|  |  |
| --- | --- |
| **The Farmer’s Market** | |
|  |  |
|  | We sell the following four products at the local farmer’s market every week. |
|  |  |
|  | ``` |
|  | +--------------|--------------|---------+ |
|  | | Product Code | Name | Price | |
|  | +--------------|--------------|---------+ |
|  | | CH1 | Chai | $3.11 | |
|  | | AP1 | Apples | $6.00 | |
|  | | CF1 | Coffee | $11.23 | |
|  | | MK1 | Milk | $4.75 | |
|  | | OM1 | Oatmeal | $3.69 | |
|  | +--------------|--------------|---------+ |
|  | ``` |
|  |  |
|  | This week, we’re celebrating our one year anniversary and would like to offer the |
|  | following specials. To do so, we’ll need to update our checkout system to apply |
|  | the following rules. |
|  |  |
|  | 1. BOGO -- Buy-One-Get-One-Free Special on Coffee. (Unlimited) |
|  | 2. APPL -- If you buy 3 or more bags of Apples, the price drops to $4.50. |
|  | 3. CHMK -- Purchase a box of Chai and get milk free. (Limit 1) |
|  | 4. APOM -- Purchase a bag of Oatmeal and get 50% off a bag of Apples |
|  |  |
|  | At any time, we should be able to print out the current register to see what the state of the basket is. This should include the price and the applied discount or special, if any. |
|  |  |
|  |  |
|  | For example, given the following basket: |
|  |  |
|  | CH1, AP1, AP1, AP1, MK1 |
|  |  |
|  | After CH1 and AP1, it should yield: |
|  |  |
|  | ``` |
|  | Item Price |
|  | ---- ----- |
|  | CH1 3.11 |
|  | AP1 6.00 |
|  | ----------------------------------- |
|  | 9.11 |
|  | ``` |
|  | After the entire basket is added, it would yield: |
|  |  |
|  | ``` |
|  | Item Price |
|  | ---- ----- |
|  | CH1 3.11 |
|  | AP1 6.00 |
|  | APPL -1.50 |
|  | AP1 6.00 |
|  | APPL -1.50 |
|  | AP1 6.00 |
|  | APPl -1.50 |
|  | MK1 4.75 |
|  | CHMK -4.75 |
|  | ----------------------------------- |
|  | 16.61 |
|  |  |
|  |  |
|  | Use C# to implement a checkout system that allows us to fulfil the above requirements, you can simply create a Backend web service on this do a UI with any Frontend Tech |
|  |  |
|  | Here’s some test data for your specs: |
|  |  |
|  | ``` |
|  | Basket: CH1, AP1, CF1, MK1 |
|  | Total price expected: $20.34 |
|  | ``` |
|  |  |
|  | ``` |
|  | Basket: MK1, AP1 |
|  | Total price expected: $10.75 |
|  | ``` |
|  |  |
|  | ``` |
|  | Basket: CF1, CF1 |
|  | Total price expected: $11.23 |
|  | ``` |
|  |  |
|  | ``` |
|  | Basket: AP1, AP1, CH1, AP1 |
|  | Total price expected: $16.61 |
|  | ``` |
|  |  |
|  | ----- |
|  |  |
|  | The scope of this project is meant to be narrow, but there are a lot of details to consider. |
|  | We’re looking for the following things when reviewing your code: |
|  |  |
|  | 1. Design |
|  | 2. Testing |
|  | 3. Accuracy |
|  | 4. Flexibility |
|  | 5. Containerization |
|  |  |
|  | Please feel free to ask questions as they arise |