Hunger Eats

**Grade settings**: Maximum grade: 100  
**Disable external file upload, paste and drop external content**: Yes  
**Run**: Yes **Evaluate**: Yes  
**Automatic grade**: Yes **Maximum execution time**: 16 s

Hunger Eats wants to establish their business and promote their sales.  So, they decide to give a maximum of 50% discount to their customers on the food ordered based on the bank that they choose to make the payment. [HDFC, ICICI, CUB, and SBI].

When a customer places an order for food, the order needs to be stored to the cart and the discount needs to be calculated based on the bank selected for payment. Also, the bill amount for the order needs to be calculated.

As a software developer, help them to automate the above process by writing a simple java program.

**Component Specification:** **FoodProduct (model Class)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Type(Class)** | **Attributes** | **Methods** | **Responsibilities** |
| FoodProduct | int foodId  String foodName  double costPerUnit  int quantity | Include getters and setters for all the attributes. |  |

**Component Specification:** **Order (Utility Class)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Type(Class)** | **Attributes** | **Methods** | **Responsibilities** |
| Order | List<FoodProduct> foodList  double discountPercentage | Include the getters and setter method for all the attributes. |  |

**Requirement 1:**Add Food Product to the list

Whenever a customer places an order, the admin has to add food products ordered by the customer to the cart.

The method addToCart takes FoodProduct object as an argument and adds it to the foodList.

**Component Specification:** **Order (Utility Class)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Component Name** | **Type(Class)** | **Methods** | **Responsibilities** |
| Add FoodProduct object to the foodList | Order | public void  addToCart (FoodProduct foodProductObject) | This method takes an object of FoodProduct as  an argument and adds it to the foodList. |

**Requirement 2:**Find the discount percentage

Hunger Eats provides a discount to the customers for the orders placed.  This discount is based on the bank selected by the customer for payment.

|  |  |
| --- | --- |
| **BANK** | **Discount Percentage** |
| HDFC | 15 |
| ICICI | 25 |
| CUB | 30 |
| SBI | 50 |
| OTHERS | 0 |

**Assumption: All Bank Names are in Upper case as specified in the Table above**

Method findDiscount takes the   bank name as an argument and sets the value for the attribute discountPercentage based on the bank name.

**Component Specification:** **Order (Utility Class)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Component Name** | **Type(Class)** | **Methods** | **Responsibilities** |
| Find discount percentage based on the bank name selected by the customer | Order | public void  findDiscount(String bankName) | This method takes bankName as an argument, and assigns value to the discountPercentage attribute of the Order class. |

**Requirement 3:**Calculate the total bill

An order can have multiple food products.  For each order placed, the bill amount needs to be calculated.

The bill amount is calculated as shown below:

Total Price = sum (cost \* quantity) of all food products in the list.

Bill Amount =Total Price - (Total Price \* discountPercentage / 100)

The method calculateTotalBill calculates the bill amount by fetching the food details from the foodList and returns the calculated amount.

**Component Specification:** **Order (Utility Class)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Component Name** | **Type(Class)** | **Methods** | **Responsibilities** |
| Calculate the total bill amount for the order placed by the customer. | Order | public double  calculateTotalBill () | This method fetches the  FoodProduct objects in foodList and calculates the bill amount and returns the result  If the foodList is empty this method should return 0. |

**Note:**

In the Sample Input / Output provided, the highlighted text in bold corresponds to the input given by the user and the rest of the text represents the output.  
  
Ensure to follow the object oriented specifications provided in the question description.  
Ensure to provide the names for the classes, attributes and methods as specified in the question description.

Adhere to the code template, if provided.

**Sample Input / Output 1:**

Enter the number of items

**3**

Enter the item details

Enter the item id

**1**

Enter the item name

**Veg fried rice**

Enter the cost per unit

**180**

Enter the quantity

**2**

Enter the item id

**2**

Enter the item name

**Mushroom Manchurian**

Enter the cost per unit

**130**

Enter the quantity

**1**

Enter the item id

**3**

Enter the item name

**Lemon soda**

Enter the cost per unit

**80**

Enter the quantity

**2**

Enter the bank name to avail offer

**ICICI**

Calculated Bill Amount: 487.5