using System;

namespace ElectricBill

{

class Program

{

static void Main(string[] args)

{

ElectricBill objBill = new ElectricBill();

LessThan100 objLessThan100 = new LessThan100();

LessThan200 objLessThan200 = new LessThan200();

LessThan500 objLessThan500 = new LessThan500();

MoreThan500 objMoreThan500 = new MoreThan500();

Console.WriteLine("Enter the number of Units");

int N = Convert.ToInt32(Console.ReadLine());

if (N >= 1 && N <= 100)

{

objLessThan100.BillCalculateResidential(N);

objLessThan100.BillCalculateCommertial(N);

}

else if (N > 100 && N <= 200)

{

objLessThan200.BillCalculateResidential(N);

objLessThan200.BillCalculateCommertial(N);

}

else if (N > 200 && N <= 500)

{

objLessThan500.BillCalculateResidential(N);

objLessThan500.BillCalculateCommertial(N);

}

else if (N > 500)

{

objMoreThan500.BillCalculateResidential(N);

objMoreThan500.BillCalculateCommertial(N);

}

}

}

class ElectricBill

{

protected double TaxFreeBill;

protected double Bill;

protected double GST;

public virtual void BillCalculateResidential(int n)

{

TaxFreeBill = n \* 5;

ResidentialTax();

ResidentialResult();

}

public virtual void BillCalculateCommertial(int n)

{

TaxFreeBill = n \* 8;

CommertialTax();

CommertialResult();

}

public void ResidentialResult()

{

Console.WriteLine("Your Electricity Bill for Residential Area with 13% GST is : " + Bill);

}

public void CommertialResult()

{

Console.WriteLine("Your Electricity Bill for Commerial Area with 17% GST is : " + Bill);

}

public void ResidentialTax ()

{

GST = 0.13 \* TaxFreeBill;

Bill = TaxFreeBill + GST;

}

public void CommertialTax()

{

GST = 0.17 \* TaxFreeBill;

Bill = TaxFreeBill + GST;

}

}

class LessThan100:ElectricBill

{

public override void BillCalculateResidential(int n)

{

TaxFreeBill = n \* 5;

ResidentialTax();

ResidentialResult();

}

public override void BillCalculateCommertial(int n)

{

TaxFreeBill = n \* 8;

CommertialTax();

CommertialResult();

}

}

class LessThan200: ElectricBill

{

public override void BillCalculateResidential(int n)

{

TaxFreeBill = (n-100) \* 17+(100\*5);

ResidentialTax();

ResidentialResult();

}

public override void BillCalculateCommertial(int n)

{

TaxFreeBill = (n-100) \* 21+(100\*8);

CommertialTax();

CommertialResult();

}

}

class LessThan500:ElectricBill

{

public override void BillCalculateResidential(int n)

{

TaxFreeBill = (n-200)\*23 + (100 \* 17) + (100 \* 5);

ResidentialTax();

ResidentialResult();

}

public override void BillCalculateCommertial(int n)

{

TaxFreeBill = (n-200)\*23 + (100 \* 21) + (100 \* 8);

CommertialTax();

CommertialResult();

}

}

class MoreThan500: ElectricBill

{

public override void BillCalculateResidential(int n)

{

TaxFreeBill =(n-500)\*69 + 300 \* 23 + 100 \* 17 + (100 \* 5);

ResidentialTax();

ResidentialResult();

}

public override void BillCalculateCommertial(int n)

{

TaxFreeBill =(n-500)\*79 + 300 \* 23 + 100 \* 21 + (100 \* 8);

CommertialTax();

CommertialResult();

}

}

}