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

Project description

Each group has 4 deliverables: (**Phase2:** 50 grades)

- Total grades for the project should be **20 grades**. So, the grades will be scaled.
- The templates for your deliverables and your cover page are provided.
- Your deliverables will be submitted on **https://forms.gle/5tsks6cZURf1cwNUA**.
- This form is used to submit your different deliverables in course IS332 in the academic year (2022-2023)
- Please submit your file named T<Team number>-D<Deliverable number>.docx or .pdf. Example: T7-D2.docx
  - Do not add spaces in the filename.
  - Avoid zipping the file unless it is larger than 10 MB.
- Deliverable 2 **Firm Deadline is 26-11-2022**.

Note that

- Only one team member (**team leader**) can submit the project.
- Don't submit multiple times.
- Cheating policy: Any copies will be graded zero.
- Clearly state your assumptions (only required ones).
- No handwritten reports and/or models are accepted [graded zero].
- You need to use any UML tool to depict your models and please mention the used tool(s) in your report.

[**Hint**: Review Chapters 4 - 5: domain class diagram & CRUD]

[**Tip**: Split the work among team members to help with time management]

Project Details

Project number	*1*
Project title	*Mega store cooperation*
Corresponding TA\LA	*Lamiaa*
Deliverable	*2*

Team Details

Student ID	Student name	Lab Group
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Guidelines for Deliverable 2

1. Apply the CRUD technique
2. Domain Class Diagram [Complete system]
   - Domain Class Diagram based on the Noun technique.
   - You need to follow the steps of the NOUN technique to identify the domain classes and document information using Tabular representations whenever possible. Please REFER to CHAPTER 4 in the book.
   - You need to make use -as much as you can- of complex association types, i.e., generalization, aggregation, and composition.
   - Your class diagram should also include multiplicities.
   - Please specify the name of the associations in your model to increase readability.
3. State machine diagram (single object is enough). Please justify your selection.
4. **Activity diagram(s) (at least 3 use cases)**
5. **System Sequence diagram(s) (for the same use cases in activity diagrams)**

Please **clearly state** the name of the use case related to each model in steps 4 and 5.

1. CRUD technique:

Verify use cases using CRUD technique (e.g. Fig 5-12)

Domain Class	CRUD	Verified Use case
Customer	C	Create Customer account
	R	Read customer information
	U	Update customer account
	D	Delete customer account
Order	C	Make an order
	R	Get order details
	U	Update order
	D	Cancel Order
Product	C	Add product
	R	Search for product
	U	Change price
	D	Remove product
Offer	C	Add offers
	R	Show Offers and discounts
	U	Update offers
	D	Cancel offer
Payment	C	Add new payment
	R	Choose payment method

	U	Update payment details
	D	Delete payment method from site

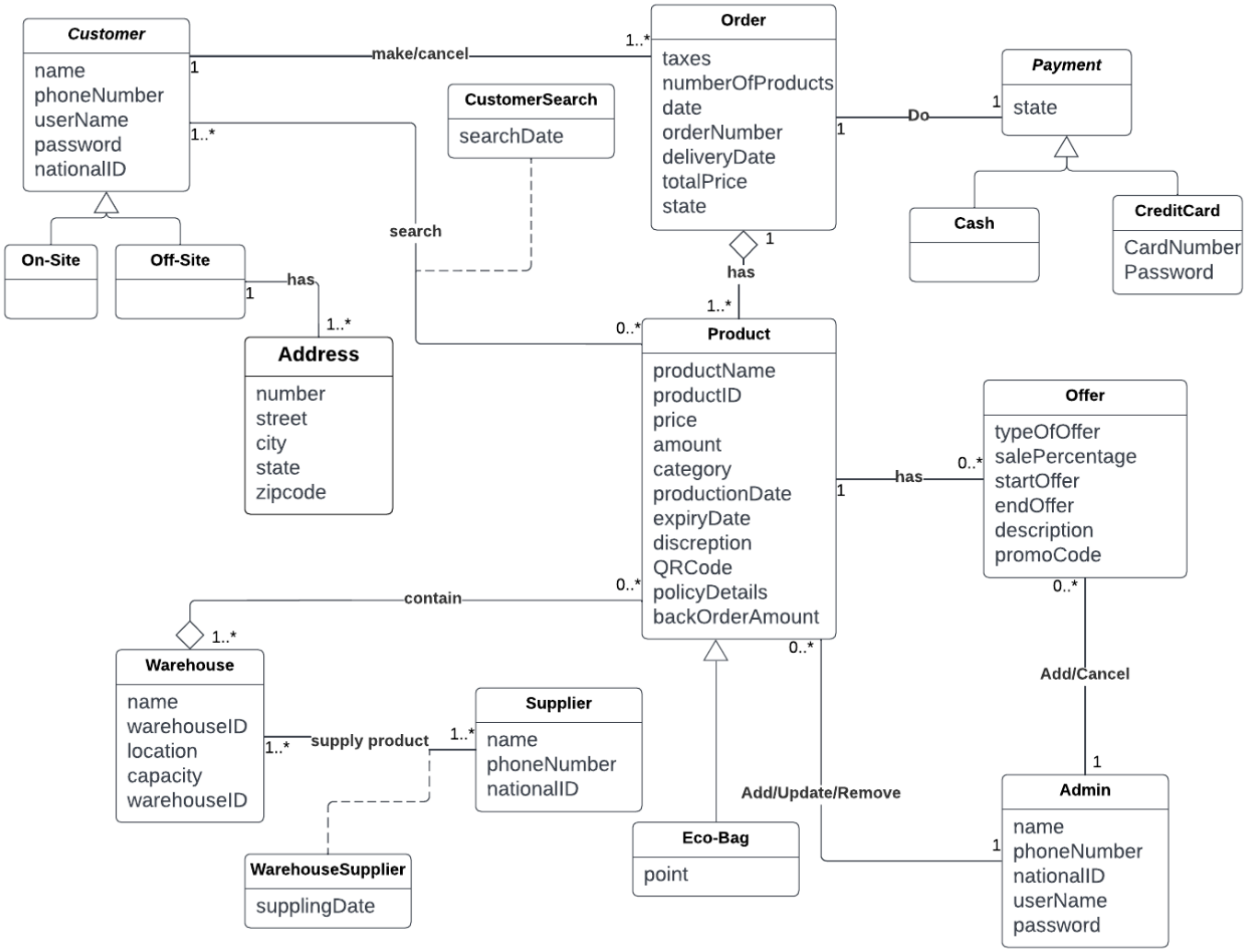
CRUD table showing use cases and corresponding domain classes (e.g. Fig 5-13)

Use case vs Domain Class	Customer	Order	Product	Offer	Payment
Create Customer account	C	…	…	…	…c
Read customer info	R	…	…	..	..
Update Customer information	U	…	…	…	…
Delete customer account	D	…	…	…	…

Make an order	….	C	…	C	…
Get order details	…	R	…	…	…
Update order		U	…	….	…
Cancel Order		D	…	D	…
Add product	…	…	C	…	…
Search for product	….	…	R	…	…
Change price	…	…	U	…	U
Remove product	…	….	D	…	…
Add offer	…	…	…	C	U

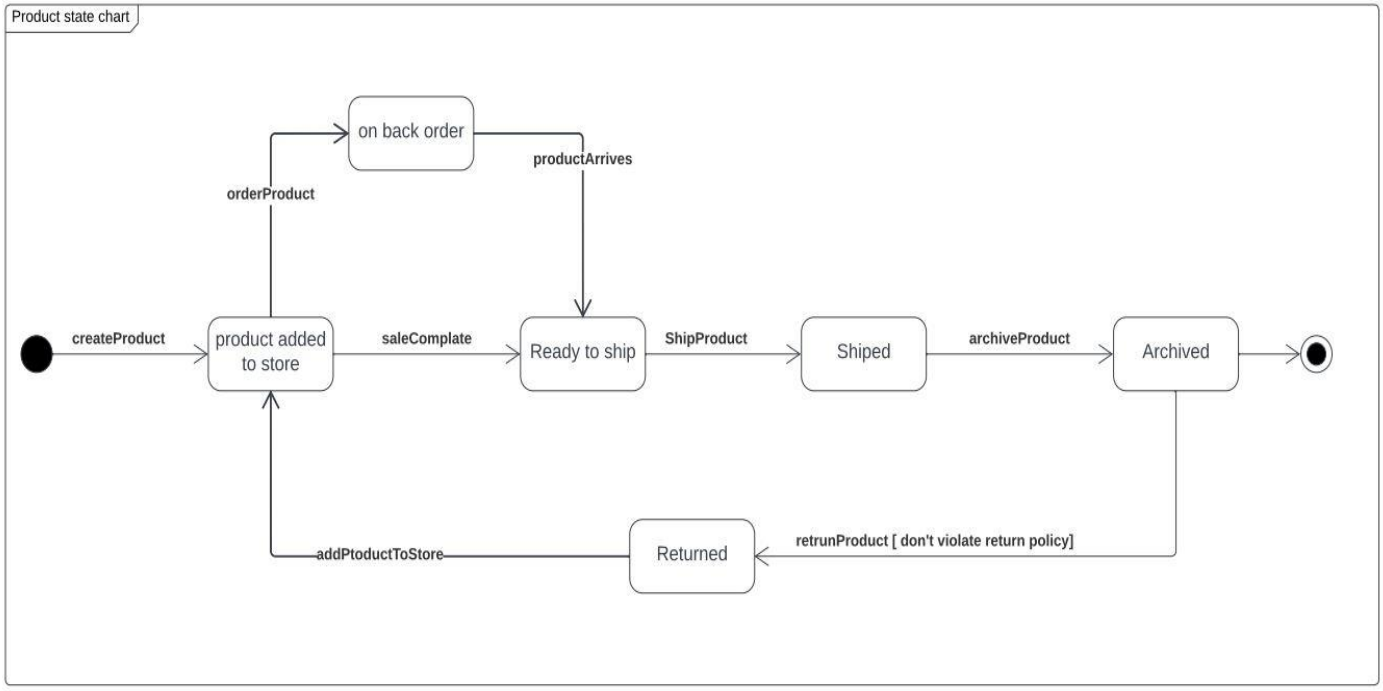
Show Offers and discounts	….	….	….	R	…
Update offers				U	…
Cancel offer	….	….	….	D	….
Add new payment	…	….	….	….	C
Choose payment method	….	C	….	….	C
Update payment details	….	….	….	….	U
Delete payment method from site	….	….	….	….	D

2. Domain Class Model



Identified noun	Notes on including a noun
Customer	want to store
Product	want to store
Website	I know what is it don't store
Price	belongs to another category "product" don't store
App	I know what is that don't store
Cart	want to store
Taxes	belongs to another category "order" don't store
Order	want to store
Offer	want to store
Product	want to store
Payment method	want to store
Supplier	want to store
warehouse	want to store
Point	may be store as catalog or one of customer attributes
Report	output form another category don't store

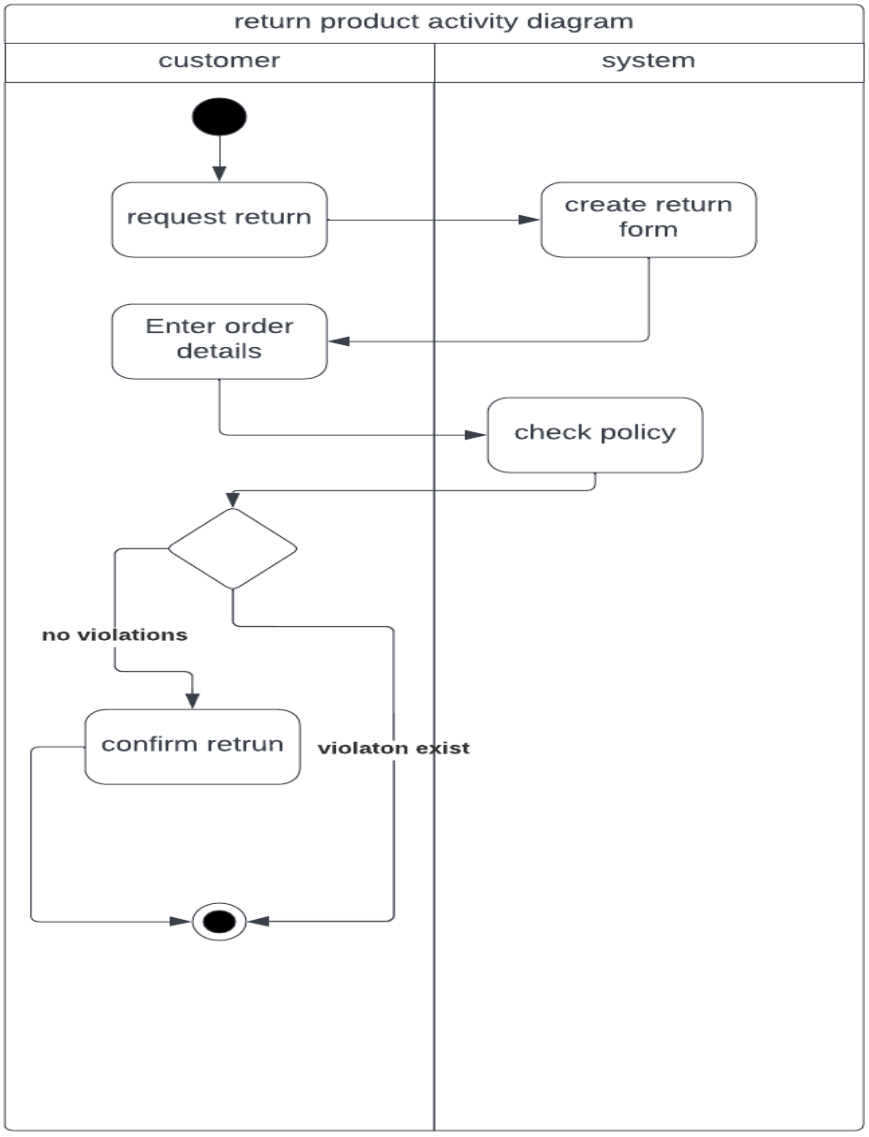
3. State Machine Model



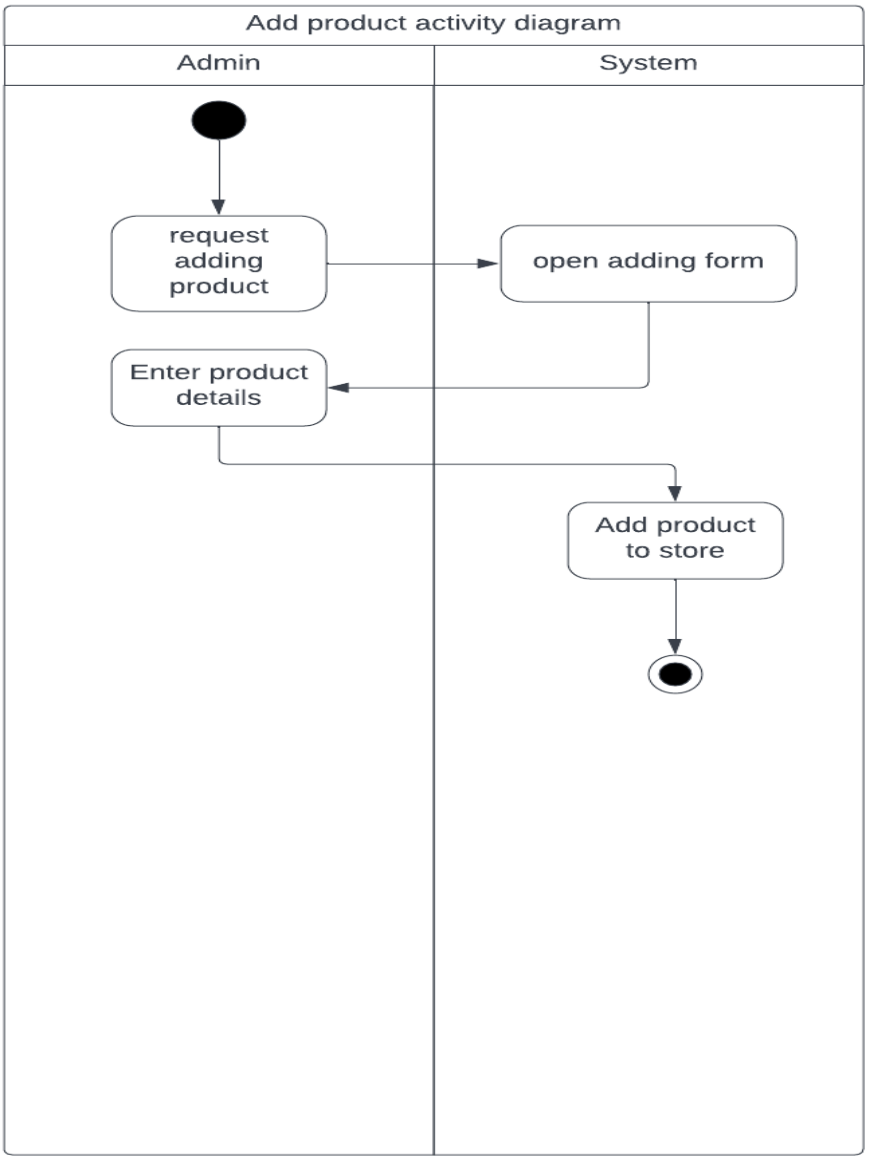
Justification: Product object was selected to do state chart diagram because it consider the main object in the system and has many important different states that represent product state

4. Activity Diagrams

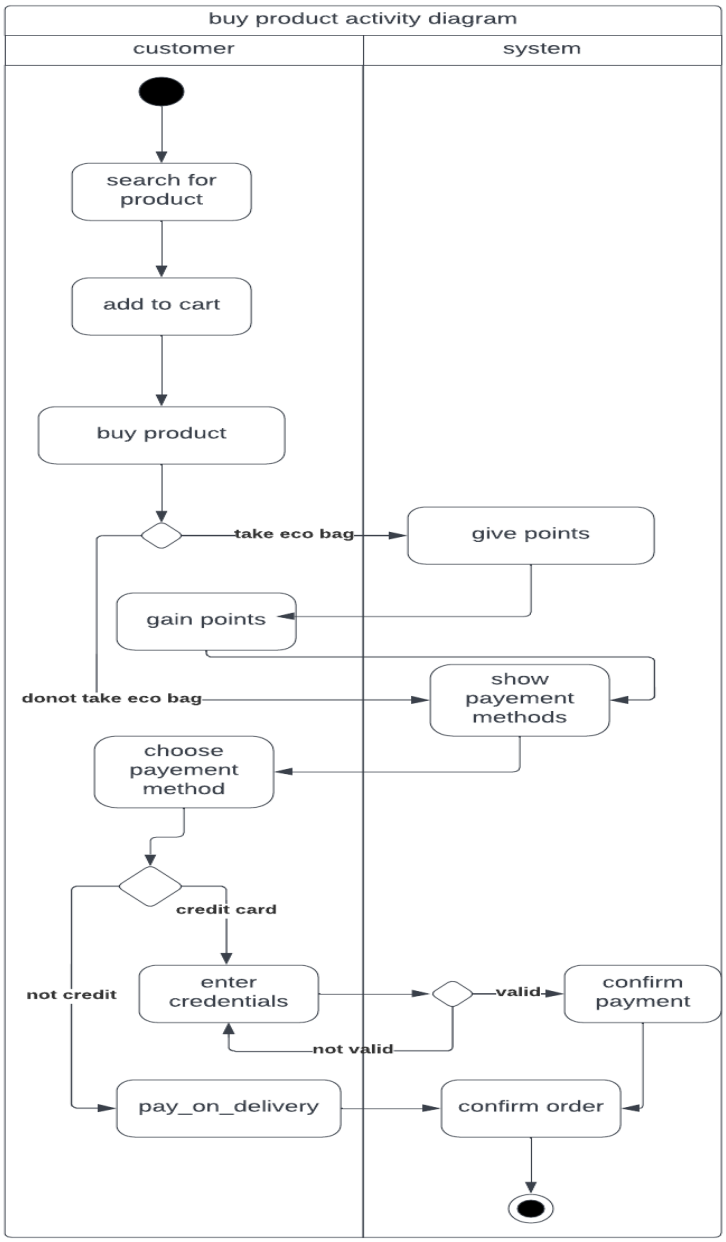
1) Return product



2)Add product

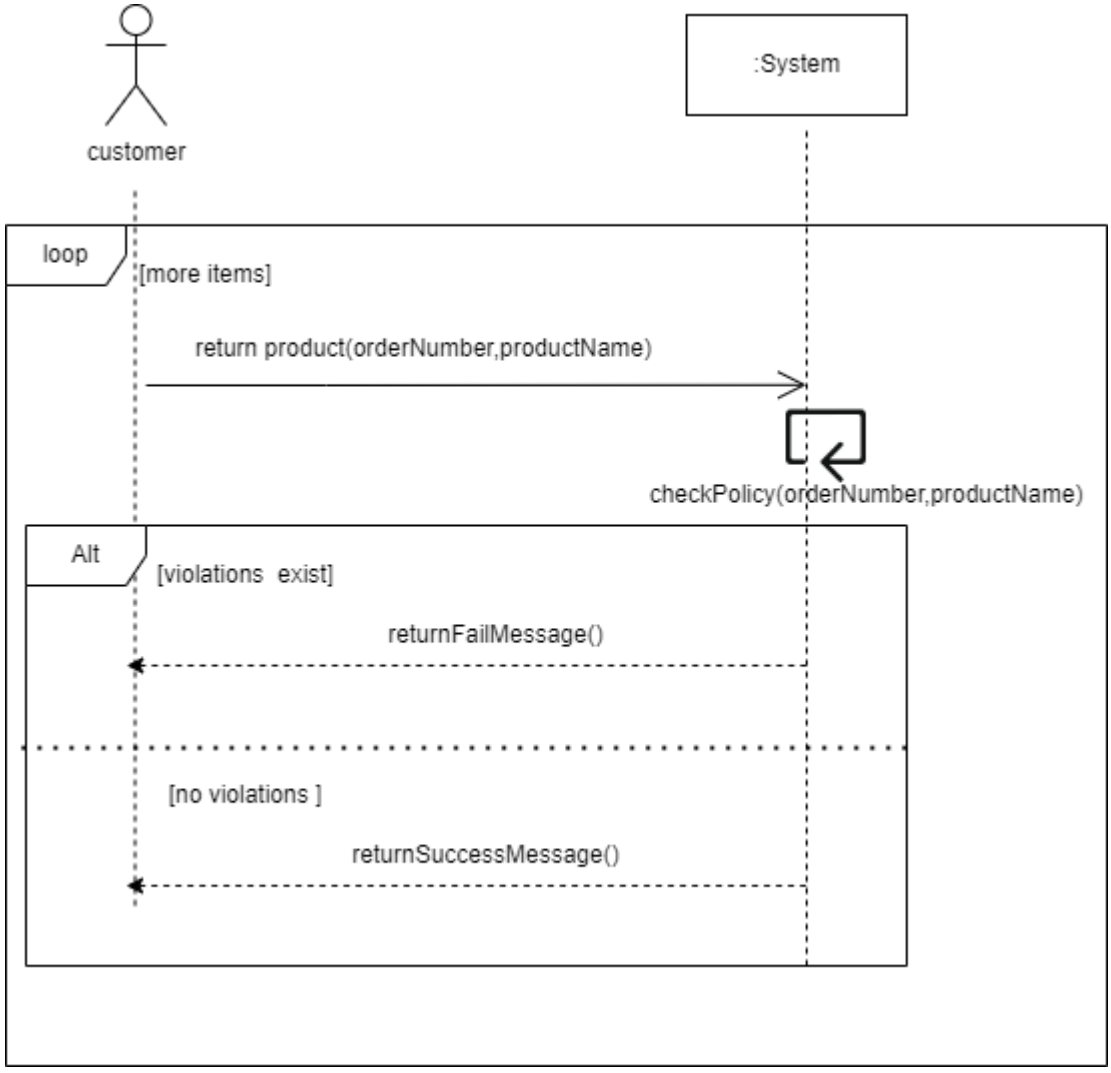


3) Buy product

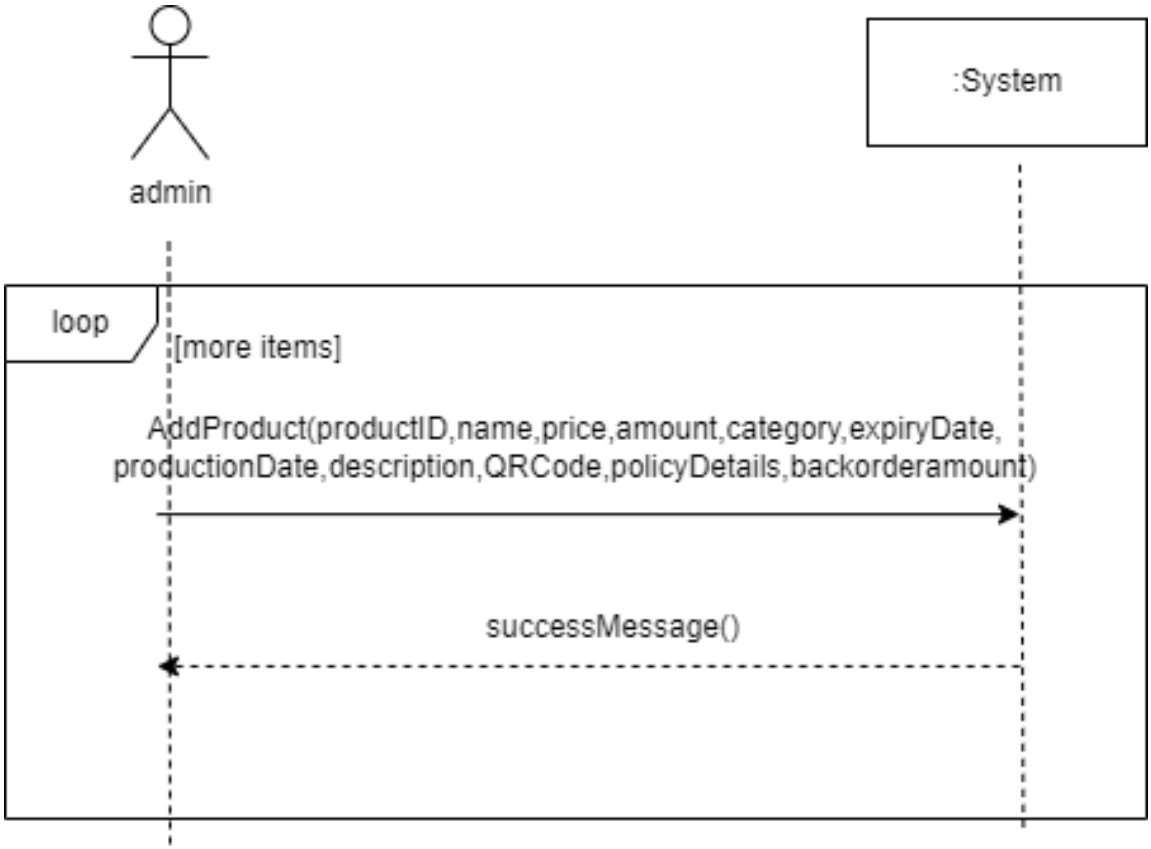


5) System sequence diagram

1)return product



2) Add product



3) Buy product