

Cairo University

Faculty of Computers and Artificial Intelligence



CS251

Introduction to Software Engineering

Project Name

Software Design Specifications

Version X.X

Team Names and Emails



Software Design Specification

Month & Year

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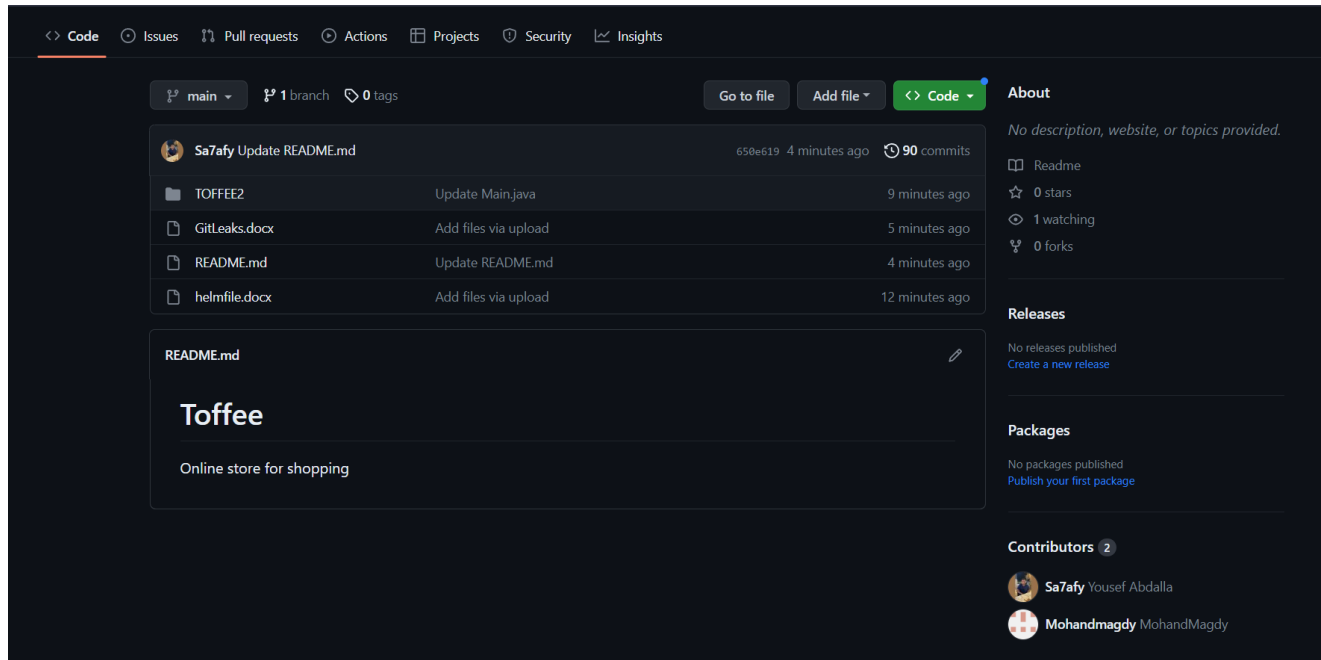
Team

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Software Design Specification

GitHub



Document Purpose and Audience

SDS template for Toffee online store.

People who can read it: Client, project manager, developers.

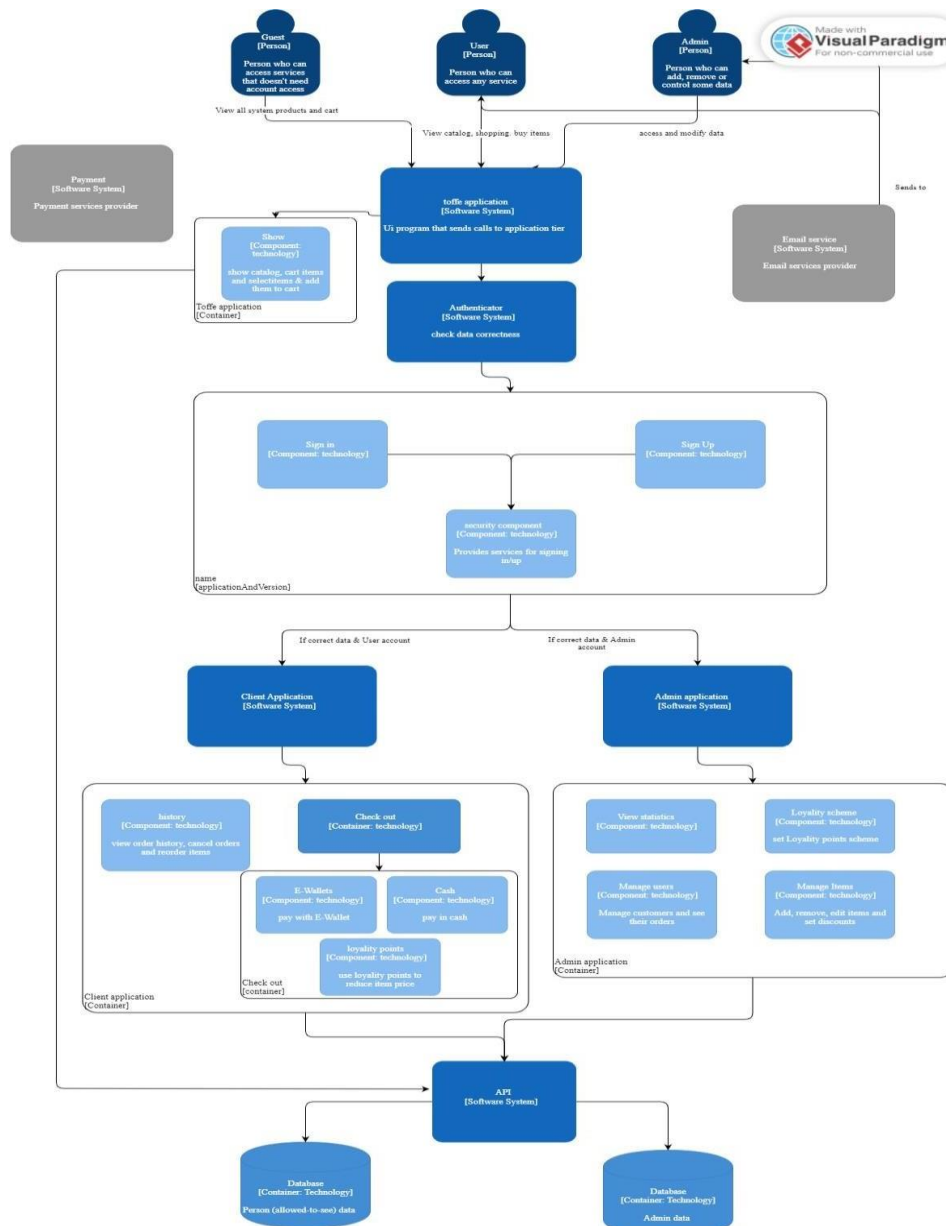
System Models

I. Architecture Diagram

We used C4 model because it's easy to be represented and understand.



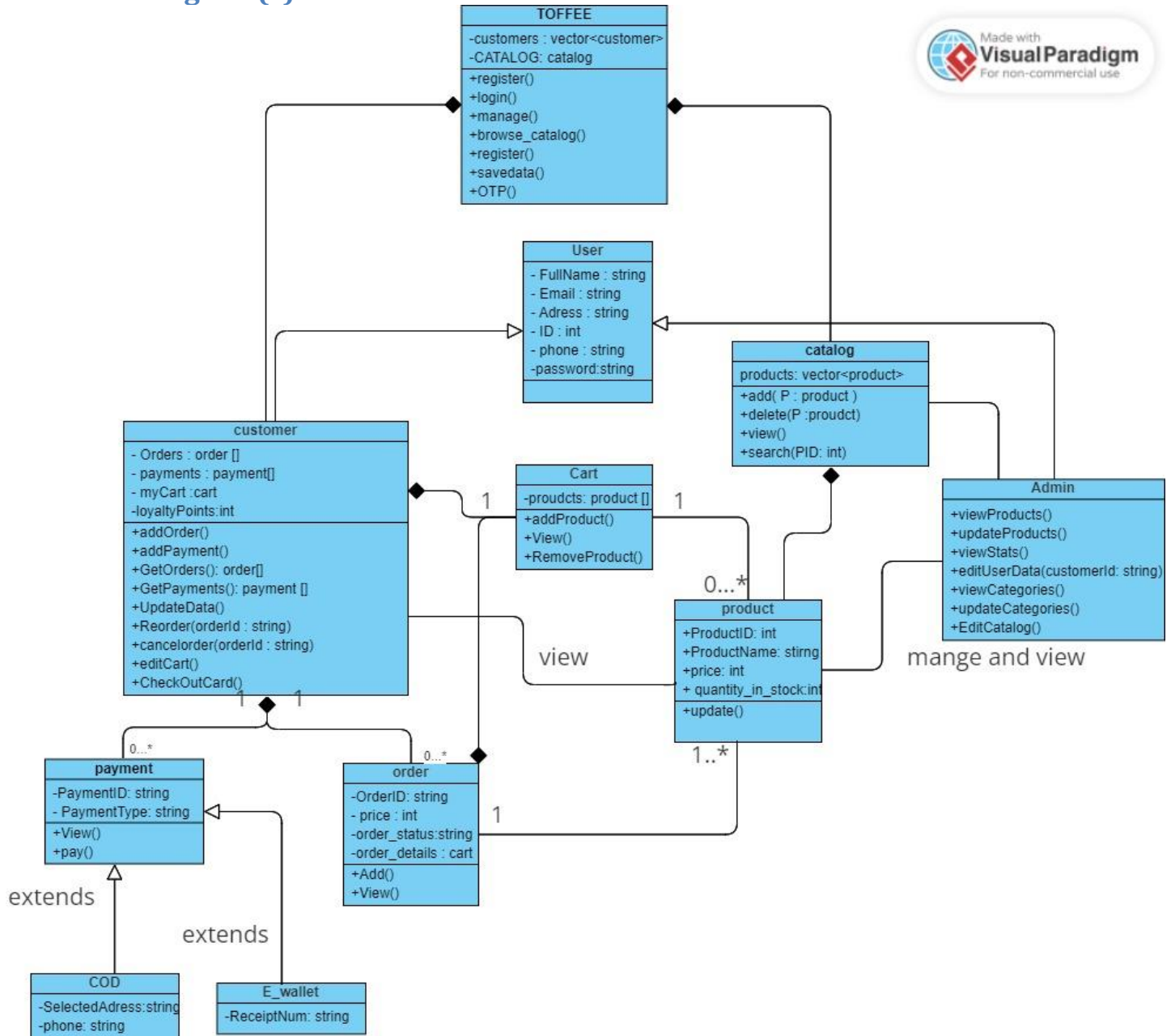
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II. Class Diagram(s)





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III. Class Descriptions

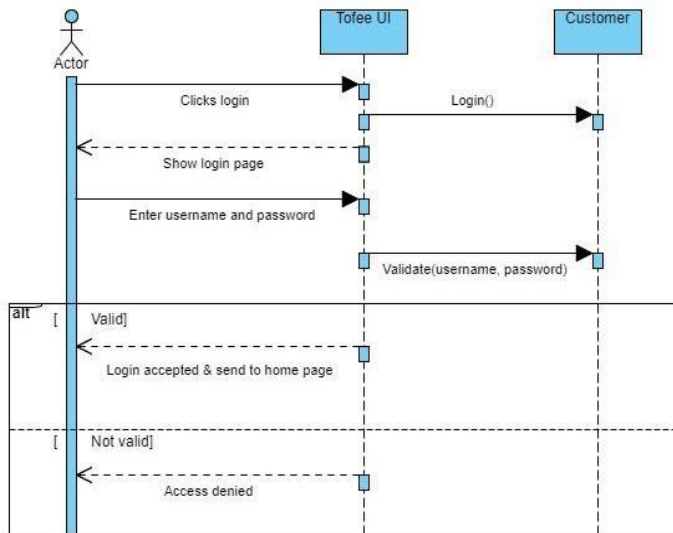
Class ID	Class Name	Description & Responsibility
1.	User	This class represents the users of the toffee store, including customers and admins. It contains attributes such as name, email, and password, as well as methods for logging in and out
2.	Customer	This subclass of User represents the customers of the online store. It contains additional attributes such as payment information, and order history. And a lot of methods which he can do like order or view products
3.	Admin	This subclass of User represents the administrators of the online store. It contains additional attributes such as a list of products, categories, and promotions, as well as methods for adding and updating them and show stats.
4.	product	This class represents the products sold by the online store. It contains attributes such as name, description, price, and quantity in stock, as well as methods for adding and removing products.
6.	Cart	This class represents the shopping cart used by customers to store the products they want to purchase. It contains a list of products and their quantities, as well as methods for adding and removing products and calculating the total price.
7.	Order	This class represents an order placed by a customer. It contains a list of products and their quantities, as well as the customer's shipping and billing addresses, payment information, and order status.
8.	Payments	This class represents the payment options available to customers. It has two subclasses: a. COD (Cash on Delivery): This subclass represents the COD payment option, where the customer pays for their order in cash upon delivery. b. EWallet: This subclass represents an e-wallet payment option, where the customer can pay for their order using a digital wallet service.
9	Toffee	Class to manage all program and optimize operations between users and products
.10	Catalog	Manage all products that the store has. which user can browse and admin can edit



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IV. Sequence diagrams

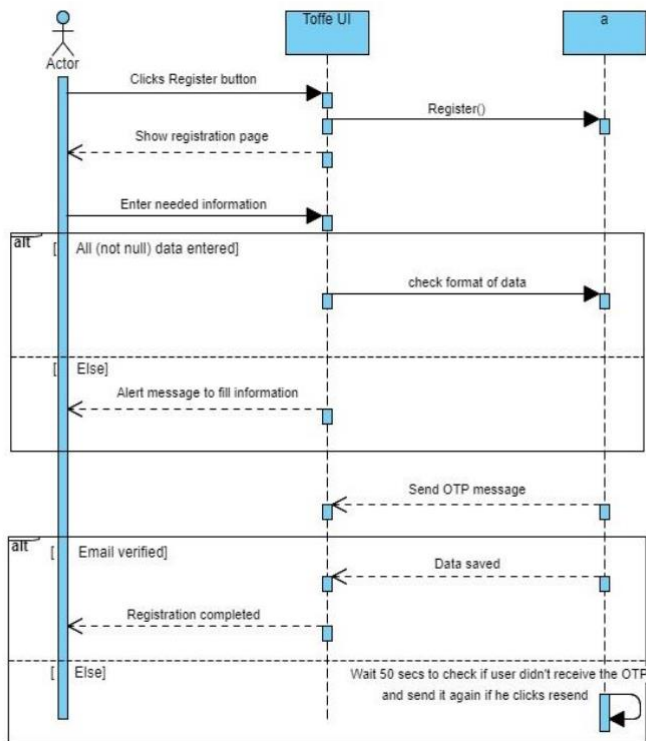
1-Login



2-Register



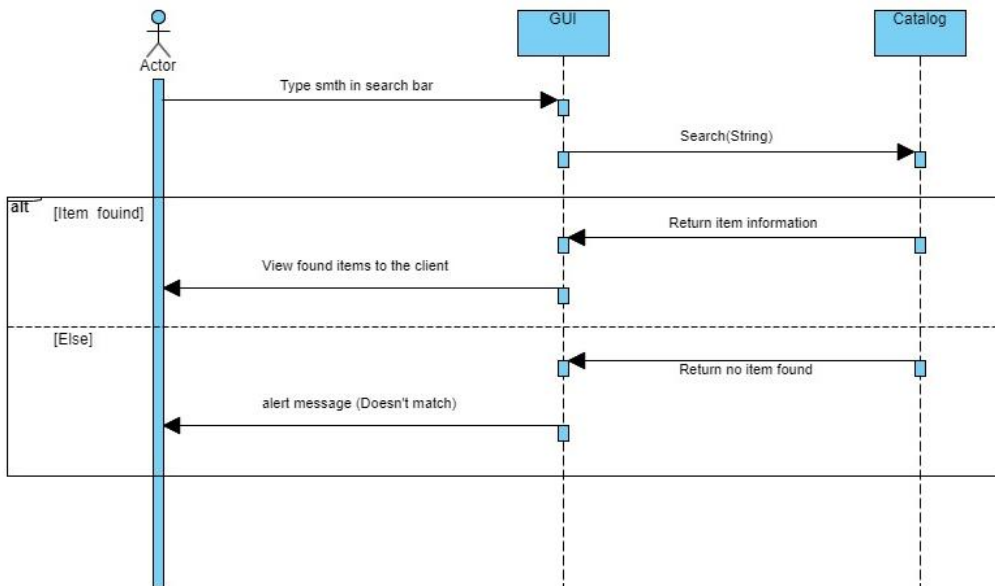
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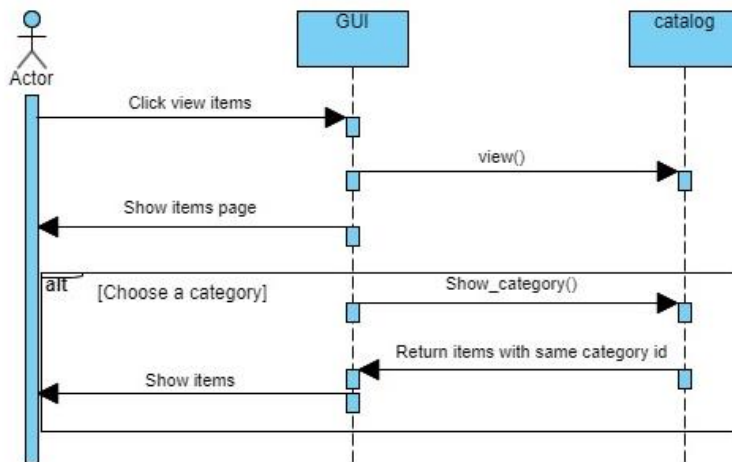
3-Search



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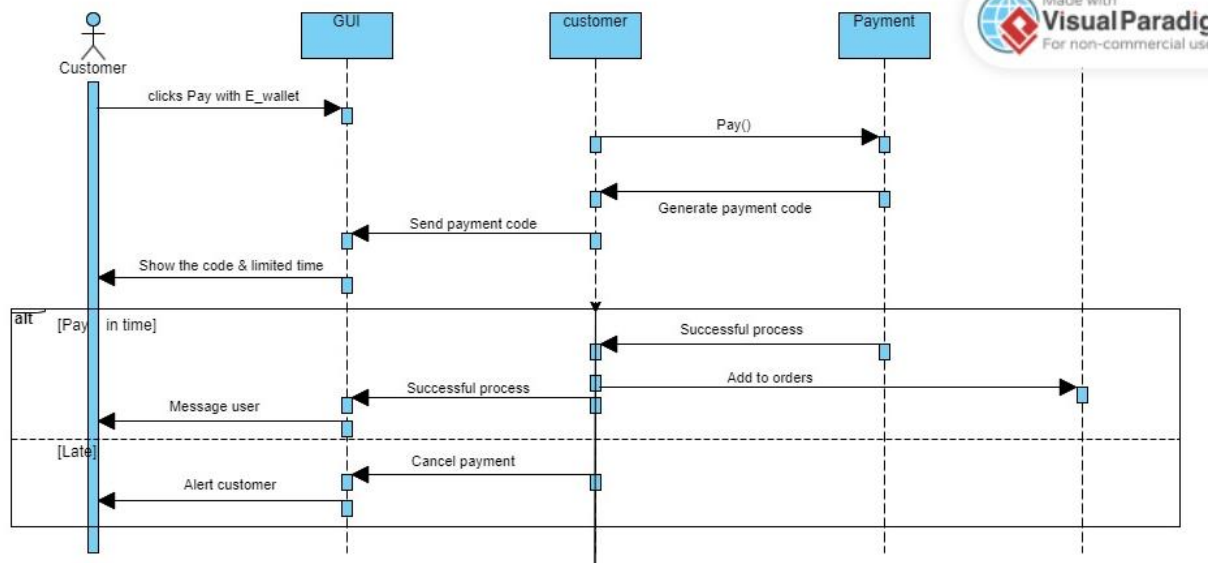
4-Show items





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S5-pay

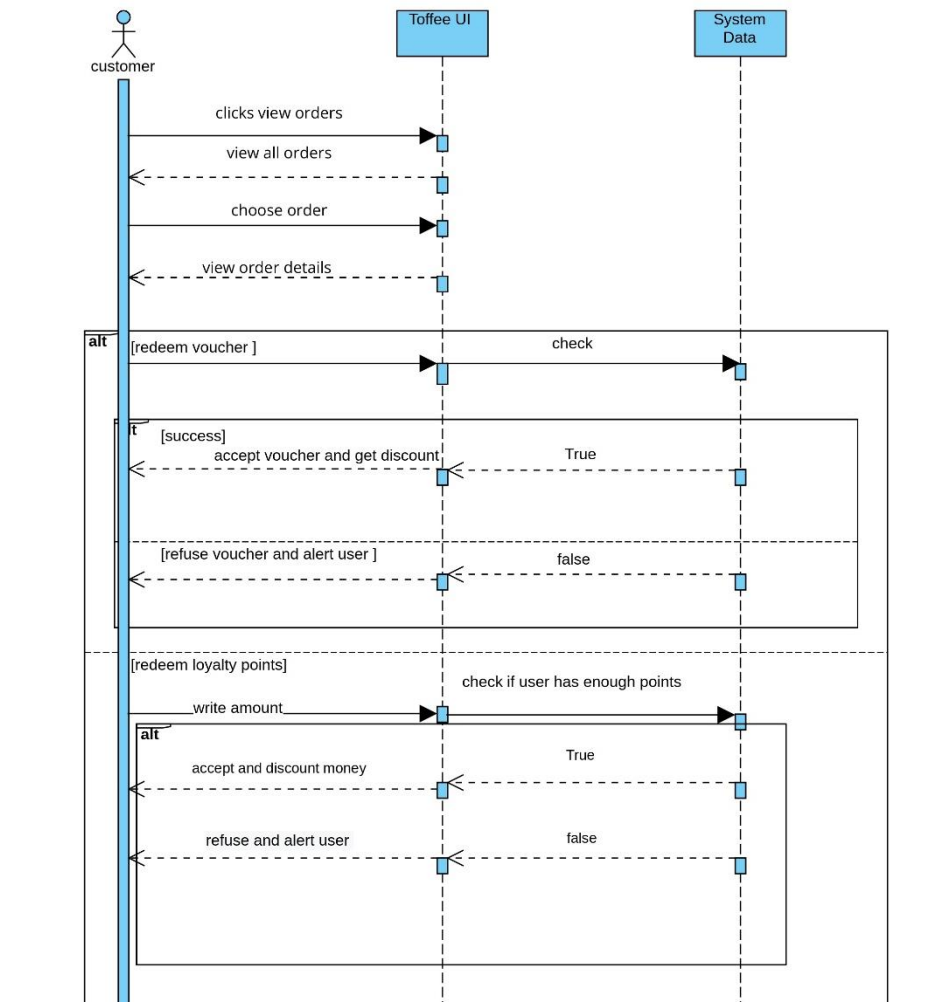


Class on the right: Order

5-add voucher



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Class - Sequence Usage Table

Sequence Diagram	Classes Used	All Methods Used
1. Login	Class Customer	Login() Validate(string username, string password)
2. Register	Class Customer	Register()



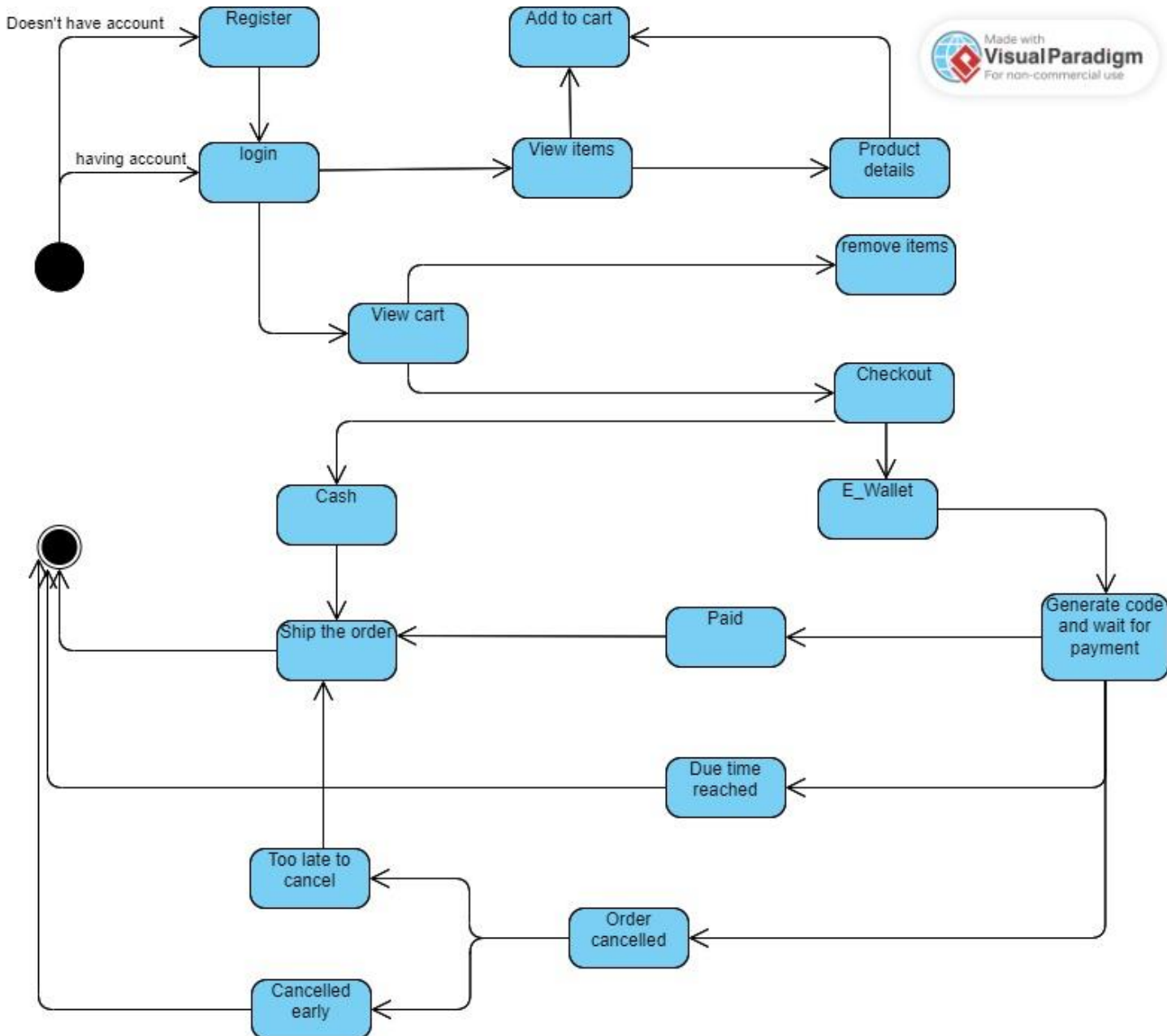
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3. Search	Class Catalog	Search()
4.show items	Class catalog	View()
5.pay	Class customer Class payment Class Order	Payment::pay() Order::add() Customer::Checkout()
6.add voucher	Database	



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V. State Diagram



Tools

Visual paradigm



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Ownership Report

Item	Owners
Youssef Abdalla Attia	Class diagram and 4 sequence diagrams
Mohand Magdy Ahmed	Architecture diagram, 2 sequence diagrams and State diagram