SDD-01

SOFTWARE DESIGN DESCRIPTION

MISTER LAUNDRY

WEB BASED LAUNDRY APPLICATION

for:

Student in Telkom University

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Change List

Revision	Description
A	'Document Coverage': State what is the problem and the solution (your application) and explain about the app.
B	Sequence diagram: Pay attention to the numbering of messages; remember that each message should return to the actor at last.
C	Pay attention to the symbol used in component diagram.
D	
E	
F	
G	

INDEX Date	-	A	B	C	D	E	F	G
Written by								
Examined by								
Approved by								

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Pages Changes List

Page	Revision	Page	Revision
10	Document Coverage		
13	Symbol used in component diagram		
24	Sequence diagram		

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1. Preliminary

1.1 Purpose of Writing Document

This document is a Software Design Description (SDD) for the Mister Laundry. The purpose of writing this document is to describe in detail of the system that we make, which can be a guide to how this system works. Meanwhile, this document will be a guidance for software developer to build the web-based application in the future.

Users of this document are used by developers of software and stakeholders involved in this system. With the drafting of this SDD document, it is expected that the development of software will be more conceptual and not cause ambiguity during development.

1.2 Document Coverage

The software of Web-Based Application of Mister Laundry in Telkom University facilitates student who live in the dormitory and university area to do their laundry through website. Besides, this software will solve their problem such as looking for laundry in the difficult times when they have full schedule in their studies. Therefore, this document of software description will develop the application for handling student problem that often happen.

1.3 Definitions and Abbreviations

The following are the definitions, abbreviations, and acronyms in this document:

- SDD: (Software Design Description) Documents that describe and describe in detail the design of software to be built.
- SRS: (Software Requirement Specification) is a specification of the software that will be developed.
- DBMS: (Database Management System) is an organizing system of database processing systems on computers.
- HTML: (Hypertext Mark-up Language) is a marking language used to create a web page, display various information in an Internet web browser and simple hypertext formatting written in ASCII format files so that it can produce an integrated display form.
- PHP: (Hypertext Pre-processor) is a programming language that is widely used to handle the creation and development of a website and can be used in conjunction with HTML.
- MySQL: SQL database management system software that is open source.
- XAMPP: Free software, which supports many operating systems, is a complication of several programs.
- CSS: (Cascading Style Sheet) is a collection of codes that aim to decorate and adjust the style of appearance / layout of web pages to make it more elegant and attractive.
- JavaScript: It is a scripting language, which is a language that does not require a compiler to run it, but it is enough with an interpreter
- OS: (Operating System.) system software that manages the resources of hardware and software, and as a daemon for a computer program.

1.4 Reference

The source that related with this SDD is:

1. Group 3 - IF-41-INT02(2019). SDD Web-based Application Assistant Recruitment in Telkom University.
2. SRS Mister Laundry Web Based Application - Telkom University.

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1.5 Systematic Discussion

This SDD document contains a description of the design of the Mister Laundry Web application software that will be developed based on the SRS document. This SDD document will explain the details for software design therefore it can be implemented by a software developer. This document consists of four chapters with the following details:

A. Preliminary
   This chapter contains an explanation about the SDD document which includes the purpose of the document, the problems and solutions, references, and some list of abbreviations.
B. Global Design Description
   This chapter contains about the design of the software includes implementation environment, architectural description, and component description.
C. Detailed Design
   This chapter explains about the realization of the use cases implemented in the class diagram, description the designing of the class, queries and algorithm, Statechart diagram, interface design and the navigation table.
D. Usability Matrix
   The usability matrix contains functional terms found in SRS documents.

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2 Global Design Description

The description of the global design includes an explanation of the design of the implementation environment, an architectural description, and a description of the components that constitute this web-based application.

2.1 Design of the Implementation Environment

Table 2-1: Design of the Implementation Environment

System	Specification
Operating system	Windows 10
DBMS	My SQL
Development tools	Git (Version Control), Visual studio code, Bootstrap
Framework	Code Igniter (CI)
Programming Language	HTML, CSS, JS, PHP

2.1 Architectural Description

The below figures architecture and components will be applied to facilitate developers in building this software.

Deployment Diagram

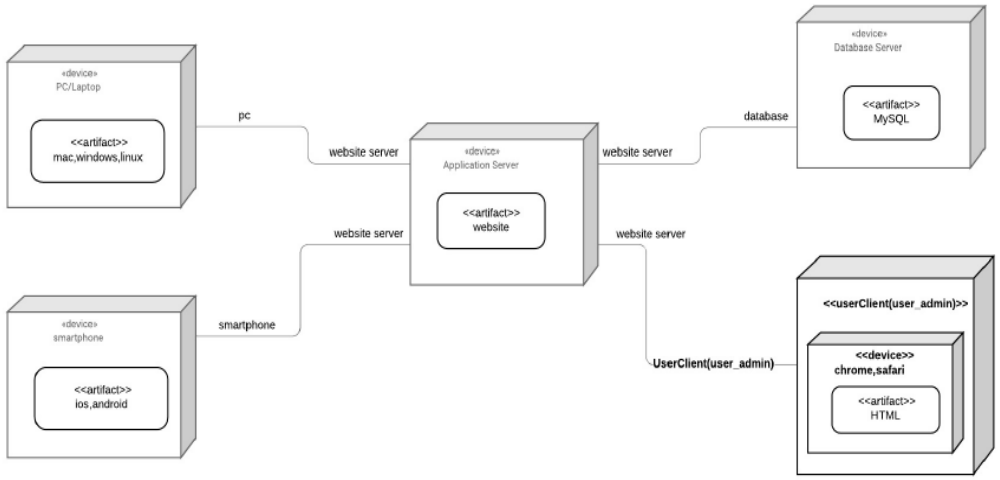

Figure 2-1: Deployment Diagram

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Component Diagram

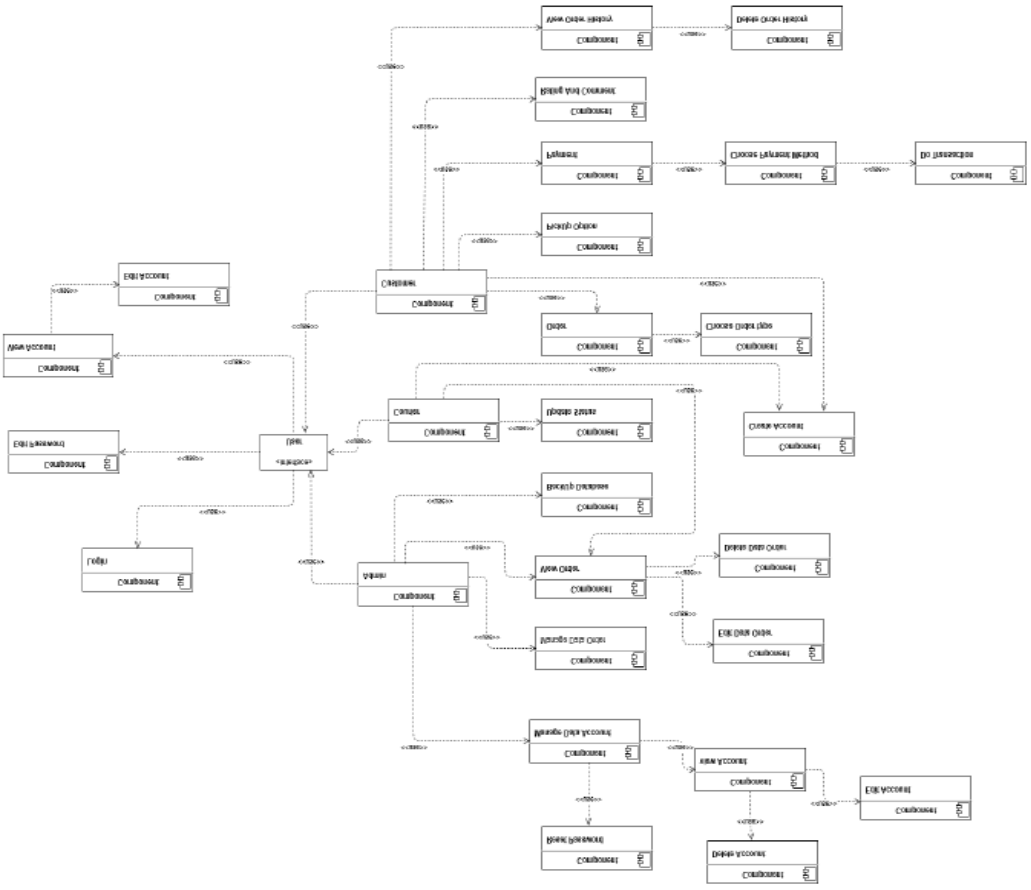

Figure 2-2: Component Diagram

2.2 Component Description

Table 2-2: Component Description

No	Component Name	Explanation
1	Admin	The user of the Mister laundry web application
2	Courier	The user of the Mister laundry web application
3	Customer	The user of the Mister laundry web application
4	Create account for customer	This module is used by the customer to create an account for the application

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5	Create account for courier	This module is used by the courier to create an account for the application
6	Login	This module is used by all the user to access the application
7	Edit password	This module is used by the customer to edit the password account
8	Ordering Process	This module is used by the customer to fill the total of clothes, type of clothes, etc.
9	Choose order type	This module is used by the customer to choose the type of order
10	Payment Process	This module is used by the customer to confirm the payment
11	Choose payment method	This module is used by the customer to choose the payment method
12	Do transaction	This module is used by the customer to do the payment transaction
14	Choose Pick-up option	This module is used by the customer to choose the laundry pick up service
15	Giving Rating and comment process	This module is used by the customer to give a rating and a comment about the laundry services
16	View order history	This module is used by the customer to view the order history
17	Delete order history	This module is used by the customer to delete the order history
18	Update account data	This module is used by the customer and courier to update the account data
19	View account	This module is used by the customer to view their account
20	Edit account	This module is used by the customer to edit their account
21	Update Order status	This module is used by the courier to update whether the laundry has been picked up
22	View Order	This module is used by the admin and courier to view al customers order data
23	Edit data order	This module is used by the admin to edit the data order
24	Delete data order	This module used by the user to delete the data order
25	Manage data account	This module is used by the admin to manage data count such as input, delete, and etc.

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26	Reset password	This module is by the admin to reset the password
27	Delete account	This module is used by the admin to delete an account
28	Edit account	This module is used by the admin to edit an account
29	View account	This module is used by the user to view an account
30	Manage data order	This module is used by the admin to manage the database of data order

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3 Detailed Design

The detailed design chapter will explain the use case realization, class detail design, overall class diagram, algorithm / query, state-chart diagram, interface design, and class persistence representation design.

3.1 Realization Use Case

This section explains the realization of all use cases that have been designed in the software requirements specification document.

3.1.1 Use Case Create Customer Account

3.1.1.1 Class Identification

Table 3-1: Create Customer Account - Class Identification

No	Design Class Name	Class Type
1	Customer	Actor
2	Create Account page	Boundary
3	Create Account Controller	controller
4	Customer database	Database

3.1.1.2 Sequence Diagram

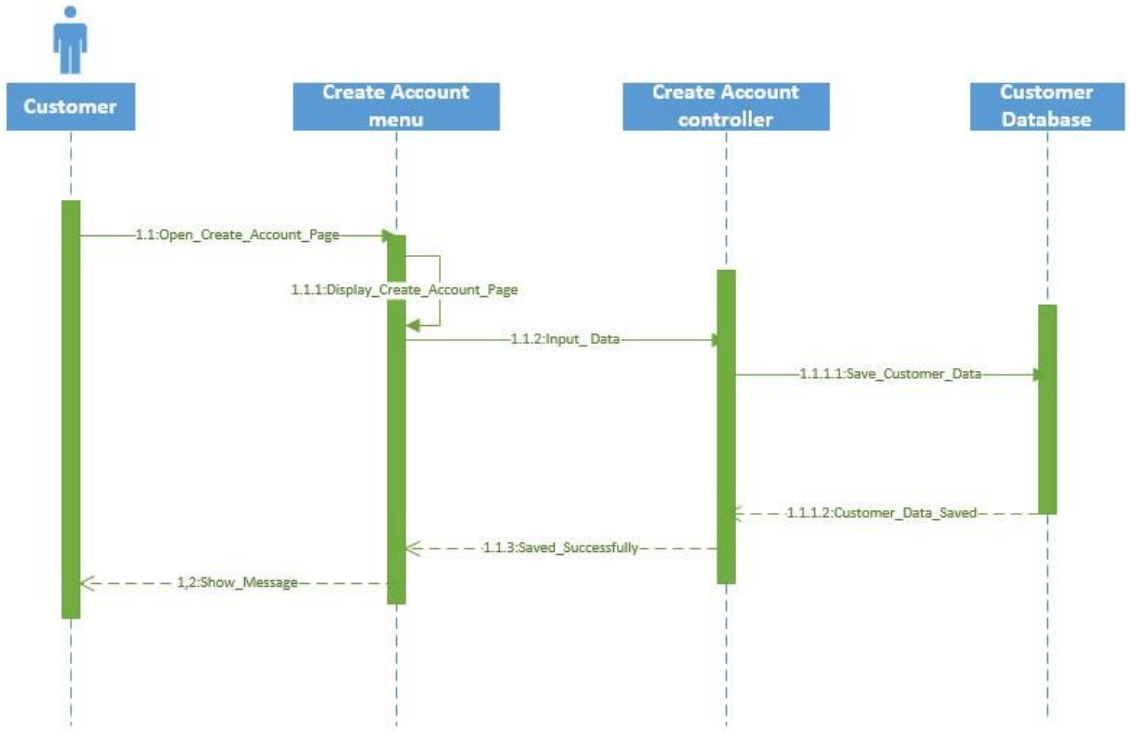

Figure 3-1: Create Customer Account – Sequence Diagram

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3.1.1.3 Class Diagram

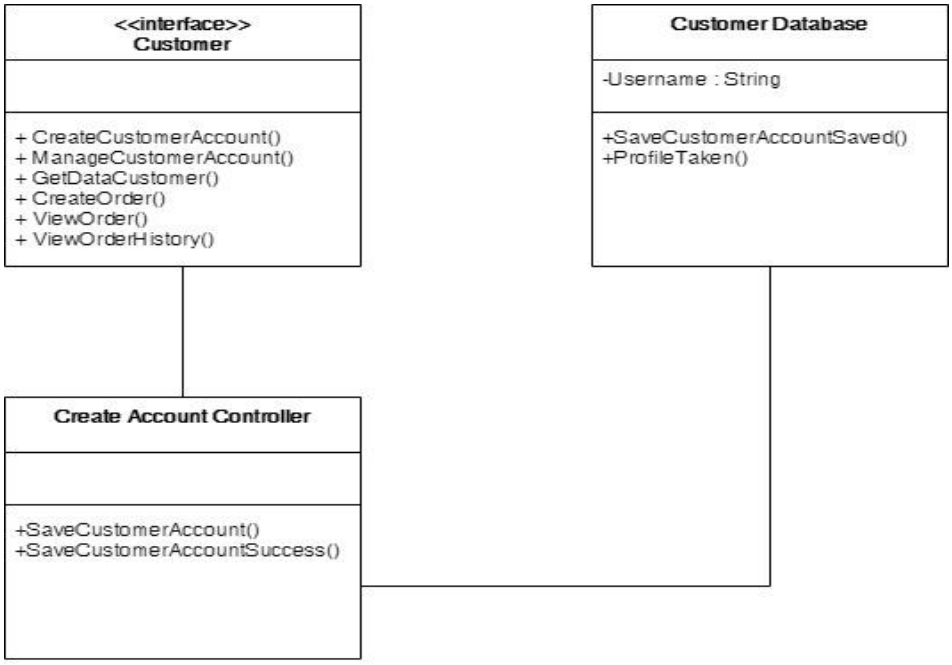

Figure 3-2: Create Customer Account – Class Diagram

3.1.2 Use Case Create Courier Account

3.1.2.1 Class Identification

Table 3-2: Create Courier Account – Class Identification

No	Design Class Name	Class Type
1	Courier	Actor
2	Create Account page	Boundary
3	Create Account Controller	controller
4	courier Account	Database

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3.1.2.2 Sequence Diagram

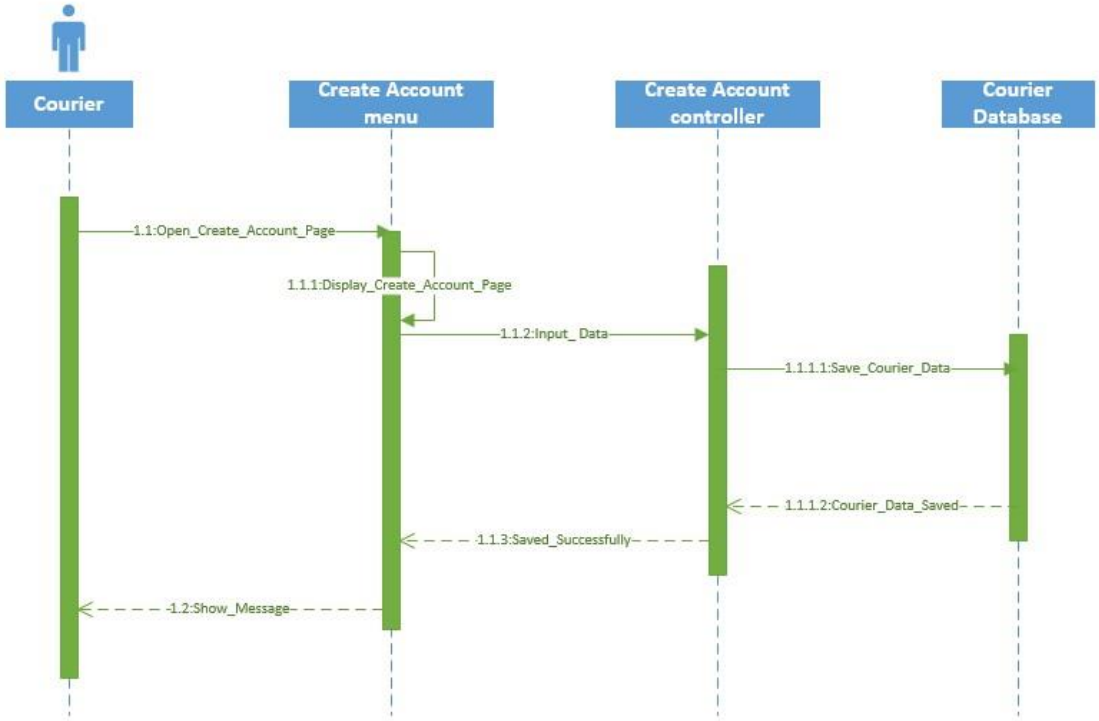

Figure 3-3: Create Courier Account – Sequence Diagram

3.1.2.3 Class Diagram

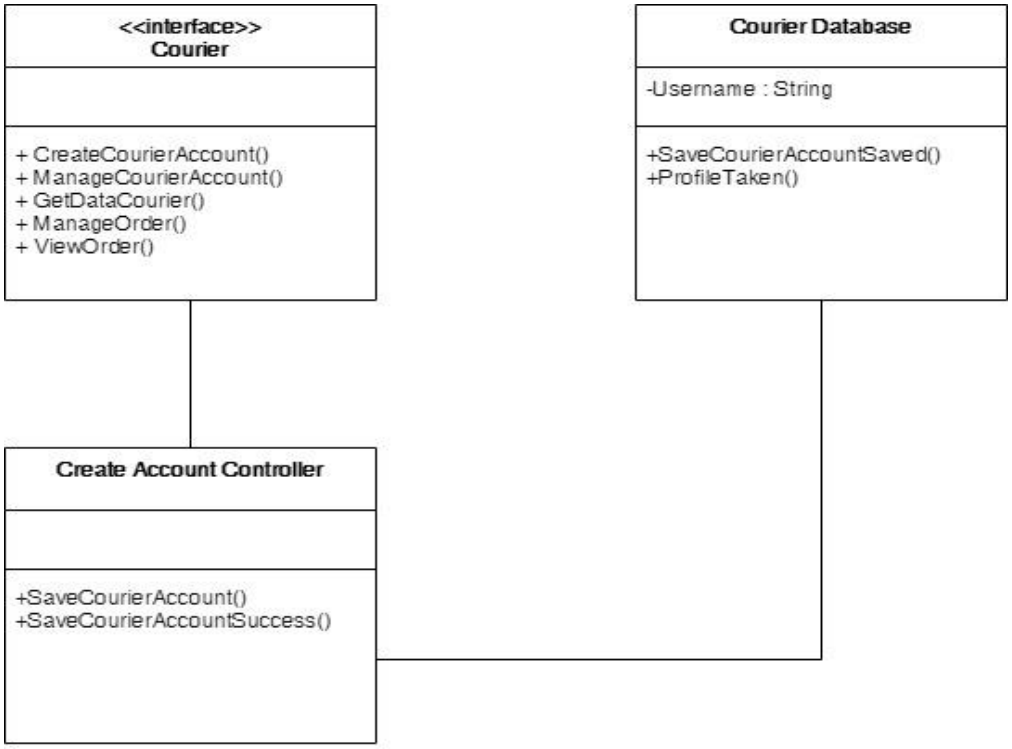

Figure 3-4: Create Courier Account – Class Diagram

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3.1.3 Use Case Login

3.1.3.1 Class Identification

Table 3-3: Login – Class Identification

No	Design Class Name	Class Type
1	Courier, admin, customer	Actor
2	Login page	Boundary
3	Login Controller	controller
4	Customer database	Database
5	Admin database	Database
6	Courier database	database

3.1.3.2 Sequence Diagram

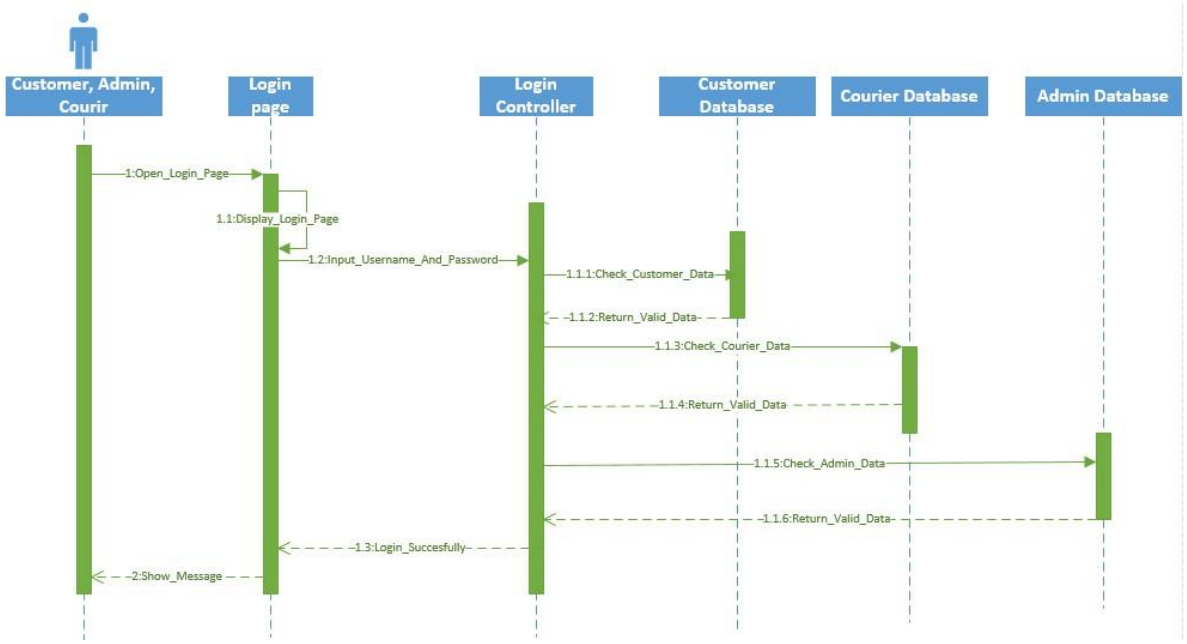

Figure 3-5: Login – Sequence Diagram

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Exceptionnel login :

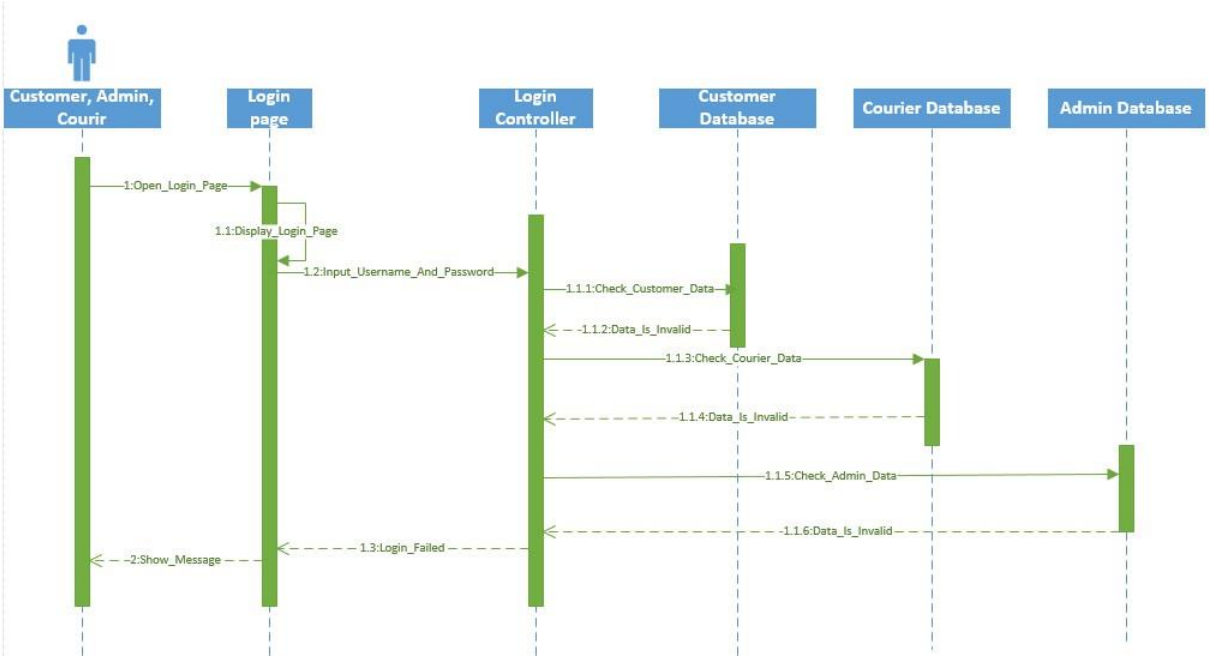

Figure 3-6: Login (Exceptional case) – Sequence Diagram

3.1.3.3 Class Diagram

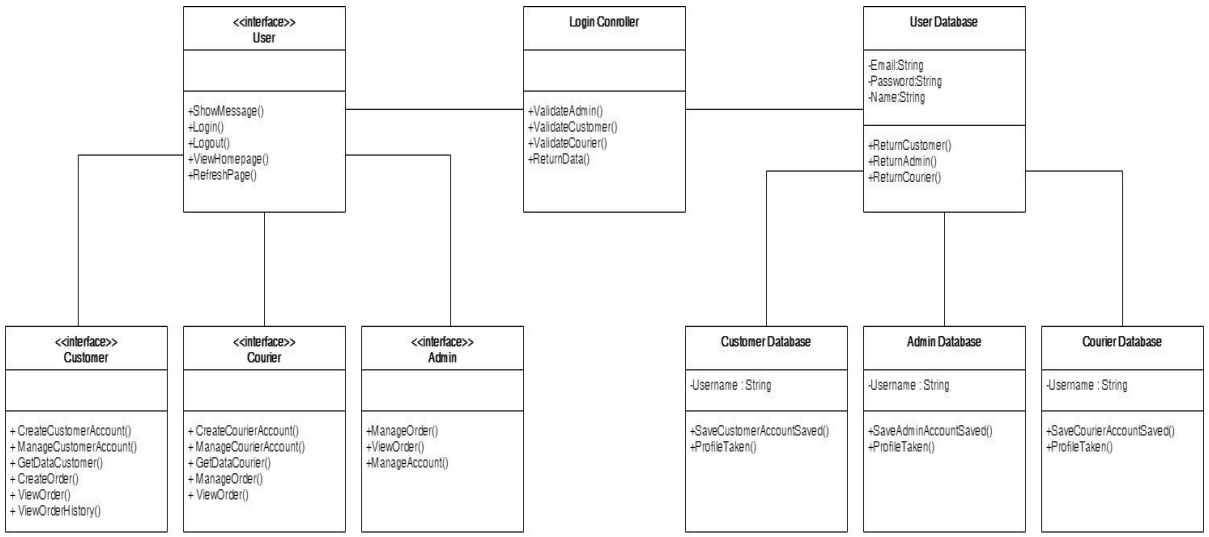

Figure 3-7: Login – Class Diagram

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3.1.4 Use Case Order

3.1.4.1 Class Identification

Table 3-4: Order Class Identification

No	Design Class Name	Class Type
1	customer	Actor
2	Order page	Boundary
3	Order Controller	controller
4	Order database	Database

3.1.4.2 Sequence Diagram

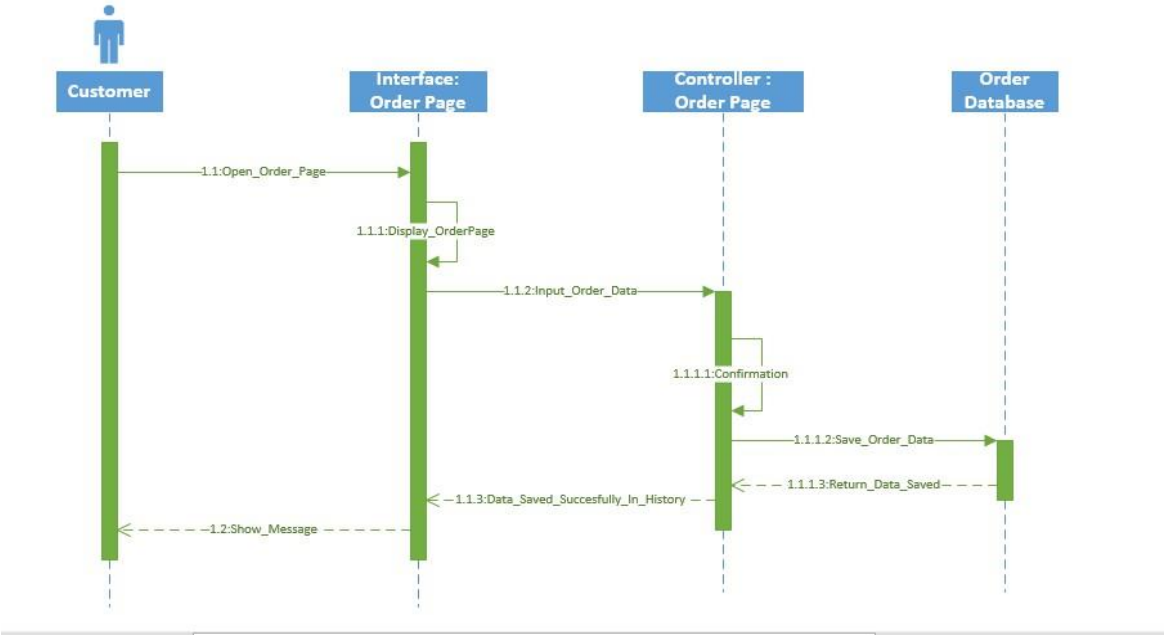

Figure 3-8: Order – Sequence Diagram

3.1.4.3 Class Diagram

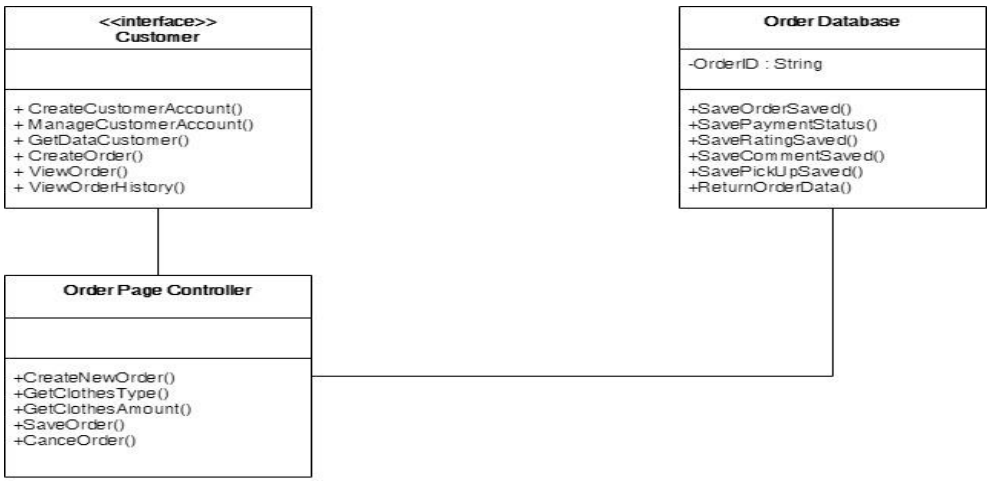

Figure 3-9: Order – Class Diagram

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3.1.5 Use Case Payment

3.1.5.1 Class Identification

Table 3-5: Payment – Class Identification

No	Design Class Name	Class Type
1	customer	Actor
2	payment page	Boundary
3	payment Controller	controller
4	Database order	Database
5	Database payment	Database

3.1.5.2 Sequence Diagram

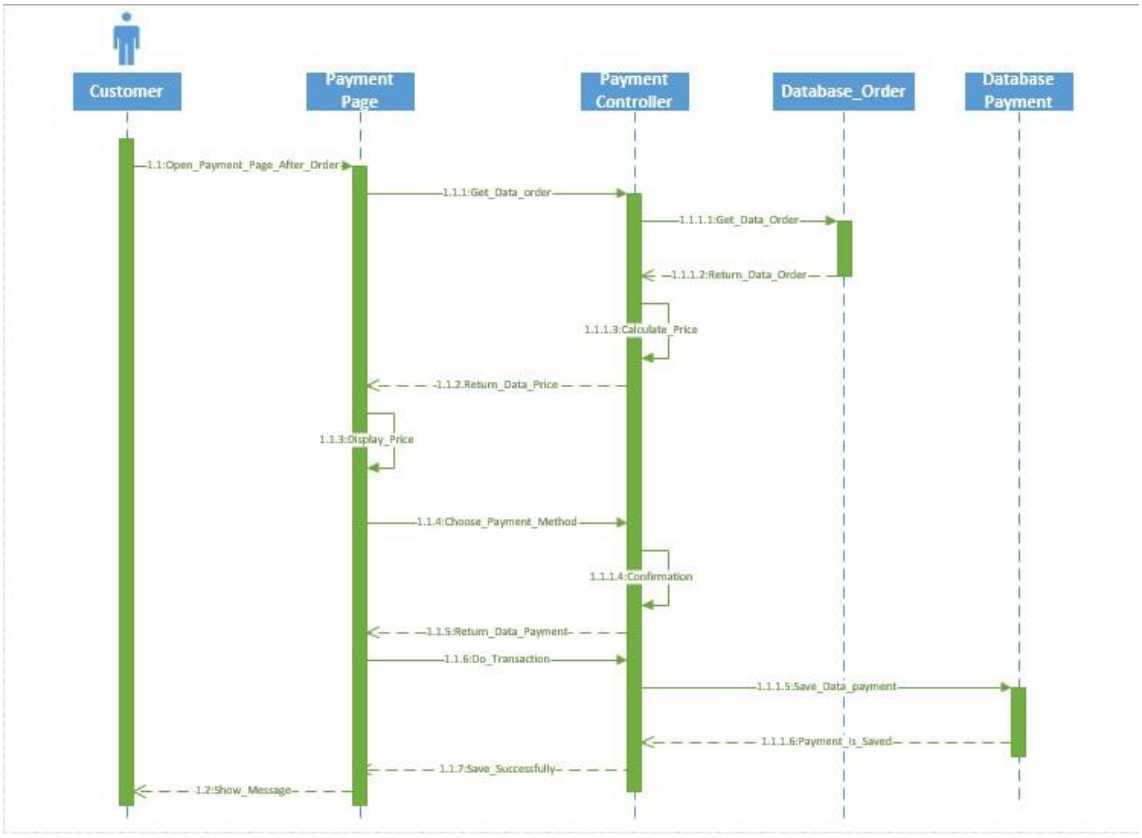

Figure 3-10: Payment – Sequence Diagram

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3.1.5.3 Class Diagram

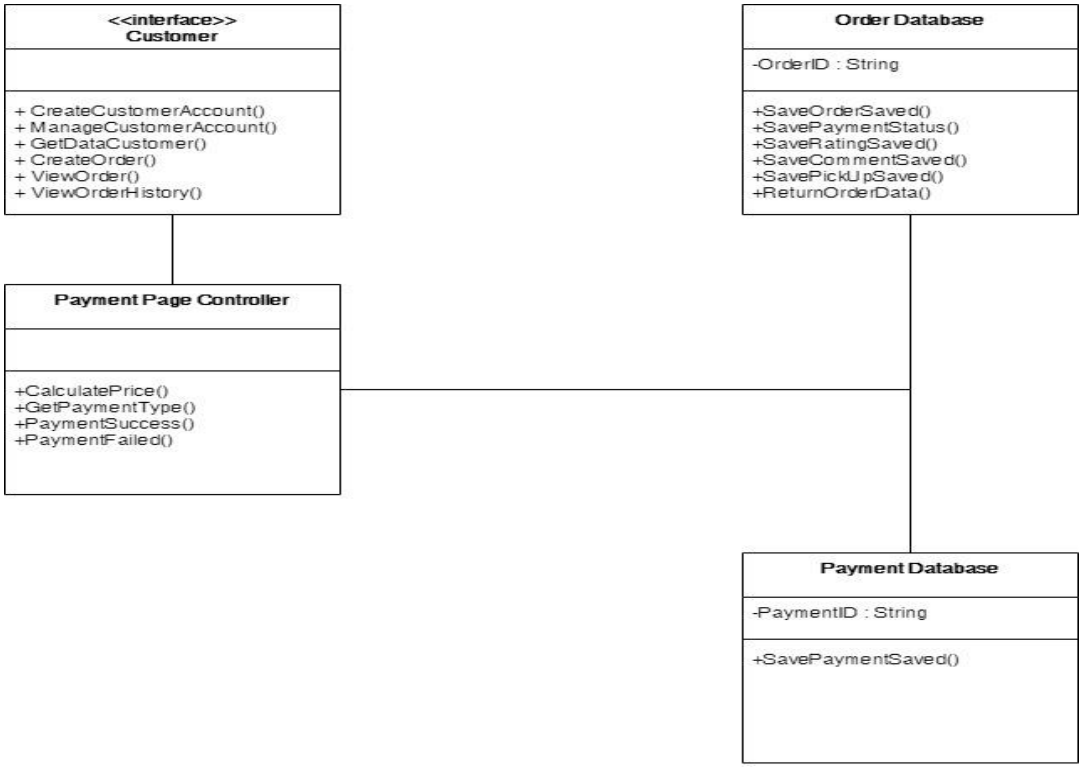

Figure 3-11: Payment – Class Diagram

3.1.6 Use Case Rating and Comment

3.1.6.1 Class Identification

Table 3-6: Rating and Comment – Class Identification

No	Design Class Name	Class Type
1	customer	Actor
2	Rating and comment page	Boundary
3	Rating and comment Controller	controller
4	Database order	Database

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3.1.6.2 Sequence Diagram

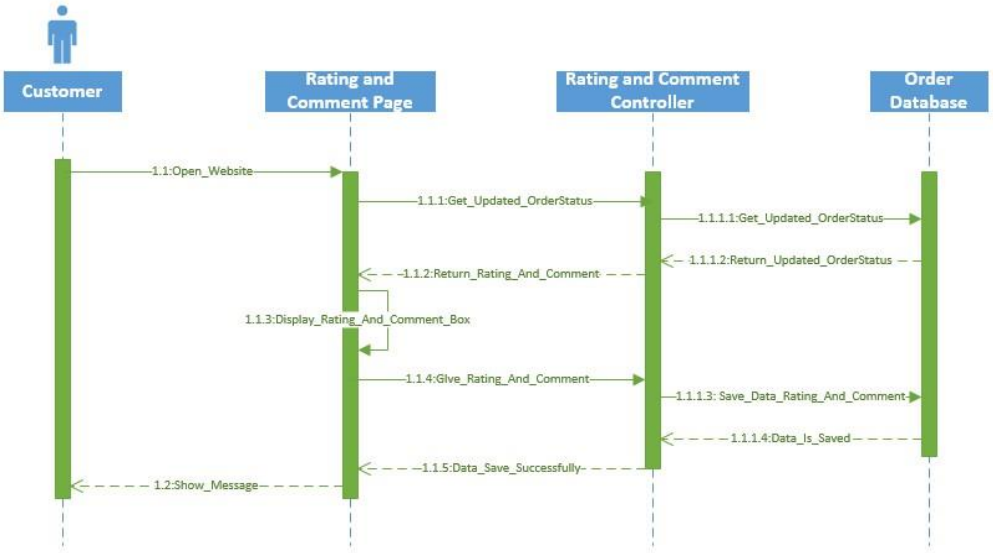

Figure 3-12: Rating and Comment – Sequence Diagram

3.1.6.3 Class Diagram

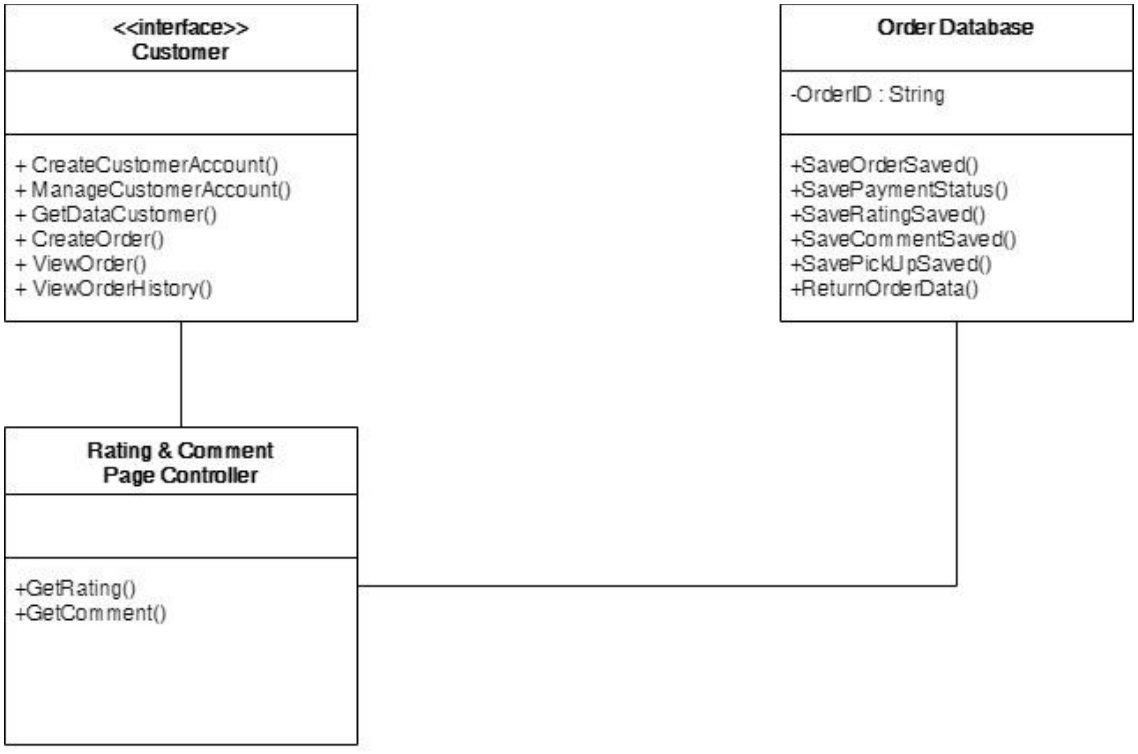

Figure 3-13: Rating and Comment – Class Diagram

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3.1.7 Use Case Pick-up Option

3.1.7.1 Class Identification

Table 3-7: Pick-up Option – Class Identification

No	Design Class Name	Class Type
1	customer	Actor
2	Pick up option page	Boundary
3	Pick up option controller	controller
4	Database order	Database

3.1.7.2 Sequence Diagram

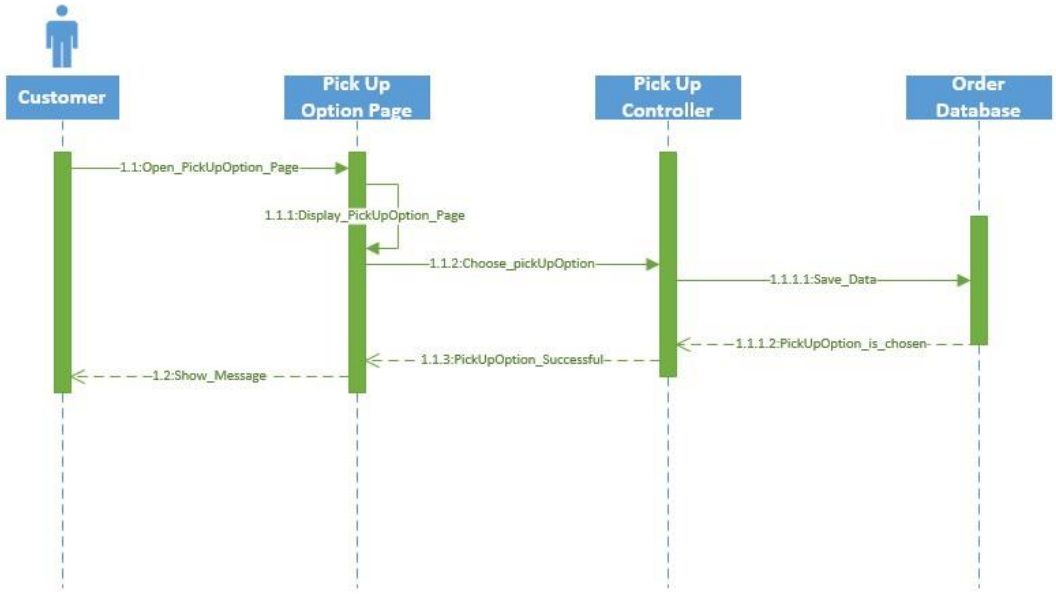

Figure 3-14: Pick-up Option – Sequence Diagram

3.1.7.2 Class Diagram

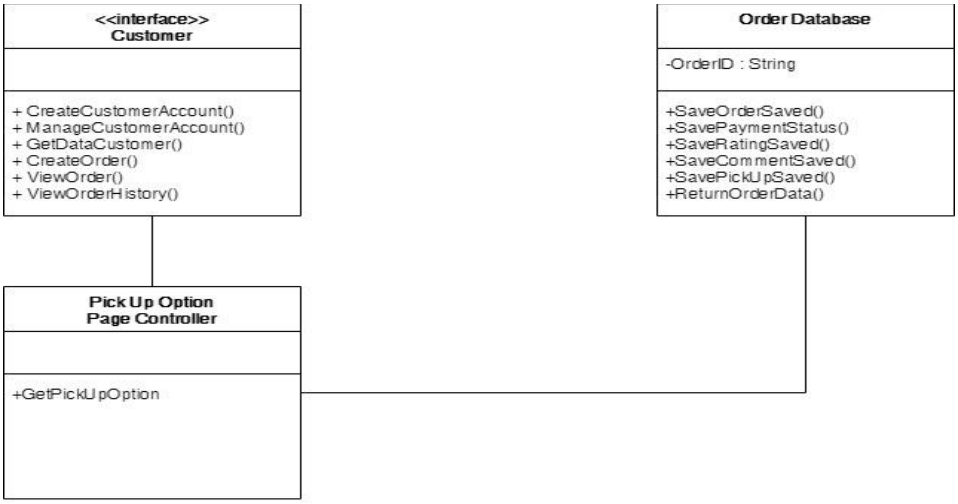

Figure 3-15: Pick-up Option – Class Diagram

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3.1.8 Use Case Update Order Status

3.1.8.1 Class Identification

Table 3-8: Update Order Status – Class Identification

No	Design Class Name	Class Type
1	courier	Actor
2	Order list page	Boundary
3	Order list controller	controller
4	Database order	Database

3.1.8.2 Sequence Diagram

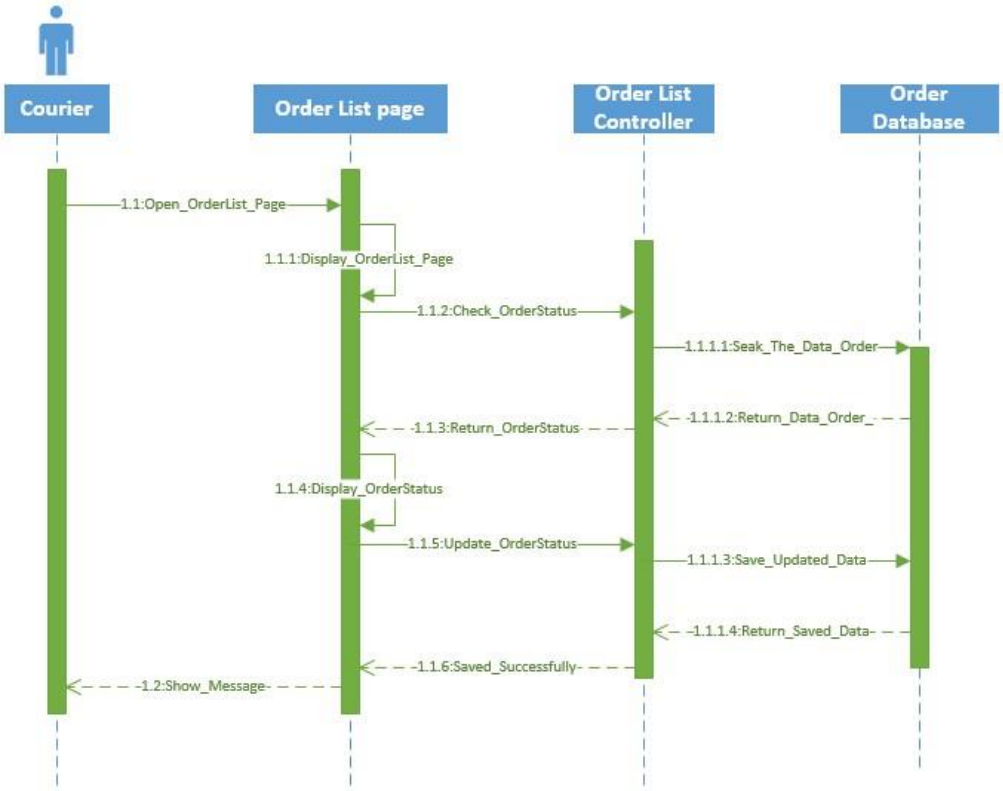

Figure 3-16: Update Order Status – Sequence Diagram

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3.1.8.3 Class Diagram

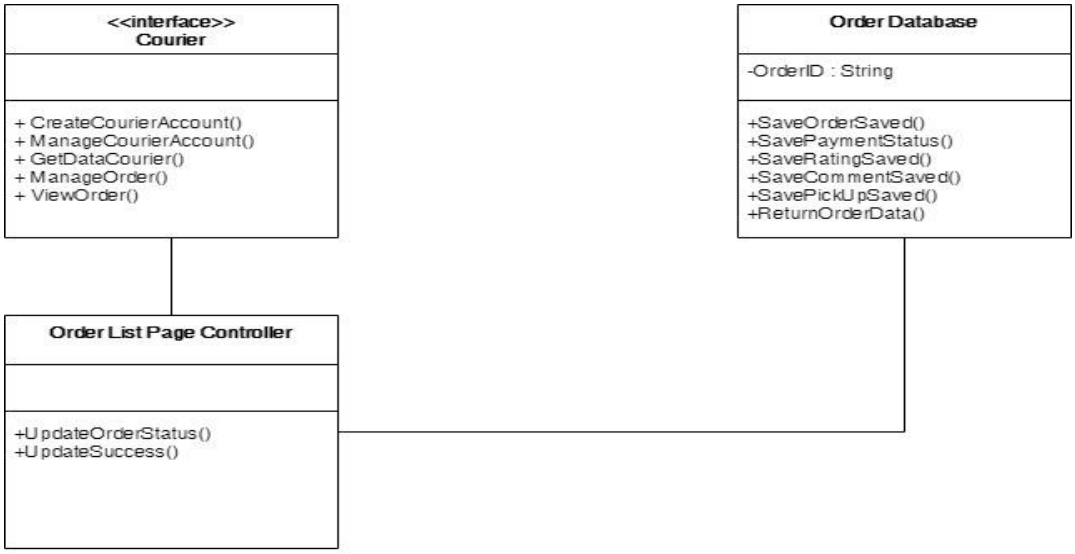

Figure 3-17: Update Order Status – Class Diagram

3.1.9 Use Case View Order History

3.1.9.1 Class Identification

Table 3-9: View Order History – Class Identification

No	Design Class Name	Class Type
1	customer	Actor
2	Order history page	Boundary
3	Order history controller	controller
4	Database order	Database

3.1.9.2 Sequence Diagram

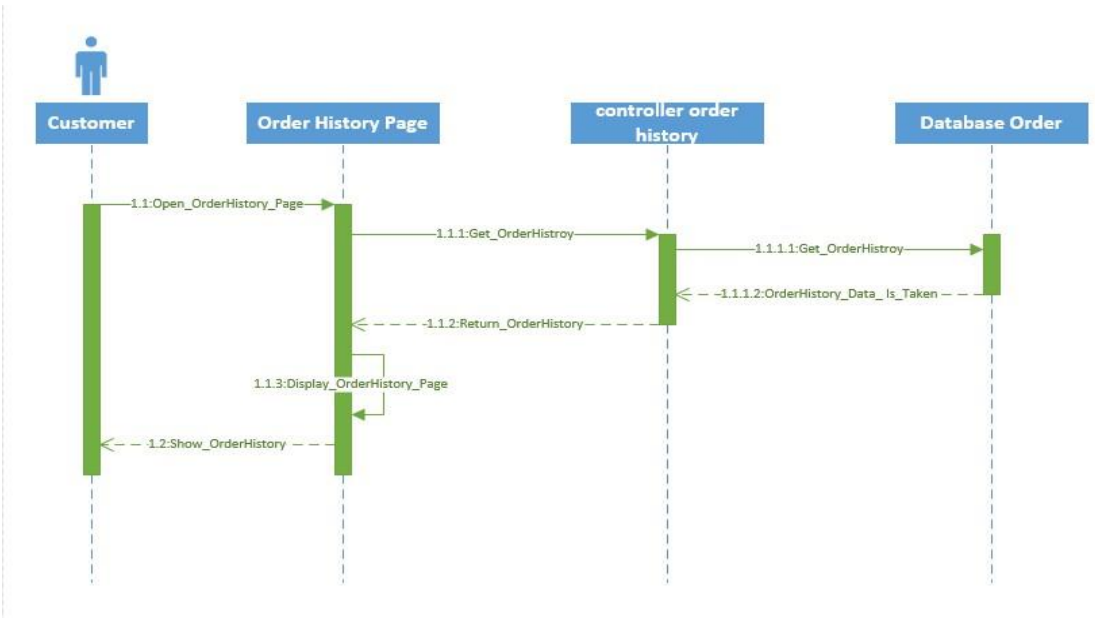

Figure 3-18: View Order History – Sequence Diagram

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3.1.9.3 Class Diagram

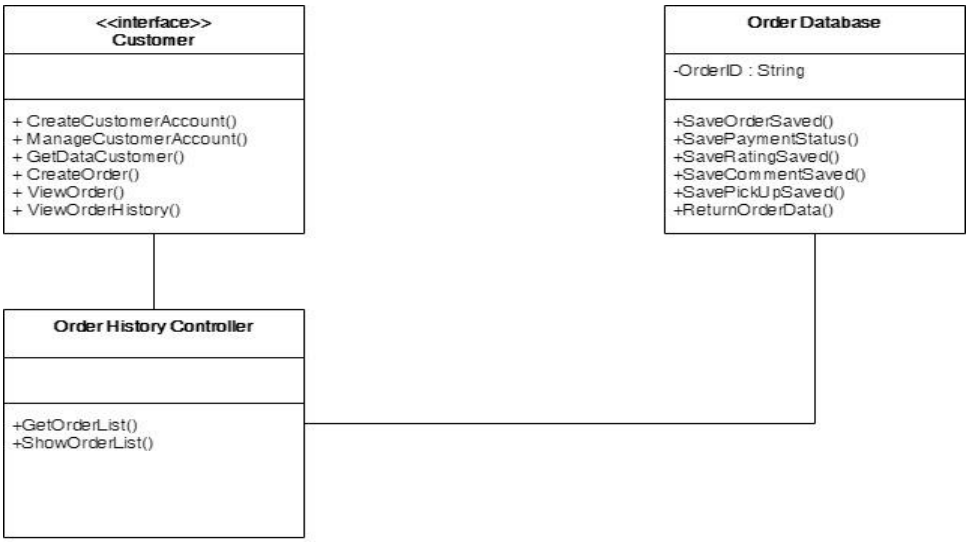

Figure 3-19: View Order History – Class Diagram

3.1.10 Use Case Update Account of Customer

3.1.10.1 Class Identification

Table 3-10: Update Customer Account – Class Identification

No	Design Class Name	Class Type
1	Customer	Actor
2	Update account page	Boundary
3	Update account controller	controller
4	Customer database	Database

3.1.10.2 Sequence Diagram

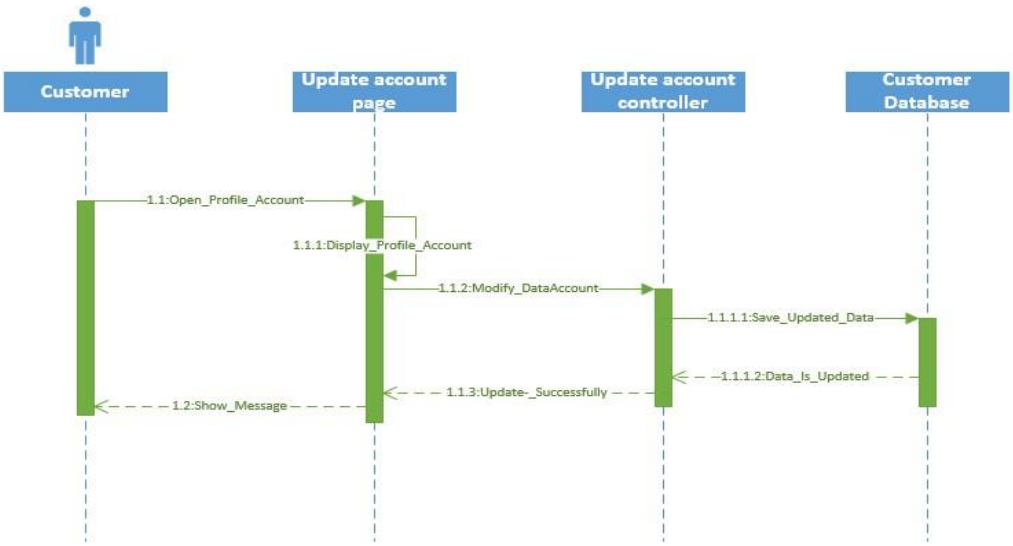

Figure 3-20: Update Customer Account – Sequence Diagram

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3.1.10.3 Class Diagram

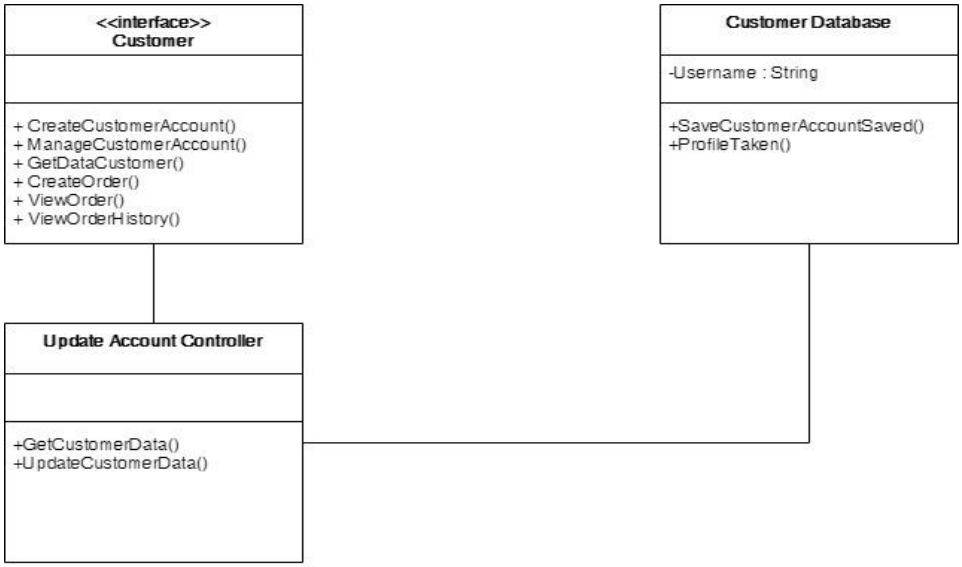

Figure 3-21: Update Customer Account – Class Diagram

3.1.11 Use Case Update Account of Courier

3.1.11.1 Class Identification

Table 3-11: Update Courier Account – Class Identification

No	Design Class Name	Class Type
1	Courier	Actor
2	Update account page	Boundary
3	Update account controller	controller
4	Courier database	Database

3.1.11.2 Sequence Diagram

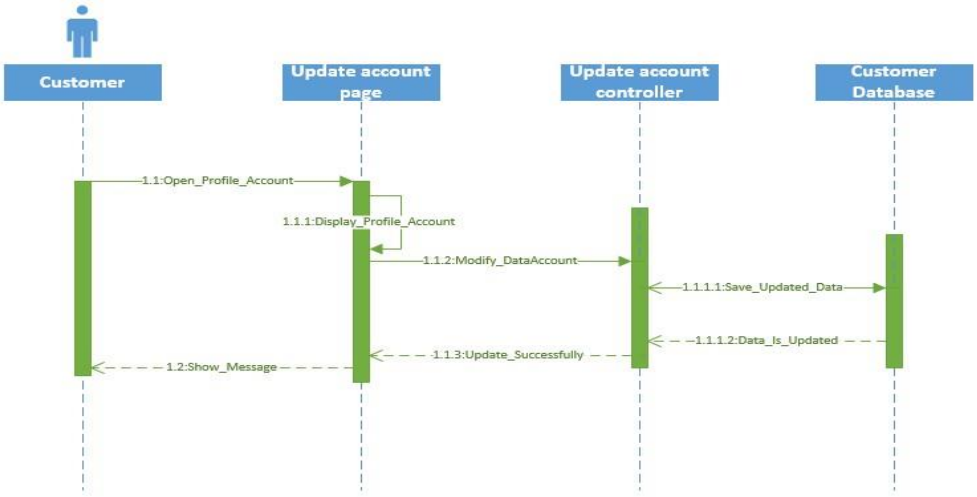

Figure 3-22: Update Courier Account – Sequence Diagram

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3.1.11.3 Class Diagram

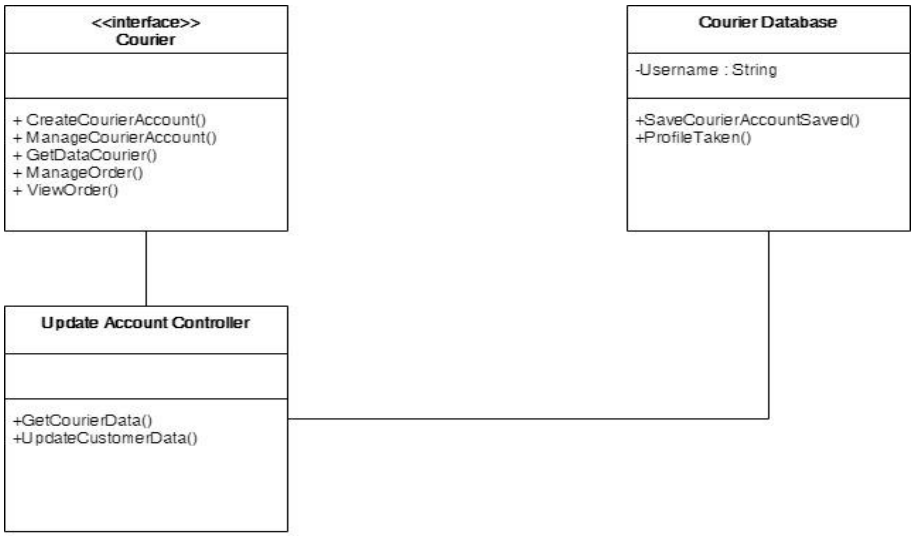

Figure 3-23: Update Courier Account – Class Diagram

3.1.12 Use Case Manage Data Account

3.1.12.1 Class Identification

Table 3-12: Manage Data Account – Class Identification

No	Design Class Name	Class Type
1	Admin	Actor
2	Data account page	Boundary
3	Data account controller	controller
4	Database customer	Database
5	Database courier	Database

3.1.12.2 Sequence Diagram

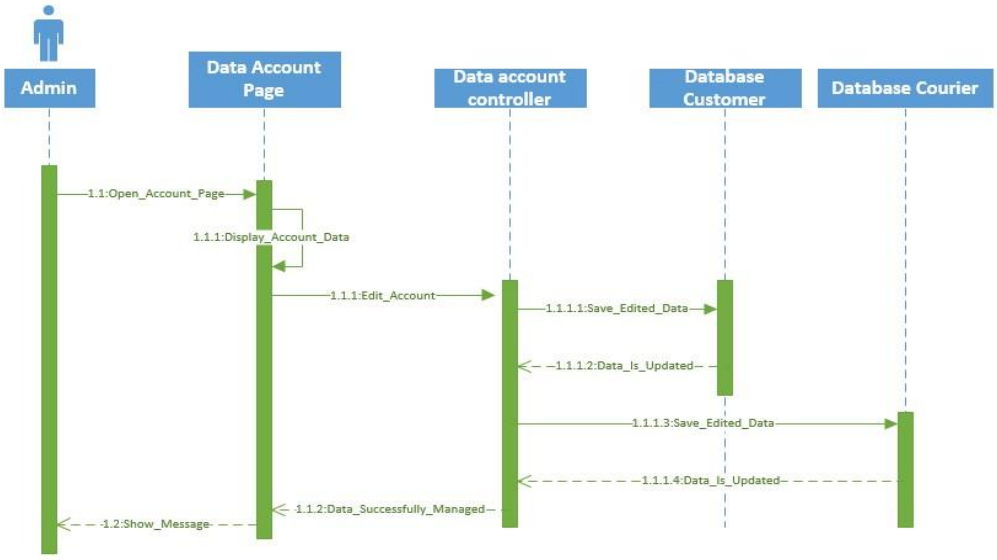

Figure 3-24: Manage Data Account – Sequence Diagram

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3.1.12.3 Sequence Diagram

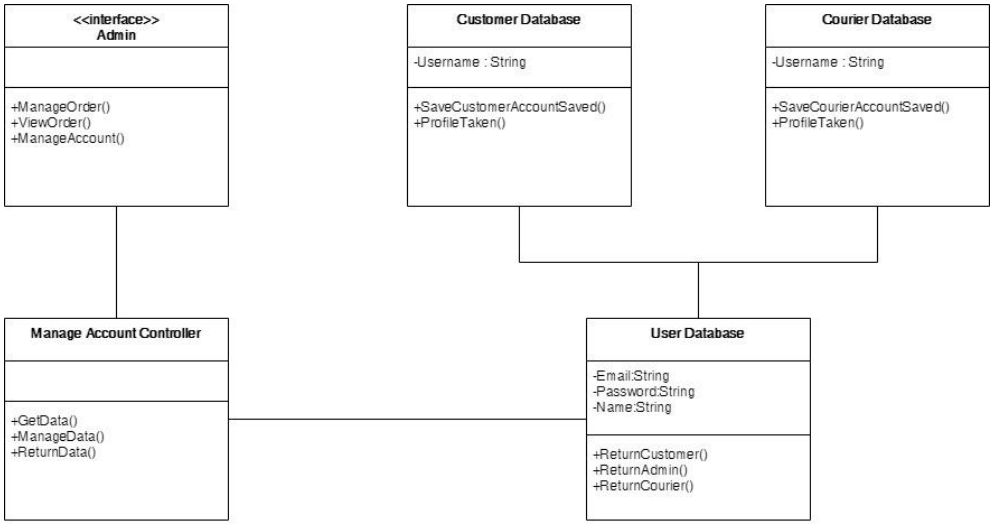

Figure 3-25: Manage Data Account – Class Diagram

3.1.13 Use Case Manage Data Order

3.1.13.1 Class Identification

Table 3-13: Manage Data Order – Class Identification

No	Design Class Name	Class Type
1	Admin	Actor
2	Data order page	Boundary
3	Data order controller	controller
4	Database order	Database

3.1.13.2 Sequence Diagram

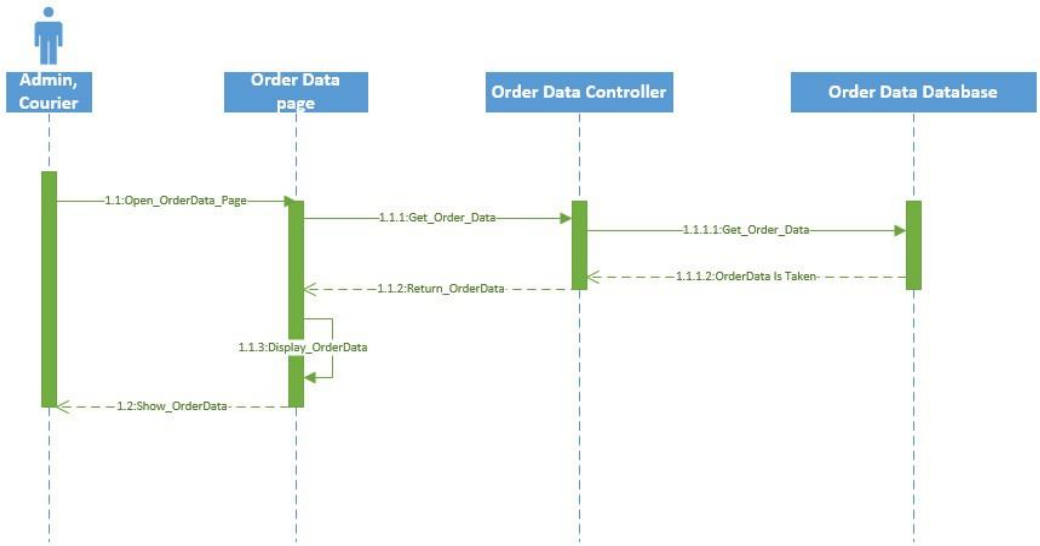

Figure 3-26: Manage Data Order – Sequence Diagram

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3.1.13.3 Class Diagram

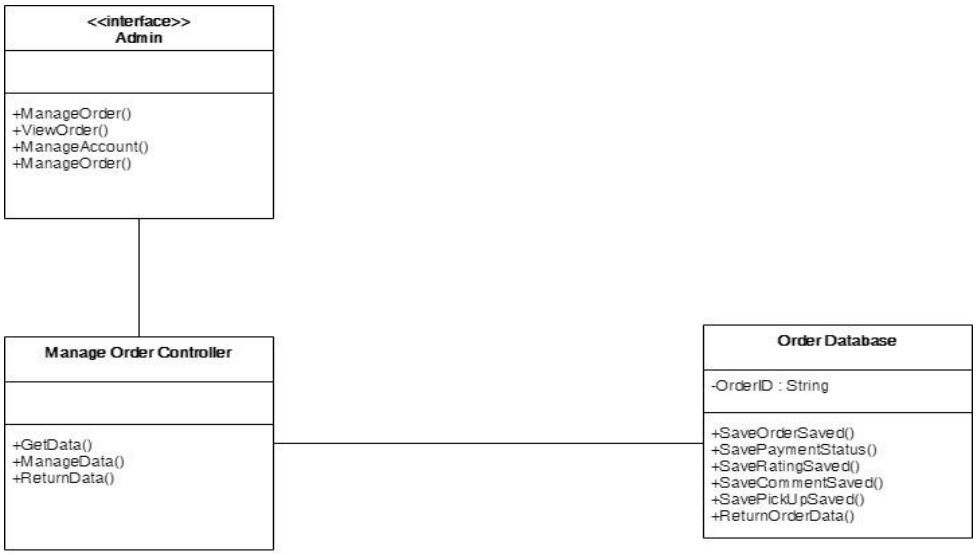

Figure 3-27: Manage Data Order - Class Diagram

3.1.14 Use Case View Data Order

3.1.14.1 Class Identification

Table 3-14: View Data Order - Class Identification

No	Design Class Name	Class Type
1	Admin	Actor
2	courier	Actor
3	Order data page	Boundary
4	Order data controller	controller
5	Order database	Database

3.1.14.2 Sequence Diagram

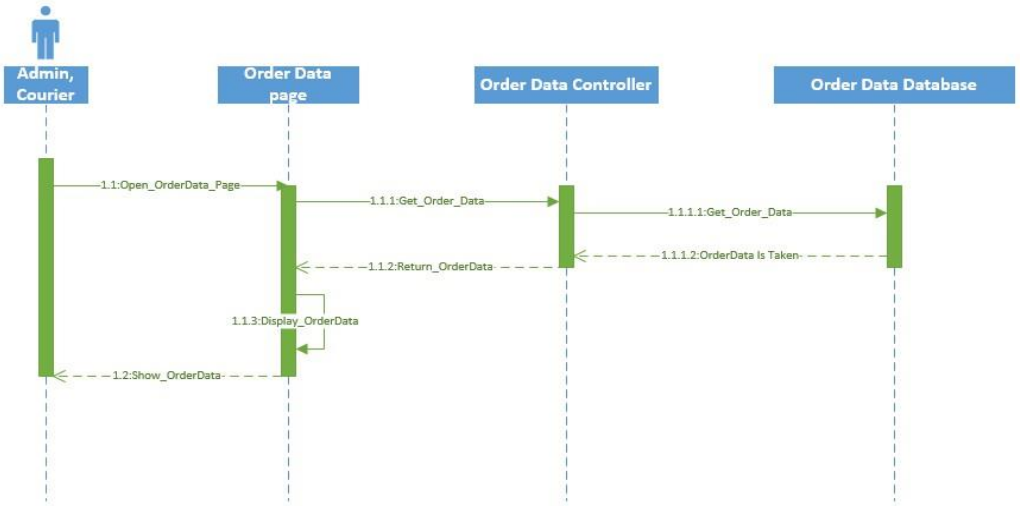

Figure 3-28: View Data Order – Sequence Diagram

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3.1.14.3 Class Diagram

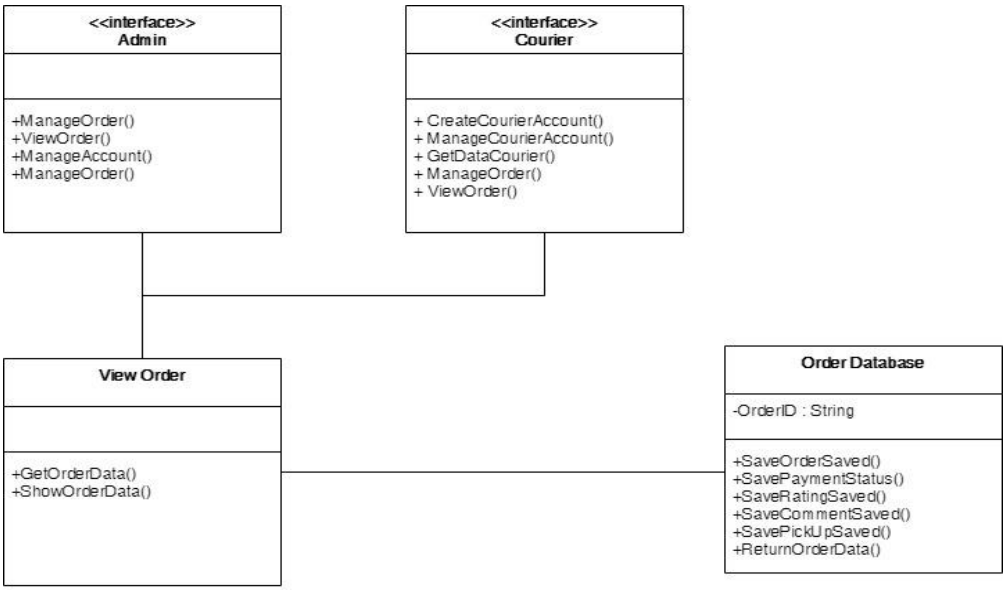

Figure 3-29: View Data Order – Class Diagram

3.2 Design Class Detail

This section is filled with a list of all classes in the following table:

Table 3-15: Design Class Detail

No	Design Class Name	Name of Related Analysis Class
1	Admin	Admin
2	Courier	Courier
3	Customer	Customer
4	User	User
5	User Database	Database
6	Admin Database	Database
7	Courier Database	Database
8	Customer Database	Database
9	Order Database	Database
10	Payment Database	Database
11	Create Customer Account Controller	Controller
12	Create Courier Account Controller	Controller
13	Login Controller	Controller
14	Order Controller	Controller
15	Payment Controller	Controller
16	Pick-up Option Controller	Controller
17	Rating and Comment Controller	Controller
18	View Order History Controller	Controller
19	Update Customer Account Controller	Controller
20	Update Courier Account Controller	Controller
21	Order List Page Controller	Controller
22	Manage Account Controller	Controller
23	Manage Order Controller	Controller
24	View Order Controller	Controller

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3.2.1 Admin Class

Table 3-16: Admin Class

Operation Name	***Visibility (private, public)***	***Explanation***
ManageOrder()	*Public*	*Managing data order in the Database*
ViewOrder()	*Public*	*View the order in the Database*
ManageAccount()	*Public*	*Manging Account data in the Database*
Nama Atribut	***Visibility (private, public)***	***Type***

3.2.2 Courier Class

Table 3-17: Courier Class

Operation Name	***Visibility (private, public)***	***Explanation***
CreateAccount()	*Public*	*Creating Account for using the website and inserted into the Database*
ManageCourierAccount()	*Public*	*Managing Account*
GetDataCourier()	*Public*	*Getting all data of Courier from Database*
ManageOrder()	*Public*	*Managing data order in the Database*
ViewOrder()	*Public*	*View the order in the Database*
Nama Atribut	***Visibility (private, public)***	***Type***

3.2.3 Customer Class

Table 3-18: Customer Class

Operation Name	***Visibility (private, public)***	***Explanation***
CreateCustomerAccount()	*Public*	*Creating Customer Account for using the website and inserted into the Database*
ManageCustomerAccount()	*Public*	*Managing Account*
GetDataCustomer()	*Public*	*Getting Data of Customer*
CreateOrder()	*Public*	*Creating Order into Database*
ViewOrder()	*Public*	*Viewing all the Orders*
ViewOrderHistory()	*Public*	*Viewing all of History of order*
Nama Atribut	***Visibility (private, public)***	***Type***

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3.2.4 User Class

Table 3-19: User Class

Operation Name	***Visibility (private, public)***	***Explanation***
ShowMessage()	*Public*	*Showing the coming message*
Login()	*Public*	*Login for account into the web application*
Logout()	*Public*	*Log out from the web application*
ViewHomePage()	*Public*	*Viewing the Home page of the web*
RefreshPage()	*Public*	*Refreshing the active page*
Nama Atribut	***Visibility (private, public)***	***Type***

3.2.5 User Database Class

Table 3-20: User Database Class

Operation Name	***Visibility (private, public)***	***Explanation***
ReturnAdmin()	*Public*	*Returning the Data of Admin*
ReturnCourier()	*Public*	*Returning the Data of Courier*
ReturnCustomer()	*Public*	*Returning the Data of Customer*
Nama Atribut	***Visibility (private, public)***	***Type***
email	*Private*	*String*
password	*Private*	*String*
name	*Private*	*String*

3.2.6 Admin Database Class

Table 3-21: Admin Database Class

Operation Name	***Visibility (private, public)***	***Explanation***
SaveAdminAccountSaved()	*Public*	*Saving the Account of the Admin*
ProfileTakken()	*Public*	*Taking the Data profile from the Database*
Nama Atribut	***Visibility (private, public)***	***Type***
Username	*Private*	*String*

3.2.7 Courier Database Class

Table 3-22: Courier Database Class

Operation Name	***Visibility (private, public)***	***Explanation***
SaveCourierAccountSaved()	*Public*	*Saving the Account of the Courier*
ProfileTakken()	*Public*	*Taking the Data profile from the Database*
Nama Atribut	***Visibility***	***Type***

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	(private, public)	
Username	*Private*	*String*

3.2.8 Customer Database Class

Table 3-23: Customer Database Class

Operation Name	***Visibility (private, public)***	***Explanation***
SaveCustomerAccountSaved()	*Public*	*Saving the Account of the Customer*
ProfileTakken()	*Public*	*Taking the Data profile from the Database*
Nama Atribut	***Visibility (private, public)***	***Type***
Username	*Private*	*String*

3.2.9 Order Database Class

Table 3-24: Order Database Class

Operation Name	***Visibility (private, public)***	***Explanation***
SaveOrderSaved()	*Public*	*Saving the Order into the Database*
SavePaymentStatus()	*Public*	*Saving the Payment into the Database*
SaveRatingSaved()	*Public*	*Saving the Rating into the Database*
SaveCommentSaved()	*Public*	*Saving the Comment into the Database*
SavePickUpSaved()	*Public*	*Saving the PickUp into the Database*
ReturnAllData()	*Public*	*Saving all data into the Database*
Nama Atribut	***Visibility (private, public)***	***Type***
orderID	*Private*	*String*

3.2.10 Payment Database Class

Table 3-25: Payment Database Class

Operation Name	***Visibility (private, public)***	***Explanation***
SavePaymentSaved()	*Public*	*Saving the Payment into the Database*
Nama Atribut	***Visibility (private, public)***	***Type***
paymentID	*Private*	*String*

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3.2.11 Create Customer Account Controller Class

Table 3-26: Create Customer Account Controller Class

Operation Name	***Visibility (private, public)***	***Explanation***
SaveCustomerAccount()	*Public*	*Saving Customer Account into the Database*
SaveCustomerAccountSuccess()	*Public*	*Successed for saving the Customer Account into the Database*
Nama Atribut	***Visibility (private, public)***	***Type***

3.2.12 Create Courier Account Controller Class

Table 3-27: Create Courier Account Controller Class

Operation Name	***Visibility (private, public)***	***Explanation***
SaveCourierAccount()	*Public*	*Saving Courier Account into the Database*
SaveCourierAccountSuccess()	*Public*	*Successed for saving the Courier Account into the Database*
Nama Atribut	***Visibility (private, public)***	***Type***

3.2.13 Login Controller Class

Table 3-28: Login Controller Class

Operation Name	***Visibility (private, public)***	***Explanation***
ValidateAdmin()	*Public*	*Validation of the Admin Account*
ValidateCourier()	*Public*	*Validation of the Courier Account*
ValidateCustomer()	*Public*	*Validation of the Customer Account*
ReturnData()	*Public*	*Return the Data into the Database*
Nama Atribut	***Visibility (private, public)***	***Type***

3.2.14 Order Controller Class

Table 3-29: Order Controller Class

Operation Name	***Visibility (private, public)***	***Explanation***
CreateNewOrder()	*Public*	*Creating a new order and insert into the database*
GetClothesType()	*Public*	*Getting the type of clothes*
GetClothesAmount()	*Public*	*Getting the amount of clothes*
SaveOrder()	*Public*	*Saving the Order*

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CancelOrder()	*Public*	*Cancel the Order*
Nama Atribut	***Visibility (private, public)***	***Type***

3.2.15 Payment Controller Class

Table 3-30: Payment Controller Class

Operation Name	***Visibility (private, public)***	***Explanation***
CalculatePrice()	*Public*	*Calculating Price of the order*
GetPaymentType()	*Public*	*Getting the type of payment*
PaymentSuccess()	*Public*	*Success of Payment*
PaymentFailed()	*Public*	*Failed the Order*
Nama Atribut	***Visibility (private, public)***	***Type***

3.2.16 Pick Up Controller Class

Table 3-31: Pick Up Controller Class

Operation Name	***Visibility (private, public)***	***Explanation***
GetPickupOption()	*Public*	*Getting the type of pick up*
Nama Atribut	***Visibility (private, public)***	***Type***

3.2.17 Rating and Comment Controller Class

Table 3-32: Rating and Comment Controller Class

Operation Name	***Visibility (private, public)***	***Explanation***
GetRating()	*Public*	*Getting the Rating from the Customer*
GetComment()	*Public*	*Getting the Comment from the Customer*
Nama Atribut	***Visibility (private, public)***	***Type***

3.2.18 View Order History Controller Class

Table 3-33: View Order History Controller Class

Operation Name	***Visibility (private, public)***	***Explanation***
GetOrderList()	*Public*	*Getting the list of the order from the Database*
ShowOrderList()	*Public*	*Showing the list of the order*
Nama Atribut	***Visibility***	***Type***

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	(private, public)	

3.2.19 Update Customer Account Controller Class

Table 3-34: Update Customer Account Controller Class

Operation Name	***Visibility (private, public)***	***Explanation***
GetCustomerData()	*Public*	*Getting the Data of the Customer*
UpdateCustomerData()	*Public*	*Updating the Data of the Customer*
Nama Atribut	***Visibility (private, public)***	***Type***

3.2.20 Update Courier Account Controller Class

Table 3-35: Update Courier Account Controller Class

Operation Name	***Visibility (private, public)***	***Explanation***
GetCourierData()	*Public*	*Getting the Data of the Courier*
UpdateCourierData()	*Public*	*Updating the Data of the Courier*
Nama Atribut	***Visibility (private, public)***	***Type***

3.2.21 Order List Page Status Controller Class

Table 3-36: Order List Page Status Controller Class

Operation Name	***Visibility (private, public)***	***Explanation***
UpdateOrderStatus()	*Public*	*Updating the status of the order*
UpdateSuccess()	*Public*	*Success of the update*
Nama Atribut	***Visibility (private, public)***	***Type***

3.2.22 Manage Account Controller Class

Table 3-37: Manage Account Controller Class

Operation Name	***Visibility (private, public)***	***Explanation***
GetData()	*Public*	*Getting the Data from the Database*
ManageData()	*Public*	*Managing the Data*
ReturnData()	*Public*	*Returning the Data from the database*
Nama Atribut	***Visibility (private, public)***	***Type***

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3.2.23 Manage Order Controller Class

Table 3-38: Manage Order Controller Class

Operation Name	***Visibility (private, public)***	***Explanation***
GetData()	*Public*	*Getting the Data from the Database*
ManageData()	*Public*	*Managing the Data*
ReturnData()	*Public*	*Returning the Data from the database*
Nama Atribut	***Visibility (private, public)***	***Type***

3.2.24 View Order Controller Class

Table 3-39: View Order Controller Class

Operation Name	***Visibility (private, public)***	***Explanation***
GetOrderData()	*Public*	*Getting the Data of order from the Database*
ShowOrderData()	*Public*	*Showing the data of order*
Nama Atribut	***Visibility (private, public)***	***Type***

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3.3 Overall Class Diagram

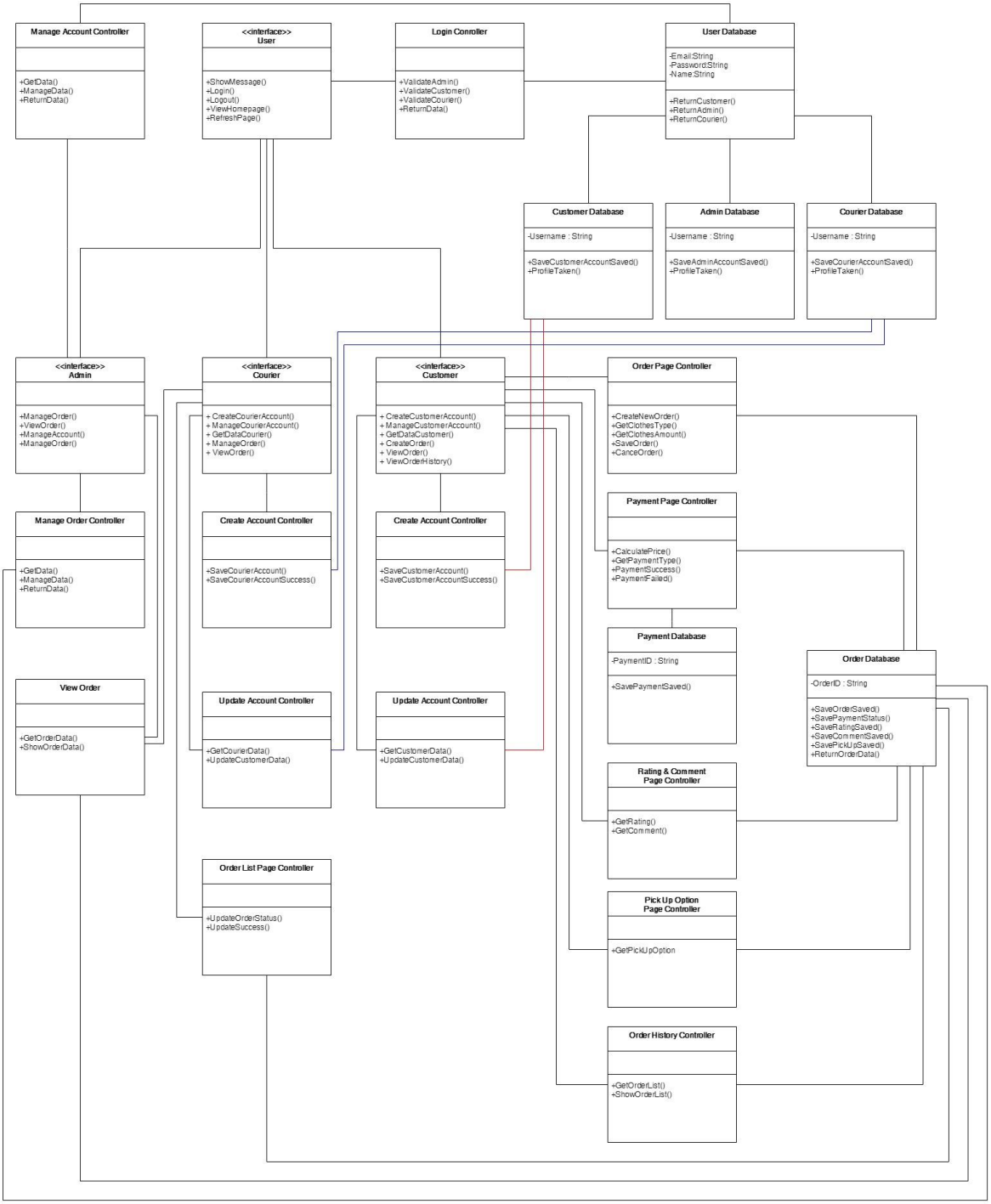

Figure 3-30: Overall Class Diagram

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3.4 Algorithm/Query

This section contains the algorithm and the queries for the main processes of this web-based Laundry Application.

A. Algorithm for Class User, Admin, Courier, Customer

Class Name : Use, Admin, Courier, Customer
Operation name : Login
Algorithm : (Algo-001)

```
Email = input
Password = input
If (Select * from Admin where email=Email and password=Password! = null) then
        begin
                Session = login_admin
                Show AdminHomepage
        end
Else if (SELECT *  FROM Courier WHERE email=Email AND password=Password! = null)
then
        begin
                Session = login_courier
                Show CourierHomepage
        end
Else if(SELECT * FROM Customer WHERE  email=Email AND password=Password
!= null) then
        begin
                 Session = login_customer
                 Show CustomerHomepage
        end
Else
Output ("email or password does not match/ does not  exist")
endif
```

Query :

Table 3-40: Query for Class User, Admin, Courier, Customer

No Query	Query	Explanation
Q-001	SELECT * FROM Admin WHERE email = Email AND password = Password !=null	Funding email and password from user's input in table Admin
Q-001	SELECT * FROM Courier WHERE email = Email AND password = Password !=null	Funding email and password from user's input in table Courier
Q-001	SELECT * FROM Customer WHERE email = Email AND password = Password !=null	Funding email and password from user's input in table Customer

B. Algorithm for Class Customer, Account, Order

Class Name : Customer, Account, Order
Operation name : Create Customer Account, Manage Customer Account, Get Data Customer, Create Order, View Order, View Order History
Algorithm : (Algo-002)

Create Customer Account
sid, cust_name, email, password, cust_addr, cust_contact

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```
sID = input
custName = input
Email = input
Password = input
custContact = input
custAddr = input
INSERT INTO Account (sid, cust_name, email, password, cust_addr, cust_contact) VALUES (‘sID’,
‘custName’, ‘Email’, ‘Password’, ‘custAddr’, ‘custContact’)
```

Manage Customer Account

```
sID = input
update = bool
delete = bool
if (SELECT * FROM Customer WHERE sid=sID NOT NULL) then
        begin
        Output(SELECT * FROM Customer WHERE sid=sID)
        if (Update = true) then
                custAddr =input
                custContact =input
                Password =input
                begin
                        Output (UPDATE Customer SET cust_addr = custAddr OR cust_contact=custContact
                        OR password=Password WHERE sid=sID)
                end
        else if (Delete = true) then
                begin
                        Output (DELETE FROM Customer WHERE sid=sID)
                end
        endif
        end
endif
```

Get Data Customer

```
sID = input
Data = (SELECT * FROM Customer WHERE sid= sID)
        Begin
                Output(Data)
        End
```

Create Order

```
id_order, order_date, order_type, numb_clothes, type_order
idOrder = input
orderDate = input
orderType = input
numClothes = input
orderType = input
INSERT INTO Order (id_order, order_date, order_type, numb_clothes, type_order) VALUES (‘idOrder’,
‘orderDate’, ‘orderType’, ‘numClothes’, ‘orderType’)
```

View order

```
idOrder = input
```


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```
if (SELECT * FROM Order WHERE id_order = idOrder NOT NULL) then
        begin
            output (SELECT * FROM Order WHERE id_order = idOrder)
        end
endif

View Order History
idPayment = input
if (SELECT * FROM Order WHERE id_payment = idPayment NOT NULL) then
        begin
            output (SELECT * FROM Order WHERE id_payment = idPayment)
        end
endif
```

Query :

Table 3-41: Customer, Account, Order

No Query	Query	Explanation
Q-004	INSERT INTO Account (sid, cust_name, email, password, cust_addr, cust_contact) VALUES (‘sID’, ‘custName’, ‘Email’, ‘Password’, ‘custAddr’, ‘custContact’)	Inserting the Customer’s data into the database
Q-005	SELECT * FROM Customer WHERE sid=sID NOT NULL	Funding sid from user’s input in Customer table
Q-006	SELECT * FROM Customer WHERE sid=sID	Funding data of the Customer in the Customer table that match to the input
Q-007	UPDATE Customer SET cust_addr = custAddr OR cust_contact=custContact OR password=Password WHERE sid=sID	Changing the value of the data in Customer table based on the input
Q-008	DELETE FROM Customer WHERE sid=sID	Deleting data in Customer table based on the input
Q-010	INSERT INTO Order (id_order, order_date, order_type, numb_clothes, type_order) VALUES (‘idOrder’, ‘orderDate’, ‘orderType’, ‘numClothes’, ‘orderType’)	Inserting the Order’s data into the database
Q-011	SELECT * FROM Order WHERE id_order = idOrder NOT NULL	Funding id Order from user’s input in Order table
Q-012	SELECT * FROM Order WHERE id_order = idOrder	Funding data of the Order in the Order table that match to the input
Q-013	SELECT * FROM Order WHERE id_payment = idPayment NOT NULL	Funding id Payment from user’s input in Order table
Q-014	SELECT * FROM Order WHERE id_payment = idPayment	Funding data of the Payment in the Order table that match to the input

3.5 State-chart Diagram

3.5.1 Customer state-chart diagram

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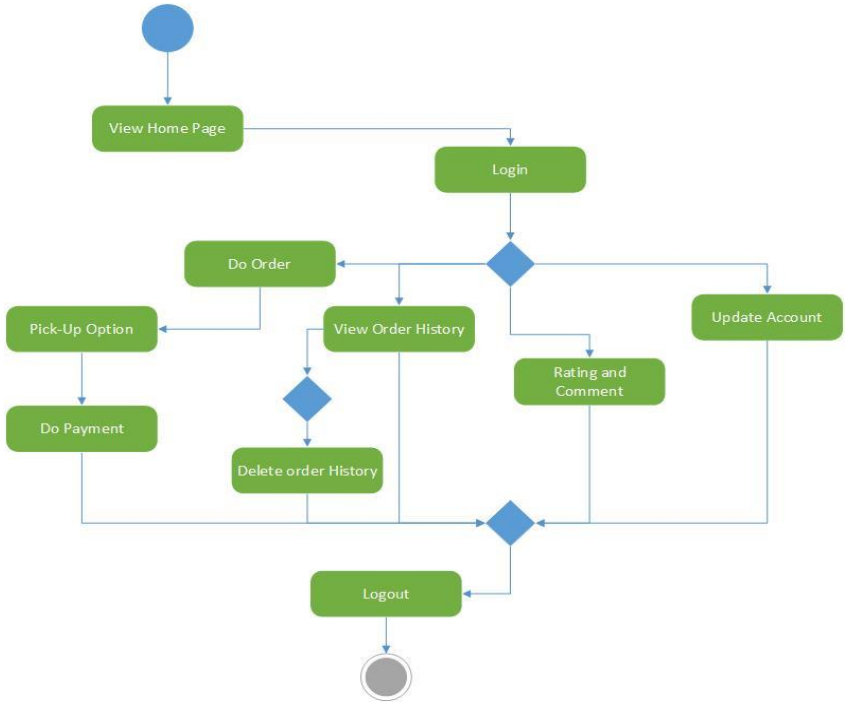

Figure 3-31: Customer state-Chart Diagram

3.5.2 Admin state-chart diagram

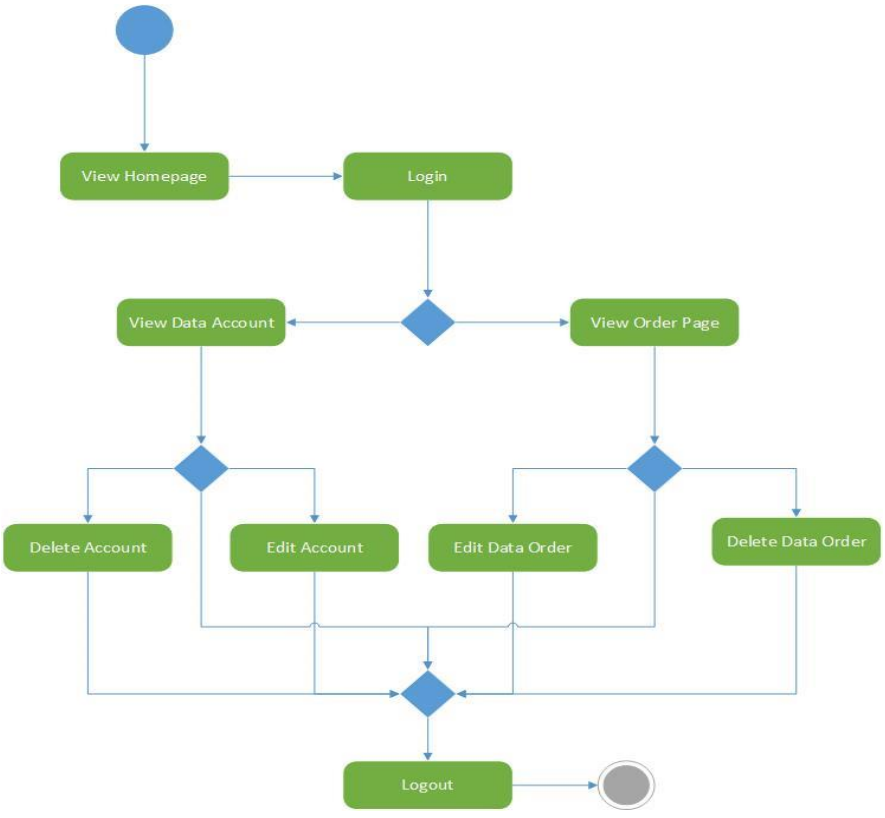

Figure 3-32: Admin state-chart Diagram

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3.5.3 Courier state-chart diagram

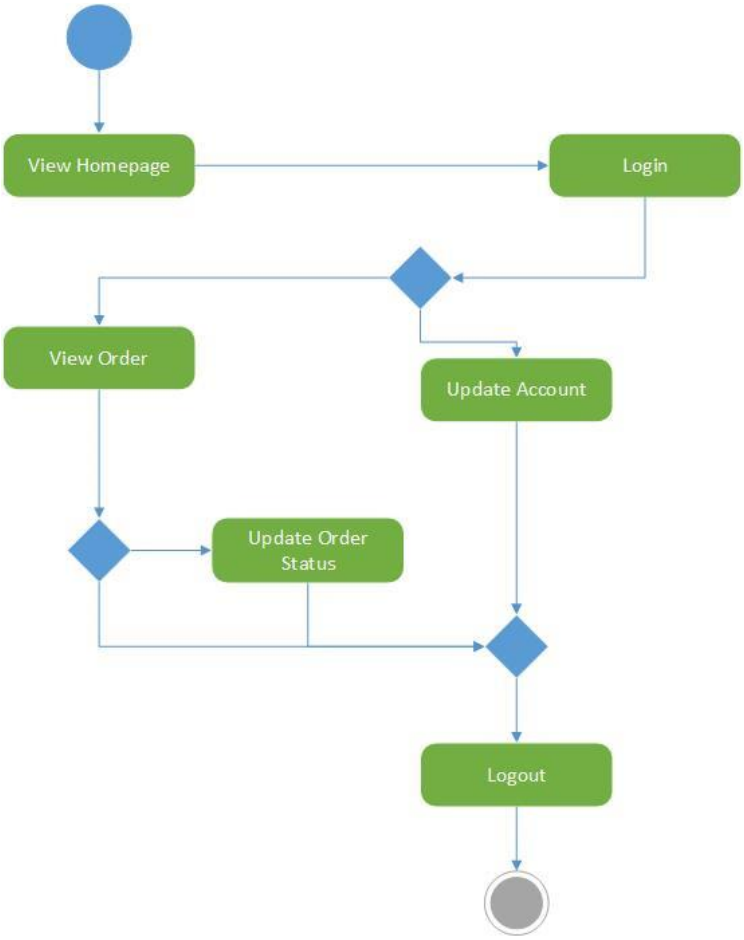

Figure 3-33: Courier state-chart Diagram

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3.6 User Interface Design

This section showing the initial version of the interface prototype with detailed specification and functions of each buttons.

3.6.1 Interface : Create Account Page

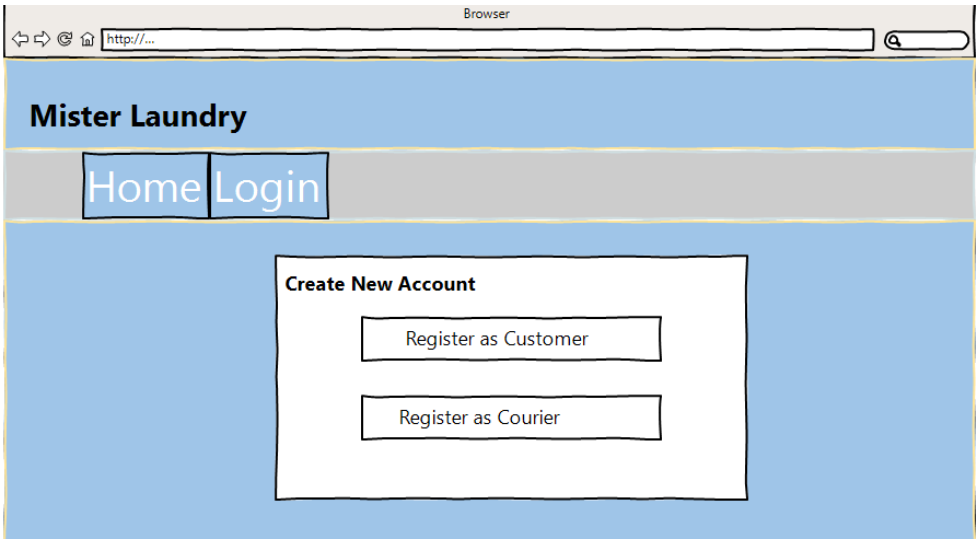

Figure 3-34: Create Account Page - Interface

Table 3-42: Create Account Page

Object_id	Type	Name	Explanation
BTN1	*Button*	*Register as Customer*	*If clicked, it will go to create customer account page*
BTN2	*Button*	*Register as courier*	*If clicked, it will go to create courier*
NAV1	*Button*	*Home*	*If clicked, it will go to homepage.*
NAV2	*Button*	*Login*	*If clicked, it will go to login page.*

3.6.2 *interface: Create customer account page*

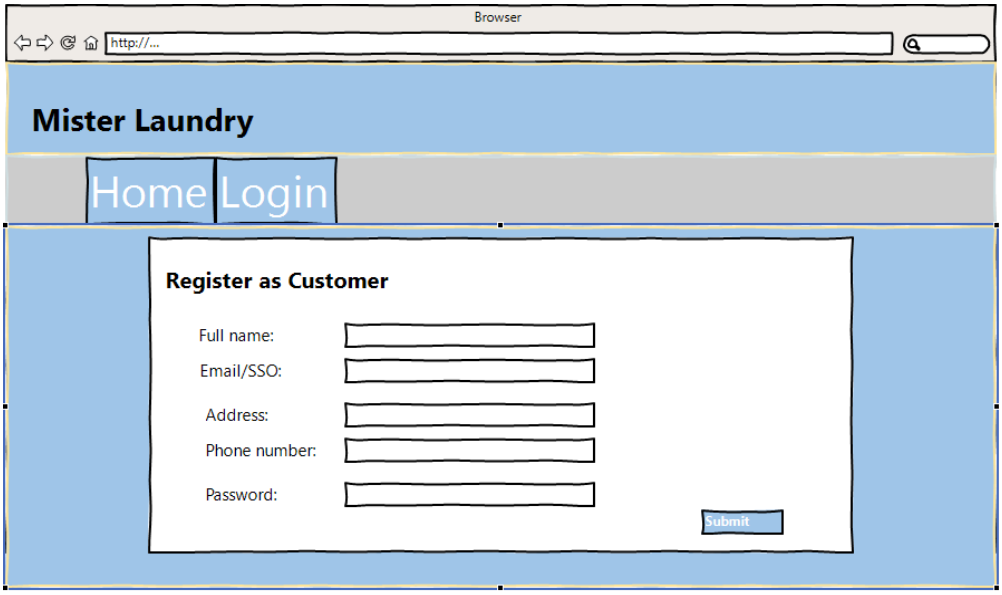

Figure 3-35: Create Customer Account page - Interface

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Table 3-43: Create Customer Account page

Object_id	Type	Name	Explanation
BTN1	*Submit Button*	*Register as Customer*	*If clicked, it will go to create customer account page*
TX1	*Text input*	*Full name*	*If clicked, it will ask for the full name to be inputted*
TX2	*Text input*	*Email/SSo*	*If clicked, it will ask for the email to be inputted*
TX3	*Text input*	*address*	*If clicked, it will ask for the address to be inputted*
TX4	*Text input*	*Phone number*	*If clicked it will ask for the phone number to be inputted*
TX5	*Text input*	*password*	*If clicked it will ask for the password to be inputted*
NAV1	*Button*	*Home*	*If clicked, it will go to homepage.*
NAV2	*Button*	*Login*	*If clicked, it will go to login page.*

3.6.3 *interface: Create courier account page*

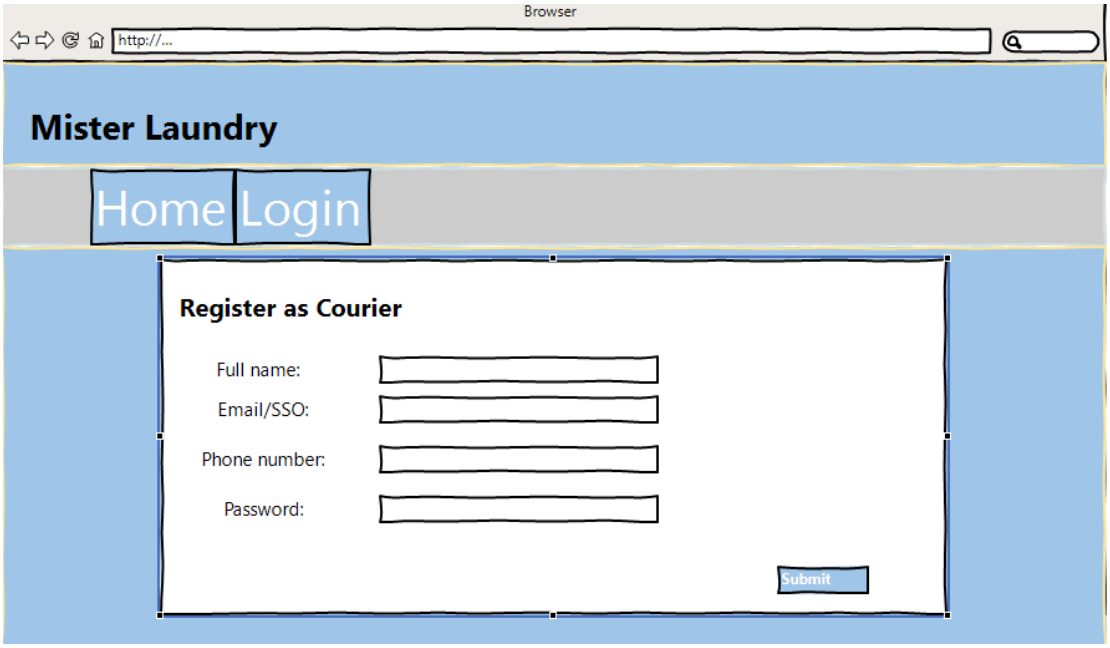

Figure 3-36: Create Courier Account Page - Interface

Table 3-44: Create Courier Account Page

Object_id	Type	Name	Explanation
BTN1	*Submit Button*	*Register as Customer*	*If clicked, it will go to create customer account page*
TX1	*Text input*	*Full name*	*If clicked, it will ask for the full name to be inputted*
TX2	*Text input*	*Email/SSO*	*If clicked, it will ask for the email to be inputted*
TX3	*Text input*	*Phone number*	*If clicked it will ask for the phone number to be inputted*
TX4	*Text input*	*password*	*If clicked it will ask for the password to be inputted*
NAV1	*Button*	*Home*	*If clicked, it will go to homepage.*
NAV2	*Button*	*Login*	*If clicked, it will go to login page.*

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3.6.4 *interface: Order Form*

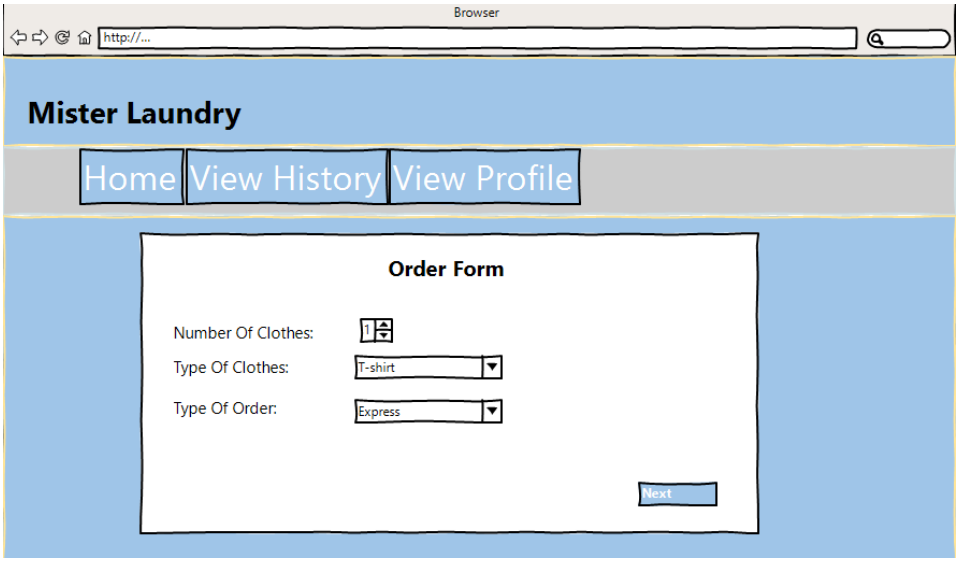

Figure 3-37: Order Form Page - Interface

Table 3-45: Order Form Page

Object_id	Type	Name	Explanation
BTN1	*Button*	*Next button*	*If clicked, it will go to the next page*
SPN1	*Spinner*	*Number of clothes*	*If clicked, it will increase based on the number of clothes*
SLT1	*Selection*	*Type of clothes*	*If clicked, it will show the list of type of clothes*
SLT2	*Selection*	*Type of order*	*If clicked, it will show the list of type of order*

3.6.5 *interface: Pick Up Option*

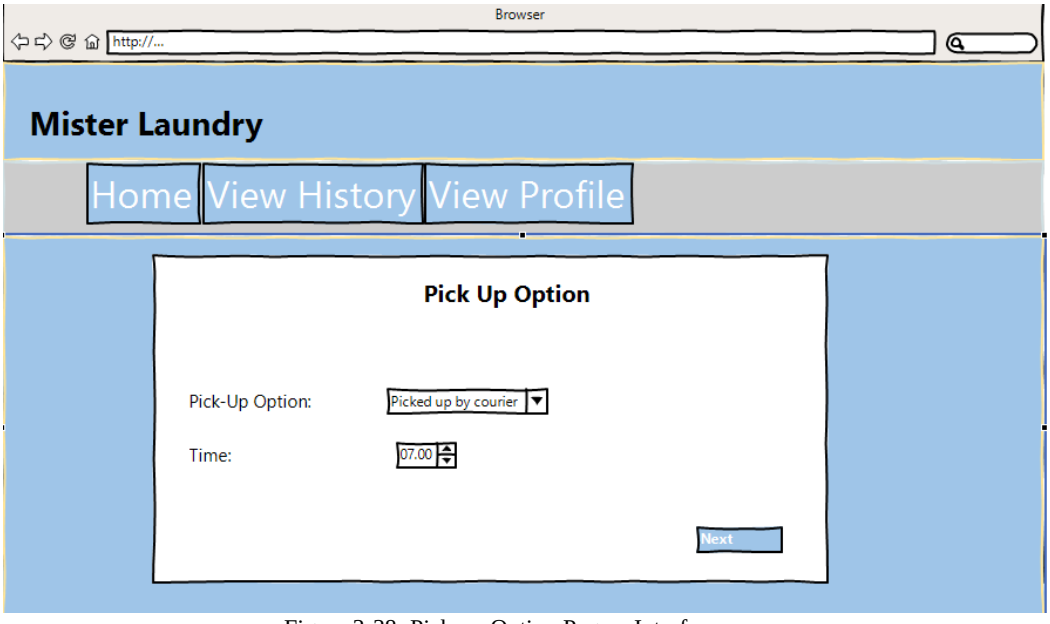

Figure 3-38: Pick-up Option Page – Interface

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Table 3-46: Pick-up Option Page

Object_id	Type	Name	Explanation
BTN1	*Button*	*Next button*	*If clicked, it will go to the next page*
SLT1	*Selection*	*Pick up option*	*If clicked, it will show the list of type of pick upt*
SPN1	*Spinner*	*Time*	*If clicked it increase the time*

3.6.6 *interface: Payment*

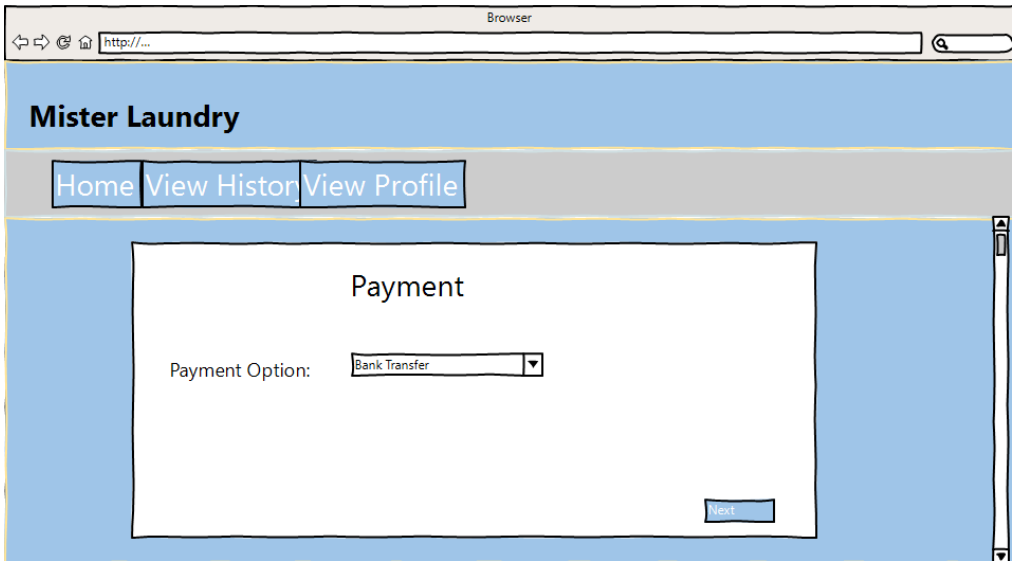

Figure 3-39: Payment Page

Table 3-47: Payment Page

Object_id	Type	Name	Explanation
BTN1	*Button*	*Next button*	*If clicked, it will go to the next page*
SLT1	*Selection*	*Payment option*	*If clicked, it will show the list of type of payment*

3.6.7 *interface: Rating and Comment*

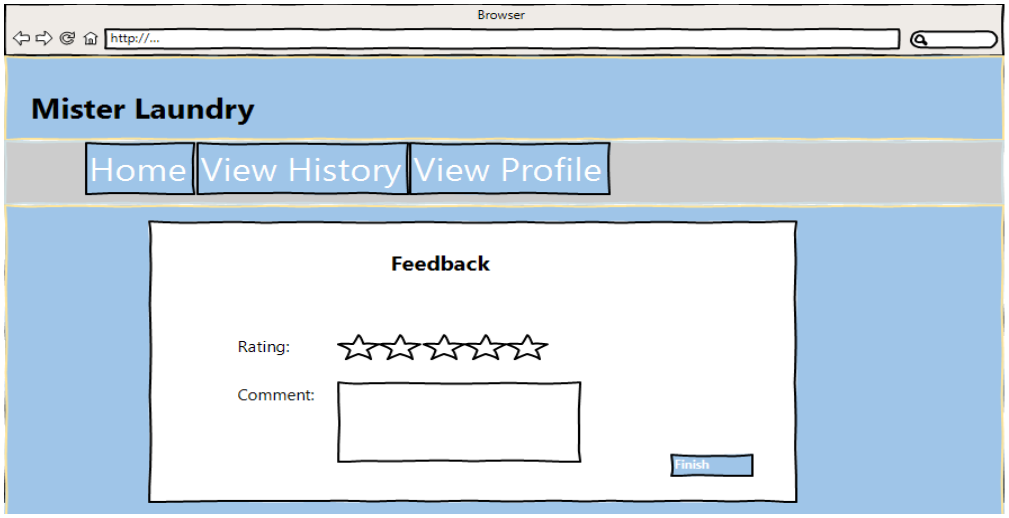

Figure 3-40: Rating and Comment Page - Interface

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Table 3-48: Rating and Comment Page

Object_id	Type	Name	Explanation
BTN1	*Button*	*Finish button*	*If clicked, it will finish the order process*
RT1	*Rating*	*Rating*	*If clicked, it will give the star rating*
TB1	*Text box*	*Text box*	*To give a comment about the service based through text that filled in box*

3.6.8 *interface: View Profile*

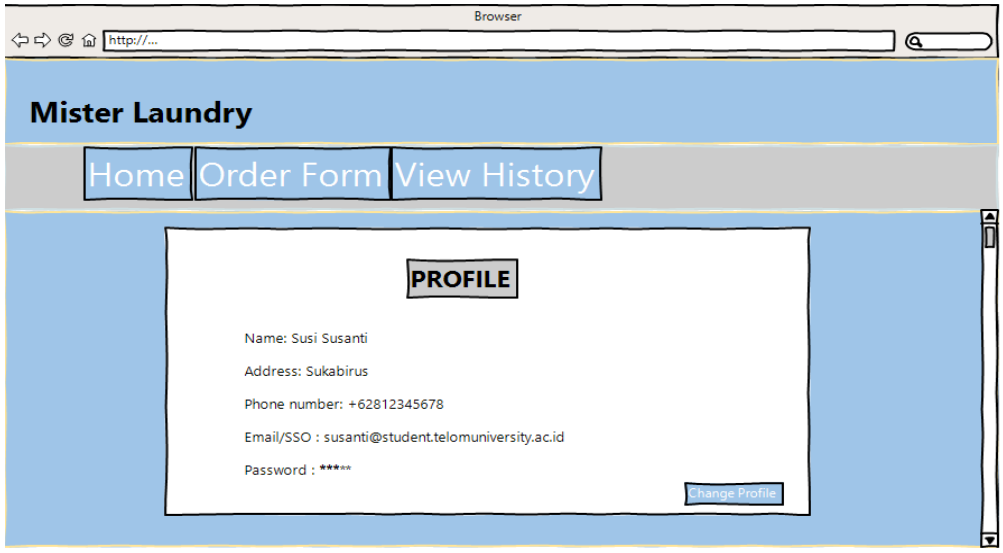

Figure 3-41: View Profile Page - Interface

Table 3-49: View Profile Page

Object_id	Type	Name	Explanation
BTN1	*Button*	*Change Profile*	*If clicked it will update the profile*
TF1	*Text field*	*profile*	*Show all the customer information*

3.6.9 *interface: View All order*

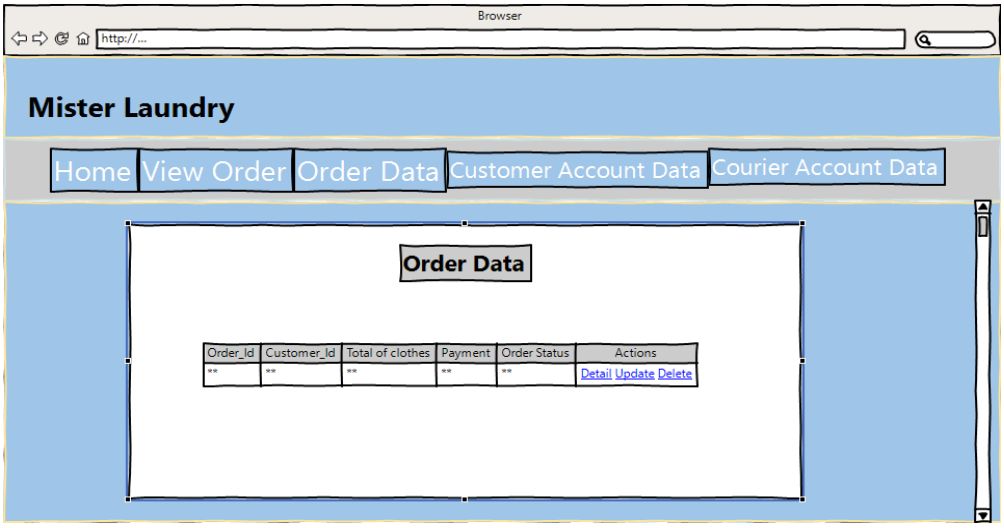

Figure 3-42: View Order Data Page - Interface

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Table 3-50: View Order Data Page

Object_id	Type	Name	Explanation
BTN1	*Button*	*Update*	*If clicked it will update the data*
BTN2	*Button*	*Detail*	*If clicked it will view on t*
BTN3	*Button*	*Delete*	*If clicked it will update the profile*
TB1	*Table*	*Order data*	*Show all the order customer data*

3.5.10 *interface: View customer account data*

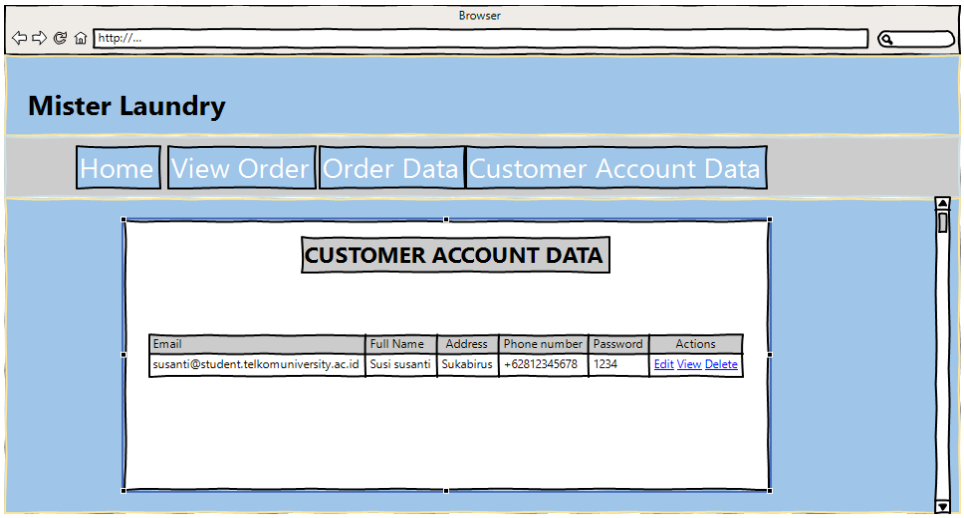

Figure 3-43: View Customer Account Data Page - Interface

Table 3-51: View Customer Account Data Page

Object_id	Type	Name	Explanation
BTN1	*Button*	*edit*	*If clicked it will update the data*
BTN2	*Button*	*view*	*If clicked it will view on detail*
BTN3	*Button*	*Delete*	*If clicked it will update the profile*
TB1	*Table*	*Customer account data*	*Show all the order customer account data*

3.6.10 *interface: View courier account data*

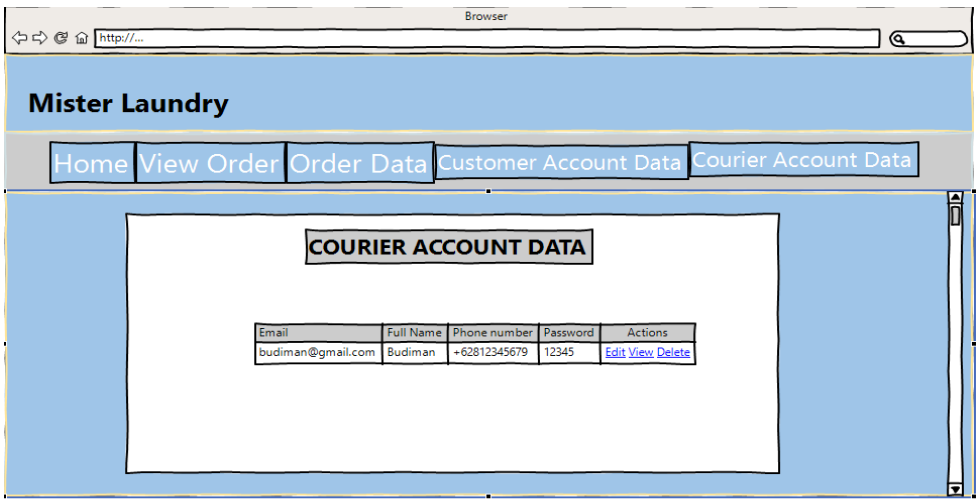

Figure 3-44: View Courier Account Data Page - Interface

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Table 3-52: View Courier Account Data Page

Object_id	Type	Name	Explanation
BTN1	*Button*	*edit*	*If clicked it will update the data*
BTN2	*Button*	*view*	*If clicked it will view on detail*
BTN3	*Button*	*Delete*	*If clicked it will update the profile*
TB1	*Table*	*courier account data*	*Show all the order courier account data*

3.6.11 *interface: Login*

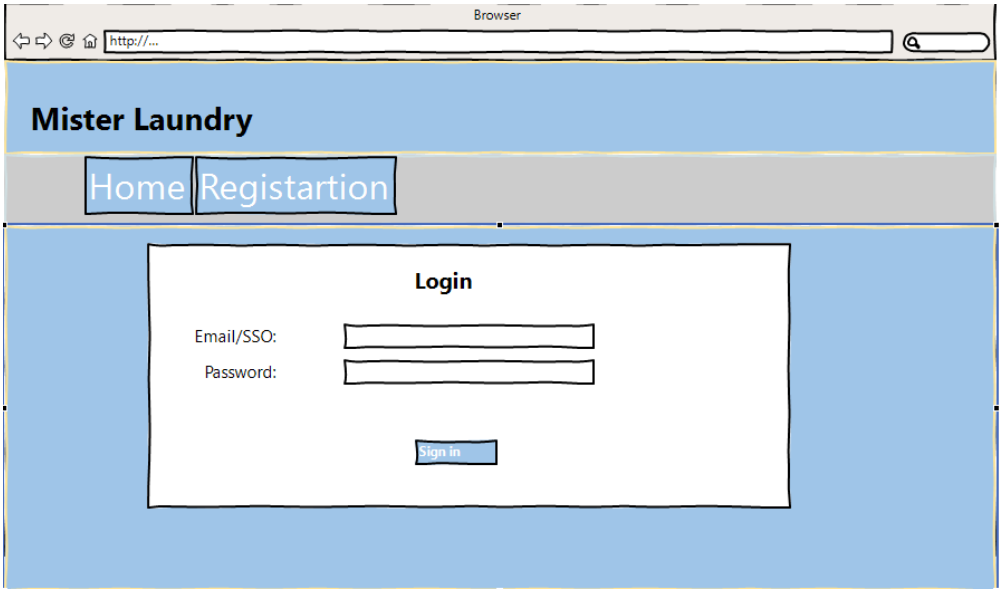

Figure 3-45: Login Page - Interface

Table 3-53: Login Page

Object_id	Type	Name	Explanation
BTN1	*Button*	*Sign In*	*If clicked it will logged into the system*
TF1	*Text field*	*Email/sso*	*To input the username of the user*
TF2	*Text field*	*password*	*To input the password of the user*

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3.7 Design of Class Persistence Representation

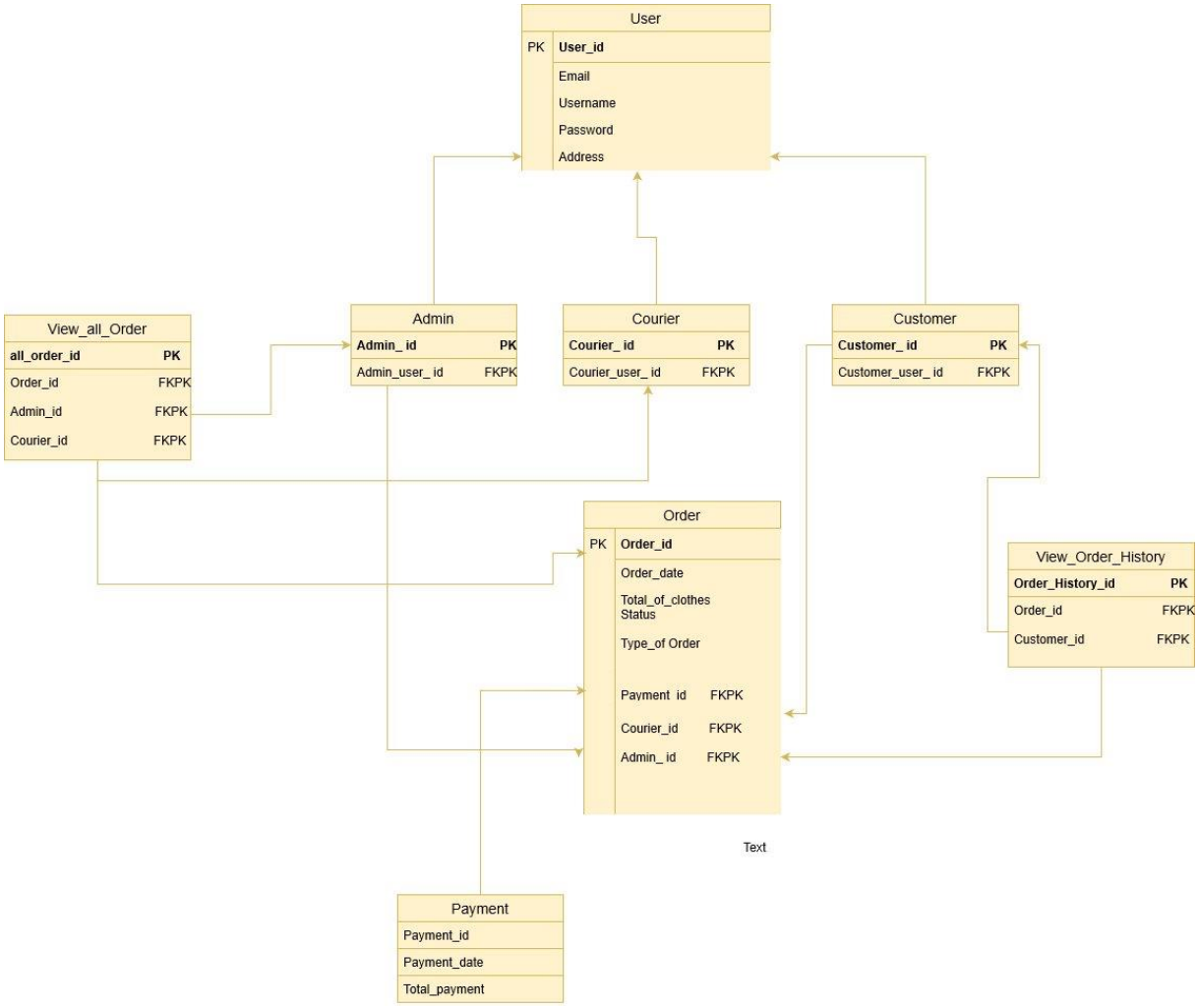

Figure 3-46: Design of Class Persistence Representation

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4 Usability Matrix

Table 4-1: Usability Matrix

No	Requirement Code	Related Use case	Class
1.	FR-01	Create Customer Account	Customer, Customer database, Create Customer Account Controller
2.	FR-02	Create Courier Account	Courier, Courier database, Create Courier Account Controller
3.	FR-03	Login process	User, Login page, Login Controller, Customer database, Courier database, Admin database
4.	FR-04	Ordering Process	Customer, Order Page, Order page controller, order database
5.	FR-05	Payment Process	Customer, Payment page, payment controller, order database, payment database
6.	FR-06	Choose Pick Up option	Customer, Pick up Option page, order database
7.	FR-07	Giving Rating and Comment Process	Customer, Rating and Comment page, Rating and Comment Controller, Order database
8.	FR-08	View Order history	This function is used by the user to view the order history.
9.	FR-09	Manage account data	Admin, order history page, order history controller, order history database
10.	FR-10	Manage order data	Admin, Data order page, data order controller, order database
11.	FR-11	View Order data	Admin, Courier, Order data page, Order data controller, order data database
12.	FR-12	Update Customer account	Customer, Update account page, update account controller, Customer database

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13.	FR-13	Update Courier account	Courier, Update account page, update account controller, Courier database
14.	FR-14	Update order data status	Courier, Order list page, order list controller, order database

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