Ex.No: 1	**Electricity Bill Calculator**
Date:	

Aim:

To create a Java console application used to generate electricity bill based on connection type (Domestic and Commercial) and consumption. Both are having different tariff slots.

Algorithm:

Step 1 Start the process

Step 2 Get the user informations [Name, Consumer Number, Reading's of previous and current month, Connection Type]

Step 3 Compute units consumed by user [Current Month Reading – Previous Month Reading]

Step 4 If a connection type is domestic goto step 6

Step 5 Else goto step 7

Step 6 Initialize i with 1 and sum as 0

- **Step 6.1** If check i is less than or equal to 100 then compute sum = sum + 1 and goto step 6.5
- **Step 6.2** Else if check i is greater than 100 and less than 200 then compute sum = sum + 2.5 and goto step 6.5
- **Step 6.3** Else if check i is greater than 200 and less than 500 then compute sum = sum + 4 and goto step 6.5
- **Step 6.4** Else compute sum = sum + 6 and goto step 6.5
- **Step 6.5** If i is equal to number of units consumed goto step 8 else return to same step

Step 7 Initialize i with 1 and sum as 0

- **Step 7.1** If check i is less than or equal to 100 then compute sum = sum + 2 and goto step 7.5
- **Step 7.2** Else if check i is greater than 100 and less than 200 then compute sum = sum + 4.5 and goto step 7.5
- **Step 7.3** Else if check i is greater than 200 and less than 500 then compute sum = sum + 6 and goto step 7.5
- **Step 7.4** Else compute sum = sum + 7 and goto step 7.5
- **Step 7.5** If i is equal to number of units consumed goto step 8 else return to same step

Step 8 Store the sum

Step 9 Display Bill Details [Name, Consumer Number, No of units consumed]

Step 10 Check the connection type

- **Step 10.1** If connection type is domestic display domestic tariff slot and goto step 11
- **Step 10.1** Else display commercial tariff slot and goto step 11

Step 11 Display amount payable using stored sum

Step 12 Stop the Process

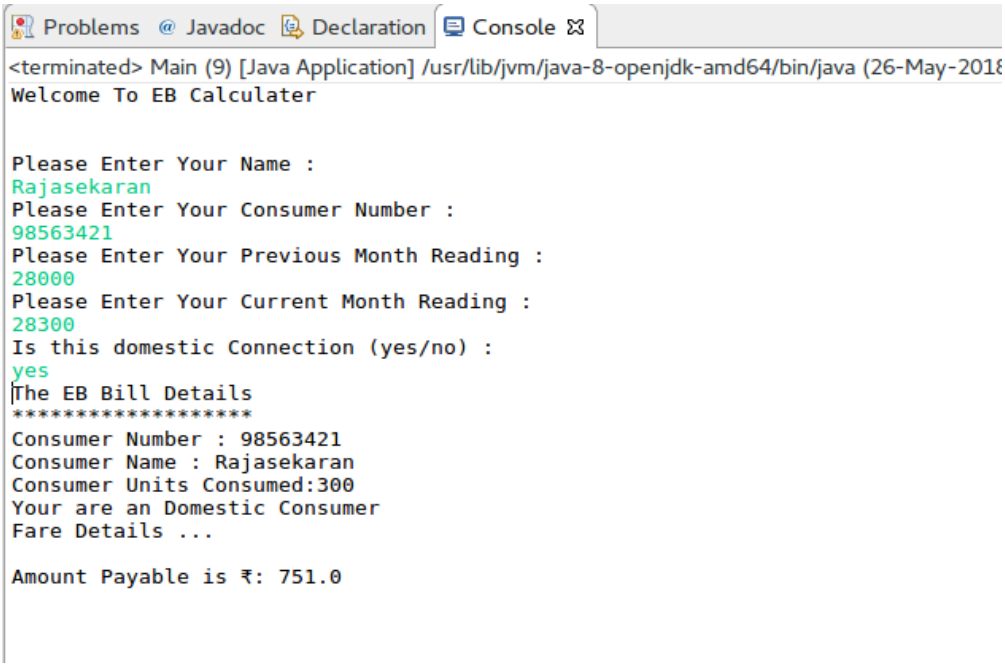
Coding

```
import java.util.Scanner;
class EBConsumer {

int consumer_number;
String consumer_name;
int previous_month_reading;
int current_month_reading;
int units_consumed;
boolean isDomestic = false;
double bill_ammount;

public void displayDomesticFares(){
   System.out.println("Domestic Fare Details");
   System.out.println("**********************");
   System.out.println("First 100 units - Rs. 1 per unit");
   System.out.println("101-200 units - Rs. 2.50 per unit");
   System.out.println("201 -500 units - Rs. 4 per unit");
   System.out.println("> 501 units - Rs. 6 per unit");
}

public void displayCommercialFare() {
   System.out.println("Commercial Fare Details");
   System.out.println("************************");
   System.out.println("First 100 units - Rs. 2 per unit");
   System.out.println("101-200 units - Rs. 4.50 per unit");
   System.out.println("201 -500 units - Rs. 6 per unit");
   System.out.println("> 501 units - Rs. 7 per unit");
}

public void getDetails() {
   Scanner inputs = new Scanner(System.in);
   System.out.println("Welcome To EB Calculater\n\n");
   System.out.println("Please Enter Your Name : ");
   this.consumer_name = inputs.next();
   System.out.println("Please Enter Your Consumer Number : ");
   this.consumer_number = inputs.nextInt();
   System.out.println("Please Enter Your Previous Month Reading : ");
   this.previous_month_reading = inputs.nextInt();
   System.out.println("Please Enter Your Current Month Reading : ");
   this.current_month_reading = inputs.nextInt();
   System.out.println("Is this domestic Connection (yes/no) : ");
   if(inputs.next().equals("yes"))
      this.isDomestic = true;
}

public void generateBill(){
   int number_of_units_consumed = this.current_month_reading - this.previous_month_reading;
   this.units_consumed = number_of_units_consumed;
   double sum = 0;
   if(isDomestic == true) {
```

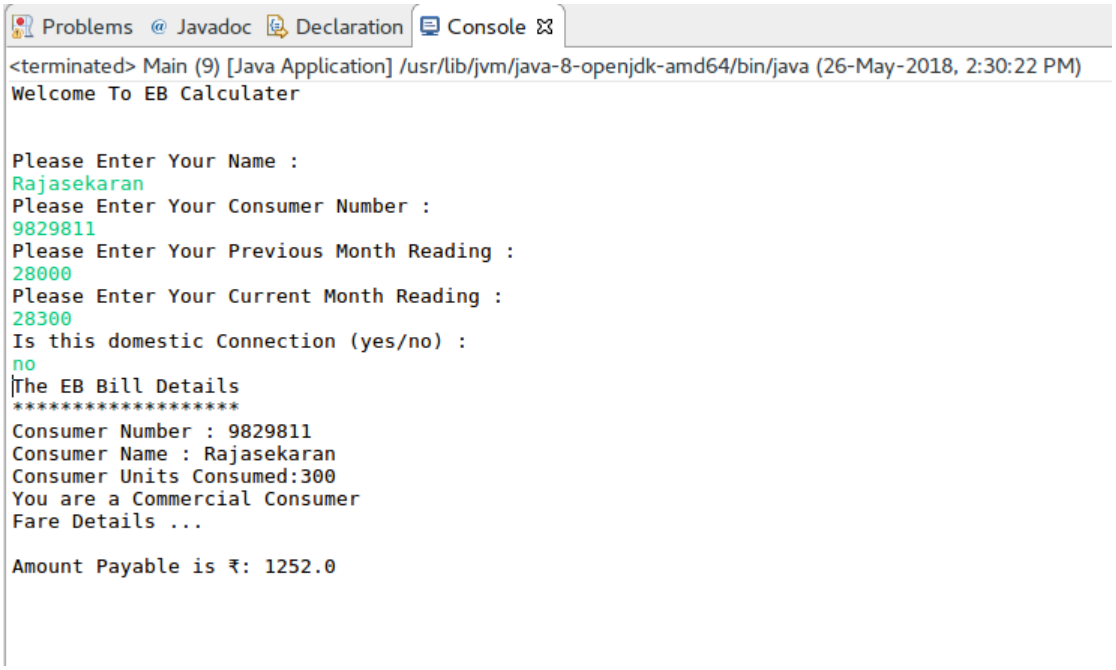
```
        for (int i = 0; i <= number_of_units_consumed; i++) {
            if (i <= 100)
                sum = sum + 1;
            else if (i > 100 && i <= 200)
                sum = sum + 2.5;
            else if (i > 200 && i <= 500)
                sum = sum + 4;
            else
                sum = sum + 6;
        }

    }
    else {
        for (int i = 0; i <= number_of_units_consumed; i++) {
            if (i <= 100)
                sum = sum + 2;
            else if (i > 100 && i <= 200)
                sum = sum + 4.5;
            else if (i > 200 && i <= 500)
                sum = sum + 6;
            else
                sum = sum + 7;
        }
    }
    this.bill_ammount = sum;
}

public void displayBill() {
    generateBill();
    System.out.println("The EB Bill Details");
    System.out.println("**********************");
    System.out.println("Consumer Number : "+this.consumer_number);
    System.out.println("Consumer Name : "+this.consumer_name);
    System.out.println("Consumer Units Consumed:"+this.units_consumed);
    if(this.isDomestic == true)
        System.out.println("Your are an Domestic Consumer\nFare Details ...");
    else
        System.out.println("You are a Commercial Consumer\nFare Details ...");
    System.out.println("\nAmount Payable is \u20B9: "+this.bill_ammount);
}
}

public class Main {

    public static void main(String[] args) {
        EBConsumer consumer = new EBConsumer();
        consumer.getDetails();
        consumer.displayBill();
    }
}
```

Output:

User type is domestic:



User type is commercial:



Result:

The Java console application for electricity bill generator was developed and tested successfully.