Don Bosco Institute of Technology, Kurla(W)
Department of Electronics and Tele-Communication Engineering
ECL304 - Skill Lab: C++ and Java Programming
Sem III
2021-22

Practice Problems – Light Bill Program	
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1. Write a C++ and Java program to input electricity unit charge and calculate the total electricity bill

according to the given condition:

For first 50 units Rs. 0.50/unit

For next 100 units Rs. 0.75/unit

For next 100 units Rs. 1.20/unit

For unit above 250 Rs. 1.50/unit

An additional surcharge of 20% is added to the bill.

C++ Program:

```
/*Write a C++ program to input electricity unit charge
and calculate the total electricity bill
according to the given condition:
For first 50 units Rs. 0.50/unit
For next 100 units Rs. 0.75/unit
For next 100 units Rs. 1.20/unit
For unit above 250 Rs. 1.50/unit
An additional surcharge of 20% is added to the bill.
*/
```

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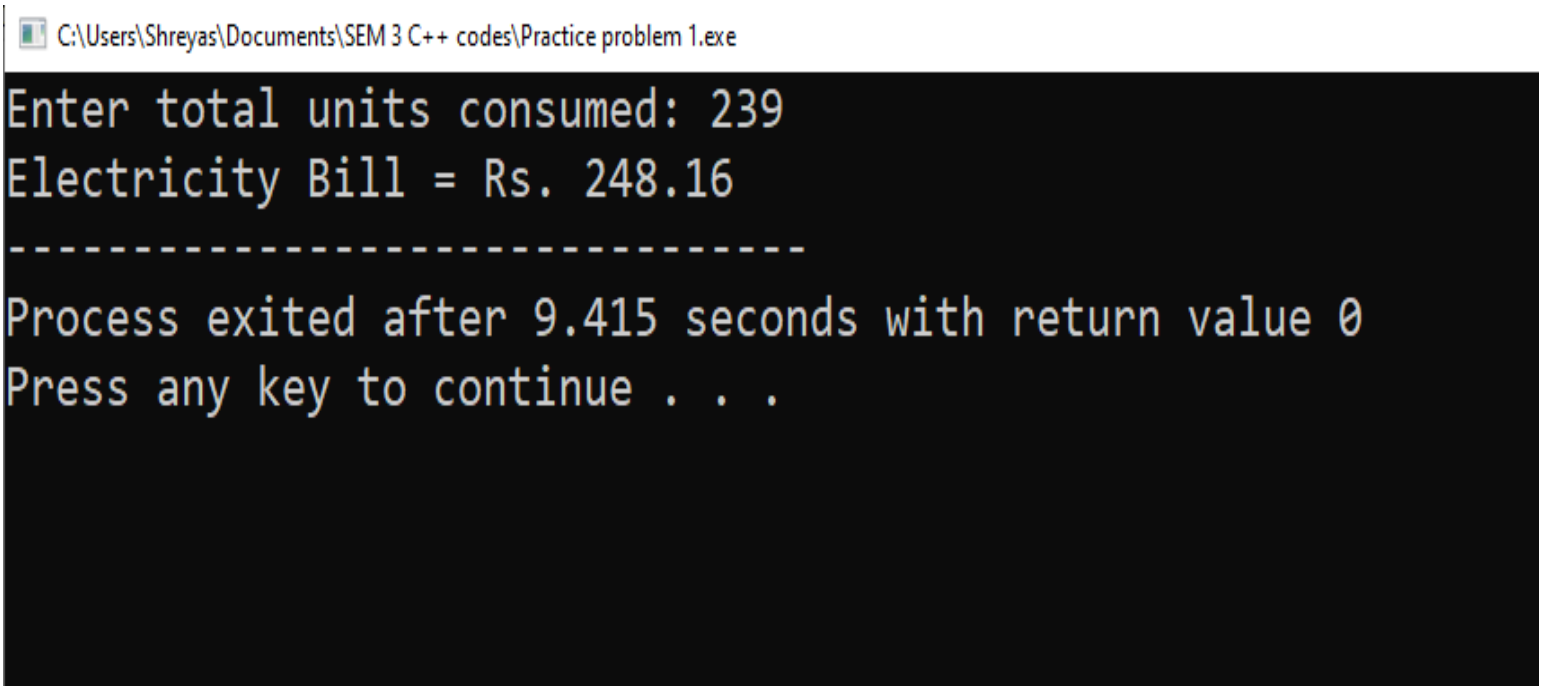
```
#include <iostream>

#include <iomanip>  //this is for setpricision() function which helps in telling the compiler that how many places after the decimal point the answer should be printed

#include <cstdio>    //it helps to use the C language syntax


using namespace std;


int main()

{

   int units_consumed;     //variable declaration

   float amt, total_amt, sur_charge;     //variable declaration


   cout << "Enter total units consumed: ";   //asking for user input

   cin >> units_consumed;   //storing the user input



/* Calculating the  electricity bill on the basis of units consumed

        with the help  of given limitting conditions */


   if(units_consumed <= 50)

   {
```

```
    amt = units_consumed * 0.50;
  }

  else if(units_consumed <= 150)
  {
    amt = 25 + ((units_consumed-50) * 0.75);
  }

  else if(units_consumed <= 250)
  {
    amt = 100 + ((units_consumed-150) * 1.20);
  }

  else
  {
    amt = 220 + ((units_consumed-250) * 1.50);
  }

  sur_charge = amt * 0.20;
  total_amt  = amt + sur_charge;    // adding an extra 20% charge on the
electricity bill
       //cout << "Total bill is = Rs. " <<total_amt;
 // cout<< "Electricity Bill = Rs. " << setprecision (2)  << fixed << total_amt;
```

```
        printf("Electricity Bill = Rs. %.2f", total_amt);


    return 0;
}
```

Output:



Java Program:

```
/*Write a Java program to input electricity unit charge and calculate the total electricity bill
        according to the given condition:
        For first 50 units Rs. 0.50/unit
        For next 100 units Rs. 0.75/unit
        For next 100 units Rs. 1.20/unit
        For unit above 250 Rs. 1.50/unit
        An additional surcharge of 20% is added to the bill.
        */
package javaprogramming2;
import java.util.Scanner;

public class LightBill {
        public static void main(String [] args)
        {
           int units_consumed;
           float amt, total_amt, sur_charge;

           Scanner sc = new Scanner(System.in);
           System.out.println("Enter total units consumed: ");
           units_consumed=sc.nextInt();
```

```
if(units_consumed <= 50)
{
   amt = (float) (units_consumed * 0.50);
}

else if(units_consumed <= 150)
{
   amt = (float) (25 + ((units_consumed-50) * 0.75));
}

else if(units_consumed <= 250)

{
   amt = (float) (100 + ((units_consumed-150) * 1.20));
}

else

{
   amt = (float) (220 + ((units_consumed-250) * 1.50));
}

sur_charge = (float) (amt * 0.20);
```

```
            total_amt  = amt + sur_charge;

            System.out.println("Electricity Bill  to be paid is Rs. "+ total_amt);


        }


}
```

Output: