



Cairo University  
Faculty of Computers and Artificial Intelligence  
IS Department

Course code: IS332  
Course: Analysis and Design of Information Systems  
Under supervision: Dr. Iman Helal – Dr. Dina Ezzat  
Academic Year: 2022-2023

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## Project Details

Project number *13*  
Project title *Mega store corporation*

Corresponding TA\LA *Dina abbas*  
Deliverable *1*

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# 1. Use cases model:

## 1.1. Using Event Decomposition technique:

*Table 1- Types of Events*

### 1.1.1. Types of Events

Event	Type (External/State/temporal)
Manager adds new products	External
Manager updates product's price	External
Manager makes deals with suppliers about the products	External
Manger makes offers of some products occasionally	Temporal
Manager gets reports	Temporal
The sub-system makes receipt to a customer	State
The sub-system checks the reusable bag	State
The sub-system checks items	State
The sub-system changes customer's points	State
The sub-system provides many categories of products	External
The sub-system markets products in retail and wholesaling	External
The customer checks offer of products	External
The customer looks for and views products	External
The customer views his points	External
The customer pays for a product	External
The customer returns product	External



### 1.1.2. Formalize events with use cases

*Table 2- Formalizing Events to use cases*

Event	Type (External/State/temporal)	Use case
Manager adds new products	External	Add product
Manager update product's price	External	Change product's price
Manager makes deals with suppliers about the products	External	Make deals
Manger makes offers of some products occasionally	Temporal	Make offers
Manager gets reports	Temporal	Check reports
The sub-system makes receipt to a customer	State	Make receipt
The sub-system checks the reusable bag	State	Check reusable bag
The sub-system checks items	State	Check item
The sub-system provides many categories of products	External	Support many categories
The sub-system markets products in retail and wholesaling	External	Sell product



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The sub-system changes customer's points	State	Change points
The customer checks offers of products	External	Check offers
The customer looks for and views products	External	Search and view products
The customer views his points	External	View points
The customer pays for a product	External	pay
The customer returns products within 14 days or on the same day	External	Return Products



### 1.1.3. Use case Descriptions:

*Table 3 - Use cases descriptions*

Use case name	Actor	Description
Make receipt	Sub-system	In this use case the sub-system checks the price of each item then makes the receipt.
Check item	Sub-system	In this use case the sub-system checks the price of each item.
Make offers	Manager	In this use case the manager makes special offers on some products occasionally.
Check offers	Customer	In this use case the customer checks if there are any offers on products.
Search and view product	Customer	In this use case the customer searches for particular product and views its details.
View points	Customer	In this use case the customer views his collected points.
Return products	Customer	In this use case the customer can return products that he has bought within 14 days or on the same day if the product has gone bad.
Return products within 14 days	Customer	In this use case the customer can return products on the same day as fresh food, dairy, and pastry products.



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Return products on the same day	Customer	In this use case the customer can return products within 14 days such as appliances.
Change product's price	Manager	In this use case the manager changes the price of particular product.
Add product	Manager	In this use case the manager adds new product to the system
Check reports	Manager	In this use case the manager gets reports about products including bestselling, lowest selling products and customer preferences.
Make deals	Manager, Supplier	In this use case the manager makes deals with various suppliers to provide these variations of products.
Provide products	Supplier	In this use case the supplier provides manager with various products based on their deal.
check reusable bag	Sub-system	In this use case Sub-system checks if customer uses special bags to add point for him/her.
support many categories	Sub-system	In this use case Sub-system provides many product's categories like types of food and appliances.
sell product	Sub-system	In this use case Sub-system allows customers to choose which way buy product with.
retail	Sub-system	In this use case Sub-system provides retail method to sell product one by one.
wholesaling	Sub-system	In this use case Sub-system provides wholesaling method to sell product in group.



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change point	Sub-system	Sub system increases customer's point when the customer uses reusable bag
buy	Customer	In this use case Customer selects products to buy in retail or wholesaling
pay	Customer	In this case when the customer buys any product from the store he has to pay with credit, in cash or using his points
pay with credit	Customer	In this case the customer can pay using credit card so his points will be increased
pay in cash	Customer	In this case the customer can pay in cash so his points will be increased
pay with points	Customer	In this case the customer can pay using his points and that affect his points balance



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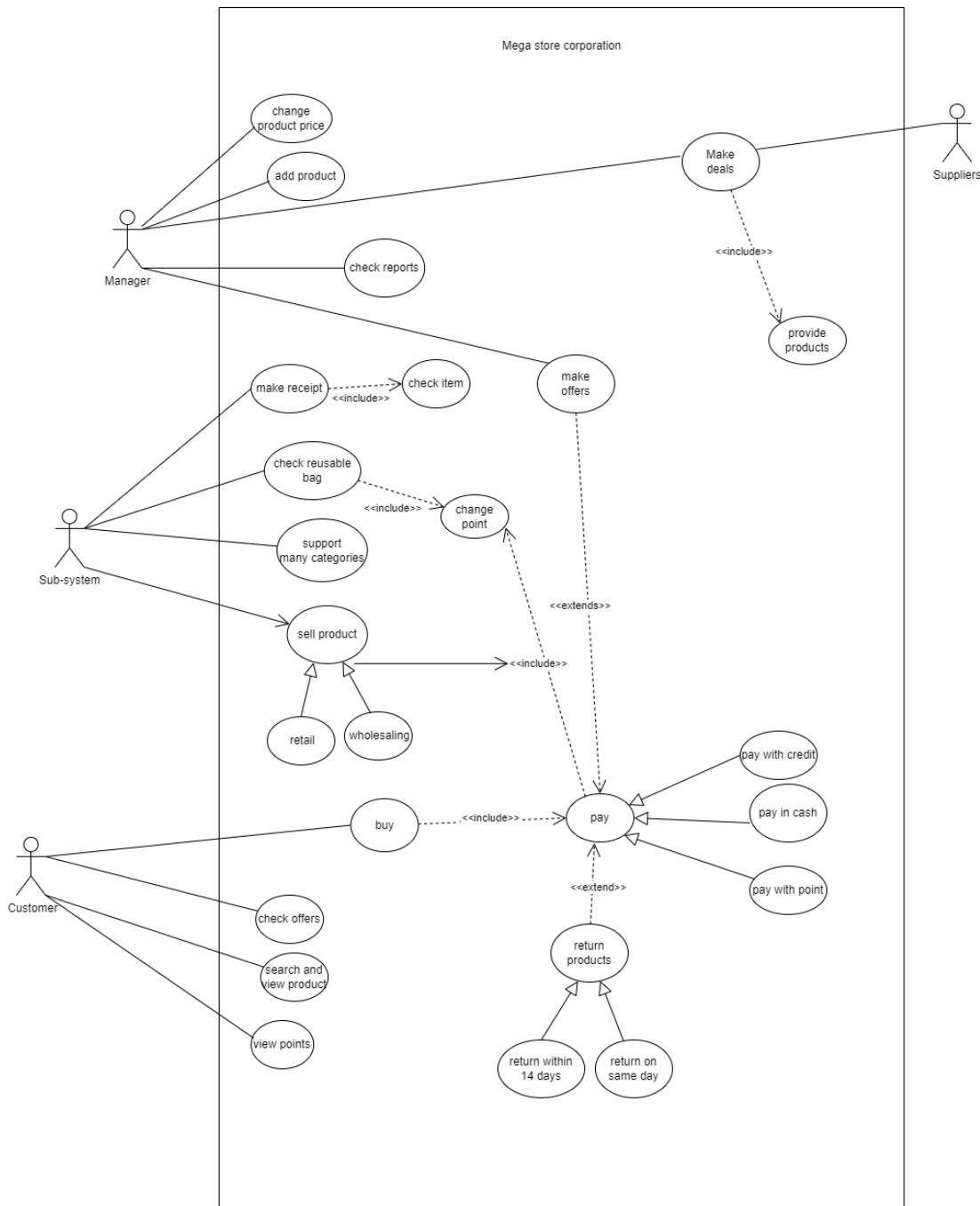
#### 1.1.4. Matrix that maps all domain classes to the set of use cases

Use case <b>Vs.</b> Domain Class	Domain Class 1	Domain Class 2
change product price	Manager	Product
add product	Manager	Product
make deals	Supplier	Manager
provide product	Supplier	Product
make offer	Offer	Manager
make receipt	Sub-system	Receipt
check item	Sub-system	Product
check reusable bag	Sub-system	Payment
change point	Sub-system	Payment
buy	Customer	Product
pay	Customer	Payment
pay with credit	Customer	Payment
pay in cash	Customer	Payment
pay with point	Customer	Payment
check offers	Customer	Offer
search and view product	Customer	Product
return product	Customer	Product
return on same day	Customer	product
return within 14 days	Customer	Product
sell products	Sub-system	product
retail	Sub-system	Product
wholesaling	Sub-system	Product
view points	Customer	Payment
support many categories	Sub-system	Product
check reports	Manager	Reports





### 1.1.1. Use case Diagram:





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## List of assumption

- 1- System support many to pay: with point – in cash – with credit
- 2- Every month manager checks report includes sold products, bestselling product, and lowest selling product.
- 3- Manager has the authority to change product's price and add products.

Used tool: [draw.io](https://draw.io)