TECHNICAL DESIGN DOCUMENT

COFFEE SHOP RECEIPT

CHARLENE'S COFFEE CORNER

NOVEMBER 20TH 2020

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INTRODUCTION

This Technical Design has been developed for Charlene' Coffe Corner new system for generating customer receipts.

The aim of the application is to apply Charlene'Coffe Corner's product offering including its promotions and special discounts.

PRODUCT CATALOG

The product offering of Charlene's Coffee Corner will feed a product catalog with the following data:

Product	Price	Type	Entry Code
Coffee Small	2,50	Beverage	CS
Coffee Medium	3,00	Beverage	CM
Coffee large	3,50	Beverage	CL
Bacon Roll	4,50	Snack	BR
Freshly squeezed orange juice (0.25l)	3,95	Beverage	FSa
Extra Milk	0,30	Extra	EM
Foamed Milk	0,50	Extra	FM
Special roast coffee	0,50	Extra	SR

This product catalog is designed to be expanded in the future with new product offerings.

The offerings of the product catalog will be store according to the following data structure:

- Product: detailed description of the offering. This content is the base for the receipt output lines. For the sake of simplicity in the data input stage there is one product offer for each coffee size: small, medium and large.
- Price: product price.
- Type: indicates if the offering is a beverage, snack or extra.
- Entry code: code that must be used to enter the customer selection in the application.

USER INTERFACE

As stated in the use case document no graphical user interface must be provided for entering the order data.

The user of the application will provide the order data through codes that will be assigned to the different product offers. Theses codes have to be entered in the command prompt when executing the application. The number of stamps of the customer's stamp card must be entered alongside the order detail.

The following is the format that will be used to enter the data into the application:

A sequence of product codes with optional extras separated with blank spaces:

[#Stamps] [<Produc Code>[,<Extra Code>…]] [<SPACE> [<Product Code>[,<Extra Code>…]]]…

- Example:

  To order one Coffee Small and one Coffee Large with Foamed Milk and one Bacon Roll the input data would be:

  CS CL,FM BR

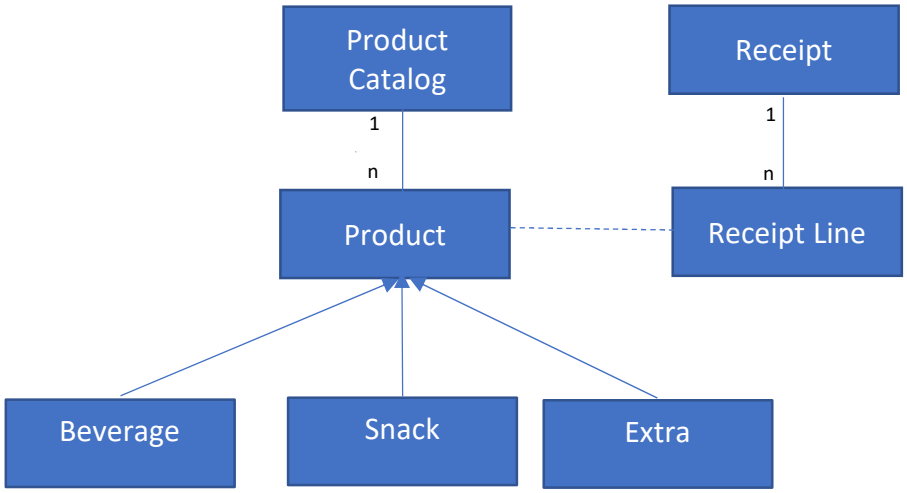
In case the customer provides his stamp card the number of stamps must be entered as one additional parameter.

- Example:

  Customer with a stamp card with 4 stamps who orders one Coffee Small and one Coffee Large with Foamed Milk and one Bacon Roll:

  4 CS CL,FM BR

DATA MODEL


Product Catalog
Receipt
1
n
1
n
Product
Receipt Line
Beverage
Snack
Extra

OUTPUT

The output of the application is the generated receipt.
The receipt must have the following format:

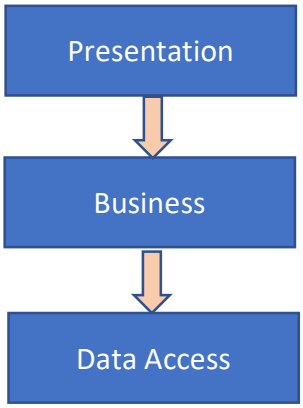
```
Charlene's Coffee Corner

DATE TIME

OFFERING AND EXTRAS DESCRIPTION                                  PRICE CHF
OFFERING AND EXTRAS DESCRIPTION                                  PRICE CHF
OFFERING AND EXTRAS DESCRIPTION                                  PRICE CHF
OFFERING AND EXTRAS DESCRIPTION                                  PRICE CHF
OFFERING AND EXTRAS DESCRIPTION                                  PRICE CHF
OFFERING AND EXTRAS DESCRIPTION                                  PRICE CHF

Total amount...                                        TOTAL AMOUNT CHF
```

TIER ARCHITECTURE



Order data is entered through the command prompt.
main method on **App** class.

Receipt is generated with order data with **print()** and **getLine()** methods.

Order data is managed in **Receipt** class to apply discounts and calculate the total bill.

Product data is stored and retrieved through an instance object of **ProductCatalog** class.