**Inheritance:**

**Discount For Customer**

In the bank, customers can be Normal, Priviledged, SeniorCitizen and so on. The bank also introduces an offer where privileged customers get a 30% off on the bill while senior citizens get 12% off. Let’s implement the inheritance with discount yet again a better understanding.  
  
1. Create Customer, PrivilegedCustomer & SeniorCitizenCustomer class with data members as given below.  
2. Implement GenerateBillAmount Method as per the specification.  
  
Write a program to get the customer details and display bill, discount amount based on customer type.

**[Note :  Strictly adhere to the object-oriented specifications given as a part of the problem statement.  
Follow the naming conventions as mentioned. Create separate classes in separate files.]**

Consider a class named **Customer** with the following protected attributes

|  |  |
| --- | --- |
| **Data Type** | **Attributes** |
| string | \_name |
| string | \_address |
| string | \_mobileNumber |
| int | \_age |

Use constructors to initialize data.

Include the following public method in **Customer**class.

|  |  |
| --- | --- |
| **Method Name** | **Description** |
| public void DisplayCustomer() | This method displays the customer details. |

Consider a class **SeniorCitizenCustomer** which extends the class **Customer**.  
  
Include the following public method in **SeniorCitizenCustomer**class.

|  |  |
| --- | --- |
| **Method Name** | **Description** |
| double GenerateBillAmount(int amount) | This method is used to calculate and return the payment amount where the discount is 12%. |

Consider a class **PrivilegeCustomer** which extends the class **Customer**.  
  
Include the following public method in **PrivilegeCustomer**class.

|  |  |
| --- | --- |
| **Method Name** | **Description** |
| double GenerateBillAmount(int amount) | This method is used to calculate and return the payment amount where the discount is 30%. |

Consider a driver class named **Program** which creates an instance of the above mentioned classes and their functionalities are tested.  
Use **base** Keyword to call the base class constructor.  
Read the respective customer details (Senior Citizen or Privileged) and call the corresponding GenerateBillAmount() method based on the choice as shown in the sample output.

**Input and Output Format:**

The bill amount double value should be display 1 decimal palces.

The total amount to be paid value should be displayed upto 2 decimal palces.

Refer sample input and output for formatting specifications.

**[All text in bold corresponds to input and the rest corresponds to output.]**

**Sample Input and Output 1:**

1)Privilege Customer  
2)SeniorCitizen Customer  
Enter Customer Type  
**1**  
Enter The Name  
**Smith**  
Enter The Age  
**25**  
Enter The Address  
**New York**  
Enter The Mobile Number  
**9576531641**  
Enter The Purchased Amount  
**5000**  
Bill Details  
Name Smith  
Mobile 9576531641  
Age 25  
Address New York  
Your bill amount is Rs 5000.0. Your bill amount is discount under privilege customer  
You have to pay Rs 3500.00

**Sample Input and Output 2:**

1)Privilege Customer  
2)SeniorCitizen Customer  
Enter Customer Type  
**2**  
Enter The Name  
**Jack**  
Enter The Age  
**46**  
Enter The Address  
**Chennai**  
Enter The Mobile Number  
**7894561230**  
Enter The Purchased Amount  
**500**  
Bill Details  
Name Jack  
Mobile 7894561230  
Age 46  
Address Chennai  
Your bill amount is Rs 500.0. Your bill amount is discount under senior citizen customer  
You have to pay Rs 440.00

**Sample Input and Output 3:**

1)Privilege Customer  
2)SeniorCitizen Customer  
Enter Customer Type  
**3**  
Invalid Customer Type