Assignment – Day 1 – CPP 56053-Karan Dubey

1. Write a C++ Program To Calculate Electricity Bill Of Person using Class. Here's a Simple Program To
Calculate Electricity Bill Of Person using Class in C++ Programming Language.
Requirements
To Calculate Electricity Bill Of Person using Class,first we have to create and call get( ) function to take input details of the customer.
After get( ) , we create and call a new function i.e calc_bill( ) to calculate the total bill of the customer
on the behalf of units consumed by the customer .
At last , we call the put( ) function to print or display customer or person electricity bill on the screen.
Unit tarrif :
100 RS. 1.20 per unit
200 RS. 2 per unit
300 RS. 3 per unit

CODE-

Terminal

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

class bill
{
    char name[30];
    int unit;
    float total;

public:
    void get()
    {
        cout << "person name ";
        cin >> name;
        cout << "enter the unit consumed";
        cin >> unit;
    }

    void calc_bill()
    {
        if(unit <= 100)
        {
            total = unit * 1.20;
        }
        else if(unit <= 200)
        {
            total = (100 * 1.20) + (unit - 100) * 2;
        }
        else
        {
        {
            total = (100 * 1.20) + (100 * 2) + (unit - 200) * 3;
        }
    }

    void put()
    {
  cout <<endl<< "person_name  " << name<<",  units  "<<unit<<"  total bil  "<<total<<endl;

    }
};

int main()
{
    bill s1;
    s1.get();
    s1.calc_bill();
    s1.put();

    return 0;
}
```

2. Design a banking application to do the following
Create a class called bank with the following data members.
acno int (should be in range of 1001 to 1200 and should be automatically generated for every customer

name string (should be minimum 8 characters)
ac_type srting (either CA or SA)
balance double (should be min 5000 for SA and 8000 for CA)
Create 2 parameterized constructors
1 st one --> Will take name which is input from user and default ac_type as SA with default balanceas
minimum balance.
2 nd one --> Will take only the name and ac_type as inputs in main() and create account with min balance.
Declare an array of 10 bank type objects dynamically.
1 st and 2nd objects should be created using constructor1 and constructor2 respectively.
For the rest of the objects call the input () method. All entries in this method should be validated.
Create a method output() which will display all customer records with appropriate headings.
Have another method called show() which takes 2 integers as input from keyboard.
ex : - show(2,6) . The method will compare the salary of the second and 6th records and show the name and salary of the one which is greater. Use static variable to generate account numbers.
All methods should be a part of the class

CODE-

Terminal

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```
1  #include <iostream>
2  #include<cstring>
3
4  using namespace std;
5
6
7  class bank{
8    private:
9    int acno;
10
11   char name[50];
12
13   char ac_type[3];
14
15   double balance  ;
16
17   static int nxt_acc_num;
18
19   public:
20   bank(){
21
22   }
23
24
25   bank(char n[]){
26     acno = nxt_acc_num++;
27     strcpy(name , n);
28     strcpy(ac_type, "SA");
29     balance = 5000;
30   }
```

```
32  bank(char n[], char type[] ){
33    acno = nxt_acc_num++;
34    strcpy(name,n);
35    strcpy(ac_type,type);
36
37    if(strcmp(ac_type,"SA")==0){
38      balance =5000;
39    } else{
40      balance =8000;
41    }
42  }
43
44  void input(){
45    acno = nxt_acc_num++;
46     cout << "user name enter"<<endl;
47            cin >> name;
48
49           do {
50             cout << "enter acc type SAor CA ";
51              cin >> ac_type;
52          } while (strcmp(ac_type, "SA") != 0 && strcmp(ac_type, "CA") != 0);
53
54
55             if (strcmp(ac_type, "SA") == 0)
56    {
57            do{
58              cout << "balance enter min5000 ";
59                cin >> balance;
60            }while(balance <5000);
61        }
```

```
63        else{
64                do
65               { cout << "balance enter min8000 ";
66                cin >> balance;
67            }  while (balance < 8000);
68        }
69
70  }
71
72  static  void show(bank b[], int i, int j ){
73    cout<<"customer u want to compare enter , 1, 2,3,4,5 anyone"<<endl;
74    int k = 0 , p =0;
75     cin >>k;
76    cin>>p;
77      i=k-1;
78    j=p-1;
79
80
81    if (b[i].balance > b[j].balance){
82            cout << " this account have more balance   "<<endl << b[i].name    << " "  << b[i].balance << endl;
83    }
84        else
85        {
86            cout <<endl <<"this account have more balance  " << b[j].name << " " << b[j].balance << endl;
87    }
88  }
89
90  void display(){
91    cout << acno << " " << name << " "   << ac_type << " " << balance << endl;
92  }
                                                                                                    92,1
```

```
 92   }
 93 };
 94
 95  int bank :: nxt_acc_num = 1001;
 96
 97 int main(){
 98     bank *b = new bank[5];
 99      int account_number;
100
101   char name[50] , ac_type[3];
102
103   double balance ;
104
105   cout<<"enter user1 name"<<endl;
106   cin>>name;
107   b[0] = bank(name);
108
109   cout<<"user2 name"<<endl;
110   cin>>name;
111   cout<<" user1 account type"<<endl;
112   cin>>ac_type;
113
114   b[1] = bank(name,ac_type);
115
116
117   for(int i =2 ; i< 5 ; i++){
118     cout<<"user info "<<i+1<<endl;
119     b[i].input();
120   }
121
122    cout <<endl<< "acno  name  type  balance";
123     for (int i = 0; i < 5; i++)
124     {
125         b[i].display();
126     }
127
128     bank:: show(b,2,6);
129
130 }
131
```