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Batch: B2

1. Q1: An electricity board charges the following rates to demonstrate users to discourage large consumption of energy:

For the first 100 units – 60 paise per unit.

For the next 200 units – 80 paise per unit

Beyond 300 units – 90 paise per unit.

All users will be charged a minimum of Rs. 50.00. If the total amount is more than Rs. 300 then additional charge of 15% is added. Write a program in Java program to read name of the users and number of units consumed and print out the charges with names

```
import java.util.Scanner;
```

```
class electricitcal{
```

```
    String name;
```

```
    int units;
```

```
    Scanner sc = new Scanner(System.in);
```

```
public void infoInput(){
```

```
    System.out.println("Enter the name of the user:");
```

```
    name = sc.nextLine();
```

```
    System.out.println("Enter the number of units:");
```

```
    units =sc.nextInt();
```

```
}
```

```
public void calculations(){
```

```
    float bill =0.0f;
```

```

if(units<100){
    bill+= units*0.60f;
}
if(units>=100 && units<300)
{
    bill+=( (units-100)*0.80f + 100*0.60f);
}
if(units>300){
    bill+= ((units-300)*0.90 + 100*0.60f + 200*0.80f);
}
if(bill>300.0f){

    bill+=bill*0.15f;
}
if(bill<50.0f){
    System.out.println("The electricity bill of " + name + " is equal to 50");
}
System.out.println("The electricity bill of " + name + " is equal to " + bill);

}

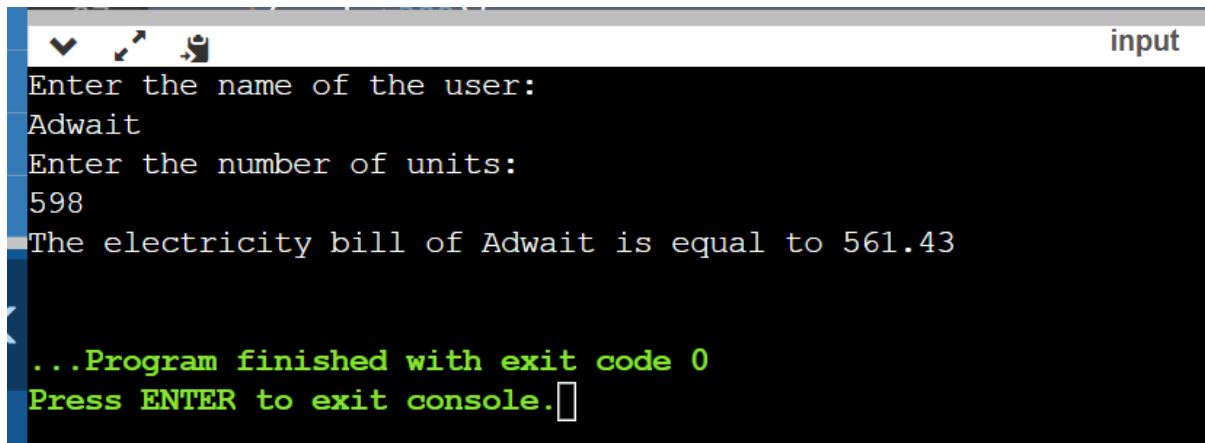
}

public class Main{
    public static void main(String[] args){
        electriccitycal obj = new electriccitycal();
        obj.infolnput();
    }
}

```

```
obj.calculations();  
  
}  
  
}
```

Output:

A screenshot of a Java IDE's console window. The window has a title bar with standard OS icons and the word 'input' on the right. The console output is as follows:
Enter the name of the user:
Adwait
Enter the number of units:
598
The electricity bill of Adwait is equal to 561.43

...Program finished with exit code 0
Press ENTER to exit console.
The text is displayed in a monospaced font. The first three lines are in white, the fourth line is in green, and the last two lines are in yellow. A cursor is visible at the end of the last line.

Q2: 2. Create a Class called library to hold accession number, title of the book, author name, price of the book and flag indicating whether the book is issued or not. Write a menu driven program that implements the working of a library. The menu options should be:

1. Add book information
2. Display book information
3. List all books of given author
4. List the books in the order of accession number

```
import java.util.*;
```

```
class libinfo{
```

```
    String b_name;
```

```
    int acc_numb;
```

```
    String a_name;
```

```
    int b_price;
```

```
    int flag;
```

```
    public void infoInput(){
```

```
        Scanner sc = new Scanner(System.in);
```

```

System.out.println("Enter the title of the book:");

b_name= sc.nextLine();

System.out.println("Enter the name of the author:");

a_name= sc.nextLine();

System.out.println("Enter the accession number:");

acc_numb= sc.nextInt();

System.out.println("Enter the price of the book:");

b_price = sc.nextInt();

System.out.println("Enter (1/0) to check whether book is issued or not:");

flag = sc.nextInt();

}


public void display(){

    System.out.println("The title of book is "+ b_name);

    System.out.println("The accession number:" + acc_numb);

    System.out.println("The name of the author:" + a_name);

    System.out.println("The price of the book:" + b_price);

    if(flag ==1){

        System.out.println("The book is issued");

    }

    else if(flag==0){

        System.out.println("Book not issued");

    }

}

}

```

```
public class Main {

    public static void main(String[] args) {

        libinfo ob1 = new libinfo();

        libinfo ob2 = new libinfo();

        libinfo ob3 = new libinfo();

        ob1.infoInput();

        ob2.infoInput();

        ob3.infoInput();


        if(ob1.acc_numb>ob2.acc_numb && ob1.acc_numb>ob3.acc_numb){

            ob1.display();

            if(ob2.acc_numb>ob3.acc_numb){

                ob2.display();

                ob3.display();

            }

            if(ob3.acc_numb>ob2.acc_numb){

                ob3.display();

                ob2.display();

            }

        }

        if(ob3.acc_numb>ob2.acc_numb && ob3.acc_numb>ob1.acc_numb){

            ob3.display();

            if(ob2.acc_numb>ob1.acc_numb){

                ob2.display();

                ob1.display();

            }

        }

    }

}
```

```
    }  
    if(ob1.acc_numb>ob2.acc_numb){  
        ob1.display();  
        ob2.display();  
    }  
}  
if(ob2.acc_numb>ob1.acc_numb && ob2.acc_numb>ob3.acc_numb){  
    ob2.display();  
    if(ob3.acc_numb>ob1.acc_numb){  
        ob3.display();  
        ob1.display();  
    }  
    if(ob1.acc_numb>ob3.acc_numb){  
        ob1.display();  
        ob3.display();  
    }  
}  
}  
}
```

Output:

Enter the title of the book:

Chhava

Enter the name of the author:

Shivaji Sawant

Enter the accession number:

2

Enter the price of the book:

567

Enter (1/0) to check whether book is issued or not:

0

Enter the title of the book:

Wings of fire

Enter the name of the author:

Abdul Kalam

Enter the accession number:

3

Enter the price of the book:

768

Enter (1/0) to check whether book is issued or not:

1

Enter the title of the book:

The Alchemist

Enter the name of the author:

Paulo Coelho

Enter the accession number:

1

Enter the price of the book:

342

Enter (1/0) to check whether book is issued or not:

0

The title of book is Wings of fire
The accession number:3
The name of the author:Abdul Kalam
The price of the book:768
The book is issued
The title of book is Chhava
The accession number:2
The name of the author:Shivaji Sawant
The price of the book:567
Book not issued
The title of book is The Alchemist
The accession number:1
The name of the author:Paulo Coelho
The price of the book:342
Book not issued