Tax: Rs 57
Swachh Bharat Cess: Rs 6
Fixed Tax: Rs 18

Generate Bill

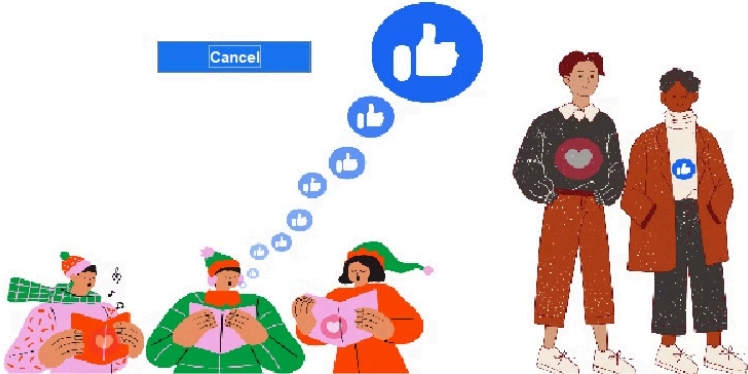
Here customer can generate / see their bill in a proper breakdown of entire amount.

View Information

View Customer Information

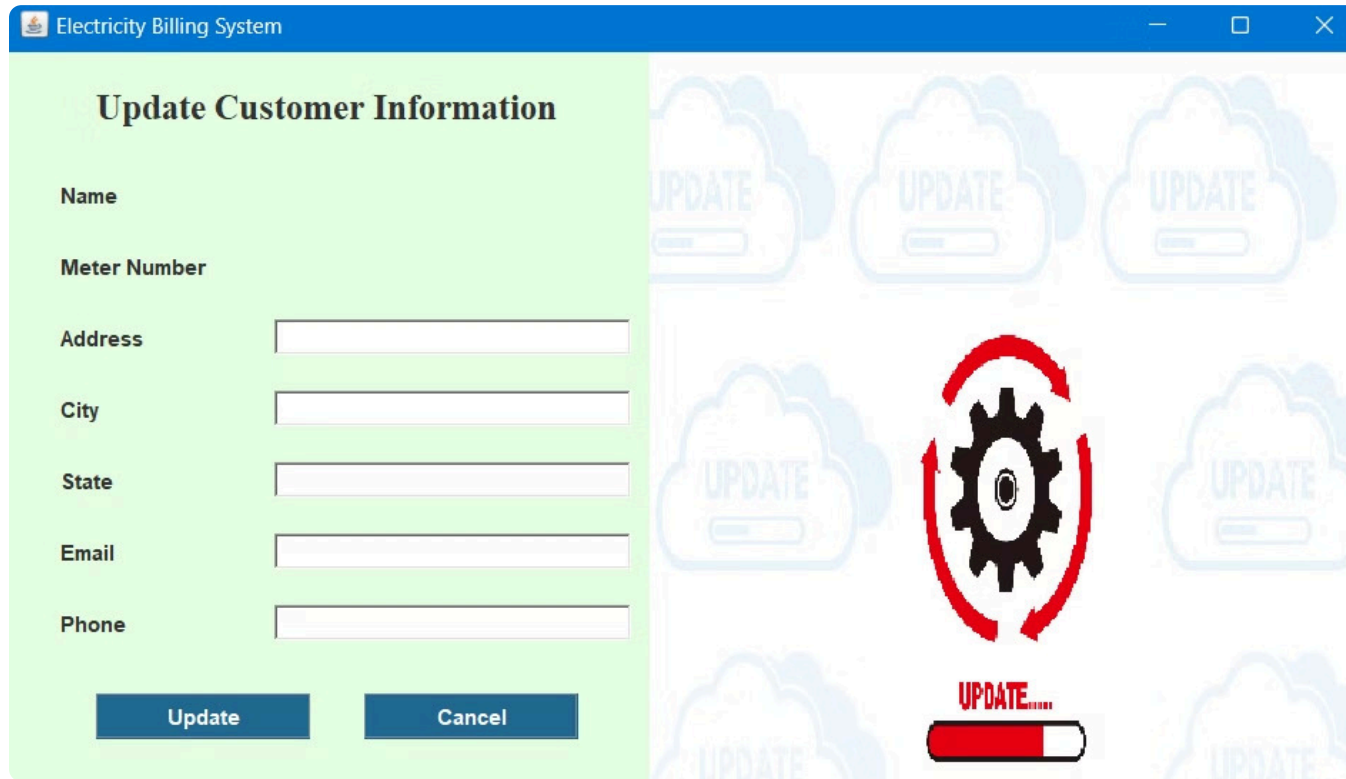
Name	State
Meter Number	Email
Address	Phone
City	

Cancel



Here customer can see their entered information such as their name, meter number, address, city , state, email id and phone number.

Update Information



The screenshot shows a web application window titled "Electricity Billing System". Inside, there is a form titled "Update Customer Information" with a light green background. The form contains the following fields: "Name", "Meter Number", "Address", "City", "State", "Email", and "Phone". Each field has a corresponding input box. At the bottom of the form are two buttons: "Update" and "Cancel". To the right of the form, there is a large, stylized graphic featuring a black gear with a red circular arrow around it, and the word "UPDATE" in red text below it. The background of the right side of the window is light blue with faint, repeating "UPDATE" text and cloud-like shapes.

Here customer can update their entered information if any correction is needed such as their address, city, state, email id and phone number.

CONCLUSION

- 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.