

SDA



## Diagram Number # 1

|  |  |
| --- | --- |
| Use case name | Profiling of user |
| Primary Actor | Customer |
| Stakeholders & interest | Store Management: Provide new coupons to the user according to their likes and dislike. |
| Precondition | Validation of the user |
| Post condition | Recommendation and coupons of products are created for the user |
| Main success scenario | |  |  | | --- | --- | | Step no. | Action | | 1 | The use case starts after the user is validated and registered into the system. | | 2 | Each time the user adds and discard a product the data of the user is stored into the system. | | 3 | The preference of the user will be tracked through the sensors and updated into the system. | | 4 | The likes and dislikes of the user on basis of which shelves and sections of product they go to are collected of each user individually. | |

**System Sequence Diagram (SSD)**

Diagram, table

Description automatically generated

**Operational contract (OC)**

|  |
| --- |
| System |
| addProduct(Name, Price)  UpdateInformation(Name, Price, Type)  removeProduct(Name, Price)  updateInformation(Name, Price, Type) |

**Sequence Diagram (SD)**

Diagram

Description automatically generated

## Diagram number # 2

|  |  |
| --- | --- |
| Use case name | Update the product status |
| Primary Actor | Customer |
| Stakeholders & interest | Store Management system: The staff is notified in case of shortage of a product |
| Precondition | The product has either been picked or placed back on the shelf by the user |
| Post condition | The number of products in the database will be updated  Notification will be issued to Store management if there is no specified product left |
| Main success scenario | |  |  | | --- | --- | | Step no. | Action | | 1 | The use case starts after the user is validated and registered into the system. | | 2 | As product is being picked by the user or placed back on the shelve again the number of total products on shelf will increase or decrease accordingly. | |

**System Sequence Diagram (SSD)**

Chart

Description automatically generated with medium confidence

**Operational contract (OC)**

|  |
| --- |
| System |
| Enter\_Information(password,username/id)  Add\_to\_Cart(product)  Remove\_from\_Cart(product) |

**Sequence Diagram (SD)**

Chart

Description automatically generated

## Diagram Number # 3

|  |  |
| --- | --- |
| Use case name | Manage product in cart |
| Primary Actor | Customer |
| Stakeholders & interest | Bill: All the items included into the cart are calculated |
| Precondition | The user is validated at the entrance  The user shall pick items from the shelves |
| Post condition | The bill is calculated on the app  The bill is accessible to the customer through the app |
| Main success scenario | |  |  | | --- | --- | | Step no. | Action | | 1 | The user is validated or registered into the app by the system. | | 2 | Every item is automatically updated into the cart as customer take item off the shelves. | | 3 | Items placed back on the shelves will be removed from the cart | |
| Extensions | The user is not authenticated, the system will notify the store employee and no bill will be calculated |

**System Sequence Diagram (SSD)**

Diagram, table

Description automatically generated

**Operational contract (OC)**

|  |
| --- |
| System |
| validateUser(name, ID)  RegisterUser(name, Password)  AlertEmployee()  addProduct(Name, Price)  removeProduct(Name, Price)  AlertEmployee(Name, Price) |

**Sequence Diagram (SD)**

Diagram

Description automatically generated

## Diagram number # 4

|  |  |
| --- | --- |
| Use case name | Validate payment method |
| Primary Actor | Customer |
| Stakeholders & interest | Bank: The bank will validate the transaction of the customer |
| Precondition | The system will match the use info with the account created for shopping and allow customer to make transaction |
| Post condition | The customer will be able to enter the shop and do shopping |
| Main success scenario | |  |  | | --- | --- | | Step no. | Action | | 1 | The system will transact $1 to check the account’s activity | | 2 | If the account is active and transaction is successful, then the user will be considered as valid | | 3 | Valid customer will be allowed to do shopping | |
| Extensions | If he system is unable to transact money then the customer will be considered invalid and will not be allowed to enter the shop or do shopping |

**System Sequence Diagram (SSD)**

**Diagram

Description automatically generated with low confidence**

**Operational contract (OC)**

**A picture containing table

Description automatically generated**

**Sequence Diagram (SD)**

**Diagram

Description automatically generated with medium confidence**

## Diagram number # 5

|  |  |
| --- | --- |
| Use case name | Validate customer login |
| Primary Actor | Customer |
| Stakeholders & interest | System |
| Precondition | The system will match the use info with the account created for shopping and count the entered customers |
| Post condition | Only limited number of customers can enter the shop |
| Main success scenario | |  |  | | --- | --- | | Step no. | Action | | 1 | When a person will enter the system will read his information | | 2 | The system will match the customer information with the created account | | 3 | If the information is valid then the customer will be allowed to shopping | | 4 | the system will also count the entered customers | |
| Extensions | If the system does not count the people and people entering the shote rises above the store’s capacity then the system might get overloaded. Thus , then the store  will not allow further entries. |

**System Sequence Diagram (SSD)**

Chart

Description automatically generated

**Operational contract (OC)**

|  |
| --- |
| System |
| Enter\_Information(password,username/id)  Add\_Customer(count) |

**Sequence Diagram (SD)**

Chart

Description automatically generated

## Diagram Number # 6

|  |  |
| --- | --- |
| Use case name | Manage coupon |
| Primary Actor | Customer |
| Stakeholders & interest | System: it will validate the coupons for use of the user |
| Precondition | The cart is updated  Product that coupon is valid for is added into the cart |
| Post condition | The coupon is validated for its authenticity |
| Main success scenario | |  |  | | --- | --- | | Step no. | Action | | 1 | The user is validated | | 2 | The user adds product into the cart | | 3 | The user can claim the coupon by going into coupon and vouchers on the app | |
| Extensions | The coupon is expired, in that case the coupon cannot be claimed and used. |

**System Sequence Diagram (SSD)**

**Diagram

Description automatically generated**

**Operational contract (OC)**

**Table

Description automatically generated with low confidence**

**Sequence Diagram (SD)**

Diagram

Description automatically generated

# **Domain model**

Diagram

Description automatically generated