

Product Promotion Engine

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# Problem Statement

We need you to implement a simple promotion engine for a checkout process. Our Cart contains a list of single character

SKU ids (A, B, C. ..) over which the promotion engine will need to run.

The promotion engine will need to calculate the total order value after applying the 2 promotion types

• buy 'n' items of a SKU for a fixed price (3 A's for 130)

• buy SKU 1 & SKU 2 for a fixed price ( C + D = 30 )

The promotion engine should be modular to allow for more promotion types to be added at a later date (e.g. a future

promotion could be x% of a SKU unit price). For this coding exercise you can assume that the promotions will be mutually

exclusive; in other words if one is applied the other promotions will not apply

Test Setup

Unit price for SKU IDs

A 50

B 30

C 20

D 15

Active Promotions

3 of A's for 130

2 of B's for 45

C & D for 30

Scenario A

1 \* A 50

1 \* B 30

1 \* C 20

Total 100

Scenario B

5 \* A 130 + 2\*50

5 \* B 45 + 45 + 30

1 \* C 28

Total 370

Scenario C

3 \* A 130

5 \* B 45 + 45 + 1 \* 30

1 \* C -

1 \* D 30

Solution

**Design**

Promotion Details

**Input**

Api

Product

Service

**Calculated output**

Unit Price Dtails

Technical details

Programming language: Java 1.8

Framework used: Spring boot

Test Framework: Junit, Mockito

Rule Engine: Easy Rule

Sample Post Request

{

"orderId" : 1,

"productList" :[{"id" : "A",

"quantity" : 5},

{"id" : "B",

"quantity" : 3},

{"id" : "C",

"quantity" : 1},

{"id" : "D",

"quantity" : 1}]

}

Sample Output

Total price of the Cart is : 335.0