Playtorium - Take Home Assignment

Thank you for applying to Playtorium. As a part of our interview process, we have prepared a take-home assignment for you to showcase your skills and problem-solving abilities.

You have a total of 5 days to complete the assignment. You are free to choose any programming language(s), libraries, or technologies you are comfortable with to complete the task.

In case you encounter any ambiguities during the assignment, please feel free to make your own assumptions. However, kindly state your assumptions clearly in your submission.

Once you have completed the assignment, please upload your code and any relevant documentation to a GitHub, GitLab, or Bitbucket repository. We kindly request you to make the repository private and share the repository with the following email addresses:

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Assignment #1

The discount module is to calculate the final price of an order by applying multiple discount campaigns to items added to the shopping cart. The campaigns are as listed below:

Campaigns	Category	Discount Rules	Examples
Fixed amount	Coupon	Discounts the entire cart by subtracting an amount from the total price Parameters: * Amount	Items in cart: 1 T-Shirt: 350 THB 1 Hat: 250 THB Discount: 50 THB Total Price: 550 THB
Percentage discount	Coupon	Discounts the entire cart by subtracting a percentage from the total price Parameters: * Percentage	Items in cart: 1 T-Shirt: 350 THB 1 Hat: 250 THB Discount: 10% Total Price: 540
Percentage discount by item category	On Top	Discount the entire amount of a specific category of items in cart Parameters: * Category (Clothing, Accessories, Electronics) * Amount	Items in cart: 1 T-Shirt: 350 THB 1 Hoodie: 700 THB 1 Watch: 850 THB 1 Bag: 640 THB Discount: 15% Off on Clothing Total Price: 2,382.5 THB
Discount by points	On Top	Users spent points for a fixed amount of discount (1 point = 1 THB). The amount will be capped at 20% of total price Parameters: * Customer points Noted that "20%" is fixed rule	Items in cart: 1 T-Shirt: 350 THB 1 Hat: 250 THB 1 Belt: 230 THB Points: 68 Points Total Price: 762 THB
Special campaigns	Seasonal	From the total price, at every X THB, subtracting a fixed amount Y THB Parameter: * Every X THB * Discount Y THB	Items in cart: 1 T-Shirt: 350 THB 1 Hat: 250 THB 1 Belt: 230 THB Discount: 40 THB at every 300 THB Total Price: 750

Users can apply multiple discount campaigns in an order. However, there are rules for applying as below:

- Apply only one campaign from the same category, i.e. users have to choose either Fixed amount or Percentage discount.
- The order of applying campaigns is Coupon > On Top > Seasonal.

Your task is to create the discount module that has the following attributes:

- Take the list items in a shopping cart.
- Take the list of discount campaigns and their parameters to apply.
- Calculate the final price according to the rules.

The module to receive user inputs is also up to your preference. I.e., you can implement full web/mobile UI to select campaigns/enter parameters, or you can simply implement the function that reads input from JSON files.

Ensure that your module is tested and resilient to the unexpected inputs or mistakenly usage.

** You don't have to create the shopping cart and inventory module. Only focus on the sale campaign and applying discount logic before completing the order.

** The code is a crucial part for the interview process as it represents your engineering skills. Please do your best to present yourself.

** Please clearly specify your full name in the README.md before submitting code via your repository