**LAB TEST – 1**

**Name: Hari Krishna Shah**

**VIT ID: 21BCS0167**

**Program Link:** [**https://drive.google.com/drive/folders/1R0bvai70FFgtjigWGccJaq6cPh3LqkII?usp=sharing**](https://drive.google.com/drive/folders/1R0bvai70FFgtjigWGccJaq6cPh3LqkII?usp=sharing)

**Aim: To find the renewal date for sim card and the total price of renewal using concepts of classes and objects.**

#include <iostream>

#include <malloc.h>

**using** **namespace** std**;**

*//Coded by Hari Krishna Shah*

**class** renewal**{**

**private:**

**int** renewal\_count**;**

**struct** renewal\_date**{**

**int** year**;**

**int** month**;**

**int** day**;**

**}\***rd**;**

**int** price**;**

**int** renewal\_gap**;**

**public:**

**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**();**

renewal**(){**

rd **=** NULL**;**

**}**

**~**renewal**(){**

**delete** rd**;**

**}**

**};**

**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**)));**

rd**[**0**].**year **=** r\_year**;**

rd**[**0**].**month **=** r\_month**;**

rd**[**0**].**day **=** r\_day**;**

**for(int** i **=** 1**;** i**<**renewal\_count**;** i**++){**

rd**[**i**].**year **=** rd**[**i**-**1**].**year**;**

rd**[**i**].**month **=** rd**[**i**-**1**].**month**;**

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 **+** add**;**

**}**

**}**

**}**

**void** renewal**::**display**(){**

**int** total\_price**;**

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 **=** 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: ";**

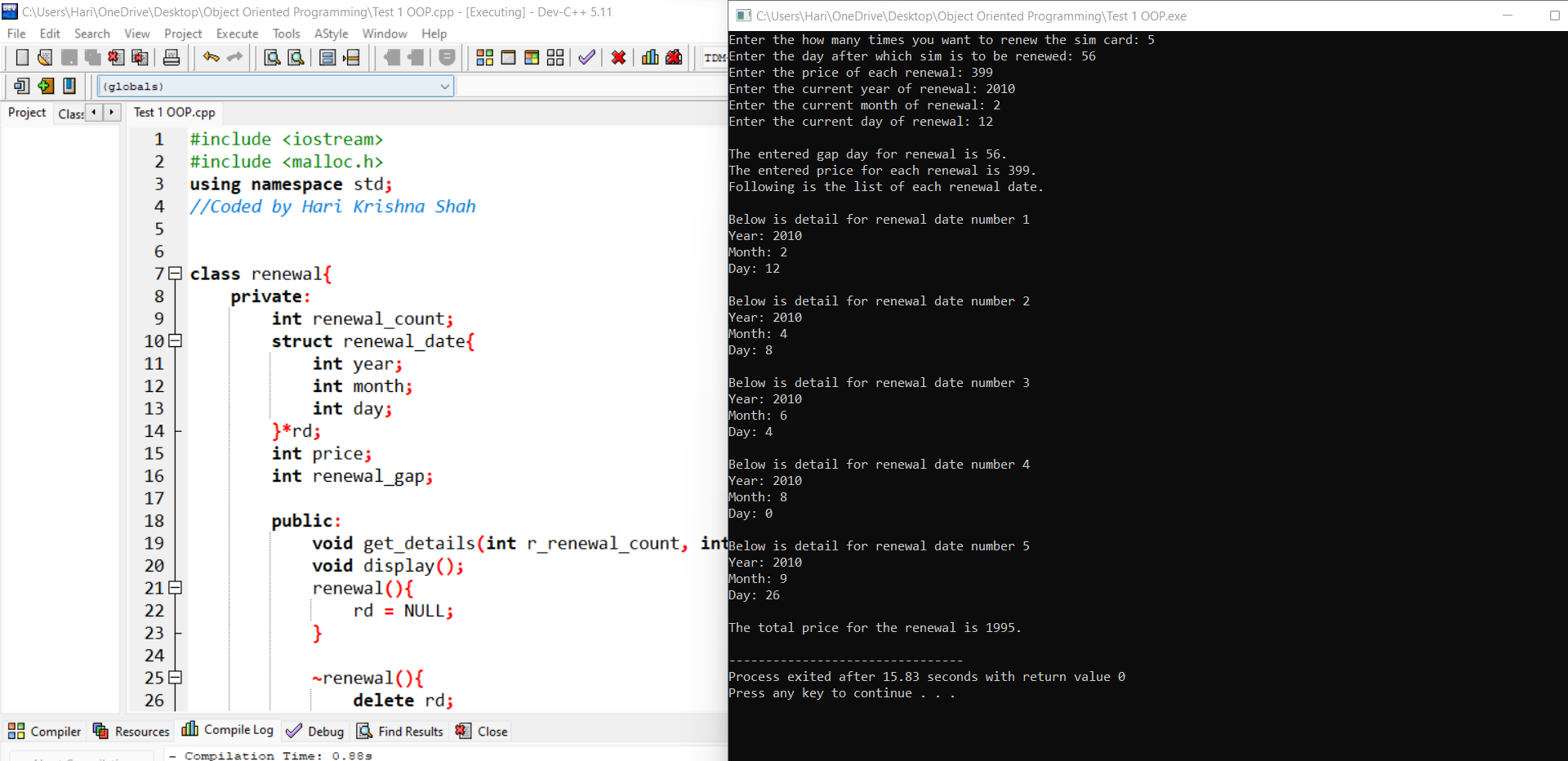
cin**>>**r\_day**;**

r**.**get\_details**(**r\_renewal\_count**,** r\_price**,** r\_year**,** r\_month**,** r\_day**,** r\_renewal\_gap**);**

r**.**display**();**

**return** 0**;**

**}**

****