

# **JAVA MINI PROJECT**

## **ELECTRICITY BILLING SYSTEM**

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## PROGRAM CODE:

### 1. SIGNUP PAGE

```
package electricity.billing.system;

import javax.swing.*;
import javax.swing.border.*;
import java.awt.*;
import java.awt.event.*;
import java.sql.*;
import java.sql.ResultSet;
import java.sql.Statement;
import java.sql.Connection;
import java.sql.DriverManager;

public class Signup extends JFrame implements ActionListener {

    JButton create, back;
    Choice accountType;
    JTextField meter, username, name, password;
    Signup() {
        setBounds(450, 150, 700, 400);
        getContentPane().setBackground(Color.WHITE);
        setLayout(null);

        JPanel panel = new JPanel();
        panel.setBounds(30, 30, 650, 300);
        panel.setBorder(new TitledBorder(new LineBorder(new
Color(173, 216, 230), 2), "Create-Account",
TitledBorder.CENTER, TitledBorder.TOP, null, new Color(172,
216, 230)));
        panel.setBackground(Color.WHITE);
        panel.setLayout(null);
        panel.setForeground(new Color(35, 139, 34));
        add(panel);

        JLabel heading = new JLabel("Create Account");
        heading.setBounds(100, 50, 140, 20);
        heading.setForeground(Color.GRAY);
        heading.setFont(new Font("Tahoma", Font.BOLD, 14));
```

```
panel.add(heading);

accountType = new Choice();
accountType.add("Admin");
accountType.add("Customer");
accountType.setBounds(260, 50, 150, 20);
panel.add(accountType);

JLabel lblmeter = new JLabel("Meter Number");
lblmeter.setBounds(100, 90, 140, 20);
lblmeter.setForeground(Color.GRAY);
lblmeter.setFont(new Font("Tahoma", Font.BOLD, 14));
panel.add(lblmeter);

meter = new JTextField();
meter.setBounds(260, 90, 150, 20);
panel.add(meter);

JLabel lblusername = new JLabel("Username");
lblusername.setBounds(100, 130, 140, 20);
lblusername.setForeground(Color.GRAY);
lblusername.setFont(new Font("Tahoma", Font.BOLD, 14));
panel.add(lblusername);

username = new JTextField();
username.setBounds(260, 130, 150, 20);
panel.add(username);

JLabel lblname = new JLabel("Name");
lblname.setBounds(100, 170, 140, 20);
lblname.setForeground(Color.GRAY);
lblname.setFont(new Font("Tahoma", Font.BOLD, 14));
panel.add(lblname);

name = new JTextField();
name.setBounds(260, 170, 150, 20);
panel.add(name);

meter.addFocusListener(new FocusListener() {
@Override
public void focusGained(FocusEvent fe) {}
```

```

@Override
public void focusLost(FocusEvent fe) {
try {
Conn c = new Conn();
ResultSet rs = c.s.executeQuery("Select * from login where
meter_no = '"+meter.getText()+"'");
while(rs.next()) {
name.setText(rs.getString("name"));
}
} catch (Exception e) {
e.printStackTrace();
}
}
});

```

```

JLabel lblpassword = new JLabel("Password");
lblpassword.setBounds(100, 210, 140, 20);
lblpassword.setForeground(Color.GRAY);
lblpassword.setFont(new Font("Tahoma", Font.BOLD, 14));
panel.add(lblpassword);

```

```

password = new JTextField();
password.setBounds(260, 210, 150, 20);
panel.add(password);

```

```

accountType.addItemListener(new ItemListener() {
public void itemStateChanged(ItemEvent ae) {
String user = accountType.getSelectedItem();
if(user.equals("Customer")) {
lblmeter.setVisible(true);
meter.setVisible(true);
name.setEditable(false);
}else {
lblmeter.setVisible(false);
meter.setVisible(false);
name.setEditable(true);
}
}
});

```

```

create = new JButton("create");
create.setBackground(Color.BLACK);
create.setForeground(Color.WHITE);

```

```

        create.setBounds(140, 260, 120, 25);
        create.addActionListener(this);
        panel.add(create);

        back = new JButton("Back");
        back.setBackground(Color.BLACK);
        back.setForeground(Color.WHITE);
        back.setBounds(300, 260, 120, 25);
        back.addActionListener(this);
        panel.add(back);

        ImageIcon i1 = new
        ImageIcon(ClassLoader.getResource("icon/signupImage.png"
        ));
        Image i2 = i1.getImage().getScaledInstance(250, 250,
        Image.SCALE_DEFAULT);
        ImageIcon i3 = new ImageIcon(i2);
        JLabel image = new JLabel(i3);
        image.setBounds(430, 30, 250, 250);
        panel.add(image);

        setVisible(true);
    }

    public void actionPerformed(ActionEvent ae) {

        if (ae.getSource() == create) {
            String atype=accountType.getSelectedItem();
            String susername=username.getText();
            String sname=name.getText();
            String spassword=password.getText();
            String smeter=meter.getText();

            try {
                Conn c = new Conn();

                String query = null;
                if(atype.equals("Admin")) {
                    query ="insert into login values('" + smeter + "', '" +
                    susername + "', '" + sname + "', '"
                    + spassword + "', '" + atype + "')";
                } else {

```

```
query = "update login set username = '"+susername+"', password  
= '"+spassword+"', user = '"+atype+" where meter_no =  
 '"+smeter+"';  
}  
c.s.executeUpdate(query);
```

```
JOptionPane.showMessageDialog(null, "Account Created  
Successfully");
```

```
setVisible(false);  
new Login();  
} catch (Exception e) {  
e.printStackTrace();  
}  
} else if (ae.getSource() == back) {  
setVisible(false);
```

```
new Login();  
}  
}
```

```
public static void main(String[] args) {  
    new Signup();  
}  
}
```

## 2.ADD NEW CUSTOMER

```
package electricity.billing.system;

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

public class NewCustomer extends JFrame implements
ActionListener {

    JTextField tfname, tfaddress, tfstate, tfcity, tfemail,
    tfphone;
    JButton next, cancel;
    JLabel lblmeter;

    NewCustomer() {
        setSize(700, 500);
        setLocation(400, 200);

        JPanel p = new JPanel();
        p.setLayout(null);
        p.setBackground(new Color(173, 216, 230));
        add(p);

        JLabel heading = new JLabel("New Customer");
        heading.setBounds(180, 10, 200, 25);
        heading.setFont(new Font("Tahoma", Font.PLAIN, 24));
        p.add(heading);

        JLabel lblname = new JLabel("Customer Name");
        lblname.setBounds(100, 80, 100, 20);
        p.add(lblname);

        tfname = new JTextField();
        tfname.setBounds(240, 80, 200, 20);
        p.add(tfname);

        JLabel lblmeterno = new JLabel("Meter Number");
        lblmeterno.setBounds(100, 120, 100, 20);
        p.add(lblmeterno);
```

```
lblmeter = new JLabel("");
lblmeter.setBounds(240, 120, 100, 20);
p.add(lblmeter);

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

JLabel lbladdress = new JLabel("Address");
lbladdress.setBounds(100, 160, 100, 20);
p.add(lbladdress);

tfaddress = new JTextField();
tfaddress.setBounds(240, 160, 200, 20);
p.add(tfaddress);

JLabel lblcity = new JLabel("City");
lblcity.setBounds(100, 200, 100, 20);
p.add(lblcity);

tfcity = new JTextField();
tfcity.setBounds(240, 200, 200, 20);
p.add(tfcity);

JLabel lblstate = new JLabel("State");
lblstate.setBounds(100, 240, 100, 20);
p.add(lblstate);

tfstate = new JTextField();
tfstate.setBounds(240, 240, 200, 20);
p.add(tfstate);

JLabel lblemail = new JLabel("Email");
lblemail.setBounds(100, 280, 100, 20);
p.add(lblemail);

tfemail = new JTextField();
tfemail.setBounds(240, 280, 200, 20);
p.add(tfemail);

JLabel lblphone = new JLabel("Phone Number");
lblphone.setBounds(100, 320, 100, 20);
p.add(lblphone);
```



```

tfphone = new JTextField();
tfphone.setBounds(240, 320, 200, 20);
p.add(tfphone);

next = new JButton("Next");
next.setBounds(120, 390, 100, 25);
next.setBackground(Color.BLACK);
next.setForeground(Color.WHITE);
next.addActionListener(this);
p.add(next);

cancel = new JButton("Cancel");
cancel.setBounds(250, 390, 100, 25);
cancel.setBackground(Color.BLACK);
cancel.setForeground(Color.WHITE);
cancel.addActionListener(this);
p.add(cancel);

setLayout(new BorderLayout());

add(p, "Center");

ImageIcon i1 = new
ImageIcon(ClassLoader.getResource("icon/hicon1.jpg"));
Image i2 = i1.getImage().getScaledInstance(150, 300,
Image.SCALE_DEFAULT);
ImageIcon i3 = new ImageIcon(i2);
JLabel image = new JLabel(i3);
add(image, "West");

getContentPane().setBackground(Color.WHITE);

setVisible(true);
}

public void actionPerformed(ActionEvent ae) {
    if (ae.getSource() == next) {
        String name = tfname.getText();
        String meter = lblmeter.getText();
        String address = tfaddress.getText();
        String city = tfcity.getText();
        String state = tfstate.getText();
    }
}

```

```

String email = tfemail.getText();
String phone = tfphone.getText();

String query1 = "insert into customer values('" + name + "',
'" + meter + "', '" + address + "', '" + city
+ "', '" + state + "', '" + email + "', '" + phone + "')";
String query2 = "insert into login values('" + meter + "',
'', '" + name + "', '', '')";

try {
    Conn c = new Conn();

    c.s.executeUpdate(query1);
    c.s.executeUpdate(query2);
    JOptionPane.showMessageDialog(null, "Customer Details Added
Successfully");
    setVisible(false);


    new MeterInfo(meter);
} catch (Exception e) {
    e.printStackTrace();
} else {
    setVisible(false);
}
}

public static void main(String[] args) {
    new NewCustomer();
}
}

```

# RESULTS

## LOGIN PAGE



Username

Password

Login in as

Admin

Login

Cancel

Signup

## SIGNUP PAGE

Create Account

Admin

Meter Number


Username

Name

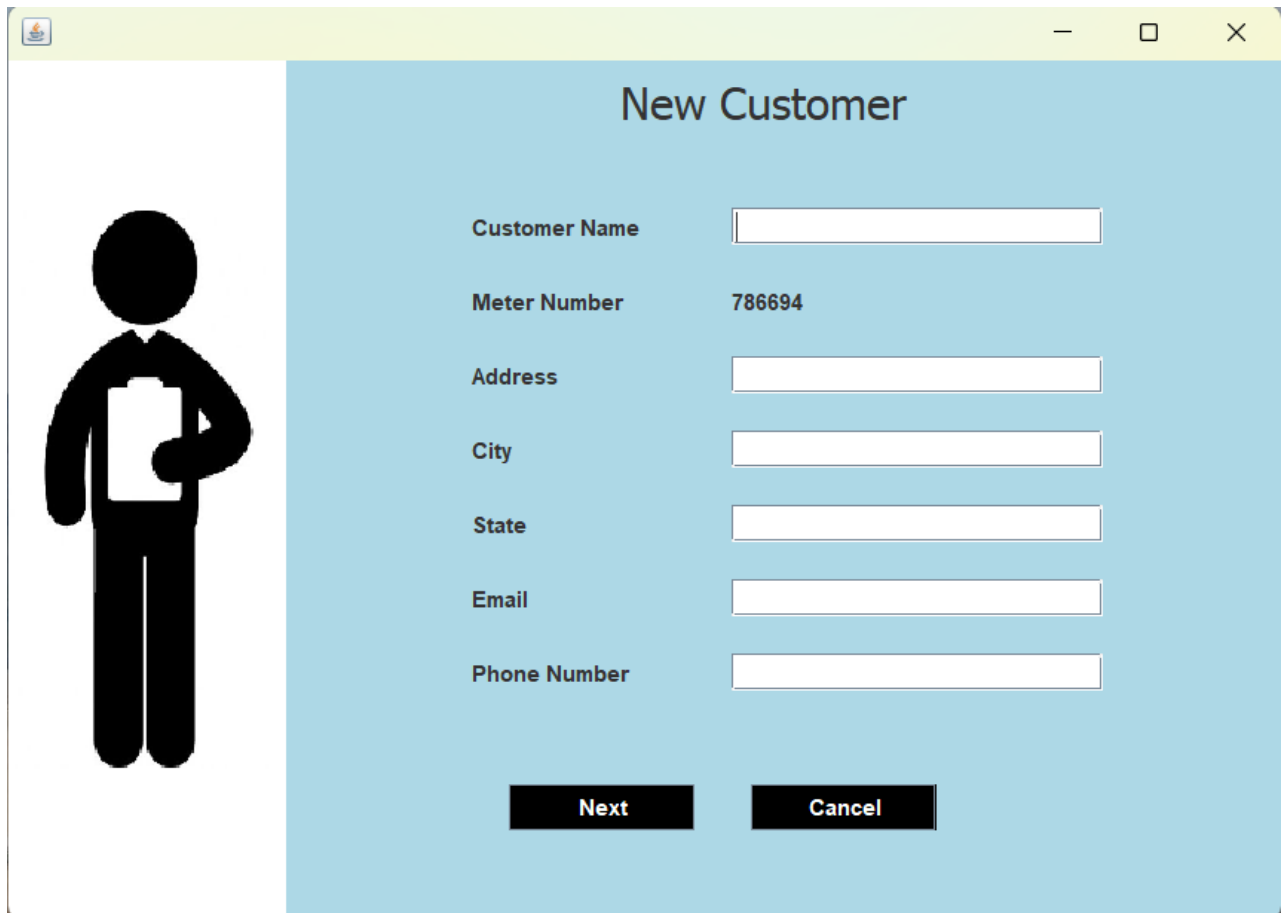
Password

create

Back



## ADDING NEW CUSTOMER



A screenshot of a web application window titled "New Customer". The window has a light green title bar with standard minimize, maximize, and close buttons. On the left side of the window is a vertical white bar containing a black silhouette of a person holding a clipboard. The main area of the window has a light blue background. At the top of this area, the title "New Customer" is displayed in a large, dark font. Below the title, there are several form fields arranged in a list. The first field is labeled "Customer Name" and is an empty text input. The second field is labeled "Meter Number" and contains the value "786694". The third field is labeled "Address" and is an empty text input. The fourth field is labeled "City" and is an empty text input. The fifth field is labeled "State" and is an empty text input. The sixth field is labeled "Email" and is an empty text input. The seventh field is labeled "Phone Number" and is an empty text input. At the bottom of the form area, there are two black buttons with white text: "Next" on the left and "Cancel" on the right.

**New Customer**

Customer Name

Meter Number 786694

Address

City

State

Email

Phone Number

**Next** **Cancel**

## CUSTOMER DETAIL VIEW

Customer Details						
name	meter_no	address	city	state	email	phone
Ram Naren	220109	Chennai	Chennai	Tamil Nadu	ramnaren@gmail.com	9746875676
Aran	201021	Chennai	Chennai	Tamil Nadu	aran_apple@gmail.com	9834675733
Seetha	835687	Velachery	Chennai	Tamil Nadu	se_etha@gmail.com	9273542278
Vrushali	972313	Tambaram	Chennai	Tamil Nadu	vrushali@gmail.com	7856432345
Chris Hamilton	995285	Washermanpet	Chennai	Tamil Nadu	chris_hamilton@gmail.com	6567432145
John	898729	Thandalam	Chennai	Tamil Nadu	john@gmail.com	7988543210
Senthil Kumar	831780	Tambaram	Chennai	Tamil Nadu	senthil_kumar@gmail.com	7845362711

## DEPOSIT DETAILS

Deposit Details

Search By Meter Number

220109

▼

Search By Month

January


▼

Search

Print

meter_no	month	units	totalbill	status
201021	March	260	2490	Paid
220109	March	350	3300	Paid
835687	March	550	5100	Not Paid
972313	March	500	4650	Paid
995285	March	790	7260	Not Paid
898729	March	450	4200	Paid
831780	March	780	7170	Paid

## CALCULATE ELECTRICITY BILL



### Calculate Electricity Bill

Meter Number	<input type="text" value="220109"/>
Name	<input type="text" value="Ram Naren"/>
Address	<input type="text" value="Chennai"/>
Units Consumed	<input type="text"/>
Month	<input type="text" value="January"/>

## DASHBOARD



## UPDATE CUSTOMER INFORMATION

UPDATE CUSTOMER INFORMATION

Name	Senthil Kumar
Meter Number	831780
Address	<input type="text" value="Tambaram"/>
City	<input type="text" value="Chennai"/>
State	<input type="text" value="Tamil Nadu"/>
Email	<input type="text" value="senthil_tkumar@gmail.com"/>
Phone	<input type="text" value="7845362711"/>

Update

Cancel



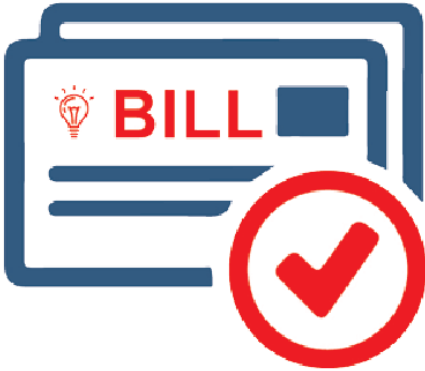
## ELECTRICITY BILL VIEW

Electricity Bill

Meter Number	831780
Name	Senthil Kumar
Month	<input type="text" value="March"/>
Units	780
Total Bill	7170
Status	Paid

Pay

Back



# GENERATE BILL PAGE

Generate Bill 831780

March

Reliance Power Limited

ELECTRICITY BILL GENERATED FOR THE MONTH

OF March, 2024

Customer Name: Senthil Kumar

Meter Number : 831780

Address : Tambaram

City : Chennai

State : Tamil Nadu

Email : senthil\_tkumar@gmail.com

Phone : 7845362711

Meter Location: Outside

Meter Type: Electric Meter

Phase Code: 055

Bill Type: Normal

Days: 30

Cost Per Unit: 9

Meter Rent: 9

Service Charge: 22

Service Tax: 22

Swacch Bharat Cess: 6

Fixed Tax: 18

Generate Bill