/*7. a) An electricity board charges the following rates to domestic users to discourage large consumption of energy. For the first 100 units Rs 1.50 per unit For the next 200 units Rs 3.00 per unit Beyond 300 units Rs.5.00 per unit All users are charged a minimum of Rs. 100. If the total cost exceeds Rs.250, then an additional surcharge of 15% is added. Write a program to read the name of user and number of units consumed and print out the charges with name.
b) Write C++ program to demonstrate inline function.*/

```cpp
#include<iostream>
using namespace std;
#include<string>

class charge{
  string name;
  float nu;
  float cost;

  public:
   void getdata(){
   cout<<"Enter the name: ";
   cin>>name;
   cout<<"Enter the no. of units consumed: ";
   cin>>nu;
   cout<<endl;
   amount();
   }

   void amount(){
        if(nu<=100){
        cost=(nu*1.5);

        if(cost <100){
        cost=100;
        }
        else if(cost>250){
        cost=(cost+0.15*cost);
        }
        }
        else if(nu>100 and nu <=300){
        int x;
        x=nu-100;
        cost=(x*3)+(100*1.5);
```

```cpp
        if(cost>250){
        cost=(cost+0.15*cost);
        }


        }
        else if(nu>300){
        cost=(nu*5);

        if(cost>250){
        cost=(cost+0.15*cost);
        }
        }




    }
        void display(){

cout<<"NAME :"<<name<<endl;
cout<<"No. of units consumed :"<<nu<<endl;
cout<<"Amount you need to pay: "<<cost;
cout<<endl;
}
};

int main(){
 int n;
 cout<<"Enter the no. of persons: ";
 cin>>n;

 charge c[n];
 for(int i=0;i<n;i++){
 cout<<"Enter the details for person "<<i+1<<endl;
        c[i].getdata();

 }
 cout<<"ELECTRICITY BILL DETAILS \n";
 for(int i=0;i<n;i++){
 cout<<"\nDETAILS OF PERSON "<<i+1<<endl;
        c[i].display();

 }
 return 0;
```

```
guest-s25r1a@administrator-HP-280-G1-MT:~$ g++ 7a.cpp
guest-s25r1a@administrator-HP-280-G1-MT:~$ ./a.ot
bash: ./a.ot: No such file or directory
guest-s25r1a@administrator-HP-280-G1-MT:~$ ./a.out
Enter the no. of persons: 3
Enter the details for person 1
Enter the name: sanjai
Enter the no. of units consumed: 45

Enter the details for person 2
Enter the name: sanjai
Enter the no. of units consumed: 120

Enter the details for person 3
Enter the name: sanjai
Enter the no. of units consumed: 500

ELECTRICITY BILL DETAILS

DETAILS OF PERSON 1
NAME :sanjai
No. of units consumed :45
Amount you need to pay: 100

DETAILS OF PERSON 2
NAME :sanjai
No. of units consumed :120
Amount you need to pay: 210

DETAILS OF PERSON 3
NAME :sanjai
No. of units consumed :500
Amount you need to pay: 2875
}
```

```cpp
#include<iostream>
using namespace std;

inline int sq(int n){
return n*n;
}

int main(){

int n;
cout<<"Enter a number: ";
cin>>n;
```

```
cout<<"square of a number: "<<sq(n);
}
```

```
Enter the no. of persons: 3
Enter the details for person 1
Enter the name: sanjai
Enter the no. of units consumed: 45

Enter the details for person 2
Enter the name: sanjai
Enter the no. of units consumed: 120

Enter the details for person 3
Enter the name: sanjai
Enter the no. of units consumed: 500

ELECTRICITY BILL DETAILS

DETAILS OF PERSON 1
NAME :sanjai
No. of units consumed :45
Amount you need to pay: 100

DETAILS OF PERSON 2
NAME :sanjai
No. of units consumed :120
Amount you need to pay: 210

DETAILS OF PERSON 3
NAME :sanjai
No. of units consumed :500
Amount you need to pay: 2875
guest-s25r1a@administrator-HP-280-G1-MT:~$ g++ 7b.cpp
guest-s25r1a@administrator-HP-280-G1-MT:~$ ./a.out
Enter a number: 5
square of a number: 25guest-s25r1a@administrator-HP-280-G1-MT:~$
```