**Detergent Cost**

George owns one of the leading detergent stores in the city with two outlets. He plans to automate the process in his store as the sales increase. He wants the system to store detergent details and help him generate bills. Detergent name, packet capacity (in grams), and cost per pack are the expected details to be stored in the system. And whenever a customer buys a detergent packet, the bill needs to be calculated for the given quantity (in kg). You being their software consultant help them with the process by developing a C# application.

Functionalities:

In **class** **Detergent**, implement the below-given properties.

Data Type Property Name

string Billld

string Name

int GramsInPack

double CostPerPack

In **class Service**, implement the below-given methods and also Inherit the class Detergent.

**Methods**

public bool ValidateBillid()

Description

This method is used to validate the bill id. The bill id should consists of 5 characters, the first two characters should be digits, followed by colon () and the last two characters should be alphabets in upper case. If the above conditions are satisfied, then return true. Otherwise, return false.

public double CalculateTotalCost(float quantity)

This method is used to calculate the total cost and return the cost.

Refer to the below formula to calculate the total cost.

Formula: Total Cost = (CostPerPack \* (quantity \* 1000) / GramsInPack)

**In Main Program**

1. Get the Bill id value from the user.

2. Call the Validate Billid method, If it returns true, then get the Name, GramsInPack, CostPerPack and quantity values from the user and move on to step 3, if turns face then display Invalid bill id.

3. Use the values in method Calculate TotalCost and display the result as per the sample output.

**Sample Input 1:**

Enter bill id

12:AB

Enter detergent name

Arial

Enter pack capacity in grams

250

Enter cost per pack

80

Enter Quantity to purchase in kgs

1

**Sample Output 1:**

Detergent cost is 320

**Sample Input 2:**

Enter bill id

123-ABC

**Sample Output 2:**

Invalid bill id