

Aim:

An electricity board charges the following rates to domestic users to discourage large consumption of energy:

- For the first 100 units - 60P per unit
- For next 200 units - 80P per unit
- Beyond 300 units - 90P per unit

All users are charged a minimum of Rs. 50.00. If the total amount is more than Rs. 300.00 then an additional surcharge of 15% is added.

Write a program to read the names of users and number of units consumed and print out the charges with names.

Note: P denotes paise (100 paise = 1 rupee).

Input Format:

- The program prompts the user to enter the consumer name (string) using the message: "Enter consumer name: "
- The program then prompts the user to enter the number of units (integer) consumed using the message: "Enter units consumed: "

Output Format:

- The program displays the consumer name in the format: "Name: <consumer_name>"
- The program displays the total bill amount (Rupees) in the format: "Total Bill Amount: Rs. <amount>".

Source Code:**electricityCharges.cpp**

```
#include<iostream>
using namespace std;
int main(){
    int units;
    float amount=0;
    char name[50];
    cout << "Enter consumer name: ";
    cin >> name;
    cout << "Enter units consumed: ";
    cin >> units;
    if(units<=100)
        amount = units * 0.60;
    else if(units<=300)
        amount = (100*0.60)+((units-100)*0.80);
    else
        amount = (100 * 0.60)+(200*0.80)+((units - 300)*0.90);
    if(amount<50)
        amount=50;
    if(amount>300)
        amount=amount+(amount*0.15);
    cout<< "Name: "<<name;
    cout<< "\nTotal Bill Amount: Rs. "<<amount<< endl;
    return 0;
}
```

Execution Results - All test cases have succeeded!

Test Case - 1
User Output
Enter consumer name: Ravi
Enter units consumed: 80
Name: Ravi
Total Bill Amount: Rs. 50

Test Case - 2
User Output
Enter consumer name: Anita
Enter units consumed: 500
Name: Anita
Total Bill Amount: Rs. 460