Technical design

Problem description

Recently, Charlene decided to open her very own little coffee shop on a busy street corner. Being the careful entrepreneur, she decided to start off with a limited offering, with the option to expand her choice of products, as business goes

Her Offering

• Coffee (small, medium, large) 2.50 CHF, 3.00 CHF, 3.50 CHF

• Bacon Roll 4.50 CHF

• Freshly squeezed orange juice (0.25l) 3.95 CHF

Extras:

• Extra milk 0.30 CHF

• Foamed milk 0.50 CHF

• Special roast coffee 0.90 CHF

Bonus Program

• Charlene's idea is to attract as many regular's as possible to have a steady turnaround.

• She decides to offer a customer stamp card, where every 5th beverage is for free.

• If a customer orders a beverage and a snack, one of the extra's is free.

Technique requirement

● Stimulate Charlene input the product as customer request.
● Write a service class, and this service class will process every time customer order a new product
● Stimulate order print the invoice with format

Technique design description

1. At the beginning. Application would create an new empty order.
2. Each time customer order a new order, a service class will accept this new order entry, then rule for three rules one by one
    A. The first is set the order entry price from the product price
    B. The second is set he product price to zero if this is the 5ᵗʰ beverage. As
requirement said that there is a stamp card but the application would not store it, so I service

allow one normal offering and beverage to free any time, just by calling with the relative parameter

       C.   The third rule is once the customer order a beverage and a snack, then one extra beverage would be free.

3.   Finally can call the order print the invoice anytime.

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                    ┌─────────────────────┐
                    │     Order start     │
                    └─────────────────────┘
                               │
                               ▼
                    ┌─────────────────────┐
            ┌──────▶│ Customer add new    │
            │       │ product             │
            │       └─────────────────────┘
            │                  │
            │                  ▼
            │       ┌─────────────────────┐
            │       │ Update the order    │
            │       │ entry price from    │
            │       │ product price       │
            │       └─────────────────────┘
            │                  │
            │                  ▼
            │       ┌─────────────────────┐
            │       │ Update the order    │
            │       │ entry price equal   │
            │       │ to zero if customer │
            │       │ order the 5th       │
            │       │ beverge             │
            │       └─────────────────────┘
            │                  │
            │                  ▼
            │       ┌─────────────────────┐
            └───────│ If a customer orders│
                    │ a beverage and a    │
                    │ snack, one of the   │
                    │ extra's is free.    │
                    └─────────────────────┘
                               │
                               ▼
                    ┌─────────────────────┐
                    │    Order finish     │
                    └─────────────────────┘
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