ELECTRICITY BILLING SYSTEM

A PROJECT REPORT
Submitted by

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Under the guidance of
Dr. LAKSHMINARAYANAN
(Assistant Professor, Department of Networking and Communications, Schoolof Computing)
in partial fulfillment of the requirements for the degreeof
BACHELOR OF TECHNOLOGY
In
COMPUTER SCIENCE AND
ENGINEERING with specialization in CYBERSECURITY

DEPARTMENT OF NETWORKINGAND COMMUNICATIONS
SRM INSTITUTE OF SCIENCE AND TECHNOLOGY,
KATTANKULATHUR- 603 203

OCTOBER 2022

SRM INSTITUTE OF SCIENCE AND

TECHNOLOGY KATTANKULATHUR – 603203

BONAFIDE CERTIFICATE

Certified that 21CSP109L project report titled "**ELECTRICITY BILLING SYSTEM**" is a the Bonafide work of "**SHUBHAM KUMAR SINGH [Reg No: RA2112703010004], AYUSH KUMAR [RegNo:RA2112703010007]** and **S SRIWANTH [Reg No: RA2112703010022]**", who carried out the project work under my supervision. Certified further, that to the best of my knowledge the work reported herein does not form any other project report or dissertation based on which a degree or award was conferred on an earlier occasion on this or any other candidate.

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Assistant Professor
Department of Networking & Communications

DR. ANNAPURANI PANAIYAPPAN. K
HEAD OF THE DEPARTMENT
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INTERNAL EXAMINER

EXTERNAL EXAMINER

Annexure II

Department of Networking and Communications
SRM Institute of Science & Technology

OWN WORK DECLARATION

Degree/ Course: MTech [Int.] Computer Science Engineering with specialization in Cyber Security and Digital Forensic

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RegistrationNumber:RA2112703010004/RA2112703010007/RA2112703010022

Title of Work: Electricity Billing System

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- Clearly references / listed all sources as appropriate
- Referenced and put in inverted commas all quoted text (from books,web, etc.)
- Given the sources of all pictures, data etc. that are not my own
- Not made any use of the report(s) or essay(s) of any other student(s)either past or present
- Acknowledgement in appropriate places any help that I have received from others compiled with any other plagiarism criteria specified in the course handbook / University website

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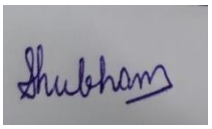
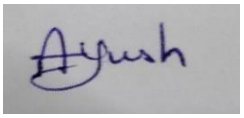
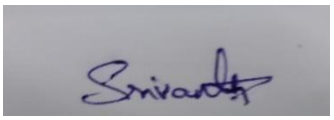


RA2112703010004



RA2112703010007



RA2112703010022

29/10/2022

If you are working in a group, please write your registration numbers and sign with the date for every student in your group.

ACKNOWLEDGEMENT

We express our humble gratitude to **Dr C. Muthamizhchelvan**, Vice-Chancellor, SRM Institute of Science and Technology, for the facilities extended for the project work and his continued support. We extend our sincere thanks to Dean-CET, SRM Institute of Science and Technology, **Dr T.V.Gopal**, for his invaluable support. We wish to thank **Dr Revathi Venkataraman**, Professor & Chairperson, School of Computing, SRM Institute of Science and Technology, for her support throughout the project work. We areincredibly grateful to our Head of the Department, **Dr K. Annapurani Panaiyappan,** Professor, Department of Networking and Communications, SRM Institute of Science and Technology, for her suggestions and encouragement at all the stages of the project work.

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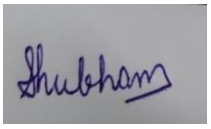
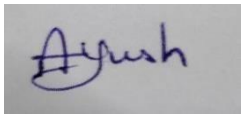
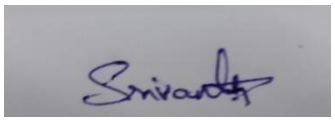
His passion for solving problems and making a difference in the world has always been inspiring. We sincerely thank the Networking and Communications Department staff and students, SRM Institute of Science and Technology, for their help during our project. Finally, we would like to thank parents, family members, and friends for their unconditional love, constant support, and encouragement.



Shubham Kumar Singh



Ayush Kumar



S Sriwanth

ABSTRACT

This Electricity Billing System Project in Java, the main goal of the project is to help the power department by computerizing the billing system. It primarily focuses on calculating the number of units utilized over a given period and the amount of money to be paid to electricity offices. For consumers, this automated method will make the total billing procedure simple, accessible, comfortable, and effective. The Electricity Billing System Project in Java with Source Code is useful for learning new skills and practicing Java Desktop Development. This project is quite useful, and the concept and logic of the project are simple to grasp. The electricity billing software calculates the units consumed by the customer and makes bills, it requires small storage for installation and functioning. There is provision for 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.

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Introduction:

- Our project entitled "Electricity Billing System" Aim is to generate electricity bill with all the charges and penalty. Manual system that is employed is extremely laborious and quite inadequate. It only makes the process more difficult and harder.

- The aim of our project is to develop a system that is meant to partially computerize the work performed in the Electricity Board like generating monthly electricity bill, record of consuming unit of energy, store record of the customer and previous unpaid record.

- we have described the Advantages, objective of the project. We have also provided the names ofthe books from which we have taken guidance to complete the work.

Advantages:

- It helps you to minimize your repeated works and take care of the completefunctionality of Billing Department.

- It is a huge time saver and facilitates proper communication among the management, staff, and the Customers

- Provide computerized system for maintaining records.

- Avoid Human storage with less computer memory.

- Minimize handwritten work from admission to Billing Department

Objective:

- The primary objective of the Electricity Billing System is to keep track of invoices, customers, units, connections, and consumption. It keeps track of all bills, readings, purchases, and payments**.**

- Today the consumer who wants to remit his current bill must identify his counter before standing in the queue. This is too difficult for him in a rush day. Moreover, he must bring exact tender coins to remit his current charge. In this system, balance if any due to the consumer can be adjusted as his future credit. Since this is a data base program any cashier can access the data of any consumer in front of him this may be helpful to both the consumer as well as the staffs handling the huge number of consumers.

- This program may reduce the manual processing time.

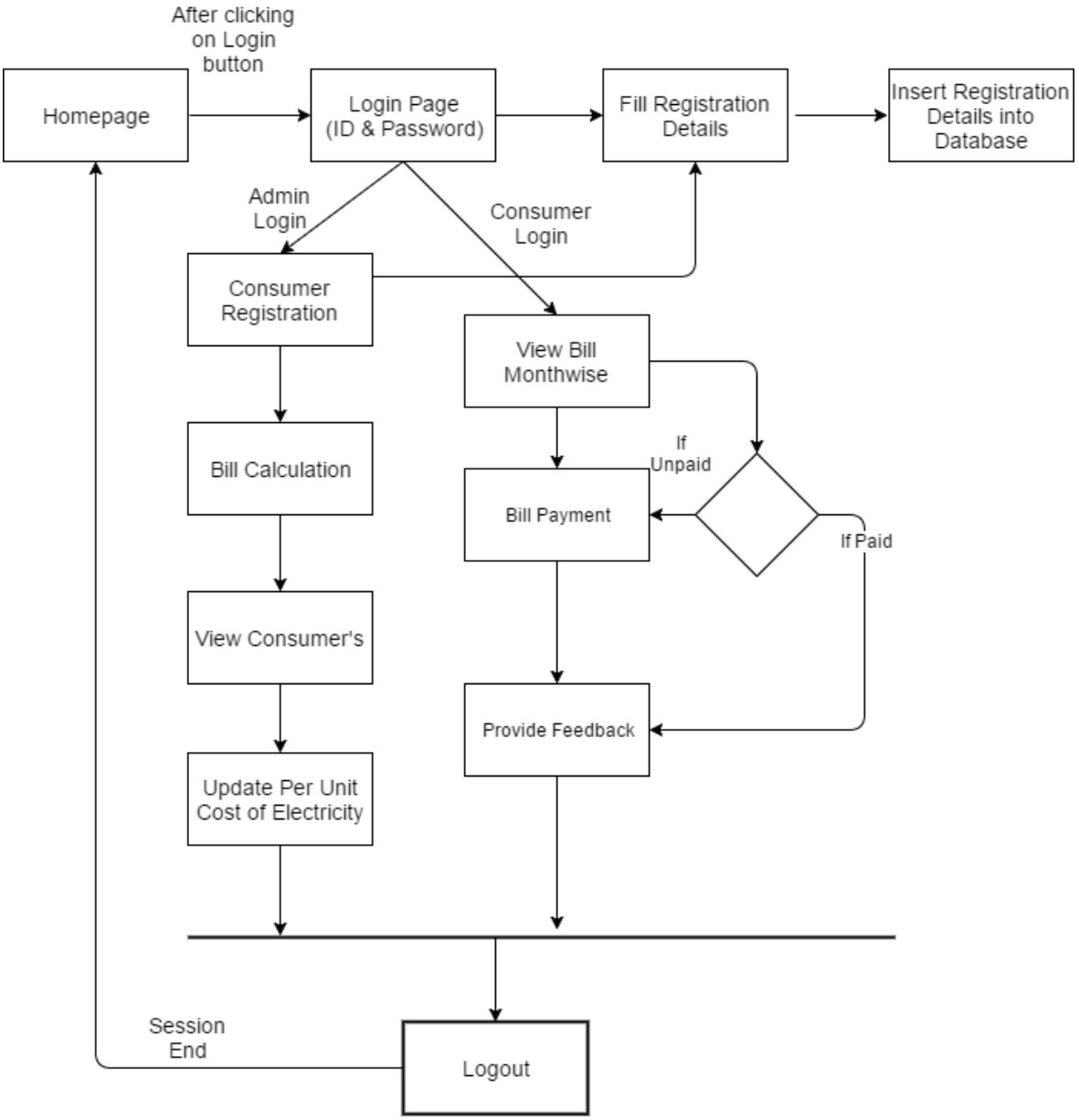
Proposed Of Project:

- Helps in maintaining the computerized employee and bill details.
- Easy attendance marking.
- Computerized Event Requests Management.
- Calculate the Bills.

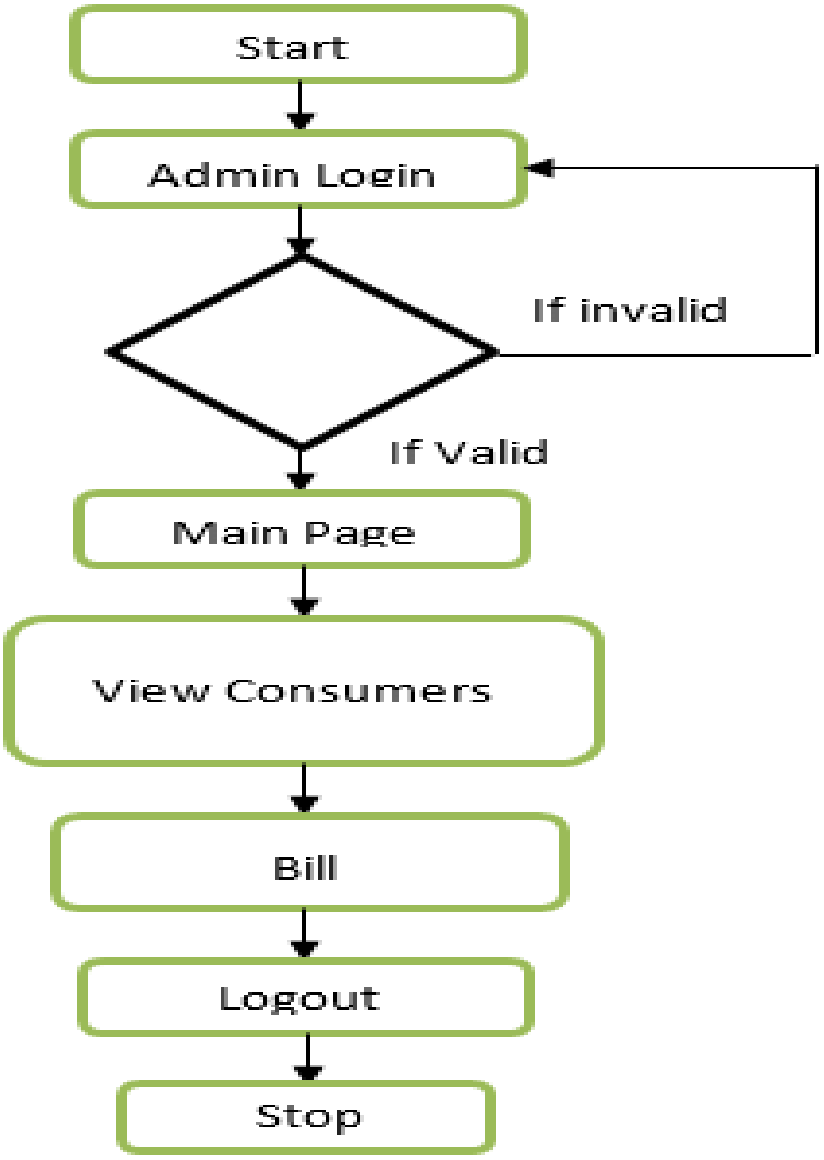
Literature Survey:

Author Name	Year Of Publication	Observation
Ashutosh Kumar, Dharmendra Pratap Singh, Sagar Subham	2021	The date of payment will be refreshed while covering the bill. It keeps up the error free database and effectively joins the future turns of events and changes
Han X, Luh P, Yan J and Stern G	2010	Payment cost minimization with transmission capacity constraints and losses using the objective switching method.
Cui T, Goudarzi H, Hatami S, Nazarian S and Pedram M	2012	Concurrent optimization of consumer's electrical energy bill and producer's power generation cost under a dynamic pricing model.

Architecture Diagram:



Activity Diagram



Algorithm:

- bill type (for less than 100 units)

Check units consumed is less than equal to the 100, If yes then the total electricity bill will be:

Total Electricity Bill = (units*10)

- bill type (for less than or equal to 200 units)

Else if, check that units consumed is less than equal to the200, if yes then total electricity bill will be:

Total Electricity Bill = (100*10) +(units-100) *15

- bill type (for less than or equal to 300 units)

Else if, check that units consumed is less than equal to the300, if yes then total electricity bill will be:

Total Electricity Bill = (100*100) +(100*15) +(units-200) *20

- bill type (for greater than 300 units)

Else if, check that units consumed greater than 300, if yes then total electricity bill will be:

Total Electricity Bill = (100*10) +(100*15) +(100*20) +(units-300) *25

Modules:

- 1. LOGIN PAGE:

This page consists options of entering Username and Password using which the user can login into the existing account.

- 2. MASTER:

New Customer: If a new customer needs to be added that can be performed here by entering the required details.

Customer Details: This portrays all the customer details who have been using the application so far.

Deposit Details: Here the customer can view all his payment activity.

- 3. USER:

Calculate Bill: The user can calculate his bill by filling in the required data.

Pay Bill; Here the customer can pay the bill using a link which will direct the user to another window.

Last Bill: This portrays the bill of previous months in case the user wanted to check.

- 4. REPORT:

This provides the user the option of generating his bill based on the data entered in CALCULATE BILL

Programs:

Login page:

```
package Electricity;

import java.awt.*;

import java.awt.event.*;

import javax.swing.*;

import java.sql.*;

public class Login extends JFrame implements ActionListener{

    JLabel l1,l2,l3, l4;

    JTextField tf1;

    JPasswordField pf2;

    JButton b1,b2, b3;

    JPanel p1,p2,p3,p4;

    Choice  c1;

    Login(){

        super("Login Page");

        setLayout(null);

        getContentPane().setBackground(Color.WHITE);

        l1 = new JLabel("Username");

        l1.setBounds(300, 20, 100, 20);

        add(l1);

        l2 = new JLabel("Password");

        l2.setBounds(300, 60, 100, 20);

        add(l2);

        tf1 = new JTextField(15);
```

```
tf1.setBounds(400, 20, 150, 20);

add(tf1);

pf2 = new JPasswordField(15);

pf2.setBounds(400, 60, 150, 20);

add(pf2);

l4 = new JLabel("Logging in as");

l4.setBounds(300, 100, 100, 20);

add(l4);

c1 = new Choice();

c1.add("Admin");

c1.add("Customer");

c1.setBounds(400, 100, 150, 20);

add(c1);

ImageIcon ic1 = new ImageIcon(ClassLoader.getSystemResource("icon/login.png"));

Image i1 = ic1.getImage().getScaledInstance(16, 16,Image.SCALE_DEFAULT);

b1 = new JButton("Login", new ImageIcon(i1));

b1.setBounds(330, 160, 100, 20);

add(b1);

ImageIcon ic2 = new ImageIcon(ClassLoader.getSystemResource("icon/cancel.jpg"));

Image i2 = ic2.getImage().getScaledInstance(16, 16,Image.SCALE_DEFAULT);

b2 = new JButton("Cancel",new ImageIcon(i2));

b2.setBounds(450, 160, 100, 20);

add(b2);

ImageIcon ic4 = new ImageIcon(ClassLoader.getSystemResource("icon/signup.png"));

Image i4 = ic4.getImage().getScaledInstance(16, 16,Image.SCALE_DEFAULT);

b3 = new JButton("Signup",new ImageIcon(i4));
```

```
        b3.setBounds(380, 200, 130, 20);
        add(b3);
        b1.addActionListener(this);
        b2.addActionListener(this);
        b3.addActionListener(this);
        ImageIcon ic3 = new ImageIcon(ClassLoader.getSystemResource("icon/second.jpg"));
        Image i3 = ic3.getImage().getScaledInstance(250, 250,Image.SCALE_DEFAULT);
        ImageIcon icc3 = new ImageIcon(i3);
        l3 = new JLabel(icc3);
        l3.setBounds(0, 0, 250, 250);
        add(l3);
        setLayout(new BorderLayout());
        setSize(640,300);
        setLocation(600,300);
        setVisible(true);
    }
    public void actionPerformed(ActionEvent ae){
        if(ae.getSource() == b1){
            try{
                Conn c = new Conn();
                String a = tf1.getText();
                String b  = pf2.getText();
                String user = c1.getSelectedItem();
               String q = "select * from login where username = '"+a+"' and password = '"+b+"' and user =
'"+user+"'";
                ResultSet rs = c.s.executeQuery(q);
                if(rs.next()){
```

```
                String meter = rs.getString("meter_no");
                new Project(meter, user).setVisible(true);
                this.setVisible(false);
            }else{
                JOptionPane.showMessageDialog(null, "Invalid login");
                tf1.setText("");
                pf2.setText("");
            }
        }catch(Exception e){
            e.printStackTrace();
            System.out.println("error: "+e);
        }
    }else if(ae.getSource() == b2){
        this.setVisible(false);
    }else if(ae.getSource() == b3){
        this.setVisible(false);
        new Signup().setVisible(true);
    }
  }
  public static void main(String[] args){
    new Login().setVisible(true);
  }
}
```

Electricity Billing System Login

New Customer:

```
package Electricity;


import java.awt.*;
import java.awt.event.*;
import javax.swing.*;
import java.sql.*;
import java.util.*;


public class NewCustomer extends JFrame implements ActionListener{
    JLabel l1,l2,l3,l4,l5,l6,l7,l8, l11;
    JTextField t1,t2,t3,t4,t5,t6,t7;
    JButton b1,b2;
    NewCustomer(){
```

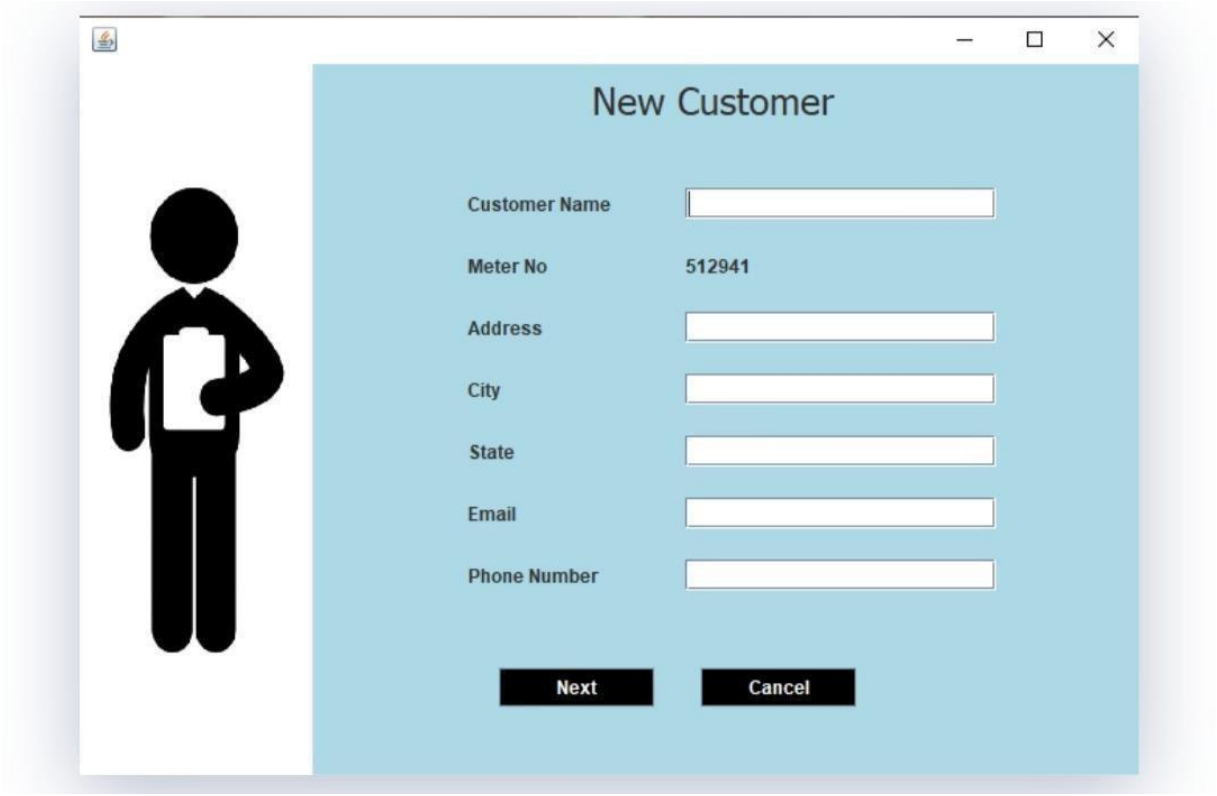
```
setLocation(600,200);

setSize(700,500);


JPanel p = new JPanel();

p.setLayout(null);

p.setBackground(Color.WHITE);

p.setBackground(new Color(173,216,230));


JLabel title = new JLabel("New Customer");

title.setBounds(180, 10, 200, 26);

title.setFont(new Font("Tahoma", Font.PLAIN, 24));

p.add(title);


l1 = new JLabel("Customer Name");

l1.setBounds(100, 80, 100, 20);


t1 = new JTextField();

t1.setBounds(240, 80, 200, 20);

p.add(l1);

p.add(t1);

l2 = new JLabel("Meter No");

l2.setBounds(100, 120, 100, 20);

l11 = new JLabel();

l11.setBounds(240, 120, 200, 20);

p.add(l2);

p.add(l11);
```

```
l3 = new JLabel("Address");

l3.setBounds(100, 160, 100, 20);

t3 = new JTextField();

t3.setBounds(240, 160, 200, 20);

p.add(l3);

p.add(t3);

l5 = new JLabel("City");

l5.setBounds(100, 200, 100, 20);

t5 = new JTextField();

t5.setBounds(240, 200, 200, 20);

p.add(l5);

p.add(t5);

l4 = new JLabel("State");

l4.setBounds(100, 240, 100, 20);

t4 = new JTextField();

t4.setBounds(240, 240, 200, 20);

p.add(l4);

p.add(t4);


l6 = new JLabel("Email");

l6.setBounds(100, 280, 100, 20);

t6 = new JTextField();

t6.setBounds(240, 280, 200, 20);

p.add(l6);

p.add(t6);

l7 = new JLabel("Phone Number");
```

```
l7.setBounds(100, 320, 100, 20);

t7 = new JTextField();

t7.setBounds(240, 320, 200, 20);

p.add(l7);

p.add(t7);


b1 = new JButton("Next");

b1.setBounds(120, 390, 100, 25);

b2 = new JButton("Cancel");

b2.setBounds(250, 390, 100, 25);


b1.setBackground(Color.BLACK);

b1.setForeground(Color.WHITE);


b2.setBackground(Color.BLACK);

b2.setForeground(Color.WHITE);


p.add(b1);

p.add(b2);

setLayout(new BorderLayout());


add(p,"Center");


ImageIcon ic1 = new ImageIcon(ClassLoader.getSystemResource("icon/hicon1.jpg"));

Image i3 = ic1.getImage().getScaledInstance(150, 300,Image.SCALE_DEFAULT);

ImageIcon ic2 = new ImageIcon(i3);
```

```
        l8 = new JLabel(ic2);
        add(l8,"West");
        //for changing the color of the whole Frame
        getContentPane().setBackground(Color.WHITE);

        b1.addActionListener(this);
        b2.addActionListener(this);

        Random ran = new Random();
        long first = (ran.nextLong() % 1000000);
        l11.setText(""+Math.abs(first));

    }
    public void actionPerformed(ActionEvent ae){
        if(ae.getSource() == b1){
            String name = t1.getText();
            String meter = l11.getText();
            String address = t3.getText();
            String state = t4.getText();
            String city = t5.getText();
            String email = t6.getText();
            String phone = t7.getText();

            String q1 = "insert into customer
values('"+name+"','"+meter+"','"+address+"','"+city+"','"+state+"','"+email+"','"+phone+"')";
            String q2 = "insert into login values('"+meter+"', '', '', '')";
            try{
```

```
            Conn c1 = new Conn();
            c1.s.executeUpdate(q1);
            c1.s.executeUpdate(q2);
            JOptionPane.showMessageDialog(null,"Customer Details Added Successfully");
            this.setVisible(false);
            new MeterInfo(meter).setVisible(true);

        }catch(Exception ex){
            ex.printStackTrace();
        }
    }else if(ae.getSource() ==b2){
            this.setVisible(false);
            }
  }


  public static void main(String[] args){
    new NewCustomer().setVisible(true);
  }
}
```

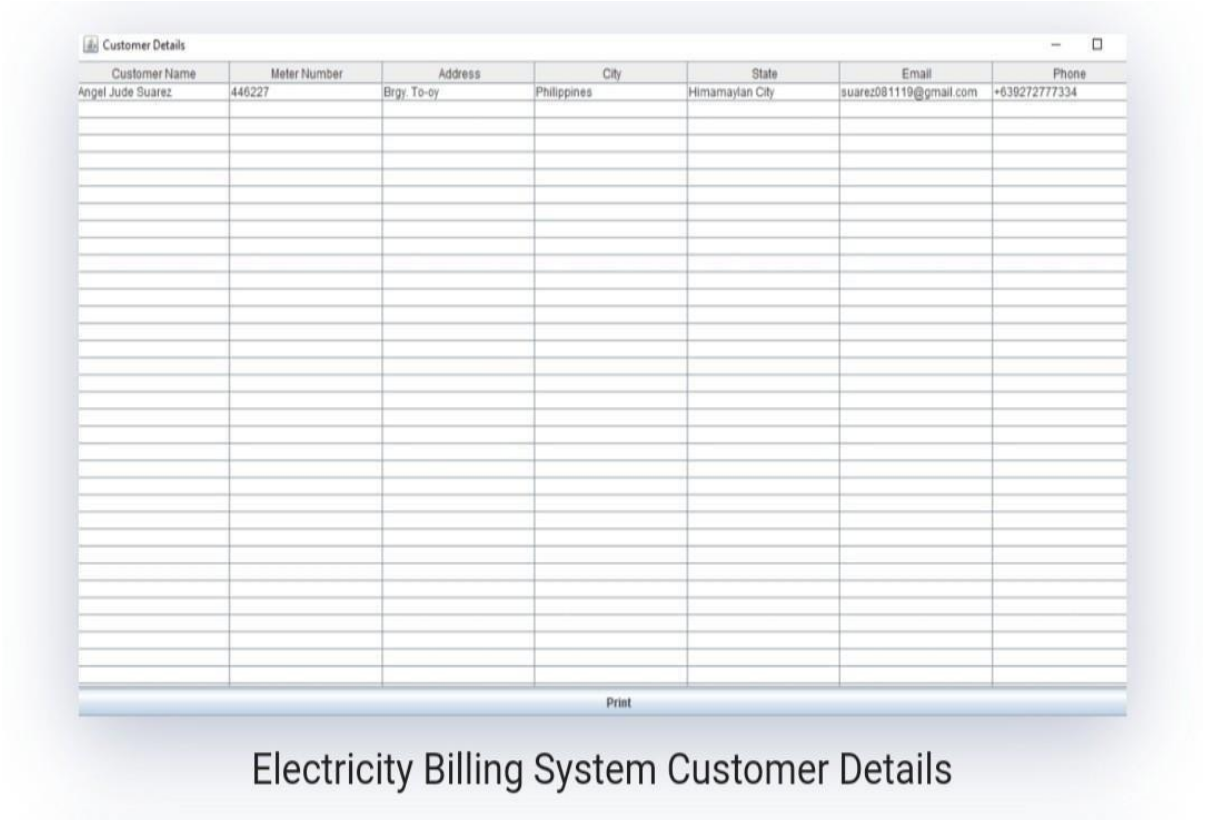


Customer Details:

```
package Electricity;

import java.awt.*;

import java.awt.event.*;

import javax.swing.*;

import java.sql.*;


public class CustomerDetails extends JFrame implements ActionListener{


    JTable t1;

    JButton b1;

    String x[] = {"Customer Name","Meter Number","Address","City","State","Email","Phone"};

    String y[][] = new String[40][8];
```

```
int i=0, j=0;
CustomerDetails(){
    super("Customer Details");
    setSize(1200,650);
    setLocation(400,150);

    try{
        Conn c1  = new Conn();
        String s1 = "select * from customer";
        ResultSet rs = c1.s.executeQuery(s1);
        while(rs.next()){
            y[i][j++]=rs.getString("name");
            y[i][j++]=rs.getString("meter");
            y[i][j++]=rs.getString("address");
            y[i][j++]=rs.getString("city");
            y[i][j++]=rs.getString("state");
            y[i][j++]=rs.getString("email");
            y[i][j++]=rs.getString("phone");
            i++;
            j=0;
        }
        t1 = new JTable(y,x);

    }catch(Exception e){
        e.printStackTrace();
    }
```

```
        b1 = new JButton("Print");
        add(b1,"South");
        JScrollPane sp = new JScrollPane(t1);
        add(sp);
        b1.addActionListener(this);
    }
    public void actionPerformed(ActionEvent ae){
        try{
            t1.print();
        }catch(Exception e){}
    }

    public static void main(String[] args){
        new CustomerDetails().setVisible(true);
    }

}
```



Deposit Details:

```
package Electricity;

import java.awt.*;

import java.awt.event.*;

import javax.swing.*;

import java.sql.*;

import net.proteanit.sql.DbUtils;


public class DepositDetails extends JFrame implements ActionListener{


    JTable t1;

    JButton b1, b2;
```

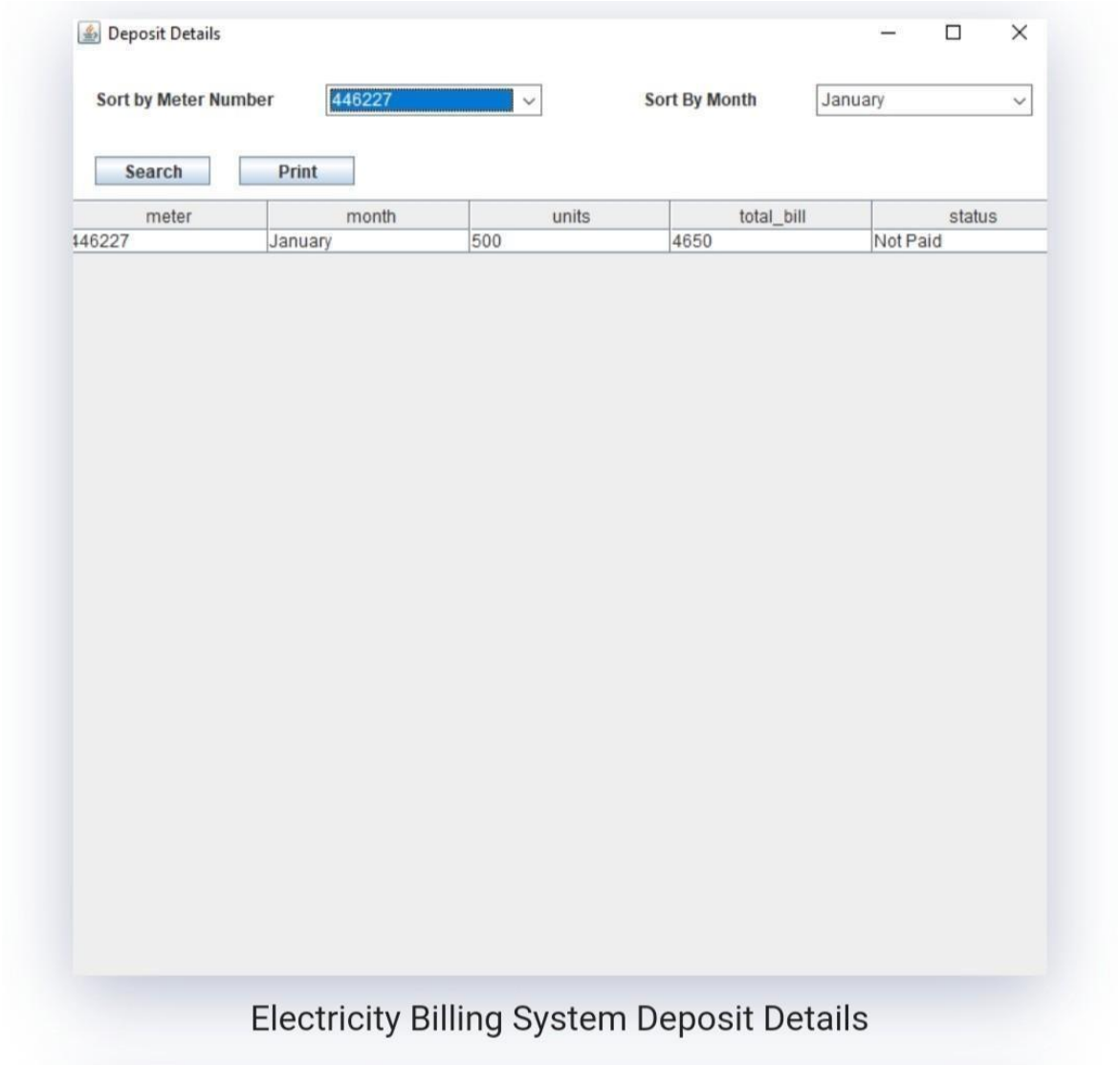
```
JLabel l1, l2;
Choice c1, c2;
String x[] = {"Meter Number","Month","Units","Total Bill","Status"};
String y[][] = new String[40][8];
int i=0, j=0;
DepositDetails(){
    super("Deposit Details");
    setSize(700,750);
    setLocation(600,150);
    setLayout(null);
    getContentPane().setBackground(Color.WHITE);

    l1 = new JLabel("Sort by Meter Number");
    l1.setBounds(20, 20, 150, 20);
    add(l1);

    c1 = new Choice();

    l2 = new JLabel("Sort By Month");
    l2.setBounds(400, 20, 100, 20);
    add(l2);

    c2 = new Choice();

    t1 = new JTable(y,x);
```

```
        try{
            Conn c  = new Conn();
            String s1 = "select * from bill";
            ResultSet rs  = c.s.executeQuery(s1);
//            while(rs.next()){
//                y[i][j++]=rs.getString("meter");
//                y[i][j++]=rs.getString("month");
//                y[i][j++]=rs.getString("units");
//                y[i][j++]=rs.getString("total_bill");
//                y[i][j++]=rs.getString("status");
//                i++;
//                j=0;
//            }
//

            t1.setModel(DbUtils.resultSetToTableModel(rs));

            String str2 = "select * from customer";
            rs = c.s.executeQuery(str2);
            while(rs.next()){
                c1.add(rs.getString("meter"));
            }

        }catch(Exception e){
            e.printStackTrace();
```

```
}

c1.setBounds(180,20, 150, 20);
add(c1);



c2.setBounds(520, 20, 150, 20);
c2.add("January");
c2.add("February");
c2.add("March");
c2.add("April");
c2.add("May");
c2.add("June");
c2.add("July");
c2.add("August");
c2.add("September");
c2.add("October");
c2.add("November");
c2.add("December");
add(c2);



b1 = new JButton("Search");
b1.setBounds(20, 70, 80, 20);
b1.addActionListener(this);
add(b1);
```

```
        b2 = new JButton("Print");
        b2.setBounds(120, 70, 80, 20);
        b2.addActionListener(this);
        add(b2);

        JScrollPane sp = new JScrollPane(t1);
        sp.setBounds(0, 100, 700, 650);
        add(sp);

    }
    public void actionPerformed(ActionEvent ae){
        if(ae.getSource() == b1){
            String str = "select * from bill where meter = '"+c1.getSelectedItem()+"' AND month =
'"+c2.getSelectedItem()+"'";
            try{
                Conn c = new Conn();
                ResultSet rs = c.s.executeQuery(str);
                t1.setModel(DbUtils.resultSetToTableModel(rs));
            }catch(Exception e){}
        }else if(ae.getSource() == b2){
            try{
                t1.print();
            }catch(Exception e){}
        }
    }
    public static void main(String[] args){
```

```
        new DepositDetails().setVisible(true);
    }


}
```



Electricity Billing System Deposit Details

Calculate Bill:

```
package Electricity;

import java.awt.*;

import java.awt.event.*;

import javax.swing.*;

import java.sql.*;


public class CalculateBill extends JFrame implements ActionListener{

    JLabel l1,l2,l3,l4,l5;

    JTextField t1;

    Choice c1,c2;

    JButton b1,b2;

    JPanel p;

    CalculateBill(){


        p = new JPanel();

        p.setLayout(null);

        p.setBackground(new Color(173, 216, 230));


        l1 = new JLabel("Calculate Electricity Bill");

        l1.setBounds(30, 10, 400, 30);


        l2 = new JLabel("Meter No");

        l2.setBounds(60, 70, 100, 30);


        JLabel l6 = new JLabel("Name");
```

```
l6.setBounds(60, 120, 100, 30);

JLabel l7 = new JLabel("Address");

l7.setBounds(60, 170, 100, 30);


l3 = new JLabel("Units Cosumed");

l3.setBounds(60, 220, 100, 30);


l5 = new JLabel("Month");

l5.setBounds(60, 270, 100, 30);


c1 = new Choice();

c1.setBounds(200, 70, 180, 20);

try{

   Conn c = new Conn();

   ResultSet rs = c.s.executeQuery("select * from customer");

   while(rs.next()){

      c1.add(rs.getString("meter"));

   }

}catch(Exception e){}


JLabel l11 = new JLabel();

l11.setBounds(200, 120, 180, 20);

p.add(l11);


JLabel l12 = new JLabel();

l12.setBounds(200, 170, 180, 20);
```

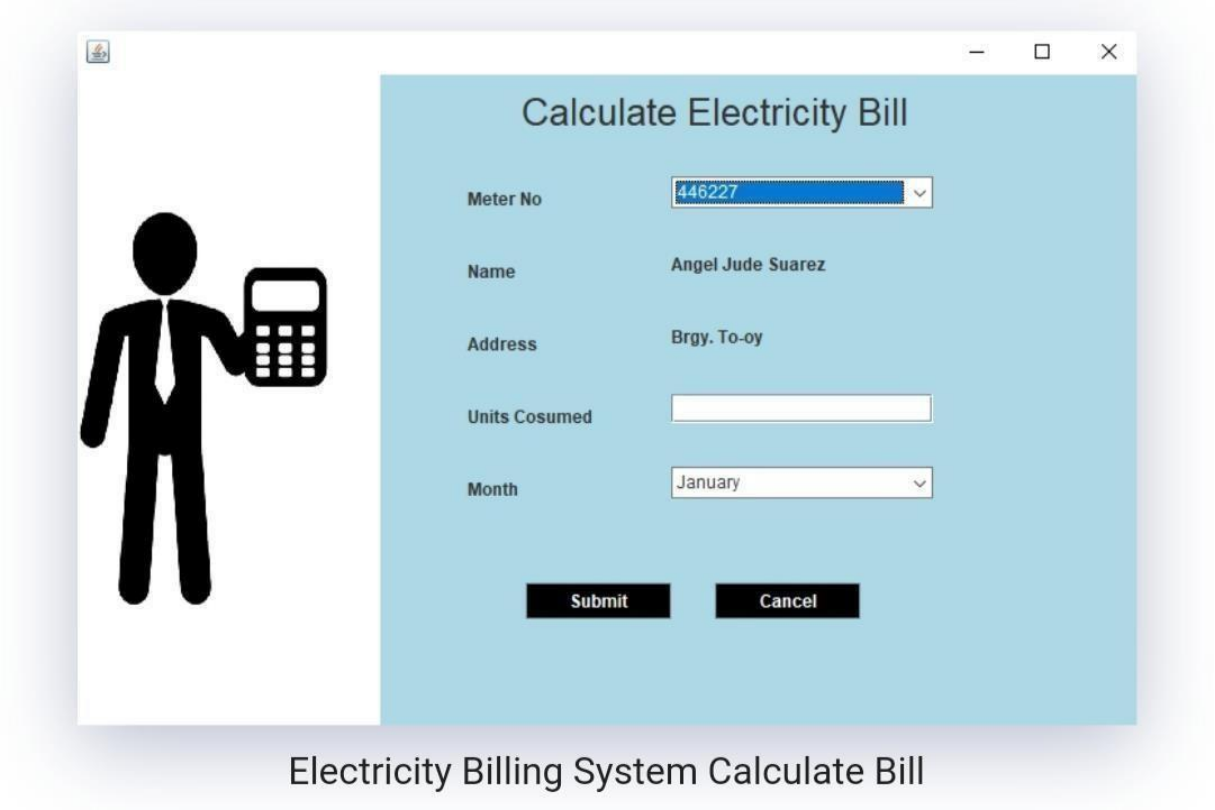
```
        p.add(l12);



        try{

            Conn c = new Conn();

            ResultSet rs = c.s.executeQuery("select * from customer where meter =
"'+c1.getSelectedItem()+"'");

            while(rs.next()){

                l11.setText(rs.getString("name"));

                l12.setText(rs.getString("address"));

            }

        }catch(Exception e){}



        c1.addItemListener(new ItemListener(){

            public void itemStateChanged(ItemEvent ae){

                try{

                    Conn c = new Conn();

                    ResultSet rs = c.s.executeQuery("select * from customer where meter =
"'+c1.getSelectedItem()+"'");

                    while(rs.next()){

                        l11.setText(rs.getString("name"));

                        l12.setText(rs.getString("address"));

                    }

                }catch(Exception e){}

            }

        });



        t1 = new JTextField();

        t1.setBounds(200, 220, 180, 20);
```

```
c2 = new Choice();
c2.setBounds(200, 270, 180, 20);
c2.add("January");
c2.add("February");
c2.add("March");
c2.add("April");
c2.add("May");
c2.add("June");
c2.add("July");
c2.add("August");
c2.add("September");
c2.add("October");
c2.add("November");
c2.add("December");

b1 = new JButton("Submit");
b1.setBounds(100, 350, 100, 25);
b2 = new JButton("Cancel");
b2.setBounds(230, 350, 100, 25);

b1.setBackground(Color.BLACK);
b1.setForeground(Color.WHITE);

b2.setBackground(Color.BLACK);
b2.setForeground(Color.WHITE);
ImageIcon i1 = new ImageIcon(ClassLoader.getSystemResource("icon/hicon2.jpg"));
```

```
Image i2 = i1.getImage().getScaledInstance(180, 270,Image.SCALE_DEFAULT);

ImageIcon i3 = new ImageIcon(i2);

l4 = new JLabel(i3);

l1.setFont(new Font("Senserif",Font.PLAIN,26));

//Move the label to center

l1.setHorizontalAlignment(JLabel.CENTER);

p.add(l1);

p.add(l2);

p.add(l6);

p.add(l7);

p.add(c1);

p.add(l5);

p.add(c2);

p.add(l3);

p.add(t1);

p.add(b1);

p.add(b2);


setLayout(new BorderLayout(30,30));



add(p,"Center");

add(l4,"West");


b1.addActionListener(this);

b2.addActionListener(this);
```

```
    getContentPane().setBackground(Color.WHITE);
    setSize(750,500);
    setLocation(550,220);
}
public void actionPerformed(ActionEvent ae){
    if(ae.getSource() == b1){
        String meter_no = c1.getSelectedItem();
        String units = t1.getText();
        String month = c2.getSelectedItem();

        int units_consumed = Integer.parseInt(units);

        int total_bill = 0;
        try{
            Conn c = new Conn();
            ResultSet rs = c.s.executeQuery("select * from tax");
            while(rs.next()){
                total_bill = units_consumed * Integer.parseInt(rs.getString("cost_per_unit")); // 120 * 7
                total_bill += Integer.parseInt(rs.getString("meter_rent"));
                total_bill += Integer.parseInt(rs.getString("service_charge"));
                total_bill += Integer.parseInt(rs.getString("service_tax"));
                total_bill += Integer.parseInt(rs.getString("swacch_bharat_cess"));
                total_bill += Integer.parseInt(rs.getString("fixed_tax"));
            }
        }catch(Exception e){}
```

```
        String q = "insert into bill values('"+meter_no+"','"+month+"','"+units+"','"+total_bill+"', 'Not
Paid')";



            try{

                Conn c1 = new Conn();

                c1.s.executeUpdate(q);

                JOptionPane.showMessageDialog(null,"Customer Bill Updated Successfully");

                this.setVisible(false);

            }catch(Exception aee){

                aee.printStackTrace();

            }



        }else if(ae.getSource()== b2){

            this.setVisible(false);

        }

    }




    public static void main(String[] args){

        new CalculateBill().setVisible(true);

    }

}
```



Electricity Billing System Calculate Bill

Pay Bill:

```
package Electricity;


import java.awt.*;
import java.awt.event.*;
import javax.swing.*;
import java.sql.*;


public class PayBill extends JFrame implements ActionListener{
    JLabel l1,l2,l3,l4,l5, l6;
    JLabel l11, l12, l13, l14, l15;
    JTextField t1;
    Choice c1,c2;
```

```
JButton b1,b2;
String meter;
PayBill(String meter){
    this.meter = meter;
    setLayout(null);

    setBounds(550, 220, 900, 600);

    JLabel title = new JLabel("Electricity Bill");
    title.setFont(new Font("Tahoma", Font.BOLD, 24));
    title.setBounds(120, 5, 400, 30);
    add(title);

    l1 = new JLabel("Meter No");
    l1.setBounds(35, 80, 200, 20);
    add(l1);

    JLabel l11 = new JLabel();
    l11.setBounds(300, 80, 200, 20);
    add(l11);

    JLabel l2 = new JLabel("Name");
    l2.setBounds(35, 140, 200, 20);
    add(l2);

    JLabel l12 = new JLabel();
```

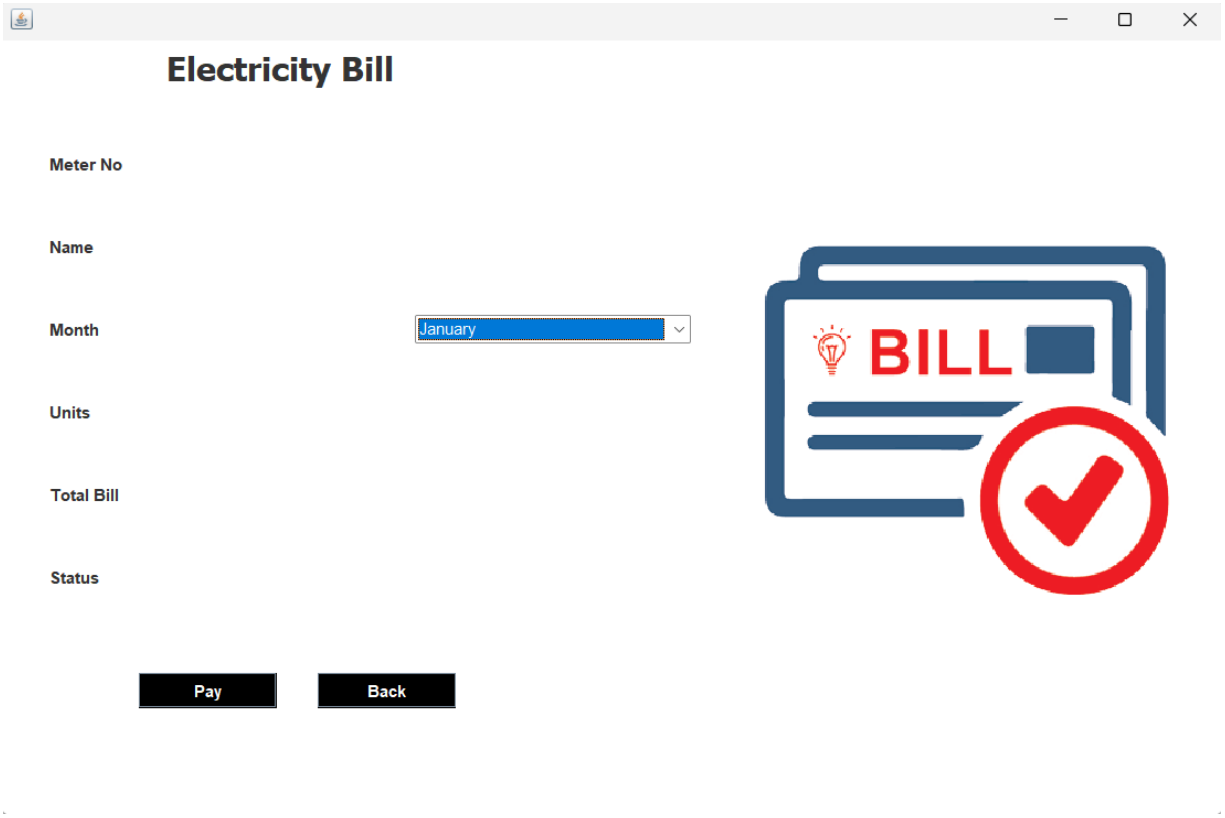
```
l12.setBounds(300, 140, 200, 20);
add(l12);

l3 = new JLabel("Month");
l3.setBounds(35, 200, 200, 20);
add(l3);

c1 = new Choice();
c1.setBounds(300, 200, 200, 20);
c1.add("January");
c1.add("February");
c1.add("March");
c1.add("April");
c1.add("May");
c1.add("June");
c1.add("July");
c1.add("August");
c1.add("September");
c1.add("October");
c1.add("November");
c1.add("December");
add(c1);

l4 = new JLabel("Units");
l4.setBounds(35, 260, 200, 20);
add(l4);
```

```
JLabel l13 = new JLabel();
l13.setBounds(300, 260, 200, 20);
add(l13);

l5 = new JLabel("Total Bill");
l5.setBounds(35, 320, 200, 20);
add(l5);

JLabel l14 = new JLabel();
l14.setBounds(300, 320, 200, 20);
add(l14);

l6 = new JLabel("Status");
l6.setBounds(35, 380, 200, 20);
add(l6);

JLabel l15 = new JLabel();
l15.setBounds(300, 380, 200, 20);
l15.setForeground(Color.RED);
add(l15);

try{
    Conn c = new Conn();
    ResultSet rs = c.s.executeQuery("select * from customer where meter = '"+meter+"'");
    while(rs.next()){
```

```
            l11.setText(rs.getString("meter"));
            l12.setText(rs.getString("name"));
        }
        rs = c.s.executeQuery("select * from bill where meter = '"+meter+"' AND month = 'January' ");
        while(rs.next()){
            l13.setText(rs.getString("units"));
            l14.setText(rs.getString("total_bill"));
            l15.setText(rs.getString("status"));
        }
    }catch(Exception e){}

    c1.addItemListener(new ItemListener(){
        @Override
        public void itemStateChanged(ItemEvent ae){
            try{
                Conn c = new Conn();
                ResultSet rs = c.s.executeQuery("select * from bill where meter = '"+meter+"' AND month =
'"+c1.getSelectedItem()+"'");
                while(rs.next()){
                    l13.setText(rs.getString("units"));
                    l14.setText(rs.getString("total_bill"));
                    l15.setText(rs.getString("status"));
                }
            }catch(Exception e){}
        }
    });
```

```
    b1 = new JButton("Pay");
    b1.setBounds(100, 460, 100, 25);
    add(b1);
    b2 = new JButton("Back");
    b2.setBounds(230, 460, 100, 25);
    add(b2);

    b1.setBackground(Color.BLACK);
    b1.setForeground(Color.WHITE);

    b2.setBackground(Color.BLACK);
    b2.setForeground(Color.WHITE);

    ImageIcon i1 = new ImageIcon(ClassLoader.getSystemResource("icon/bill.png"));
    Image i2 = i1.getImage().getScaledInstance(600, 300,Image.SCALE_DEFAULT);
    ImageIcon i3 = new ImageIcon(i2);
    JLabel l21 = new JLabel(i3);
    l21.setBounds(400, 120, 600, 300);
    add(l21);

    b1.addActionListener(this);
    b2.addActionListener(this);

    getContentPane().setBackground(Color.WHITE);
}
public void actionPerformed(ActionEvent ae){
```

```
        if(ae.getSource() == b1){

            try{

                Conn c = new Conn();

                c.s.executeQuery("update bill status = 'Paid' where meter = '"+meter+"' AND month =
'"+c1.getSelectedItem()+"'");



            }catch(Exception e){}

            this.setVisible(false);

            new Paytm(meter).setVisible(true);



        }else if(ae.getSource()== b2){

            this.setVisible(false);

        }

    }




    public static void main(String[] args){

        new PayBill("").setVisible(true);

    }

}
```



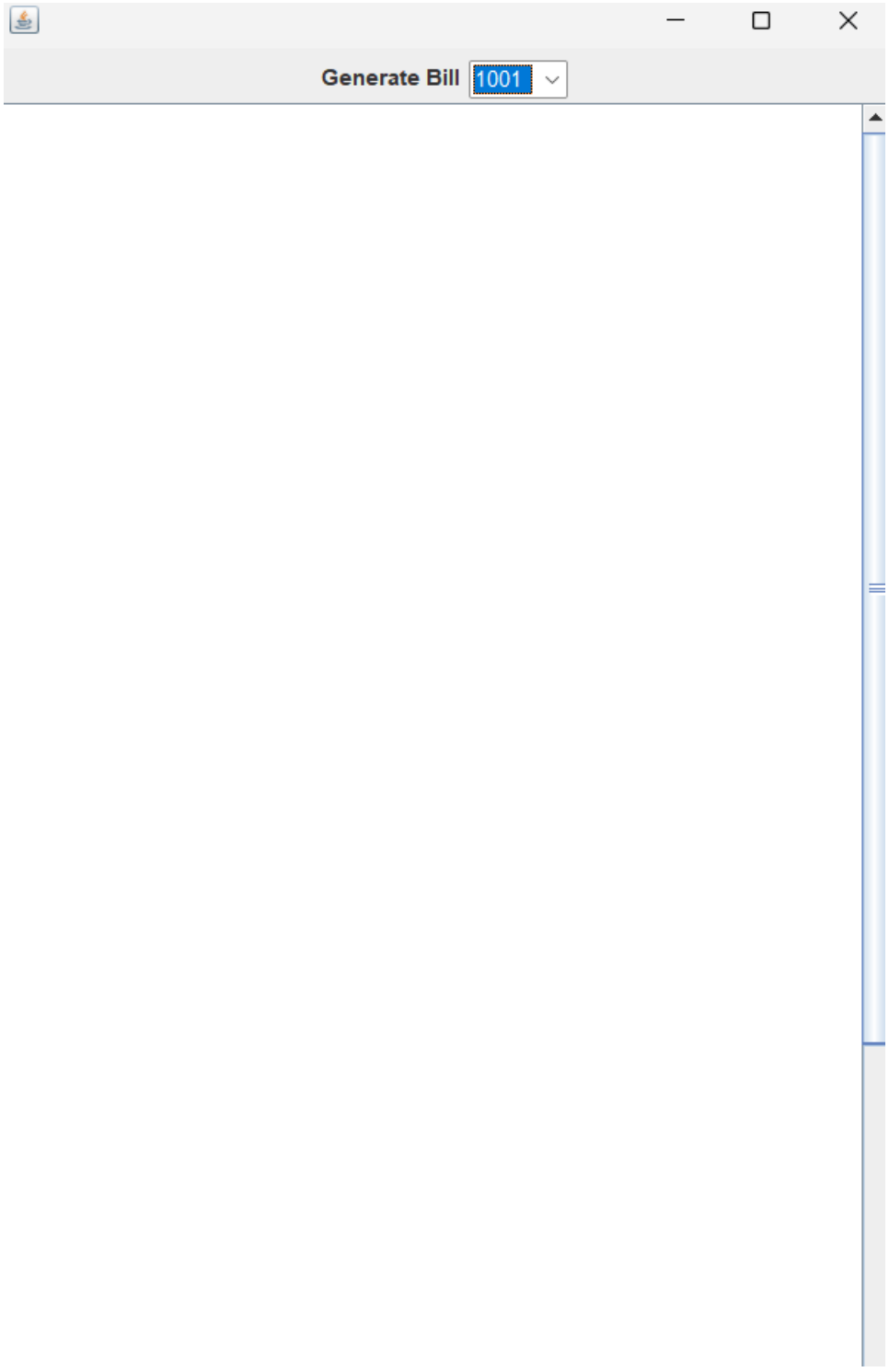
Last Bill:

```
package Electricity;


import java.awt.*;
import java.awt.event.*;
import javax.swing.*;
import java.sql.*;


public class LastBill extends JFrame implements ActionListener{
    JLabel l1;
    JTextArea t1;
    JButton b1;
    Choice c1;
```

```
JPanel p1;
LastBill(){
    setSize(500,900);
    setLayout(new BorderLayout());

    p1 = new JPanel();

    l1 = new JLabel("Generate Bill");

    c1 = new Choice();

    c1.add("1001");
    c1.add("1002");
    c1.add("1003");
    c1.add("1004");
    c1.add("1005");
    c1.add("1006");
    c1.add("1007");
    c1.add("1008");
    c1.add("1009");
    c1.add("1010");

    t1 = new JTextArea(50,15);
    JScrollPane jsp = new JScrollPane(t1);
    t1.setFont(new Font("Senserif",Font.ITALIC,18));
```

```
        b1 = new JButton("Generate Bill");


        p1.add(l1);

        p1.add(c1);

        add(p1,"North");


        add(jsp,"Center");

        add(b1,"South");


        b1.addActionListener(this);


        setLocation(350,40);

    }

    public void actionPerformed(ActionEvent ae){

        try{

            Conn c = new Conn();


            ResultSet rs = c.s.executeQuery("select * from emp where
meter_number="+c1.getSelectedItem());


            if(rs.next()){

                t1.append("\n Customer Name:"+rs.getString("name"));

                t1.append("\n Meter Number: "+rs.getString("meter_number"));

                t1.append("\n    Address:          "+rs.getString("address"));

                t1.append("\n    State:            "+rs.getString("state"));

                t1.append("\n    City:              "+rs.getString("city"));
```

```
            t1.append("\n    Email:                "+rs.getString("email"));
            t1.append("\n Phone Number "+rs.getString("phone"));
            t1.append("\n--------------------------------------------------------------------");
            t1.append("\n");
        }

        t1.append("Details of the Last Bills\n\n\n");

        rs = c.s.executeQuery("select * from bill where meter_number="+c1.getSelectedItem());

        while(rs.next()){
            t1.append("       "+ rs.getString("month") + "            " +rs.getString("amount") + "\n");
        }

    }catch(Exception e){
        e.printStackTrace();
    }
  }

  public static void main(String[] args){
    new LastBill().setVisible(true);
  }
}
```



Generate Bill:

```
package Electricity;

import java.awt.*;
```

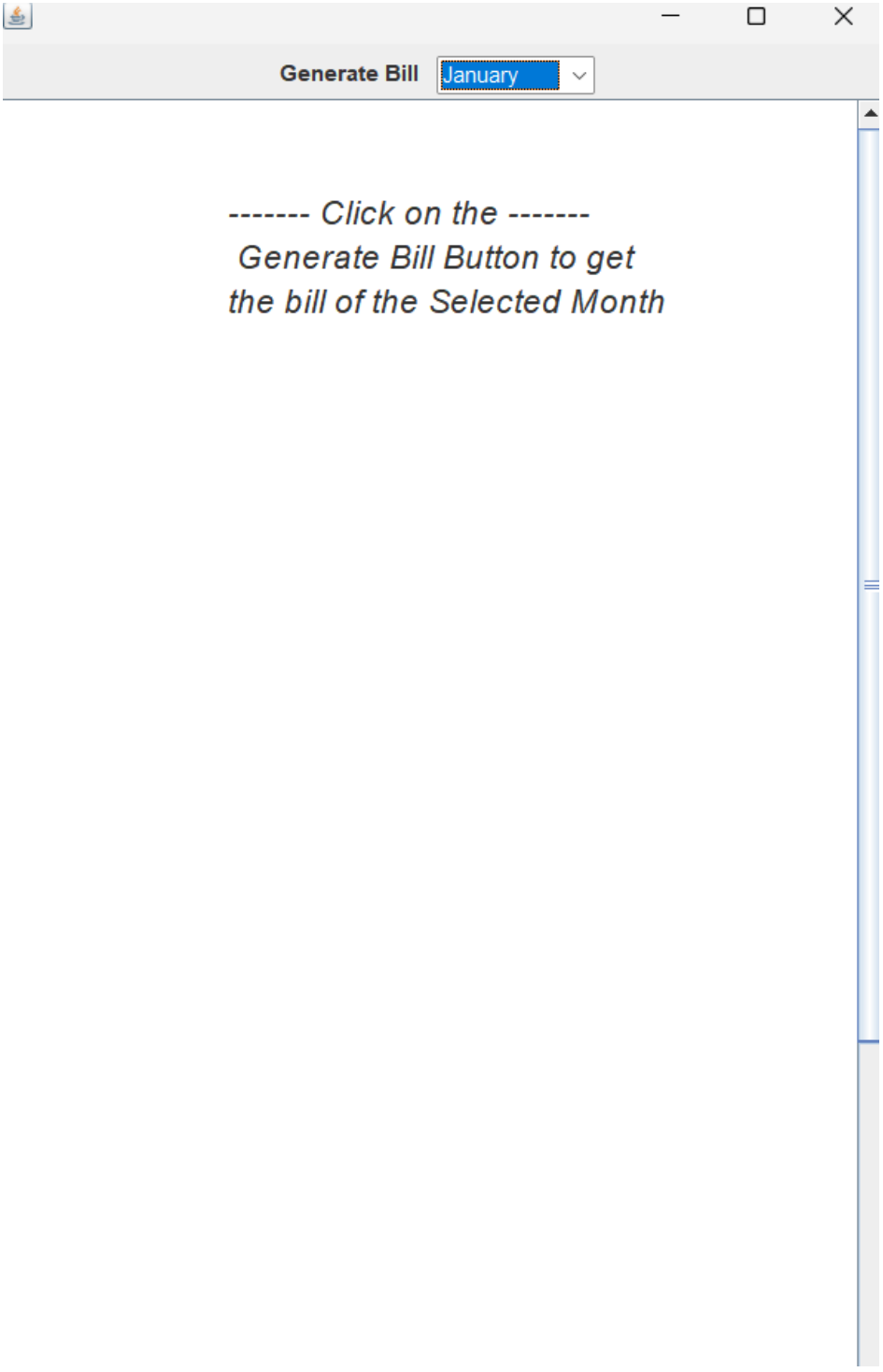
```
import java.awt.event.*;
import javax.swing.*;
import java.sql.*;

public class GenerateBill extends JFrame implements ActionListener{
    JLabel l1, l2;
    JTextArea t1;
    JButton b1;
    Choice c2;
    JPanel p1;
    String meter;
    GenerateBill(String meter){
        this.meter = meter;
        setSize(500,900);
        setLayout(new BorderLayout());

        p1 = new JPanel();

        l1 = new JLabel("Generate Bill");

        l2 = new JLabel(meter);
        c2 = new Choice();

        c2.add("January");
        c2.add("February");
        c2.add("March");
```

```
c2.add("April");

c2.add("May");

c2.add("June");

c2.add("July");

c2.add("August");

c2.add("September");

c2.add("October");

c2.add("November");

c2.add("December");




t1 = new JTextArea(50,15);

t1.setText("\n\n\t------- Click on the------- \n\t Generate Bill Button to get\n\tthe bill of the Selected Month\n\n");

JScrollPane jsp = new JScrollPane(t1);

t1.setFont(new Font("Senserif",Font.ITALIC,18));



b1 = new JButton("Generate Bill");



p1.add(l1);

p1.add(l2);

p1.add(c2);

add(p1,"North");



add(jsp,"Center");

add(b1,"South");

b1.addActionListener(this);
```

```
        setLocation(750,100);

    }

    public void actionPerformed(ActionEvent ae){

        try{

            Conn c = new Conn();



            String month = c2.getSelectedItem();

            t1.setText("\tReliance Power Limited\nELECTRICITY BILL FOR THE MONTH OF "+month+"
,2021\n\n\n");



            ResultSet rs = c.s.executeQuery("select * from customer where meter="+meter);



            if(rs.next()){

                t1.append("\n Customer Name:"+rs.getString("name"));

                t1.append("\n Meter Number: "+rs.getString("meter"));

                t1.append("\n    Address:          "+rs.getString("address"));

                t1.append("\n    State:            "+rs.getString("state"));

                t1.append("\n    City:              "+rs.getString("city"));

                t1.append("\n    Email:            "+rs.getString("email"));

                t1.append("\n Phone Number "+rs.getString("phone"));

                t1.append("\n----------------------------------------------------------------");

                t1.append("\n");

            }



            rs = c.s.executeQuery("select * from meter_info where meter_number = " + meter);



            if(rs.next()){
```

```
            t1.append("\n Meter Location:"+rs.getString("meter_location"));
            t1.append("\n    Meter Type:     "+rs.getString("meter_type"));
            t1.append("\n    Phase Code:    "+rs.getString("phase_code"));
            t1.append("\n    Bill Type:        "+rs.getString("bill_type"));
            t1.append("\n    Days:             "+rs.getString("days"));
            t1.append("\n");
        }
        rs = c.s.executeQuery("select * from tax");
        if(rs.next()){
            t1.append("_____");
            t1.append("\n\n");
            t1.append("\n Cost per Unit:            Rs "+rs.getString("cost_per_unit"));
            t1.append("\n Meter Rent:               Rs "+rs.getString("meter_rent"));
            t1.append("\n Service Charge:           Rs "+rs.getString("service_charge"));
            t1.append("\n Service Tax:              Rs "+rs.getString("service_tax"));
            t1.append("\n Swacch Bharat Cess:       Rs "+rs.getString("swacch_bharat_cess"));
            t1.append("\n Fixed Tax:                Rs "+rs.getString("fixed_tax"));
            t1.append("\n");

        }

        rs = c.s.executeQuery("select * from bill where meter="+meter+" AND month =
"'+c2.getSelectedItem()+'"');

        if(rs.next()){
            t1.append("\n Current Month :\t"+rs.getString("month"));
            t1.append("\n Units Consumed:\t"+rs.getString("units"));
```

```
            t1.append("\n Total Charges :\t"+rs.getString("total_bill"));
            t1.append("\n----------");
            t1.append("\n  TOTAL PAYABLE :\t"+rs.getString("total_bill"));
          }
        }catch(Exception e){
          e.printStackTrace();
        }
    }

    public static void main(String[] args){
        new GenerateBill("").setVisible(true);
    }
}
```


Generate Bill
January
------- Click on the -------
Generate Bill Button to get
the bill of the Selected Month

Result:

Successfully learned many things so far while doing this mini project.

SRM INSTITUTE OF SCIENCE AND TECHNOLOGY (Deemed to be University u/s 3 of UGC Act, 1956)		
Office of Controller of Examinations		
REPORT FOR PLAGIARISM CHECK ON THE SYNOPSIS/THESIS/DISSERTATION/PROJECTREPORTS		
1	Name of the Candidate (IN BLOCK LETTERS)	1. SHUBHAM KUMAR SINGH 2. AYUSH KUMAR 3. S SRIWANTH
2	Address of the Candidate	SRM UNIVERSITY KTR CAMPUS
3	Registration Number	1. RA2112703010004 2. RA2112703010007 3. RA2112703010022
4	Department	DEPARTMENT OF NETWORKING &COMMUNICATIONS
5	Faculty	FACULTY OF ENGINEERING & TECHNOLOGY
6	Title of the Synopsis/ Thesis/ Dissertation/Project	ELECTRICITY BILLING SYSTEM
7	Name and address of the Supervisor /	Dr..LAKSHMINARAYANAN SRM INSTITUTE OF SCIENCE AND TECHNOLOGY, KATTANKULATHUR,TAMIL NADU - 603 203
8	Software Used	NETBEANS IDE
9	Date of Verification	29-10-2022