EXP NO:1

DATE:09/7/19

JAVA APPLICATION FOR ELECTRICITYBILL

Aim:

To develop a java console application to generate electricity bill

Requirement:

Develop a Java application to generate Electricity bill. Create a package billings and Create a class ElectricityBill with the following

members: Consumer no., consumer name, previous month reading, current month reading, type

of EB connection(i.e domestic or commercial). Declare constructors to pass the initial attributes.

Declare and define the following member functions

getData() - to get attributes from the user

printData() - to print the data

computeBillAmount() - to calculate and print the bill amount in appropriate format

Compute the bill amount using the following tariff.

If the type of the EB connection is domestic, calculate the amount to be paid as follows:

First 100 units - Rs. 1 per unit

101-200 units - Rs. 2.50 per unit

201 -500 units - Rs. 4 per unit

>501 units - Rs. 6 per unit

If the type of the EB connection is commercial, calculate the amount to be paid as follows:

First 100 units - Rs. 2 per unit

101-200 units - Rs. 4.50 per unit

201 -500 units - Rs. 6 per unit

> 501 units - Rs. 7 per unit

Create a class Calculation1 with main function. Create the object of EBill class, get the data

and display the bill amount by calling computeBillAmount() function.

Algorithm:

Step1: create a package billings

step2: declare a class name electricity bill

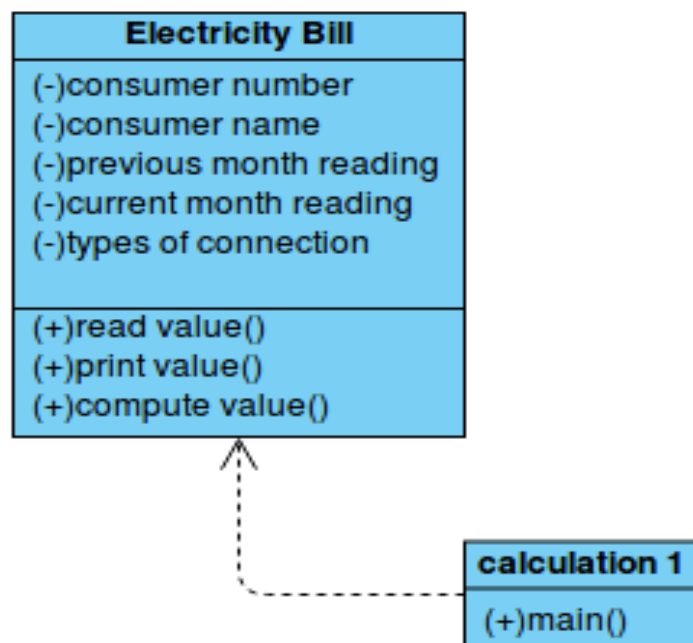step3: declare a constructor with inital attributes

step4: declare get data for the consumer no,consumer name,pre month reading,current month reading,consumer type.

Step5: declare a class calculation with static main function

step6: compute the data from the user

step7: print the computed data

Class Diagram

Program:

```
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package billings;

import java.util.Scanner;

public class ElectricityBill {
        private long customernumber;
        private String customername;
        private double premonthreading;
        private double currentmonthreading;
        private String customertype ;


        public ElectricityBill()
        {
                this.customernumber=2000;
                this.customername="avinash";
                this.premonthreading=10.5;
                this.currentmonthreading=9.5;
                this.customertype="domestic";
        }

        public ElectricityBill(long number,String name,double preading,double creading,String
type)
        {
                this.customernumber=number;
                this.customername=name;
                premonthreading=preading;
                currentmonthreading=creading;
                customertype=type;
        }
        public void getData()
        {
                Scanner sc=new Scanner(System.in);

                System.out.printf("\n%40s","BILLING INFORMATION");
                System.out.print("\nEnter the customer number:");
                this.customernumber=sc.nextLong();
                System.out.print("Enter the customer name:");
                customername= sc.next();
                System.out.print("Enter the reading:");
                premonthreading=sc.nextDouble();
```

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            System.out.print("Enter the customer type (domestic or
commercial):");
            customertype=sc.next();
            System.out.println("Enter the reading:");
            currentmonthreading=sc.nextInt();

    }
    public void printData()
    {
            System.out.printf("%-40s%40s\n", "Customer
Number:"+customernumber,"CustomerName:"+customername);
            System.out.printf("Pre Month Reading:"+premonthreading+"   "+"Current Month
Reading:"+currentmonthreading+"   ");
            System.out.printf("%-40s", "Customer Type:"+customertype);
    }
    public void computeBillunit()
    {
        double unit=currentmonthreading-premonthreading;
            double amount=0;
            String space="---------------------------------------------------------------------------";

            if(customertype.equals("domestic"))
            {
                    if((unit>=0)&& (unit<=100))
                    {
                            amount=unit*2.0;
                    }else if((unit>101)&&(unit<=200))
                    {
                            amount=unit*3.50;
                    }else if((unit>201)&&(unit<=500))
                    {
                            amount=unit*50.0;
                    }else
                    {
                            amount=unit*60.0;
                    }
            }else if(customertype.equals("comercial"))
            {
                    if((unit>=0)&& (unit<=100))
                    {
                            amount=unit*2.0;
                    }else if((unit>=101)&&(unit<=200))
                    {
                            amount=unit*210.0;
                    }else if((unit>=201)&&(unit<=500))
                    {
                            amount=unit*50.0;
                    }else
                    {
                            amount=unit*60.0;
                    }
            }
```

```java
			System.out.print("\n"+space+"\n");
			System.out.printf("%50s", "ELECTRICITY BILL");
			System.out.print("\n"+space+"\n");
			this.printData();
			System.out.printf("%30s%9.3f Rs", "Total unit:",amount);
			System.out.print("\n"+space+"\n");
		}
}
package billings;

public class Calculation2 {

	public static void main(String[] args) {
		ElectricityBill bill1,bill2;

		bill1=new ElectricityBill(2019,"lokesh",11.5,13.7,"Domestic");
		bill1.printData();
		bill2=new ElectricityBill();
		bill2.getData();
		bill1.computeBillunit();
		bill2.computeBillunit();
	}

}
```

output:

```
Customer Number:2019
CustomerName:lokesh
Pre Month Reading:11.5
Current Month Reading:13.7
Customer Type:Domestic

            BILLING INFORMATION

Enter the customer number:2020
Enter the customer name:bairava
Enter the reading:13
Enter the customer type (domestic or commercial):domestic
Enter the reading:19


-------------------------------------------------------------------------
                 ELECTRICITY BILL
-------------------------------------------------------------------------
Customer Number:2019
CustomerName:lokesh
Pre Month Reading:11.5
Current Month Reading:13.7
Customer Type:Domestic
Total unit:   10.000 Rs


-------------------------------------------------------------------------
```

```
-------------------------------------------------------------------------------
                        ELECTRICITY BILL
-------------------------------------------------------------------------------
Customer Number:2020                    CustomerName:bairava
Pre Month Reading:13.0
Current Month Reading:19.0
Customer Type:domestic
Total unit:   12.000 Rs
-------------------------------------------------------------------------------
```

Result:

Thus a java console application program is written and the output is verified.