

Cairo University

Faculty of Computers and Artificial Intelligence



CS251

Introduction to Software Engineering

Dinosaurs

Toffee

Software Design Specifications

Version 0.1

ID	Name	Email	Mobile
20211013	Eslam Mohamed Abdelazim Ali	eslam3012mohamed@gmail.com	01552931168
20211078	Mohamed Elsayed Mohamed Abd-Elmoty	Ma0867694@gmail.com	01095553093
20210392	Mostafa Abdelwahab abbas	Mostafaabdelwahab443@gmail.com	01032499296

April 2023



CS251: Phase 2 – <Dinosaurs>

Project: <Toffee>

Software Design Specification

Contents

Team	1
Document Purpose and Audience	3
System Models	4
I. Architecture Diagram	4
II. Class Diagram(s).....	5
III. Class Descriptions	6
IV. Sequence diagrams	8
Class - Sequence Usage Table.....	10
V. State Diagram	10
Tools	10
Ownership Report	10



CS251: Phase 2 – <Dinosaurs>

Project: <Toffee>

Software Design Specification

Document Purpose and Audience

Purpose:

This is a software design system document that created to explain and clarify the project toffee by the different diagrams like architecture, class, sequence and state diagrams so this diagrams eases for use that we can create a well-organized, efficient, and scalable system that can handle the various aspects of the store's operations, such as inventory management, order processing, and payment processing and provide a reliable, efficient, and user-friendly system that meets the needs of the store and its customers, while also allowing for future growth and expansion.

Audience:

- Project managers and owner
- Software development team
- Stakeholders



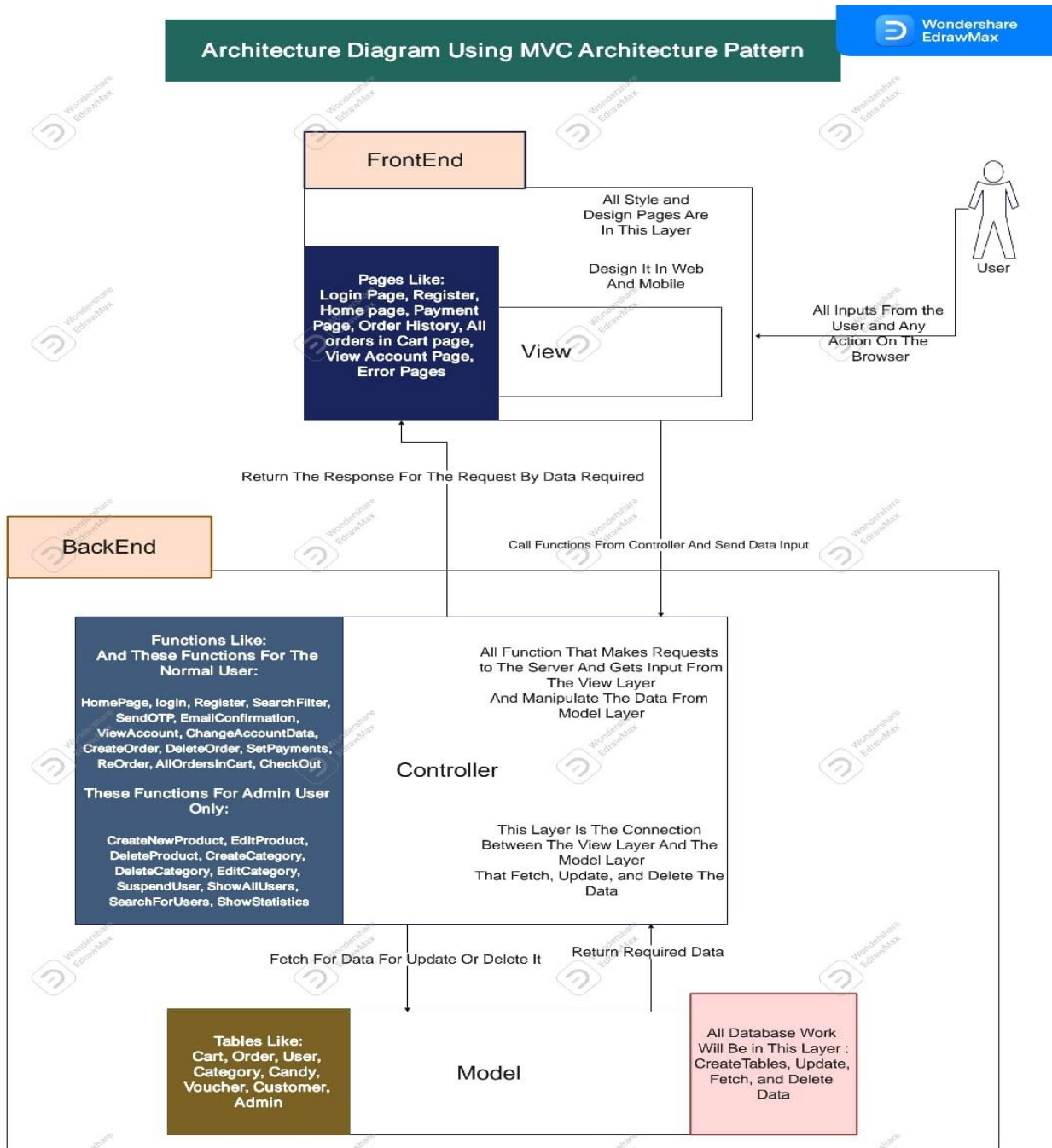
CS251: Phase 2 – <Dinosaurs>

Project: <Toffee>

Software Design Specification

System Models

I. Architecture Diagram



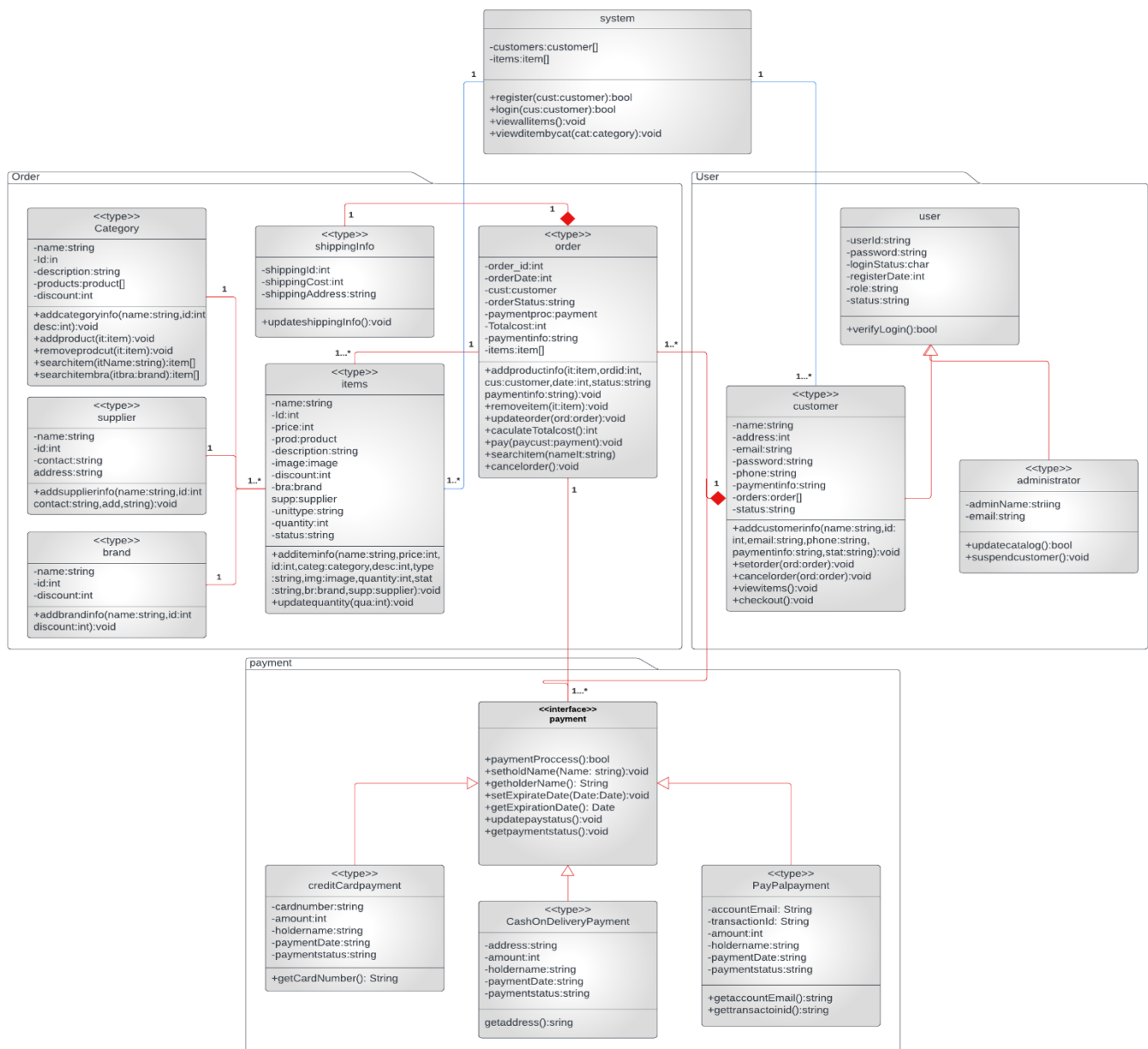


CS251: Phase 2 – <Dinosaurs>

Project: <Toffee>

Software Design Specification

II. Class Diagram(s)





CS251: Phase 2 – <Dinosaurs>

Project: <Toffee>

Software Design Specification

III. Class Descriptions

Class ID	Class Name	Description & Responsibility
F1	System	This class represents the overall system that manages the store website. Its responsibilities include managing user authentication, handling requests from users, coordinating communication between different parts of the system, and ensuring that the system is running smoothly.
F2	User	This class represents a user of the store website, and its responsibilities include managing user authentication and authorization, providing access to the appropriate parts of the system based on the user's role (e.g., customer, administrator), and managing user preferences and settings.
F3	Administrator	This class represents an administrator of the store website, and its responsibilities include managing the store's inventory, processing orders, managing user accounts and permissions, and overseeing the overall operation of the store.
F4	Customer	This class represents a customer of the store, and its responsibilities include browsing and purchasing items, managing their account and preferences, and providing feedback on their experience with the store.
F5	Order	This class represents an order placed by a customer, and its responsibilities include managing the details of the order (e.g., items purchased, shipping information, payment details), processing the order, and providing updates to the customer on the status of their order.
F6	ShippingInfo	This class represents the shipping information associated with an order, and its responsibilities include managing the details of the shipping address, tracking shipping status, and handling any issues related to shipping.
F7	Item	This class represents an item that can be purchased from the store, and its responsibilities include managing the details of the item (e.g., name, description, price), tracking inventory levels, and handling any issues related to the item (e.g., returns or exchanges).



CS251: Phase 2 – <Dinosaurs>

Project: <Toffee>

Software Design Specification

Class ID	Class Name	Description & Responsibility
F8	Category	This class represents the categories of items available in the store, and its responsibilities include managing the categories and organizing items into the appropriate categories.
F9	Supplier	This class represents the suppliers of the items available in the store, and its responsibilities include managing supplier information and relationships, tracking supplier performance, and handling any issues related to supplier management.
F10	Brand	This class represents the brands of the items available in the store, and its responsibilities include managing brand information and relationships, tracking brand performance, and handling any issues related to brand management.
F11	Payment(interface)	This interface represents the basic properties and methods required for any type of payment, such as the amount and payment date, and the ability to process and validate the payment.
F12	PayPalPayment	This class represents a payment made using PayPal, and its responsibilities include implementing the `Payment` interface methods in a way that is specific to PayPal, such as handling PayPal authentication and authorization, processing PayPal payments, and handling any issues related to PayPal payments.
F13	CashOnDeliveryPayment	This class represents a payment made using cash on delivery, and its responsibilities include implementing the `Payment` interface methods in a way that is specific to cash on delivery, such as managing the details of the cash payment, processing the payment, and handling any issues related to cash payments.
F14	CreditCardPayment	This class represents a payment made using a credit card, and its responsibilities include implementing the `Payment` interface methods in a way that is specific to credit card payments, such as managing credit card information, processing credit card payments, and handling any issues related to credit card payments.

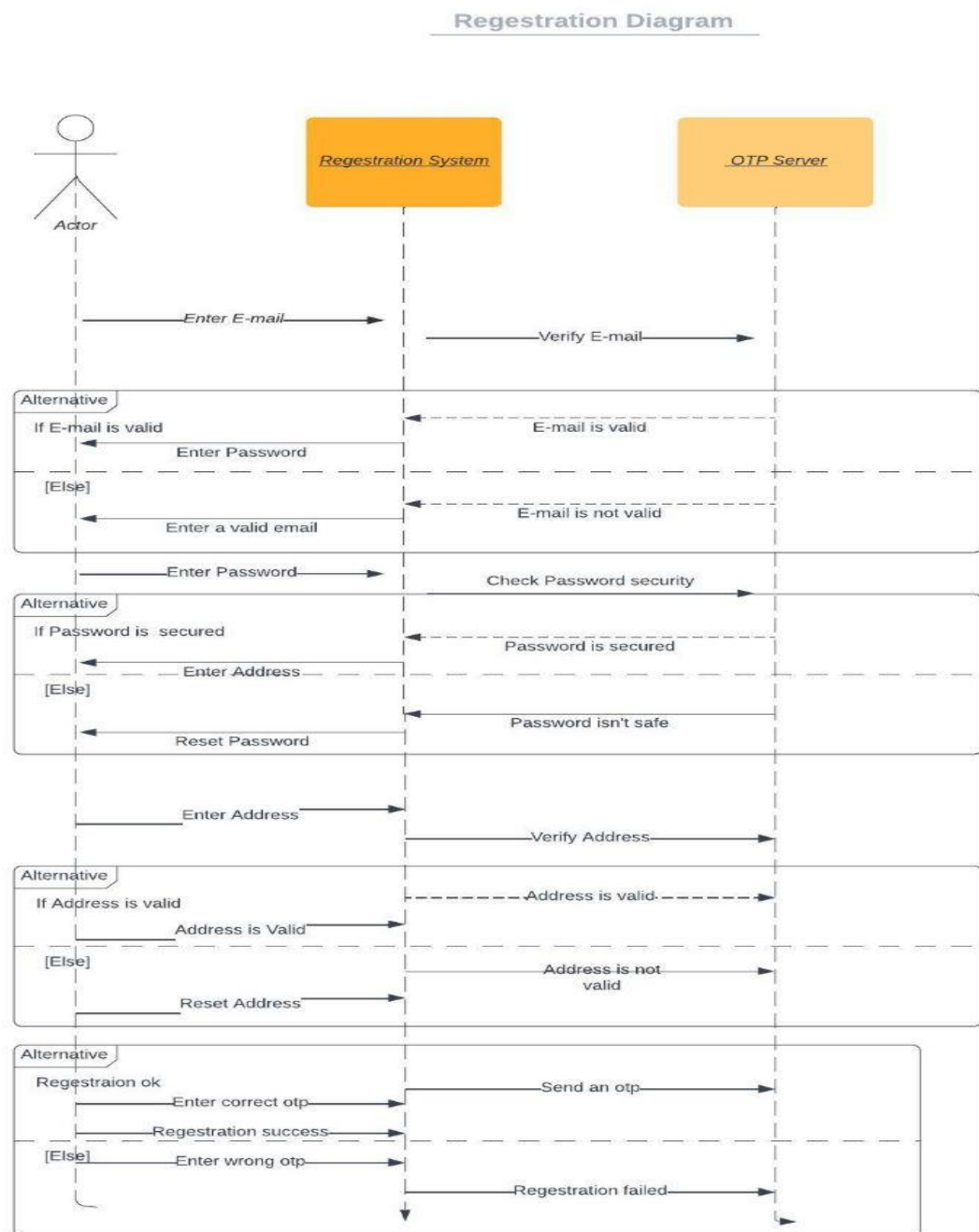


CS251: Phase 2 – <Dinosaurs>

Project: <Toffee>

Software Design Specification

IV. Sequence diagrams

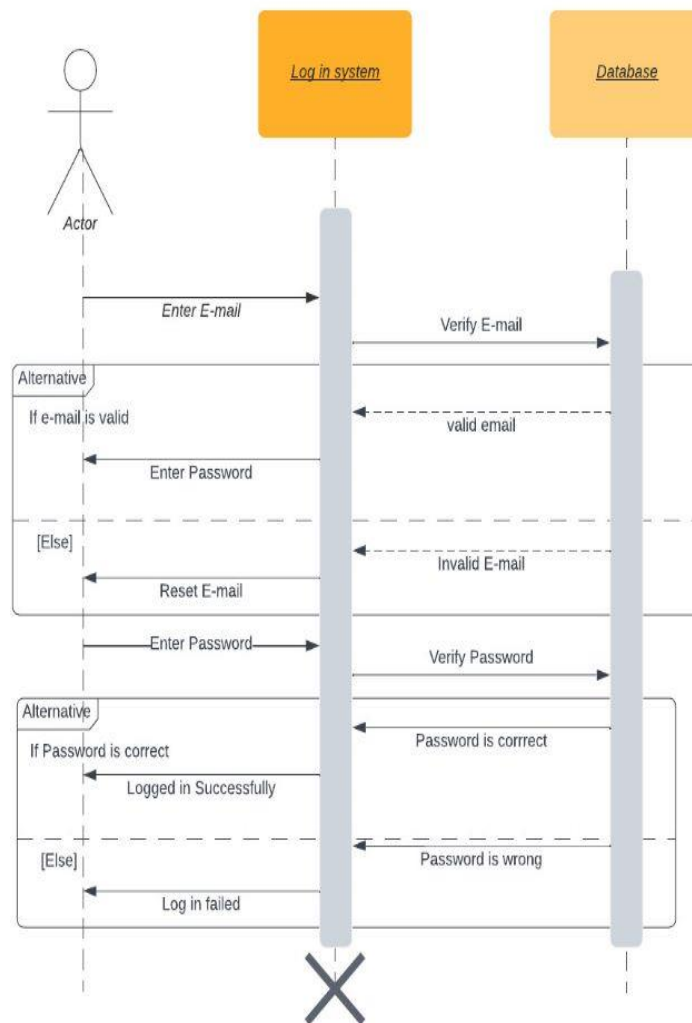




CS251: Phase 2 – <Dinosaurs> Project: <Toffee>

Software Design Specification

Log in Diagram





CS251: Phase 2 – <Dinosaurs> Project: <Toffee>

Software Design Specification

Class - Sequence Usage Table

Sequence Diagram	Classes used	All methods used
1- Registration field	1- Class system 2- Class customer	+register(cust:customer):bool +addcustomerinfo(name:string,id:int, email:string,phone:string)
3- Log in field	1- Class system 2- Class user	+login(cus:customer):bool +verifyLogin():bool

V. State Diagram

- For the order object, draw a state diagram to show the developer the different states it can be in. (for example it is initially created, then it can be shipped, cancelled (if cancelling is possible),, etc.)

Tools

- LucidChart

Ownership Report

Item	Owners
Eslam Mohamed Abdelazim Ali Tolba	Class diagrams, class descriptions
Mohamed Elsayed Mohamed Abd-Elmoty	Sequence diagram, class-sequence-usage table
Mostafa Abdelwahab abbas	Architecture diagram, state diagram