

EXPERIMENT NO: 5

TITLE: An electricity board charges the following rates for the use of electricity: for the first 200 units 80 paise per unit: for the next 100 units 90 paise per unit: beyond 300 units Rs 1 per unit. All users are charged a minimum of Rs. 100 as meter charge. If the total amount is more than Rs 400, then an additional surcharge of 15% of total amount is charged. Write a program to read the name of the user, number of units consumed and print out the charges.

PROGRAM:

```
#include <stdio.h>
void main()
{
    char name[100];
    float unit,charge;
    printf("Enter the name of consumer\n");
    scanf("%s",name);
    printf("Enter the number of units consumed\n");
    scanf("%f",&unit);
    if(unit<=200)
    {
        charge=unit*0.80+100;
    }
    else if(unit<=300)
    {
        charge=(200*0.80) + (unit-200)*0.90+100;
    }
    else
    {
        charge=(200*0.80) + (100*0.90) + (unit-300)*1+100;
    }
    if(charge>400)
    {
        charge+=charge*0.15;
    }
    printf("Consumer Name: %s\n Units consumed: %f\n Rupees: %.2f \n",name,unit,charge);
}
```

OUTPUTS:

- Enter the name of consumer
Rajesh
Enter the number of units consumed
121
Consumer Name: Rajesh
Units consumed: 121
Rupees: 196.80

- Enter the name of consumer
John
Enter the number of units consumed
269
Consumer Name: John
Units consumed: 269
Rupees: 322.10
- Enter the name of consumer
Sanjay
Enter the number of units consumed
350
Consumer Name: Sanjay
Units consumed: 350
Rupees: 400.00
- Enter the name of consumer
Smith
Enter the number of units consumed
742
Consumer Name: Smith
Units consumed: 742
Rupees: 910.80

ALGORITHM:

STEP 1: Start

STEP 2: Read name, unit

STEP 3: check ($\text{unit} \leq 200$)

if yes calculate $\text{charge} = \text{unit} * 0.80 + 100$

goto **STEP 5**

STEP 4: check ($\text{unit} \leq 300$)

if yes calculate $\text{charge} = (200 * 0.80) + (\text{unit} - 200) * 0.90 + 100$

goto **STEP 5**

if no calculate $\text{charge} = (200 * 0.80) + (100 * 0.90) + (\text{unit} - 300) * 1 + 100$

STEP 5: check ($\text{charge} > 400$)

if yes $\text{charge} = \text{charge} + \text{charge} * 0.15$

STEP 6: Display name, unit and charge

STEP 7: Stop

FLOWCHART:

