

LAB Test- 1

Object Oriented Programming

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1. 1. Develop an OOP using classes and objects to read the current renewal date of a mobile SIM card from the customer and find next 5 renewal dates and its fare if he renews every 56 days and each time he pays Rs.399/-. Check your output with all possible inputs.

```
#include <iostream>
```

```
#include <malloc.h>
```

```
using namespace std;
```

```
class renewal{
```

```
    private:
```

```
        int renewal_count;
```

```
        struct renewal_date{
```

```
            int year;
```

```
            int month;
```

```
            int day;
```

```
        }*rd;
```

```
int price;  
int renewal_gap;
```

```
renewal(){  
    rd = NULL;  
}
```

```
~renewal(){  
    delete rd;  
}
```

```
void get_details(int r_renewal_count, int r_price, int  
r_year, int r_month, int r_day, int r_renewal_gap);  
void display();
```

```
};
```

```
public:
```

```
void renewal::get_details(int r_renewal_count, int r_price, int  
r_year, int r_month, int r_day, int r_renewal_gap){  
    renewal_count = r_renewal_count;  
    price = r_price;  
    renewal_gap = r_renewal_gap;  
    int add;
```

```

    rd = (struct renewal_date *)
    (malloc(renewal_count*sizeof(struct renewal_date)));

    for(int i = 0; i<renewal_count; i++){
        rd[i].year = r_year;
        rd[i].month = r_month;
        rd[i].day = r_day;
    }

    for(int i = 1; i<renewal_count; i++){
        rd[i].day = rd[(i-1)].day + renewal_gap;

        if(rd[i].day>30){
            add = (rd[i].day/30);
            rd[i].day = rd[i].day%30;
            rd[i].month = rd[i].month + add;
        }

        if(rd[i].month>12){
            add = (rd[i].month/12);
            rd[i].month = rd[i].month%12;
            rd[i].year = rd[i].year + 1;
        }
    }
}

```

```
}
```

```
void renewal::display(){
```

```
    int total_price = 1;
```

```
    cout<<"\nThe entered gap day for renewal is  
"<<renewal_gap<<". "<<endl;
```

```
    cout<<"The entered price for each renewal is  
"<<price<<". "<<endl;
```

```
    cout<<"Following is the list of each renewal  
date."<<endl<<endl;
```

```
    for(int i = 0; i<renewal_count; i++){
```

```
        cout<<"Below is detail for renewal date number  
"<<i+1<<endl;
```

```
        cout<<"Year: "<<rd[i].year<<endl;
```

```
        cout<<"Month: "<<rd[i].month<<endl;
```

```
        cout<<"Day: "<<rd[i].day<<endl<<endl;
```

```
    }
```

```
    total_price = total_price*renewal_count;
```

```
    cout<<"The total price for the renewal is  
"<<total_price<<". "<<endl;
```

```
}
```

```
int main(){
```

```
    class renewal r;
```

```
int r_count, r_price, r_year, r_month, r_day, r_renewal_gap,  
r_renewal_count;
```

```
cout<<"Enter the how many times you want to renew the sim  
card: ";
```

```
cin>>r_renewal_count;
```

```
cout<<"Enter the day after which sim is to be renewed: ";
```

```
cin>>r_renewal_gap;
```

```
cout<<"Enter the price of each renewal: ";
```

```
cin>>r_price;
```

```
cout<<"Enter the current year of renewal: ";
```

```
cin>>r_year;
```

```
cout<<"Enter the current month of renewal: ";
```

```
cin>>r_month;
```

```
cout<<"Enter the current day of renewal: ";
```

```
cin>>r_day;
```

```
r.get_details(r_renewal_count, r_price, r_year, r_month, r_day,  
r_renewal_gap);
```

```
for(int i = 0; i<r_renewal_count; i++){
```

```
    r.display();
```

```
}
```

return 0;

}

```
1 #include <iostream>
2 #include <malloc.h>
3 using namespace std;
4
5 class renewal{
6 public:
7     int renewal_count;
8     struct renewal_date{
9         int year;
10        int month;
11        int day;
12    }*rd;
13    int price;
14    int renewal_gap;
15
16    renewal(){
17        rd = NULL;
18    }
19
20    ~renewal(){
21        delete rd;
22    }
23 }
```

Year: 2000
Month: 3
Day: 23
Below is detail for renewal date number 4
Year: 2000
Month: 3
Day: 19
Below is detail for renewal date number 5
Year: 2000
Month: 3
Day: 15
The total price for the renewal is 5.
The entered gap day for renewal is 56.
The entered price for each renewal is 399.
Following is the list of each renewal date.
Below is detail for renewal date number 1
Year: 2000
Month: 1
Day: 1
Below is detail for renewal date number 2
Year: 2000
Month: 2
Day: 27

Compiler Resources | Compile Log | Debug | Find Results | Close
- Compilation Time: 0.91s
Line: 9 Col: 22 Sel: 0 Lines: 102 Length: 2524 Insert Done parsing in 0.016 seconds