

Epic Context

A big retail brand, on the eve of Christmas wants to offer attractive discounts to its customers to boost sales.

Story#1

As a retail outlet's salesman, I should be able to calculate the customer's shopping cart bill after considering applicable discount rates that are based on the purchase amount and customer type so that our retail outlet can maximize sales volume & sales value.

Discount Slabs for the regular and premium customers:

Customer Type: Regular	
Discount Slab	Discount %
\$ 0 -\$ 5,000	Nil
\$ 5,000 - \$ 10,000	10%
\$ 10,000 and above	20%

Customer Type: Premium	
Discount Slab	Discount %
\$ 0 -\$ 4,000	10%
\$ 4,000 - \$ 8,000	15%
\$ 8,000 - \$ 12,000	20%
\$ 12,000 & above	30%

Test-cases

Here are some of the test cases and corresponding input output expected:

Customer Type (input): Regular	
Purchase Amount (input)	Bill Amount (output)
\$ 5,000	\$ 5,000
\$ 10,000	\$ 9,500
\$ 15,000	\$ 13,500

Customer Type (input): Premium	
Purchase Amount (input)	Bill Amount (output)
\$ 4,000	\$ 3,600
\$ 8,000	\$ 7,000
\$ 12,000	\$ 10,200
\$20,000	\$15,800

Solution Expectations' Guidelines:

- You are required to create the working software that works according to story specification given above.
- You should demonstrate the working software by building application or writing test program that exercises the sample test-cases, for this purpose you may use xUnit testing framework.
- Maturity of your solution will be judged on your object oriented and / or functional programming design and your ability to write modular, extensible, maintainable and testable code.
- Coding challenge here do not require any knowledge of underlying OS platform or libraries (apart from standard development kit like JDK).
- Based on this story context, there could be other stories which can be asked to play in upcoming interview rounds.

Example: adding discount slabs for new customer types like Gold, Diamond, Platinum, etc.