



CAPSTONE PROJECT REPORT

Report 4 – Software Design Document

– Hanoi, April 2024 –

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I. Record of Changes

Date	A* M, D	In charge	Change Description
03/03/2024	A	All members	Create Software Design Document
04/03/2024	A	All members	System Architecture, Back-end Architecture, Front-end Architecture, Database design
05/03/2024	A	All members	Add sequence diagram for admin and manage
12/03/2024	A	All members	Add sequence diagram for personal
13/03/2024	A	All members	Add class diagram
16/03/2024	M	All members	Update System Architecture, Back-end Architecture, Front-end Architecture
16/03/2024	M	All members	Update class diagram
25/03/2024	M	All members	Complete report 4

*A - Added M - Modified D - Deleted

II. Software Design Document

1. System Design

1.1 System Architecture

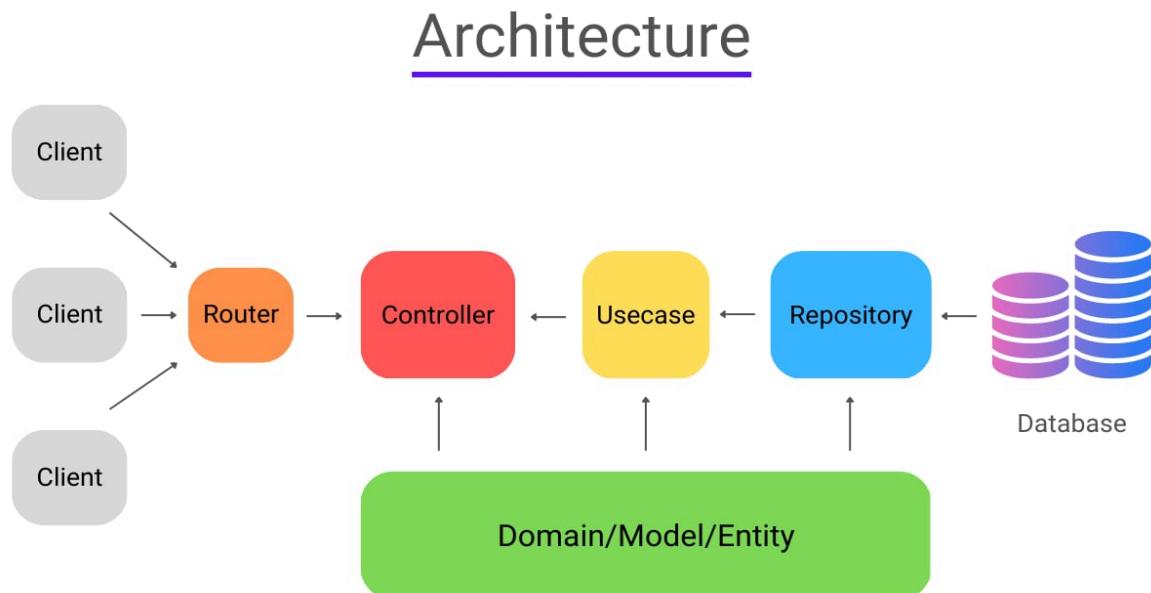


Figure: System Architecture Diagram

1.2 Package Diagram

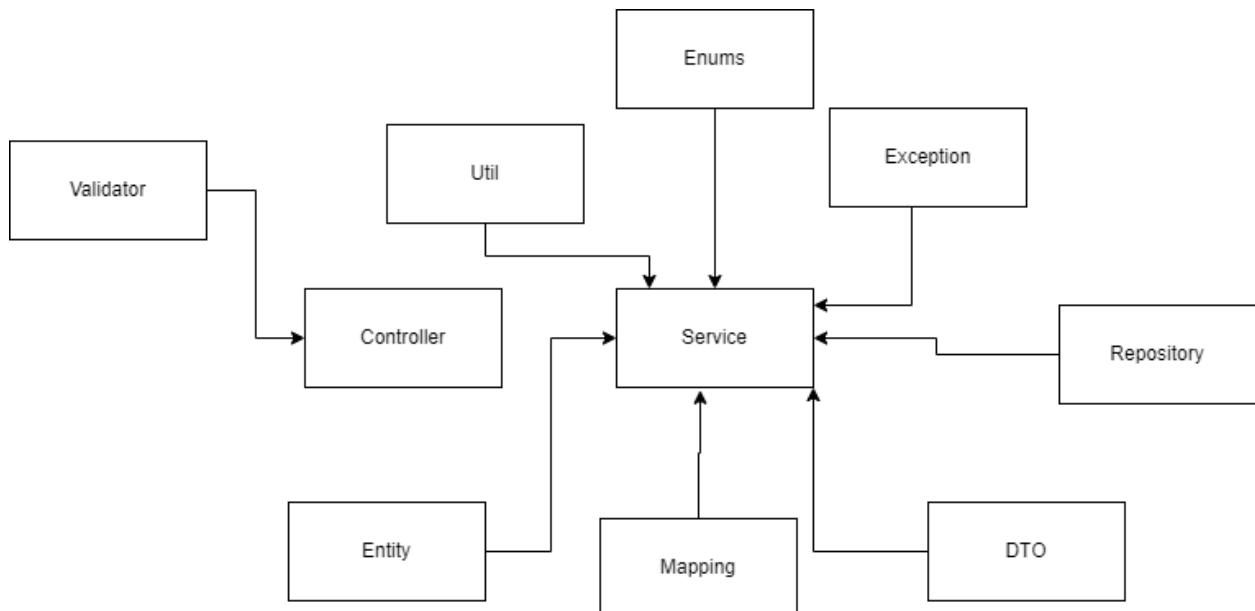


Figure: Package Diagram

Package descriptions

No	Package	Description
01	Validator	This package contains classes and interfaces for validating input data before it is processed by the application. It ensures that all data meets the defined constraints and rules.
02	Util	The Util package provides utility classes and helper functions that are commonly used across different layers of the application, such as formatting, common data manipulations, and shared constants.
03	Controller	The Controller package is responsible for handling incoming HTTP requests, manipulating data using the Service layer, and returning the appropriate responses to the client.
04	Entity	This package includes the domain models or entities that represent the application's core business logic and data structures.
05	Mapping	The Mapping package contains the logic to transform or map one type of object to another, facilitating data transfer between different layers, such as from Entity to DTO (Data Transfer Object).
06	Service	Central to the application, the Service package provides the business logic and orchestrates transactions, data processing, and decision-making.
07	Enums	Enums package includes all the enumeration classes that define a set of named constants used throughout the application.
08	Exception	This package contains custom exception classes that represent specific error conditions within the application, allowing for granular error handling and messaging.
09	Repository	The Repository package acts as the data access layer, containing classes and interfaces for querying and interacting with the database.
10	DTO	The DTO (Data Transfer Object) package consists of objects that carry data between processes, aiming to reduce the number of method calls, particularly in a network environment.

2. Database Design

2.1 Database diagram

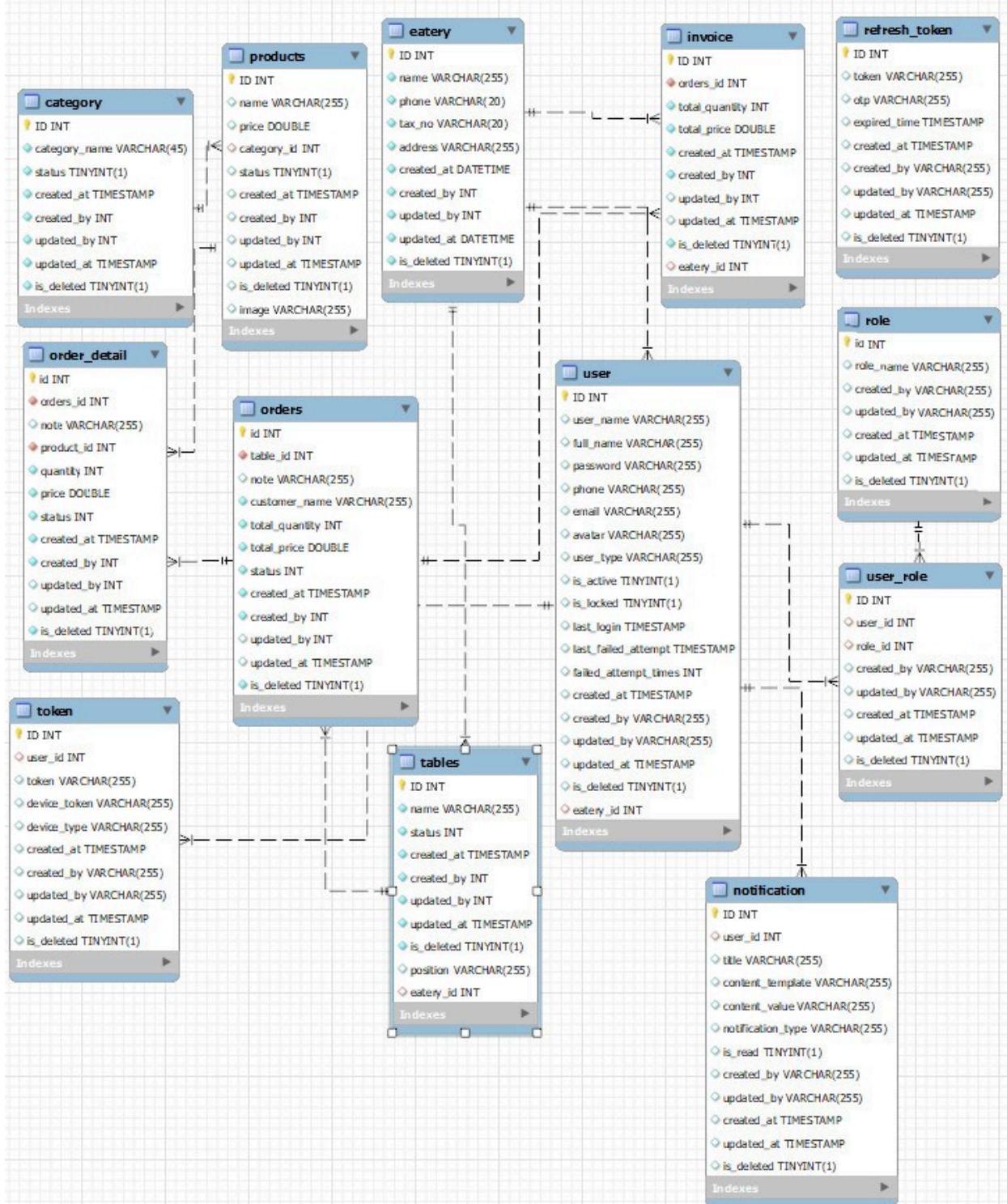


Figure:Database diagram

2.2 Table Descriptions

2.2.1 Orders

No	Field name	Type	Unique	Not null	PK/FK	Note
1	id	INT	x	x	x	Auto Incremental
2	table_id	INT	x	x		
3	note	VARCHAR(255)				
4	customer_name	VARCHAR(255)				
5	total_quantity	INT				
6	total_price	DOUBLE				
7	status	INT				
8	created_at	TIMESTAMP				
9	created_by	INT				
10	updated_by	INT				
11	updated_at	TIMESTAMP				
12	is_deleted	TINYINT(1)				

2.2.2 Product

No	Field name	Type	Unique	Not null	PK/FK	Note
1	id	INT	x	x	x	Auto Incremental
2	name	VARCHAR(255)				
3	price	DOUBLE				
4	category_id	INT				
5	status	TINYINT(1)				
6	created_at	TIMESTAMP				
7	created_by	INT				
8	updated_by	INT		x		
9	updated_at	TIMESTAMP				
10	is_deleted	TINYINT(1)				
11	image	VARCHAR(255)				
12	note	VARCHAR(255)				

2.2.3 User role

No	Field name	Type	Unique	Not null	PK/FK	Note
1	id	INT	x	x	x	Auto Incremental
2	user_id	INT		x		
3	role_id	INT		x		

4	created_by	INT				
5	updated_by	INT				
6	created_at	TIMESTAMP				CURRENT_TIMESTAMP
7	updated_at	TIMESTAMP				CURRENT_TIMESTAMP
8	is_deleted	TINYINT(1)		x		

2.2.4 User

No	Field name	Type	Unique	Not null	PK/FK	Note
1	id	INT	x	x	x	Auto Incremental
2	user_name	VARCHAR(255)				
3	full_name	VARCHAR(255)				
4	password	VARCHAR(255)				
5	phone	VARCHAR(50)				
6	email	VARCHAR(255)				
7	avatar	VARCHAR(255)				
8	user_type	INT				
9	is_active	TINYINT(1)				1
10	is_locked	TINYINT(1)				0
11	last_login	TIMESTAMP				CURRENT_TIMESTAMP
12	last_failed_attempt	TIMESTAMP				CURRENT_TIMESTAMP
13	failed_attempt_times	INT				
14	created_by	INT				
15	updated_by	INT				
16	created_at	TIMESTAMP				CURRENT_TIMESTAMP
17	updated_at	TIMESTAMP				CURRENT_TIMESTAMP
18	is_deleted	TINYINT(1)		x		

2.2.5 Notification

No	Field name	Type	Unique	Not null	PK/FK	Note
1	notification_id	INT	x	x	x	
2	user_id	INT				
3	title	VARCHAR(200)				
4	content_template	VARCHAR(200)				
5	content_value	VARCHAR(200)				
6	notification_type	INT				
7	is_read	INT				
8	created_by	INT				
9	updated_by	INT				

10	created_at	TIMESTAMP				CURRENT_TIMESTAMP
11	updated_at	TIMESTAMP				CURRENT_TIMESTAMP
12	is_deleted	TINYINT(1)		x		

2.2.6 Category

No	Field name	Type	Unique	Not null	PK/FK	Note
1	id	INT	x	x	x	Auto Incremental
2	category_name	VARCHAR(45)				
3	status	TINYINT(1)				
4	created_at	TIMESTAMP				
5	created_by	INT				
6	updated_by	INT				
7	updated_at	TIMESTAMP				
8	is_deleted	TINYINT(1)				

2.2.7 Order_detail

No	Field name	Type	Unique	Not null	PK/FK	Note
1	id	INT	x	x	x	Auto Incremental
2	orders_id	VARCHAR(45)				
3	note	VARCHAR(255)				
4	product_id	INT				
5	quantity	INT				
6	price	DOUBLE				
7	status	INT				
8	created_at	TIMESTAMP				
9	created_by	INT				
10	updated_by	INT				
11	updated_at	TIMESTAMP				
12	is_deleted	TINYINT(1)				
13	done	INT				
14	in_progress	INT				
15	serving	INT				
16	pay	INT				
17	pending	INT				

2.2.8 Token

No	Field name	Type	Unique	Not null	PK/FK	Note

1	id	INT	x	x	x	Auto Incremental
2	user_id	INT				
3	token	VARCHAR(255)				
4	device_token	VARCHAR(500)				
5	device_type	INT				
6	created_by	INT				
7	updated_by	INT				
8	created_at	TIMESTAMP				CURRENT_TIMESTAMP
9	updated_at	TIMESTAMP				CURRENT_TIMESTAMP
10	is_deleted	TINYINT(1)				0

2.2.9 Refresh_token

No	Field name	Type	Unique	Not null	PK/FK	Note
1	id	INT	x	x	x	Auto Incremental
2	user_id	INT				
3	refresh_token	VARCHAR(255)				
4	created_by	INT				
5	updated_by	INT				
6	created_at	TIMESTAMP				
7	updated_at	TIMESTAMP		x		
8	is_deleted	TINYINT(1)				

2.2.10 Invoice

No	Field name	Type	Unique	Not null	PK/FK	Note
1	id	INT		x	x	Auto Incremental
2	orders_id	INT				
3	total_quantity	INT				
4	total_price	DOUBLE				
5	created_at	TIMESTAMP				
6	created_by	INT				
7	updated_by	INT				
8	updated_at	TIMESTAMP				
9	is_deleted	TINYINT(1)				

2.2.11 Tables

No	Field name	Type	Unique	Not null	PK/FK	Note

1	id	INT		x	x	Auto Incremental
2	name	VARCHAR(255)				
3	status	INT				
4	created_at	TIMESTAMP				
5	created_by	INT				
6	updated_by	INT				
7	updated_at	TIMESTAMP				
8	is_deleted	TINYINT(1)				
9	position	VARCHAR(255)				

2.2.12 Role

No	Field name	Type	Unique	Not null	PK/FK	Note
1	id	INT		x	x	Auto Incremental
2	role_name	VARCHAR(255)				
3	created_by	INT				
4	updated_by	INT				
5	created_at	TIMESTAMP				CURRENT_TIMESTAMP
6	updated_at	TIMESTAMP				CURRENT_TIMESTAMP
7	is_deleted	TINYINT(1)		x		

2.2.13 Eatery

No	Field name	Type	Unique	Not null	PK/FK	Note
1	id	INT		x	x	Auto Incremental
2	name	VARCHAR(255)				
3	phone	VARCHAR(255)				
4	tax_no	VARCHAR(255)				
5	address	VARCHAR(255)				
6	created_by	INT				
7	updated_by	INT				
8	created_at	TIMESTAMP				CURRENT_TIMESTAMP
9	updated_at	TIMESTAMP				CURRENT_TIMESTAMP
10	is_deleted	TINYINT(1)		x		

3. Detailed Design

3.1 Authenticated

3.1.1 Class Diagram

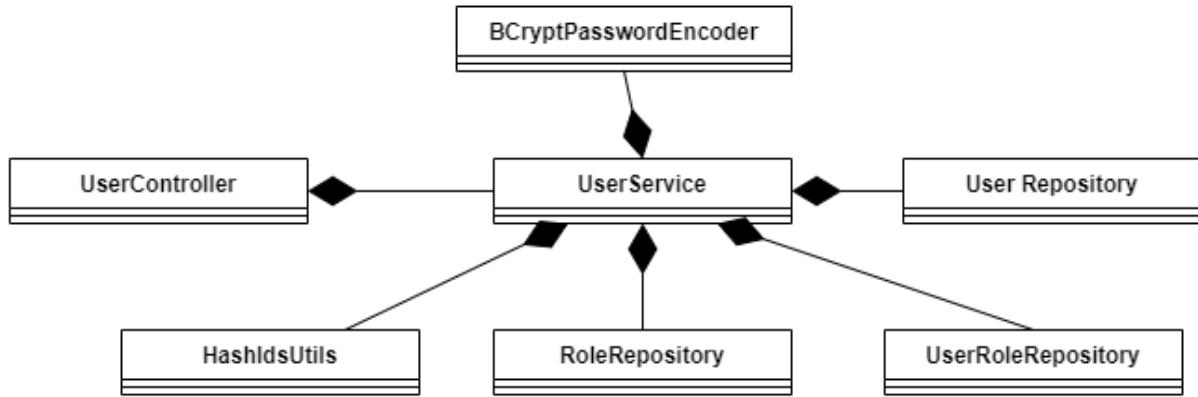


Figure:User Class diagram

3.1.2 Login

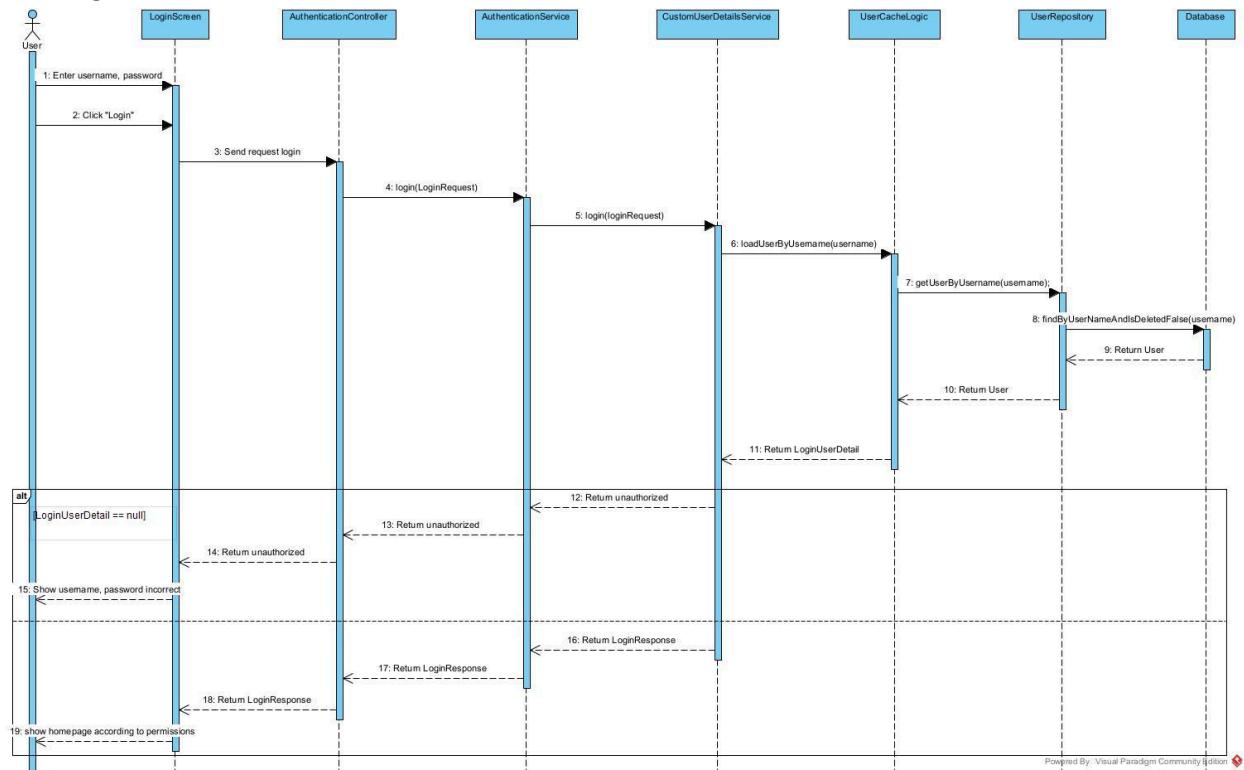


Figure:Login Sequence

3.1.3 Logout

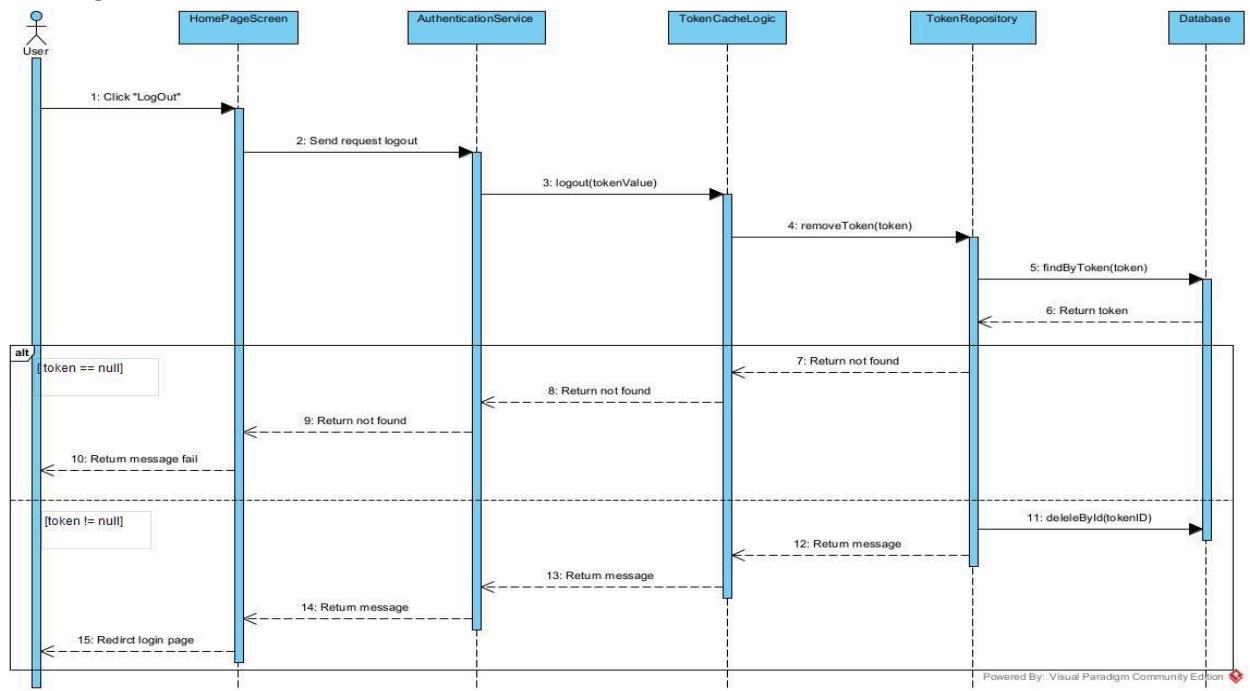


Figure:Logout Sequence

3.1.4 Change password

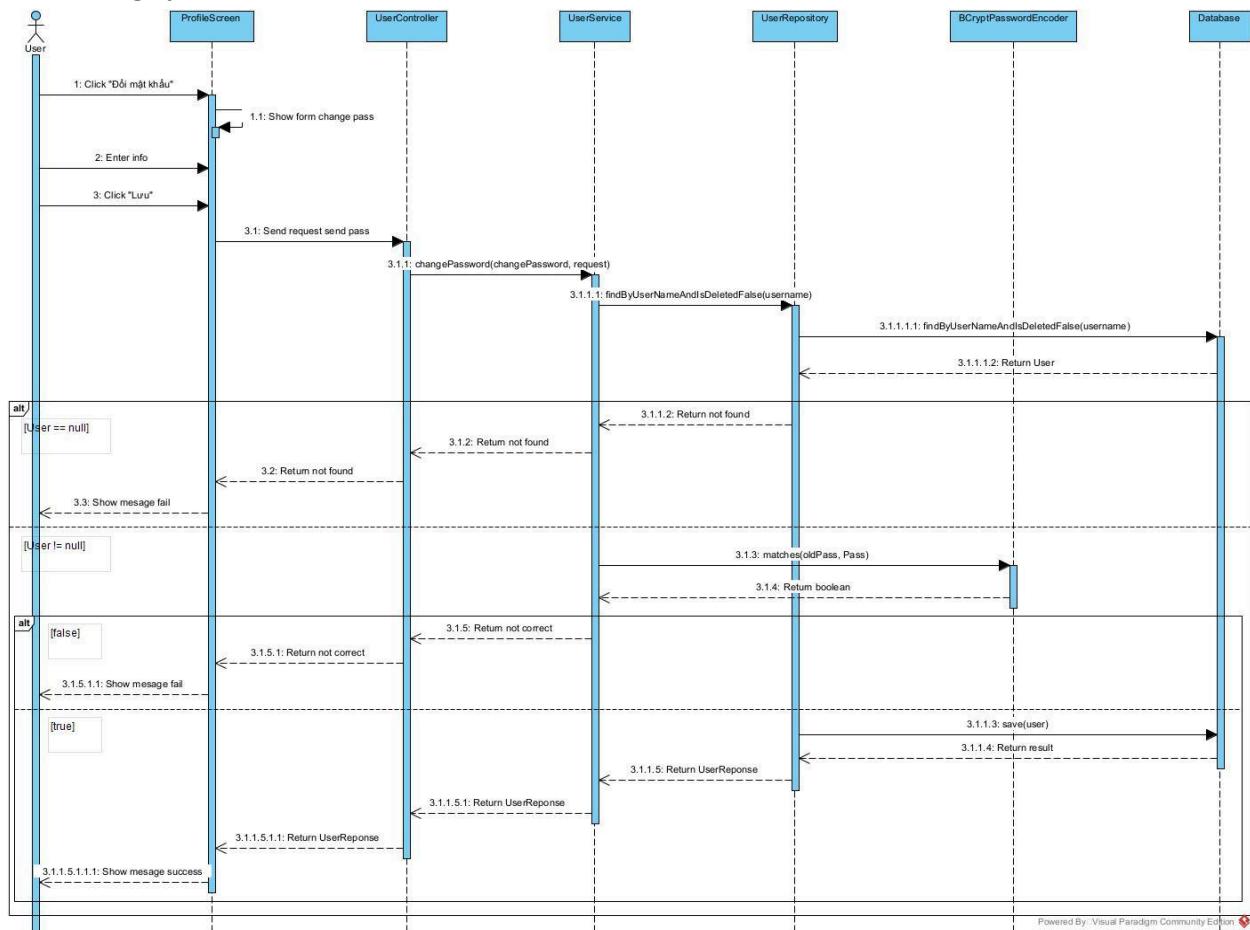


Figure:Change password Sequence

3.2 Manage Product

3.2.1 Class Diagram

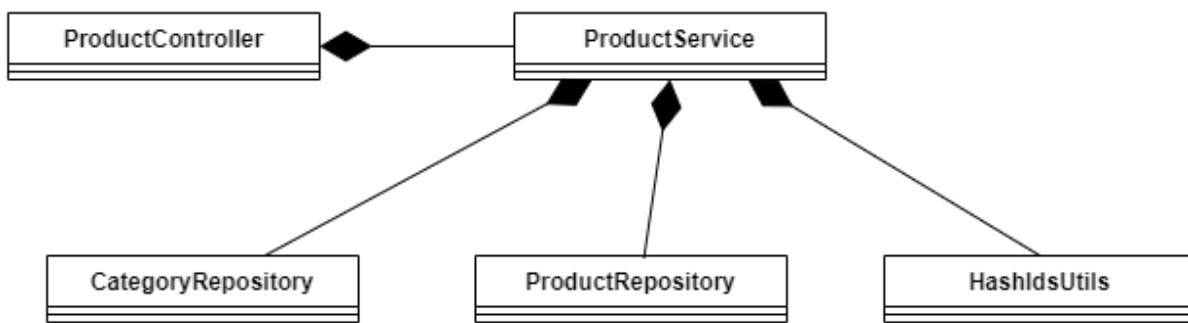


Figure:Product Class Diagram

3.2.2 View Product

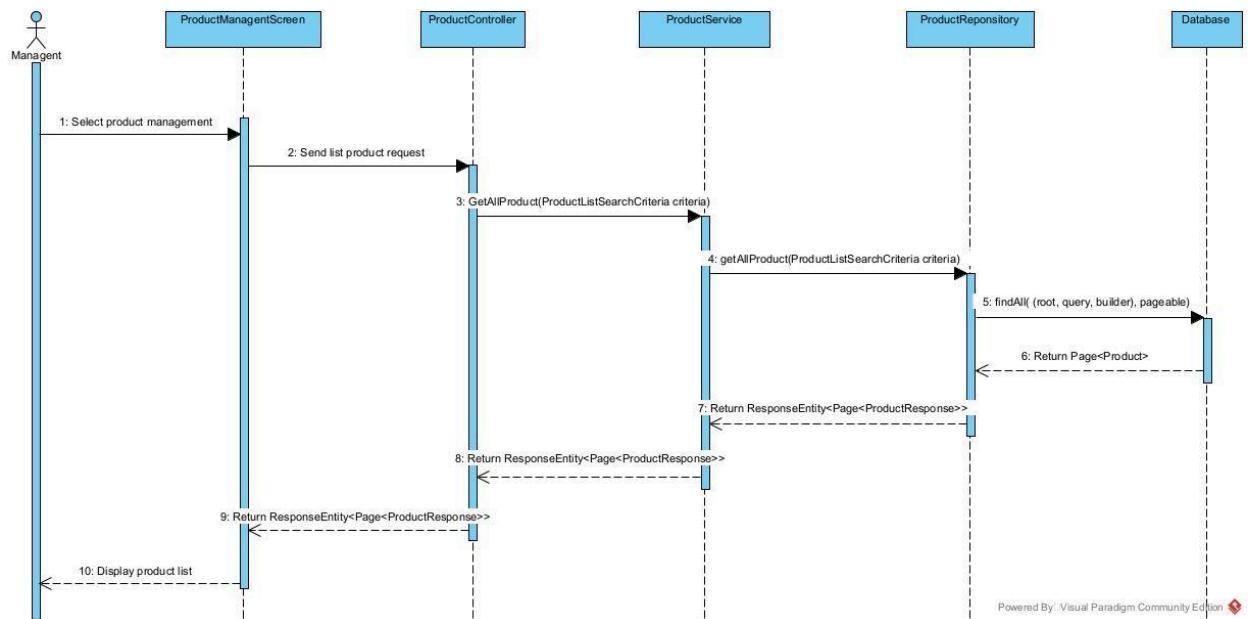


Figure:View Product List Sequence

3.2.3 Search Product

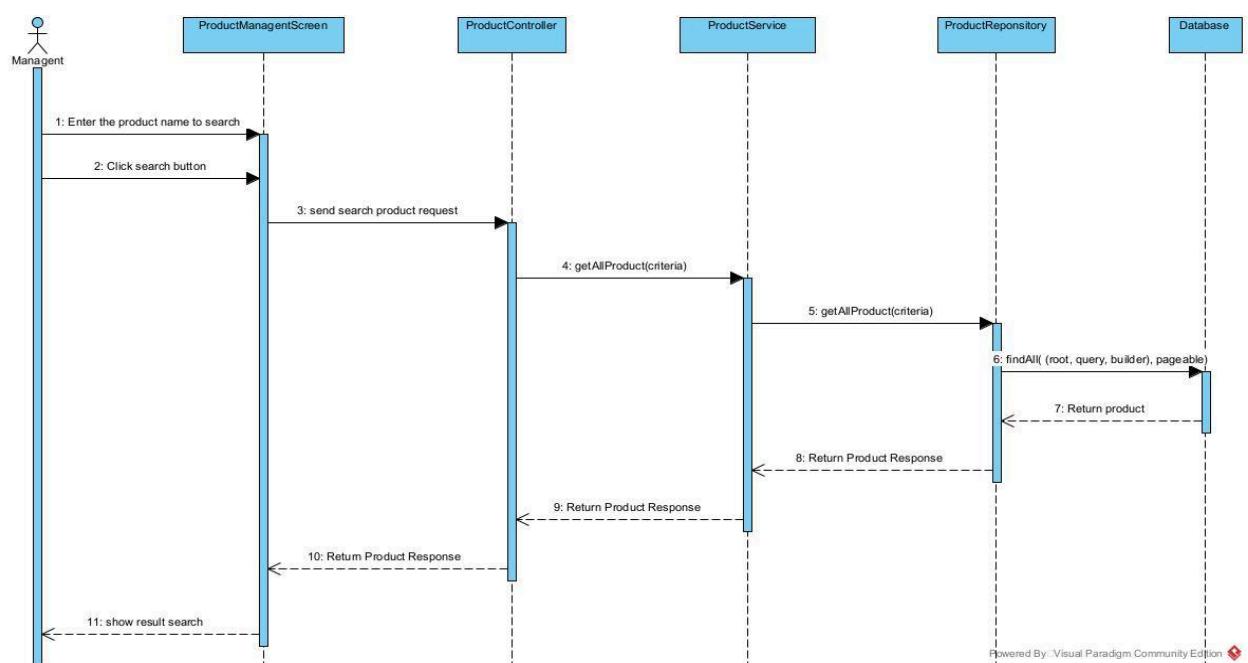


Figure:Search Product Sequence

3.2.4 Create Product

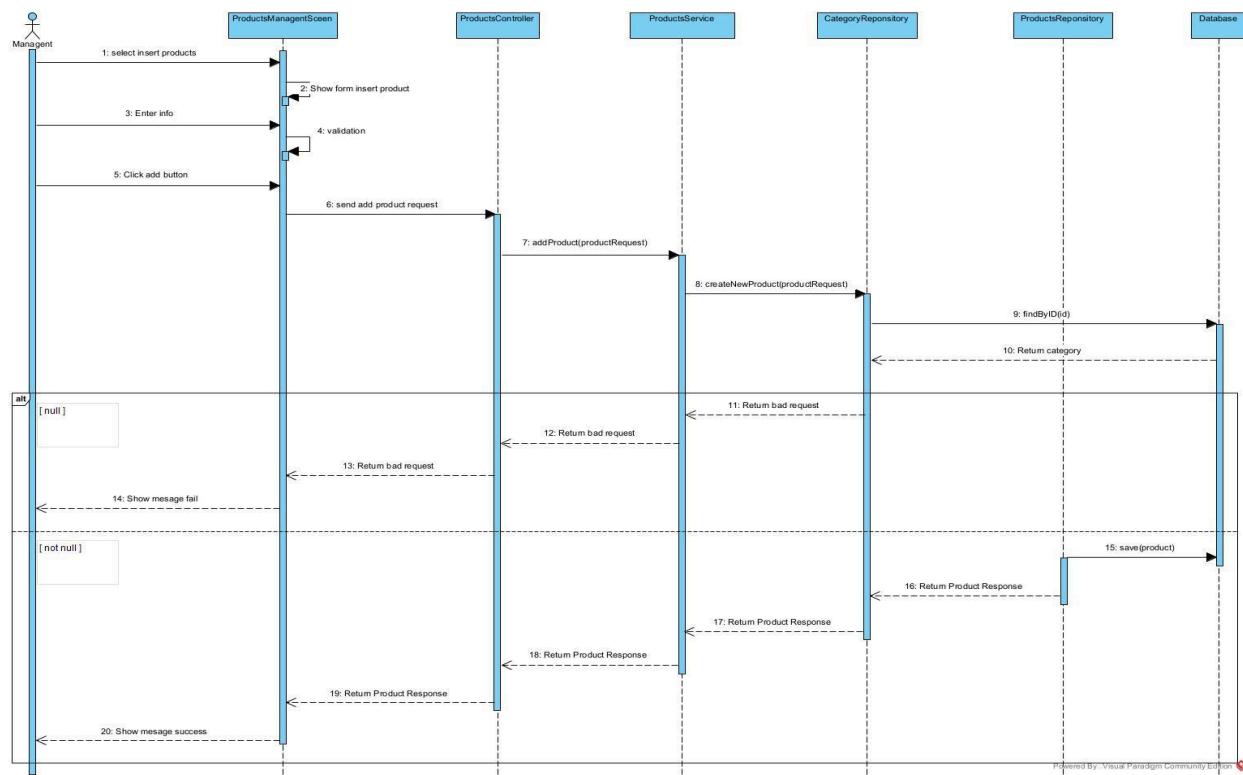


Figure:Create Product Sequence

3.2.5 Detail Product

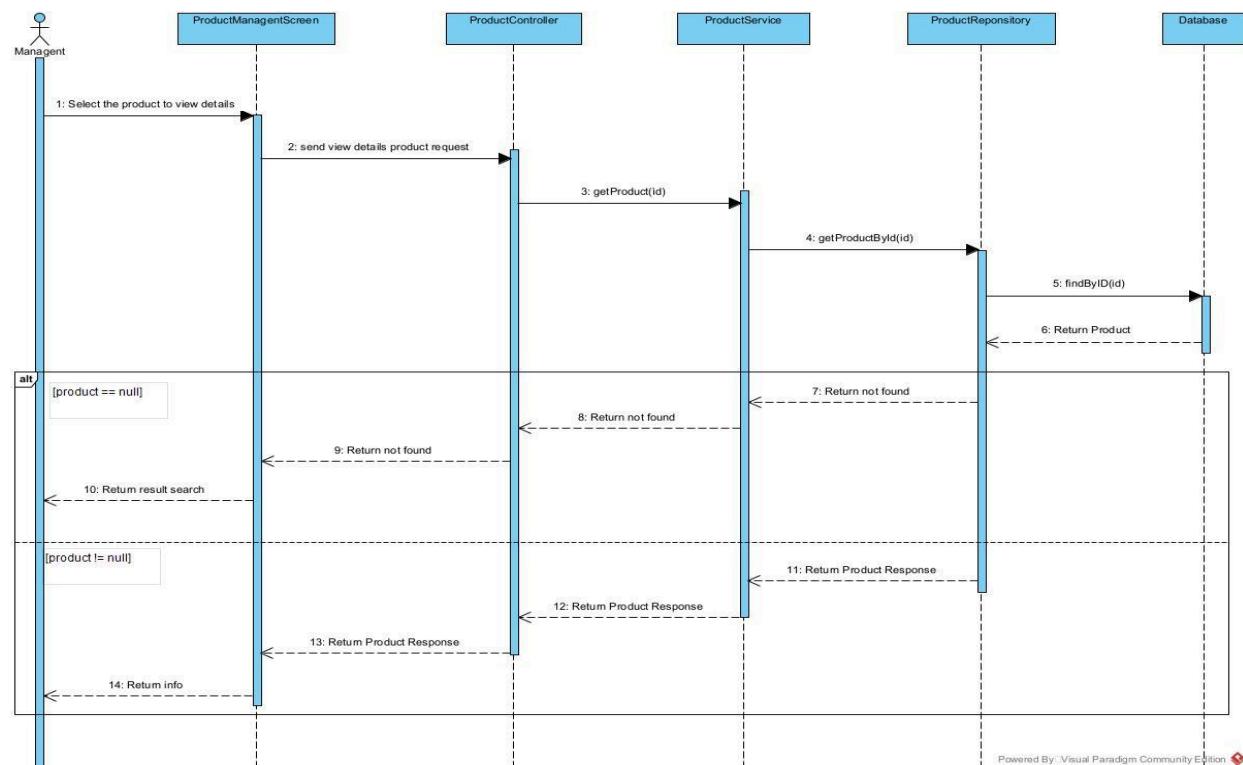


Figure:Detail Product Sequence

3.2.6 Update Product

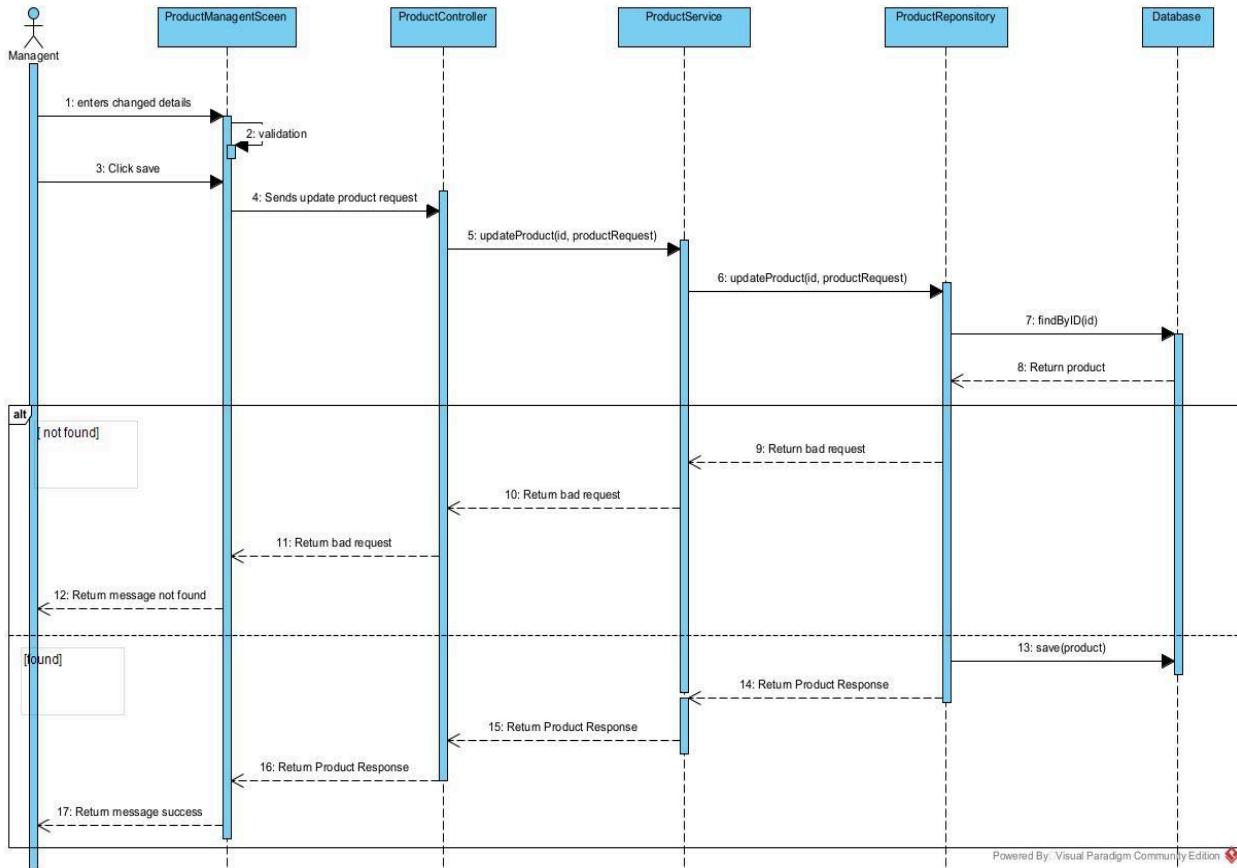


Figure:Update Product Sequence

3.2.7 Delete Product

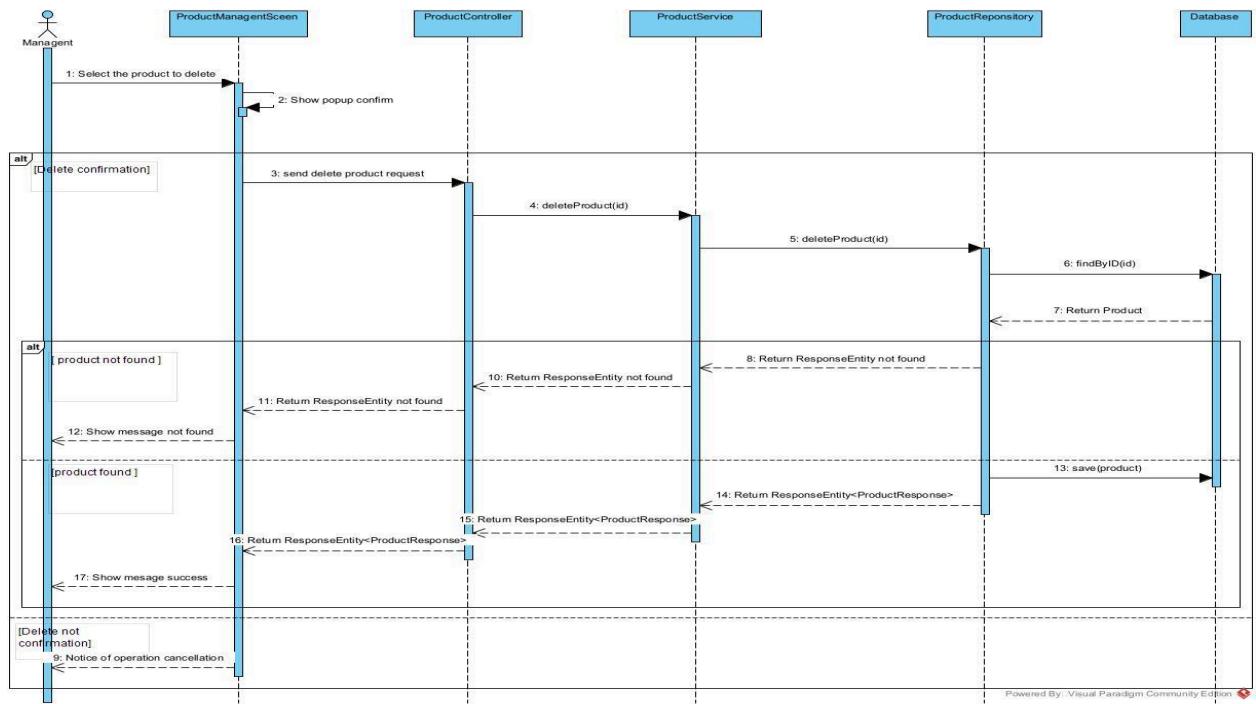


Figure:Delete Product Sequence

3.3 Manage Category

3.3.1 Class Diagram

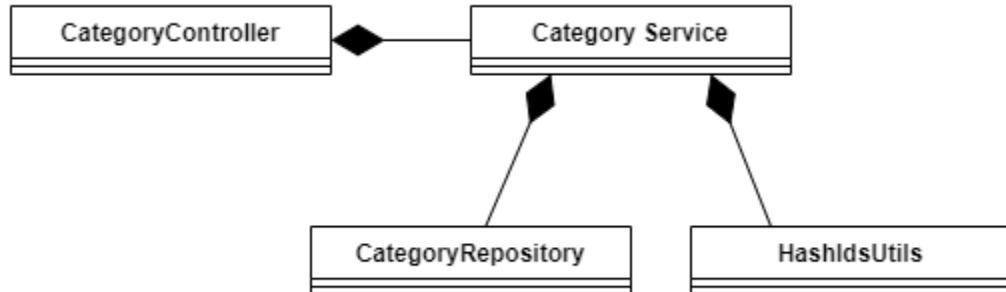


Figure:Category class diagram

3.3.2 View Category

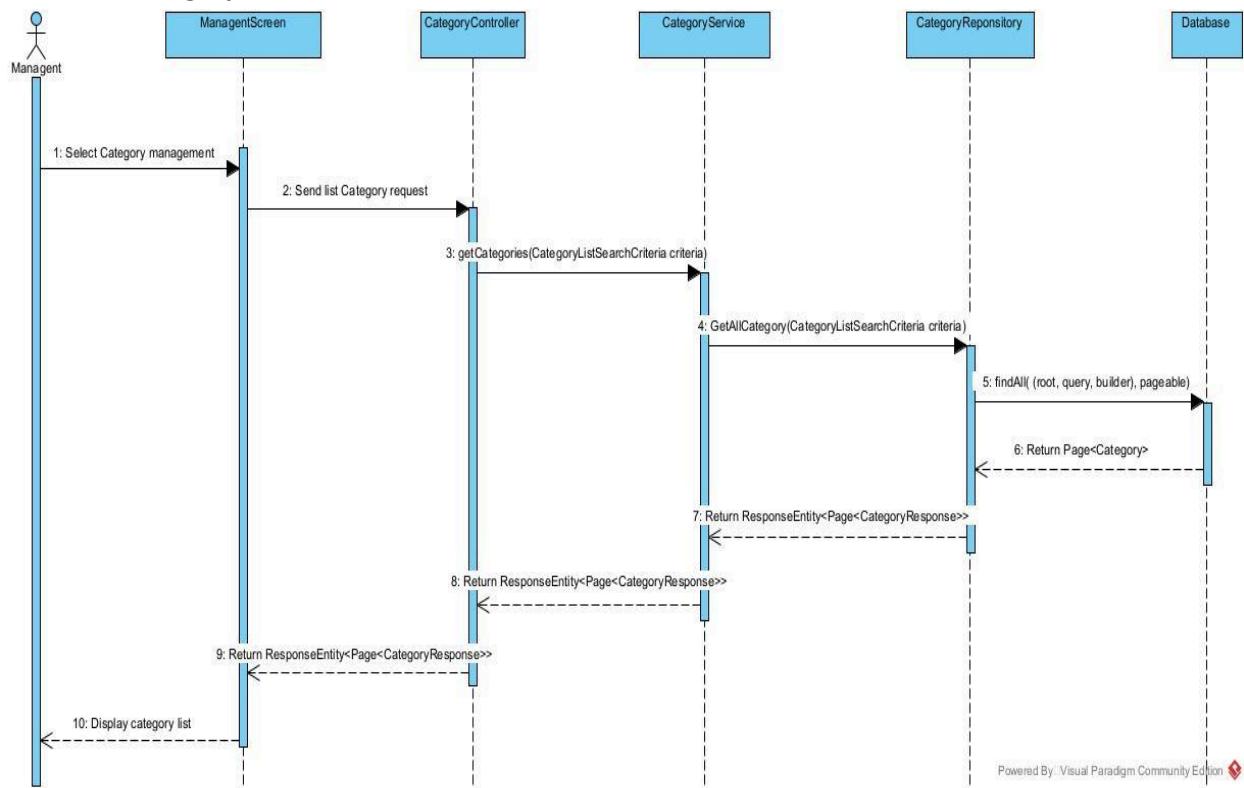


Figure:View Category List Sequence

3.3.3 Search Category

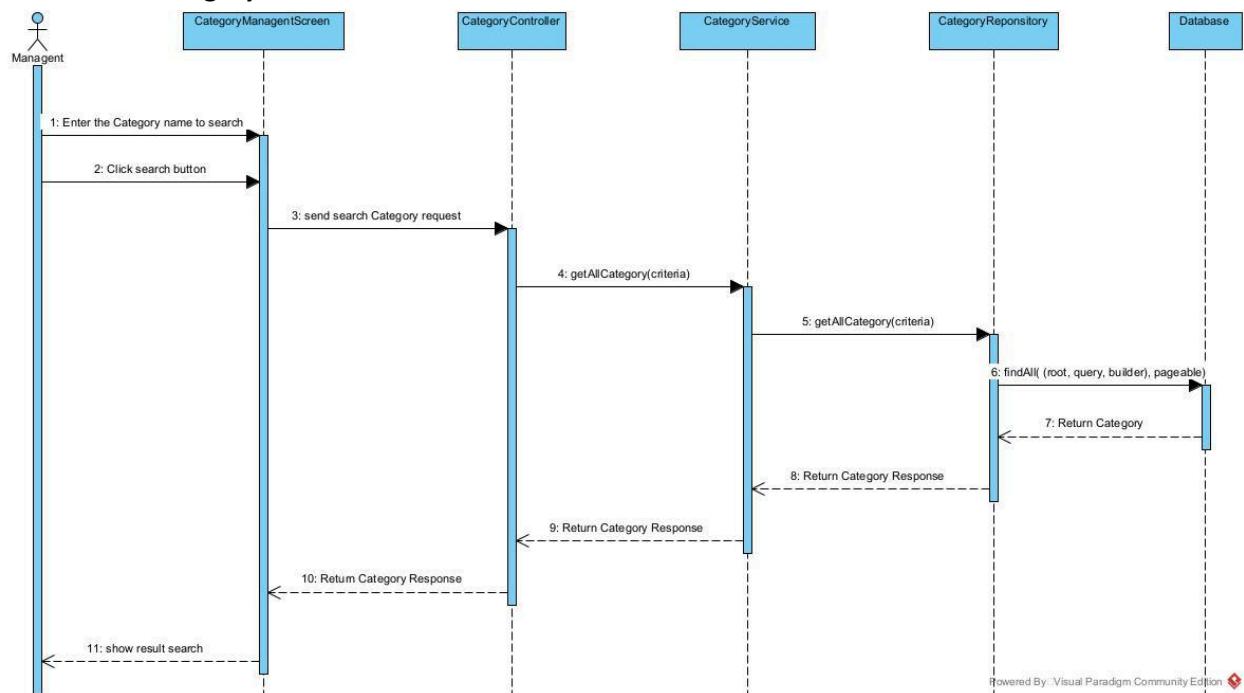


Figure:Search Category Sequence

3.3.4 Create Category

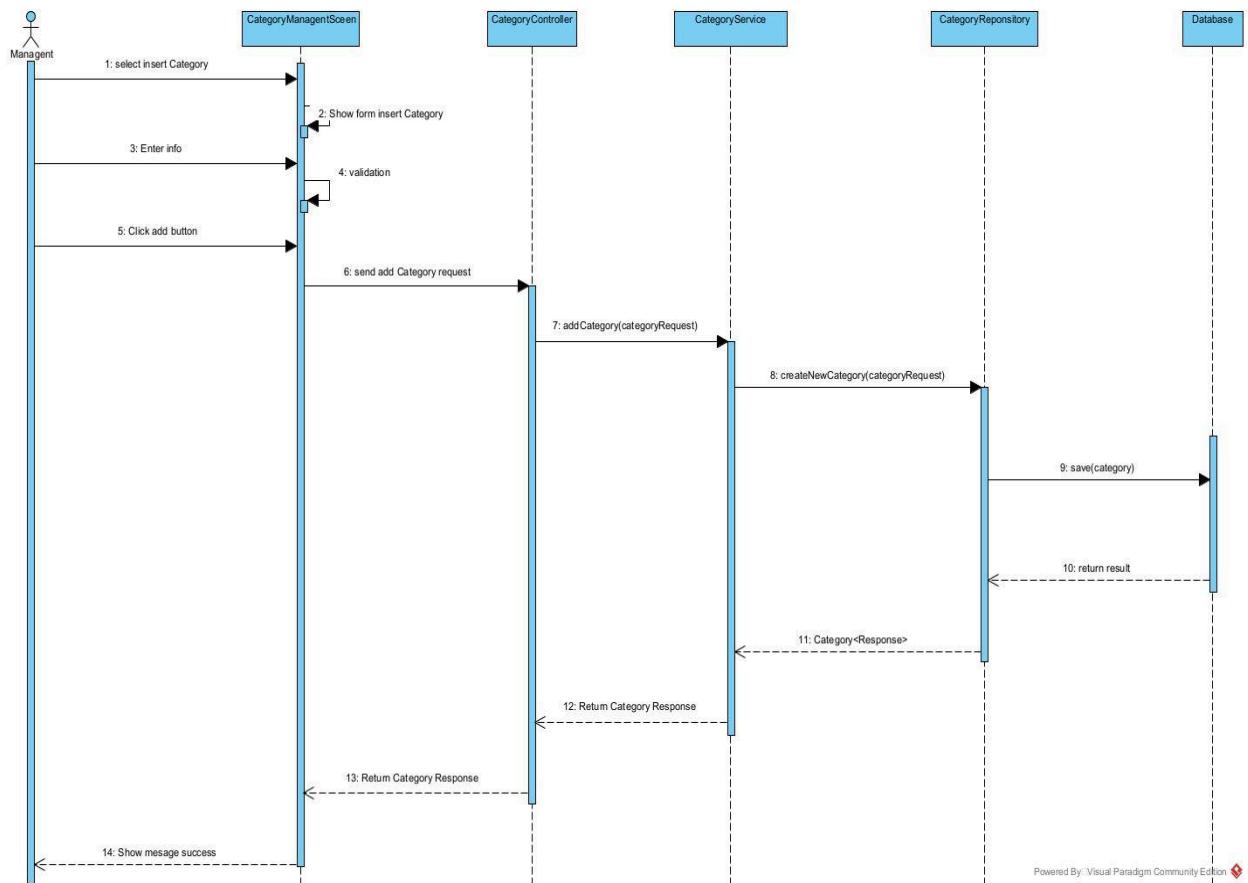


Figure:Create Category Sequence

3.3.5 Detail Category

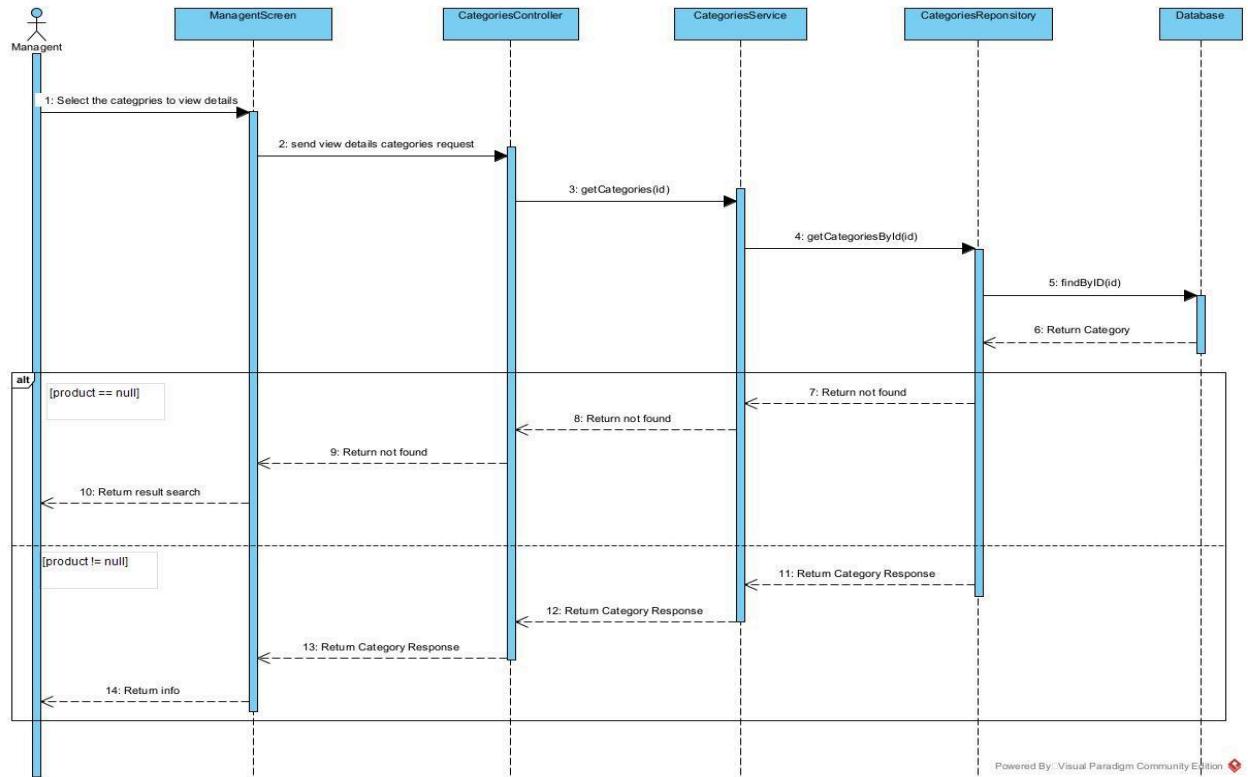


Figure:Detail Category Sequence

3.3.6 Update Category

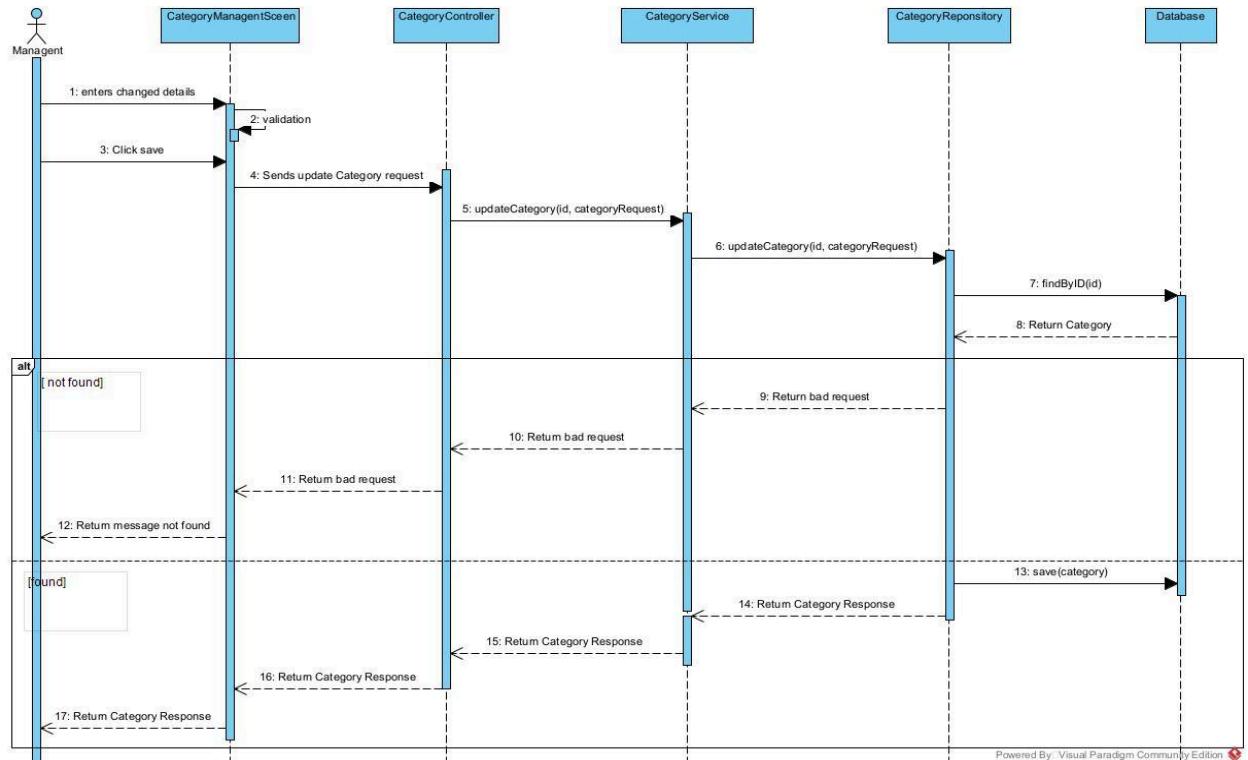


Figure:Update Category Sequence

3.3.7 Delete Category

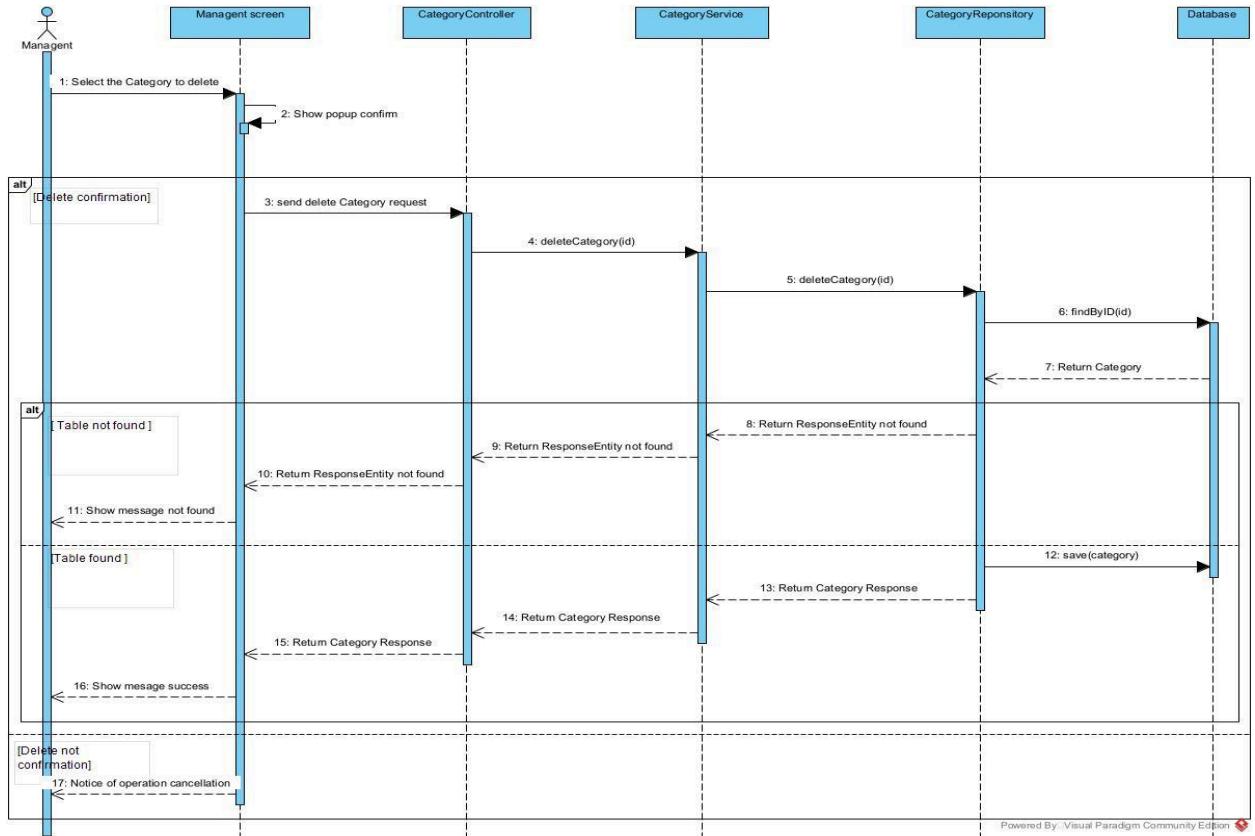


Figure:Delete Category Sequence

3.4 Manage Table

3.4.1 Class Diagram

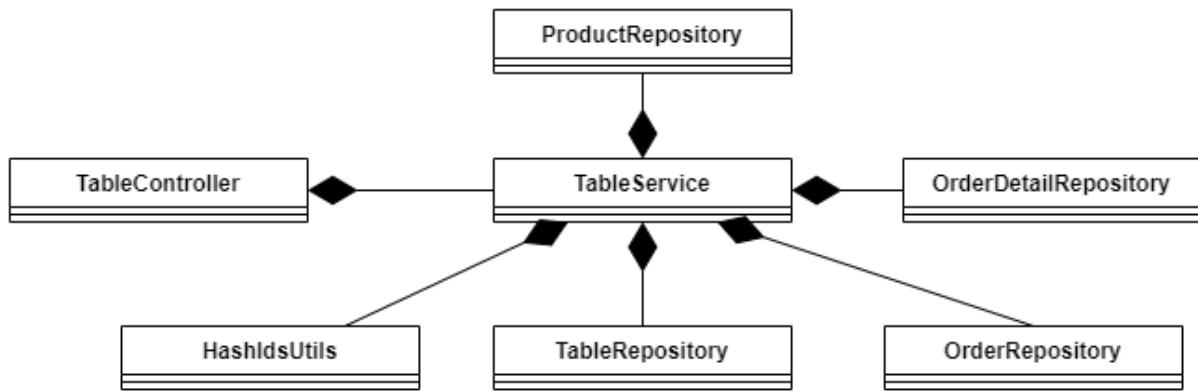


Figure:Table Class Diagram

3.4.2 View Table

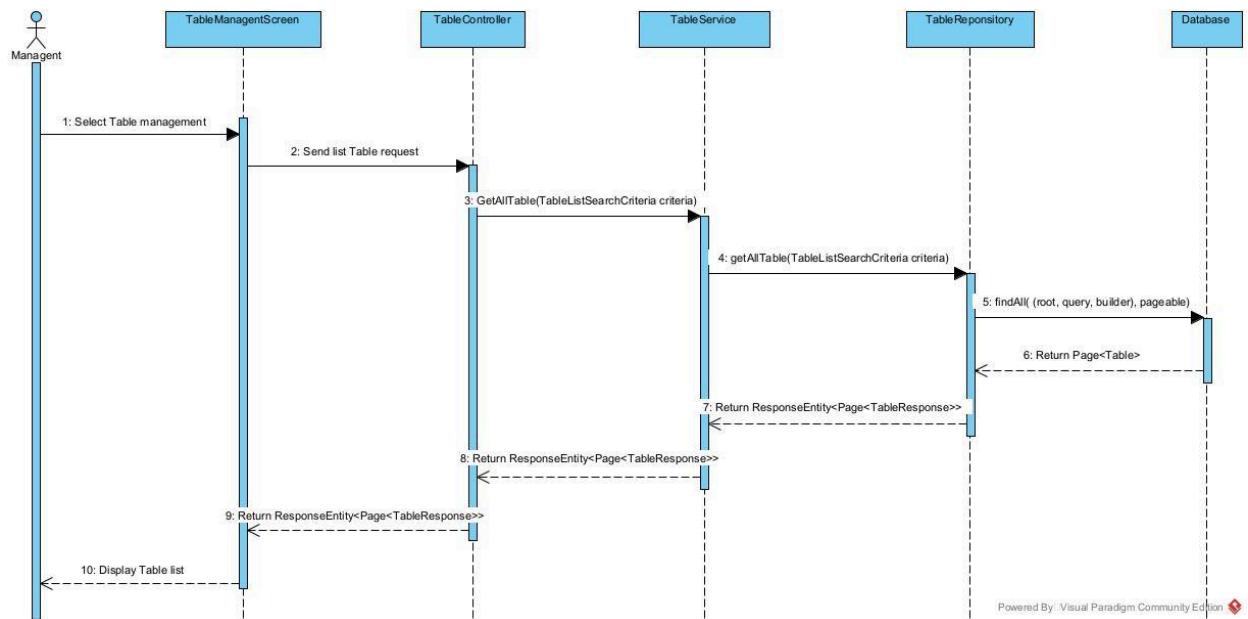
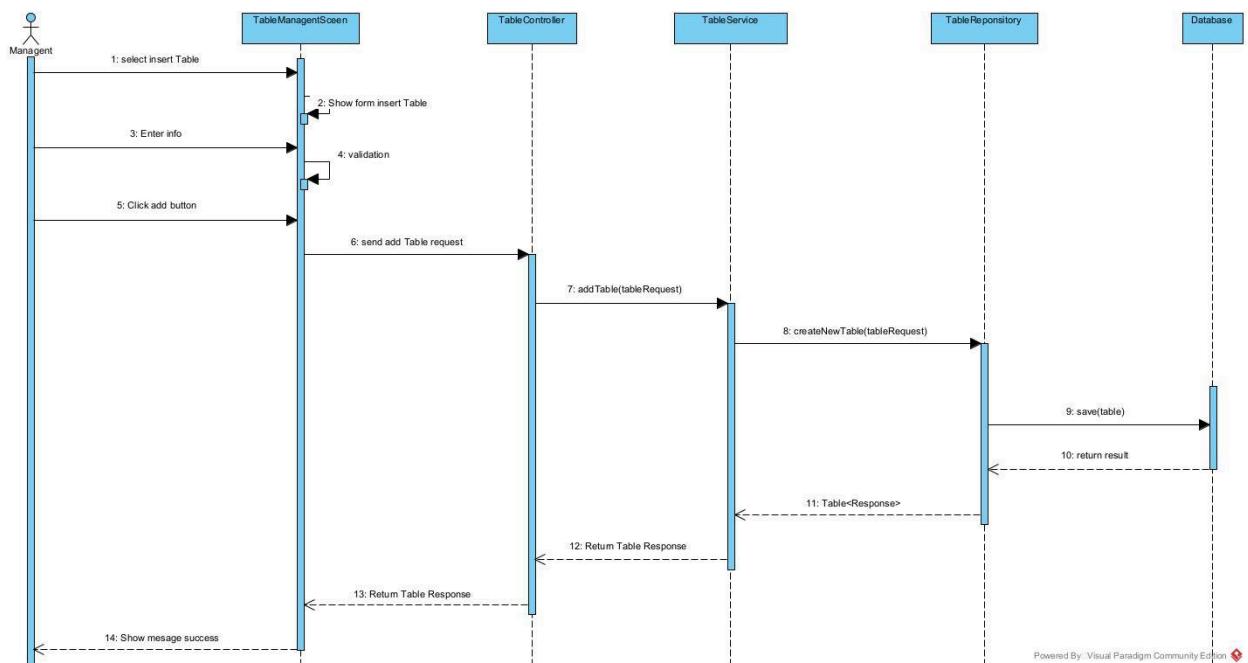


Figure:View Table List Sequence

3.4.3 Create Table



Figure>Create TableSequence

3.4.4 Detail Table

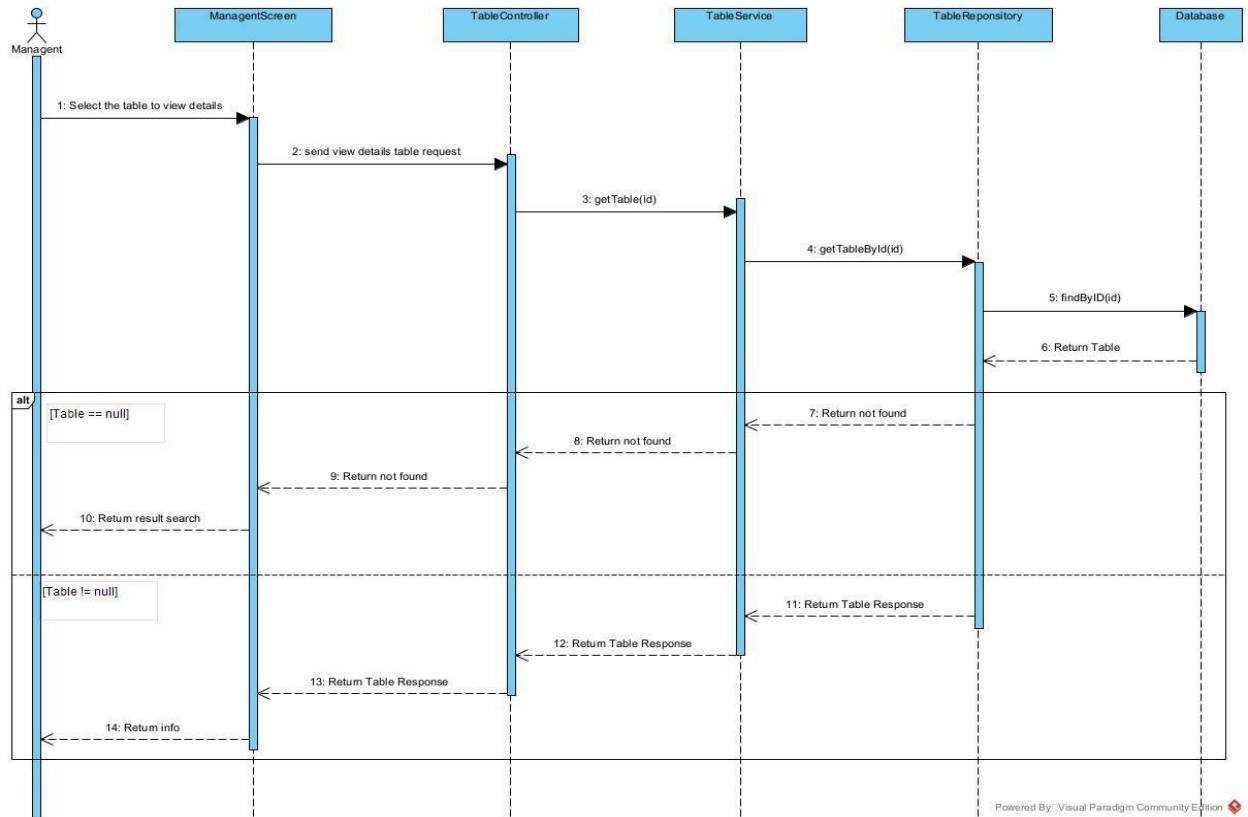


Figure:Detail Table Sequence

3.4.5 Update Table

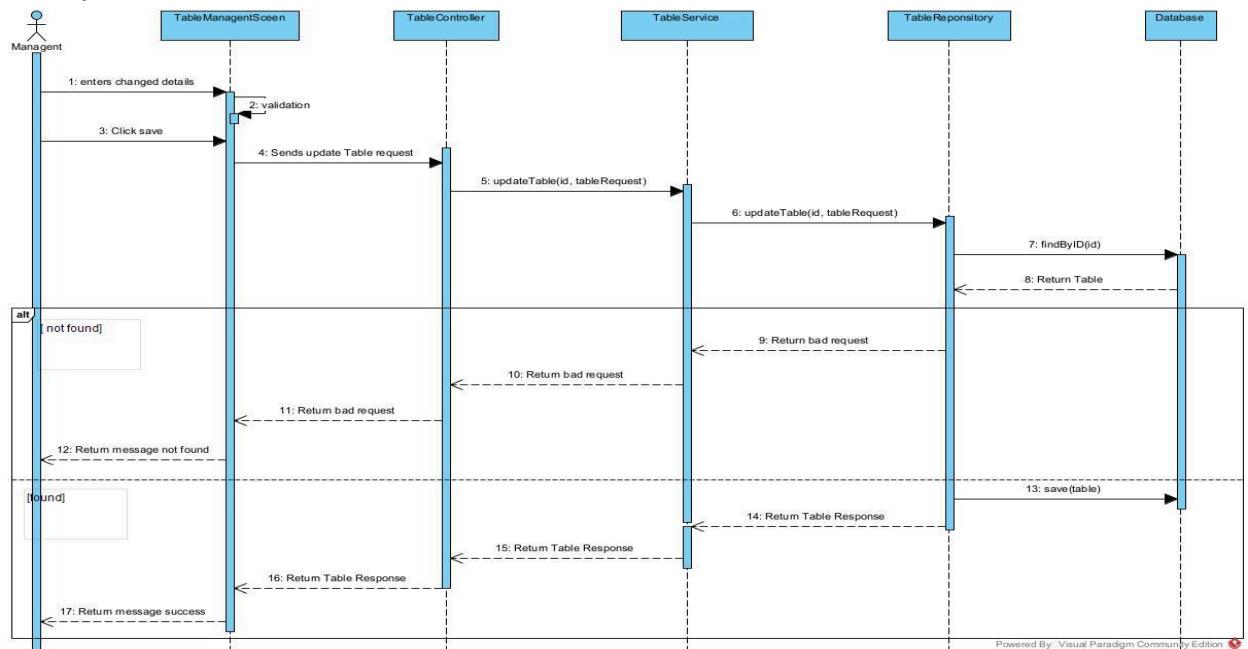


Figure: Update Table Sequence

3.4.6 Delete Table

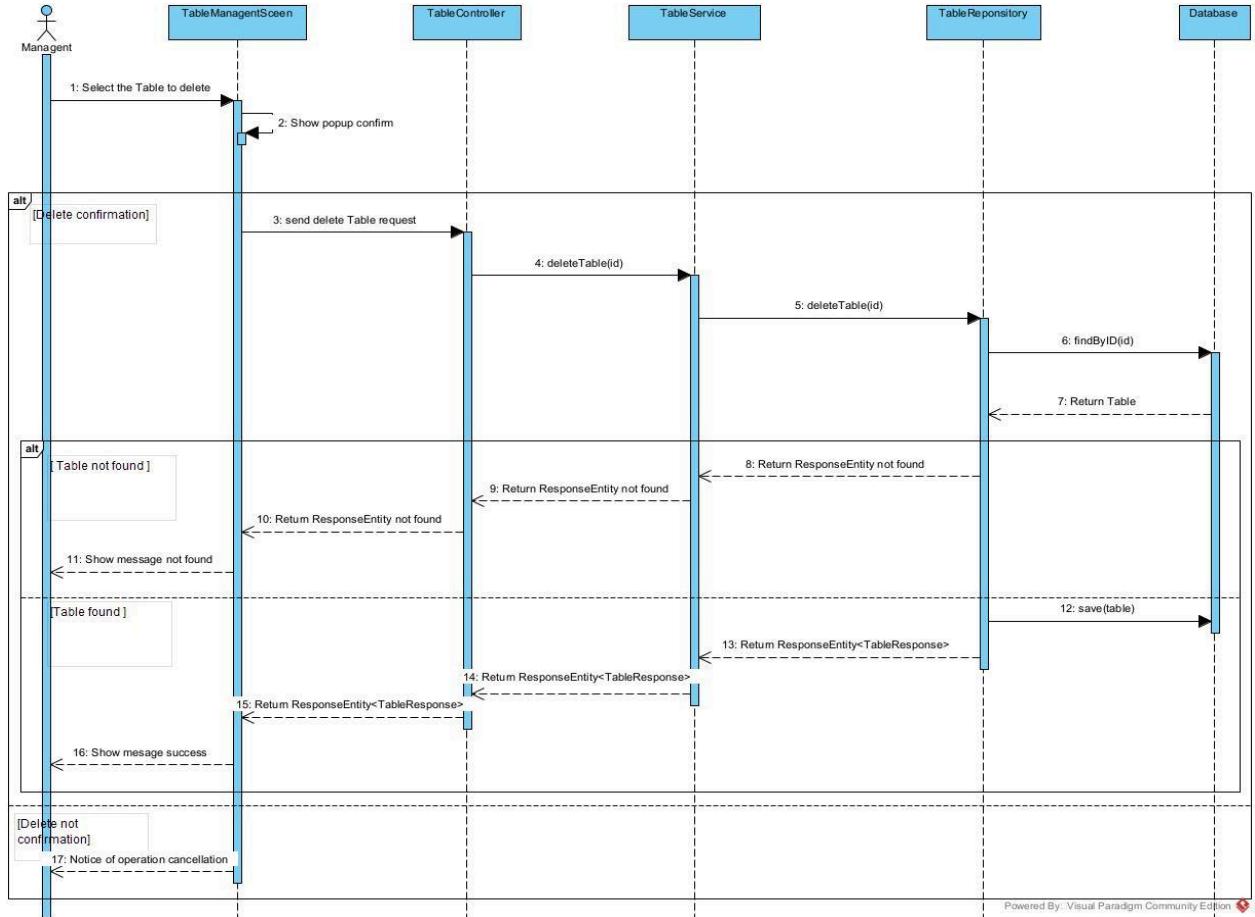


Figure: Delete Table Sequence

3.5 Manage Account

3.5.1 Class Diagram

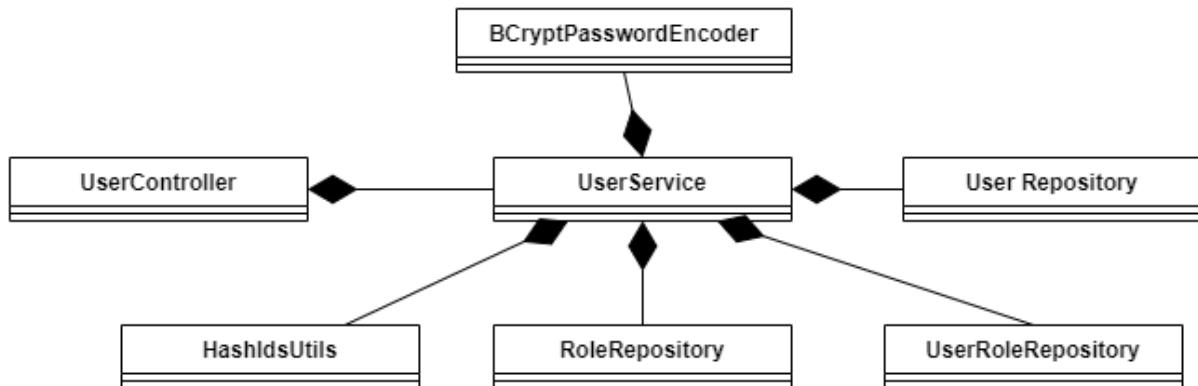


Figure: User Class Diagram

3.5.2 View Account

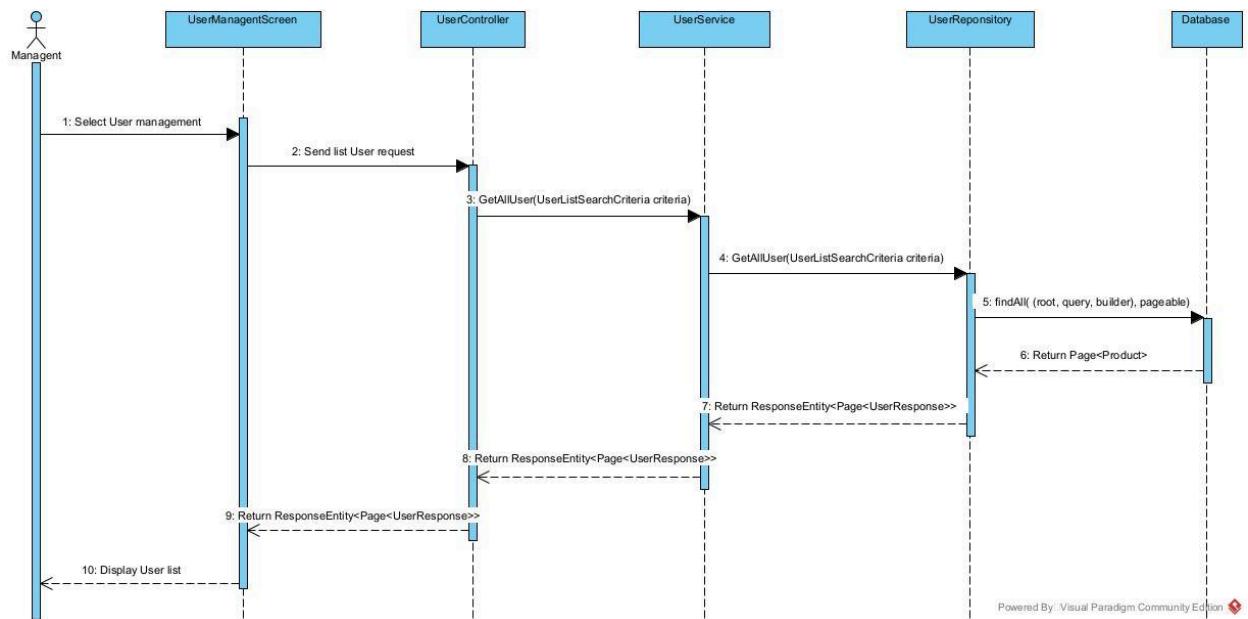


Figure: View Account Sequence

3.5.3 Search Account

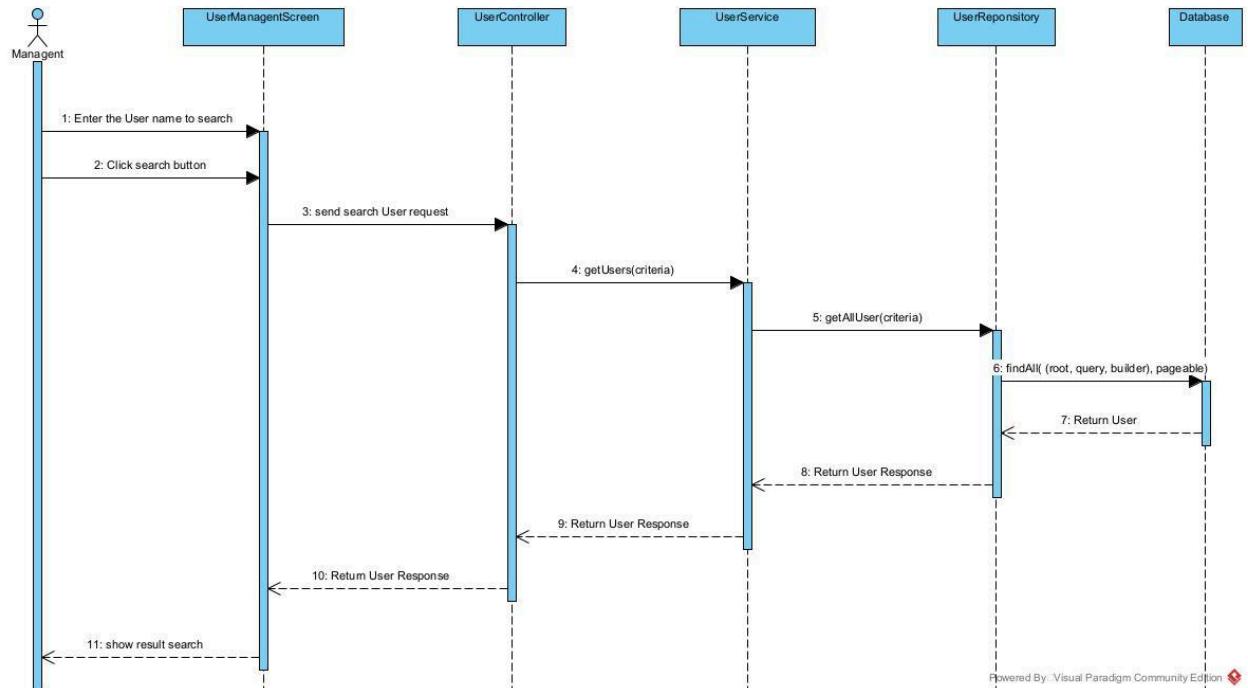


Figure: Search Account Sequence

3.5.4 Create Account

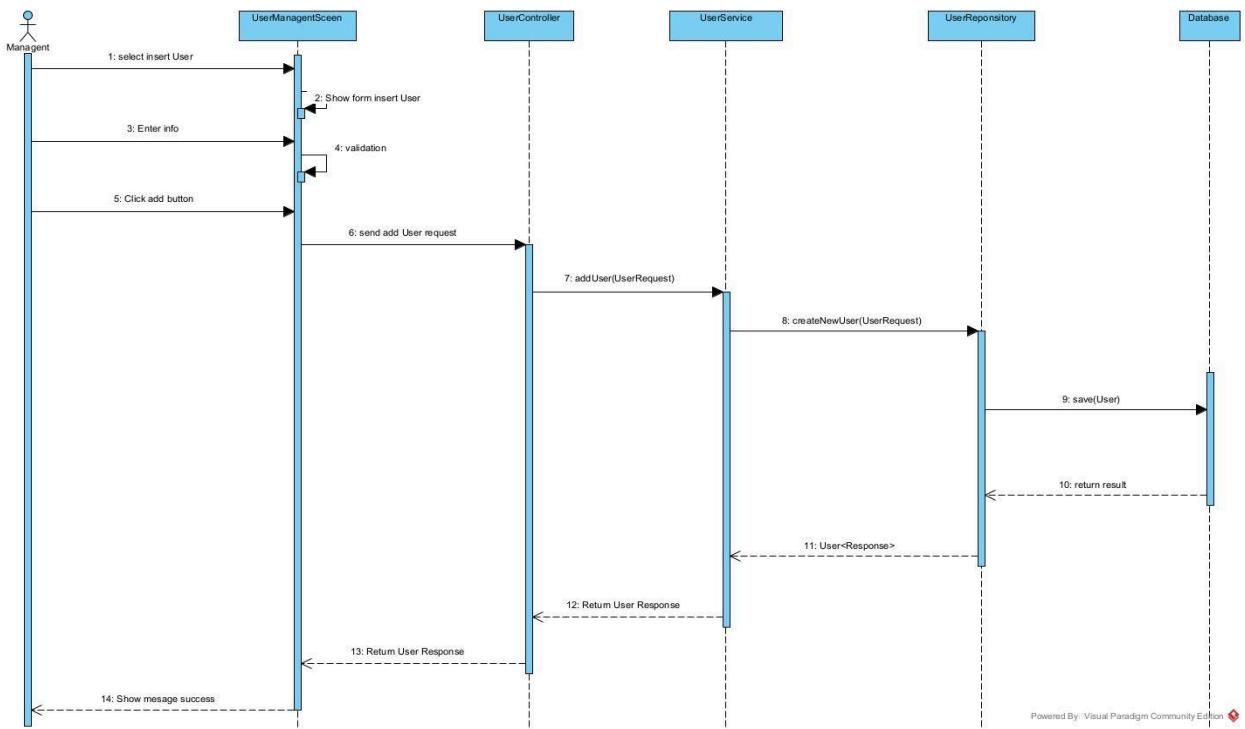


Figure: Create Account Sequence

3.5.5 Detail Account

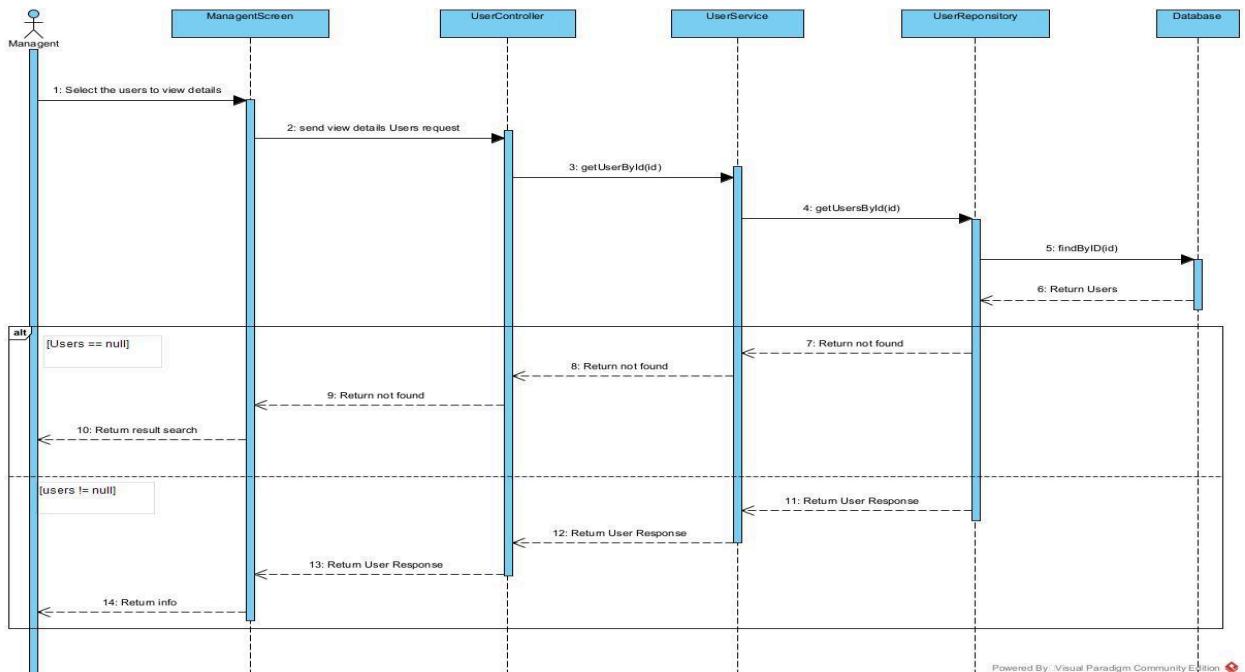


Figure: Detail Account Sequence

3.5.6 Update Account

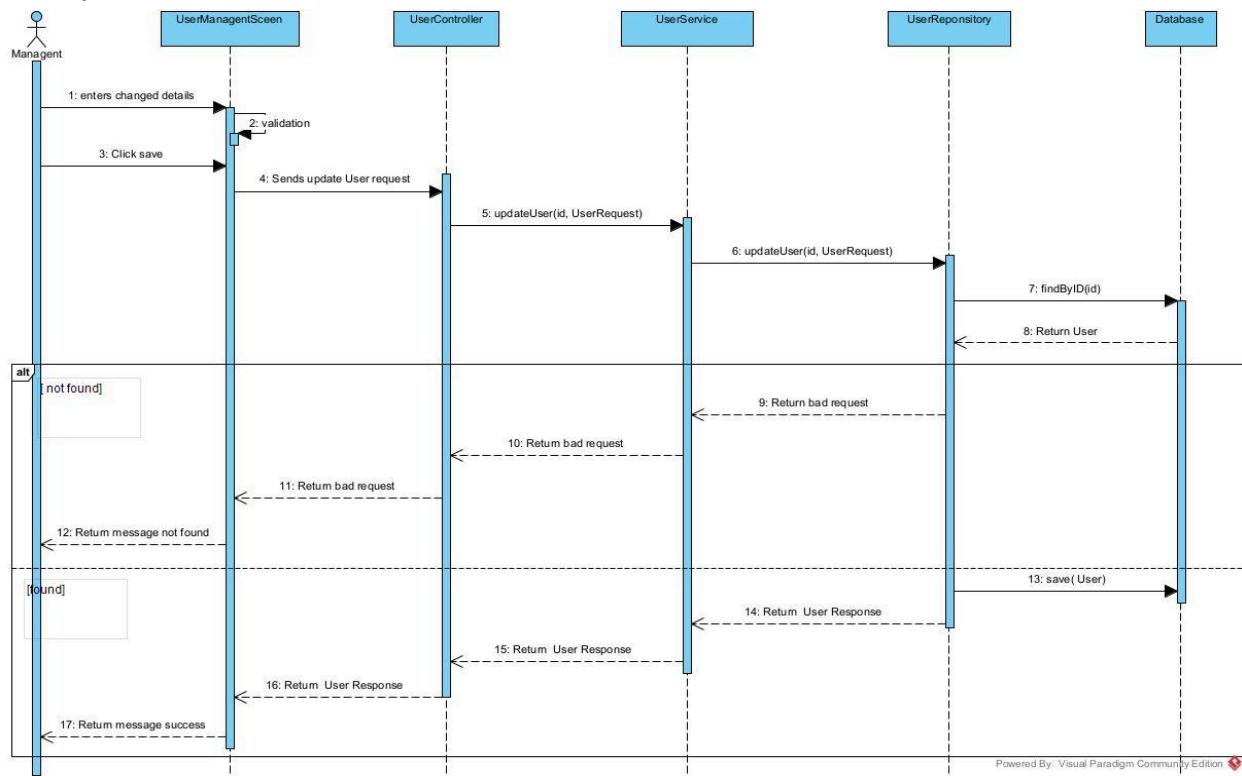


Figure: Update Account Sequence

3.5.7 Delete Account

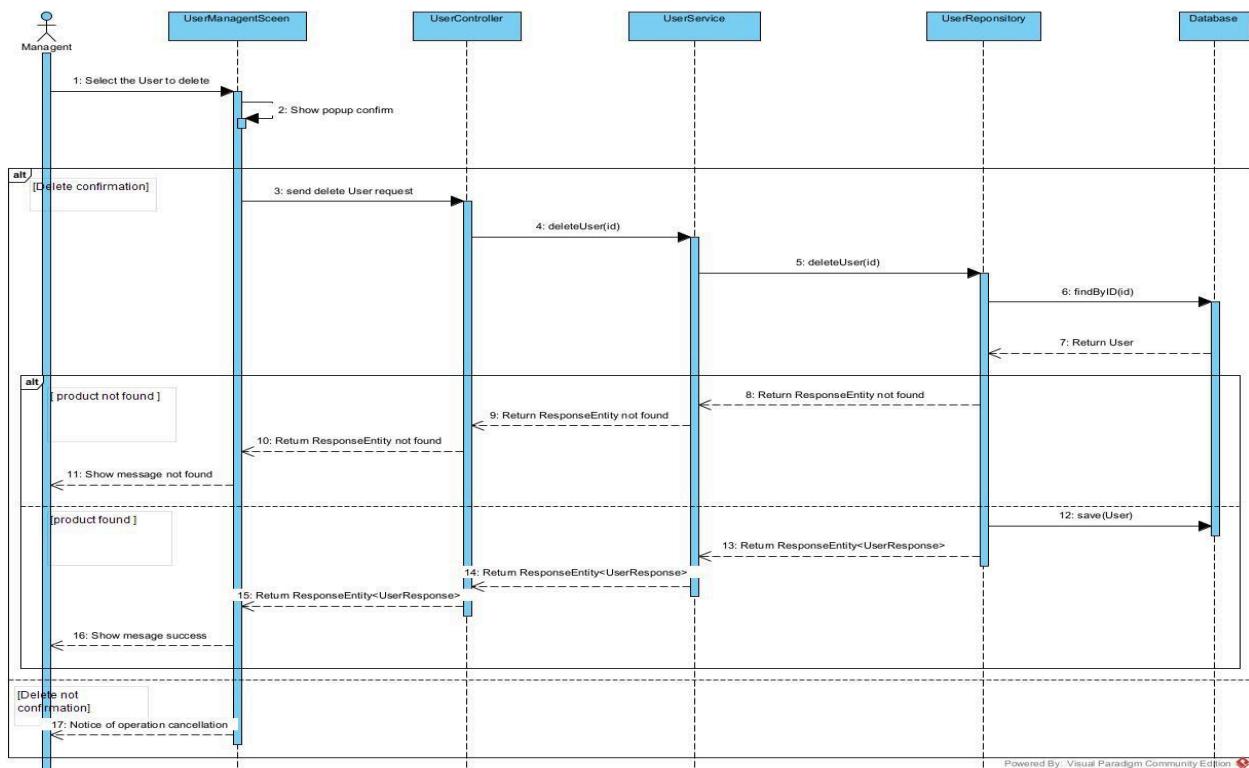


Figure: Delete Account Sequence

3.6 Manage Order

3.6.1 Class Diagram

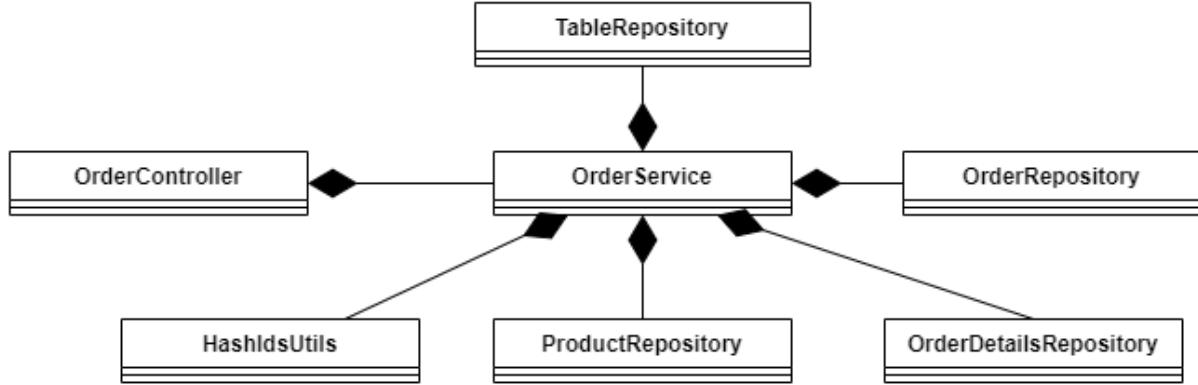


Figure: Order Class Diagram

3.6.2 View Order

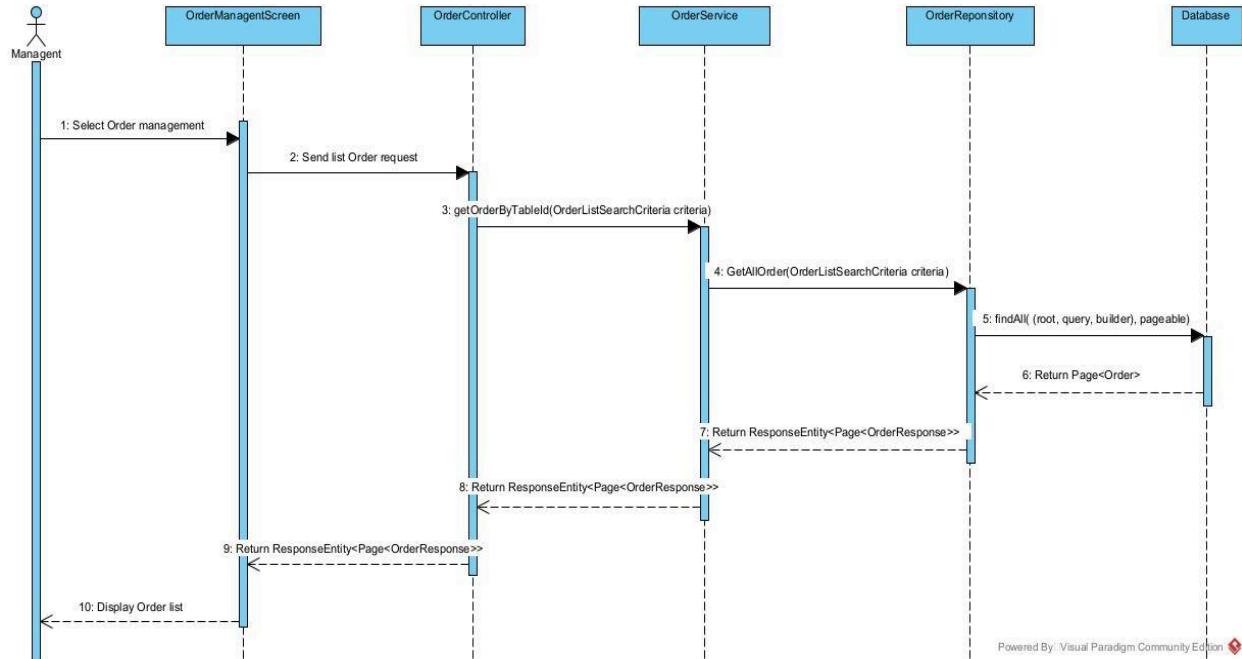


Figure: View Order List Sequence

3.6.3 Detail Order

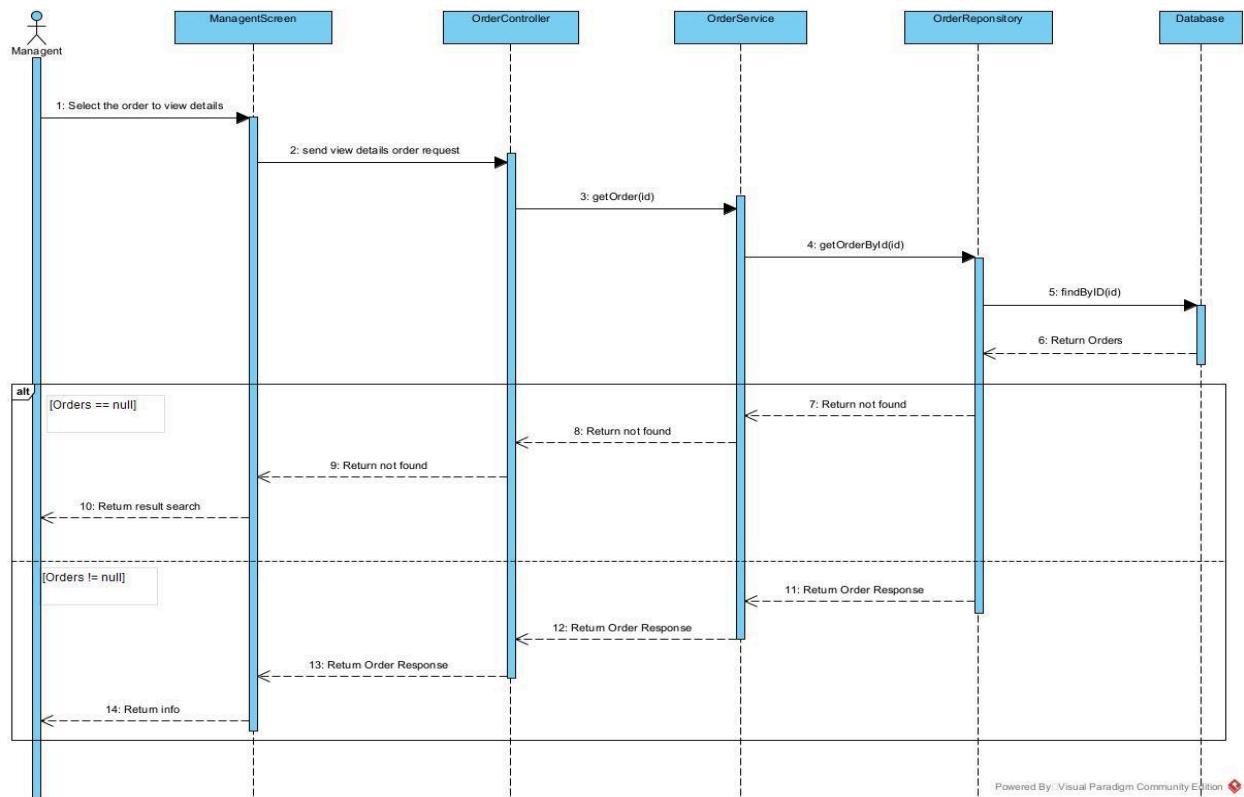


Figure: Detail Order Sequence

3.6.5 Search Order

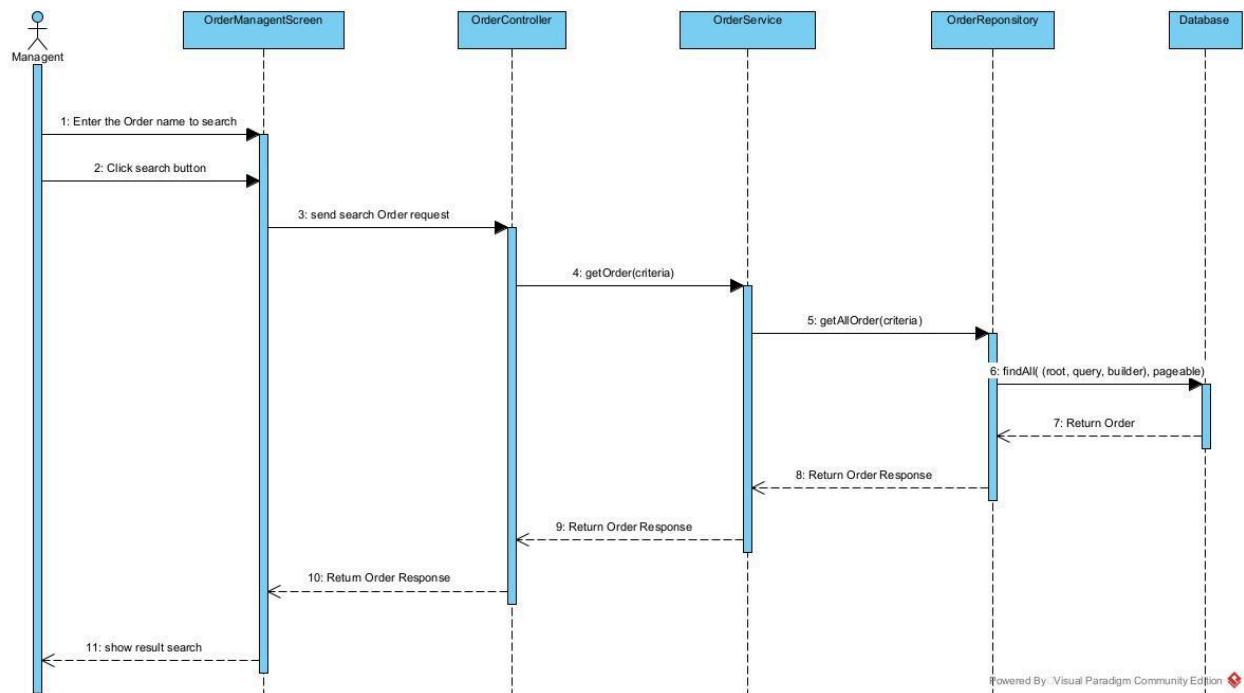


Figure: Search Order Sequence

3.6.6 Delete Order

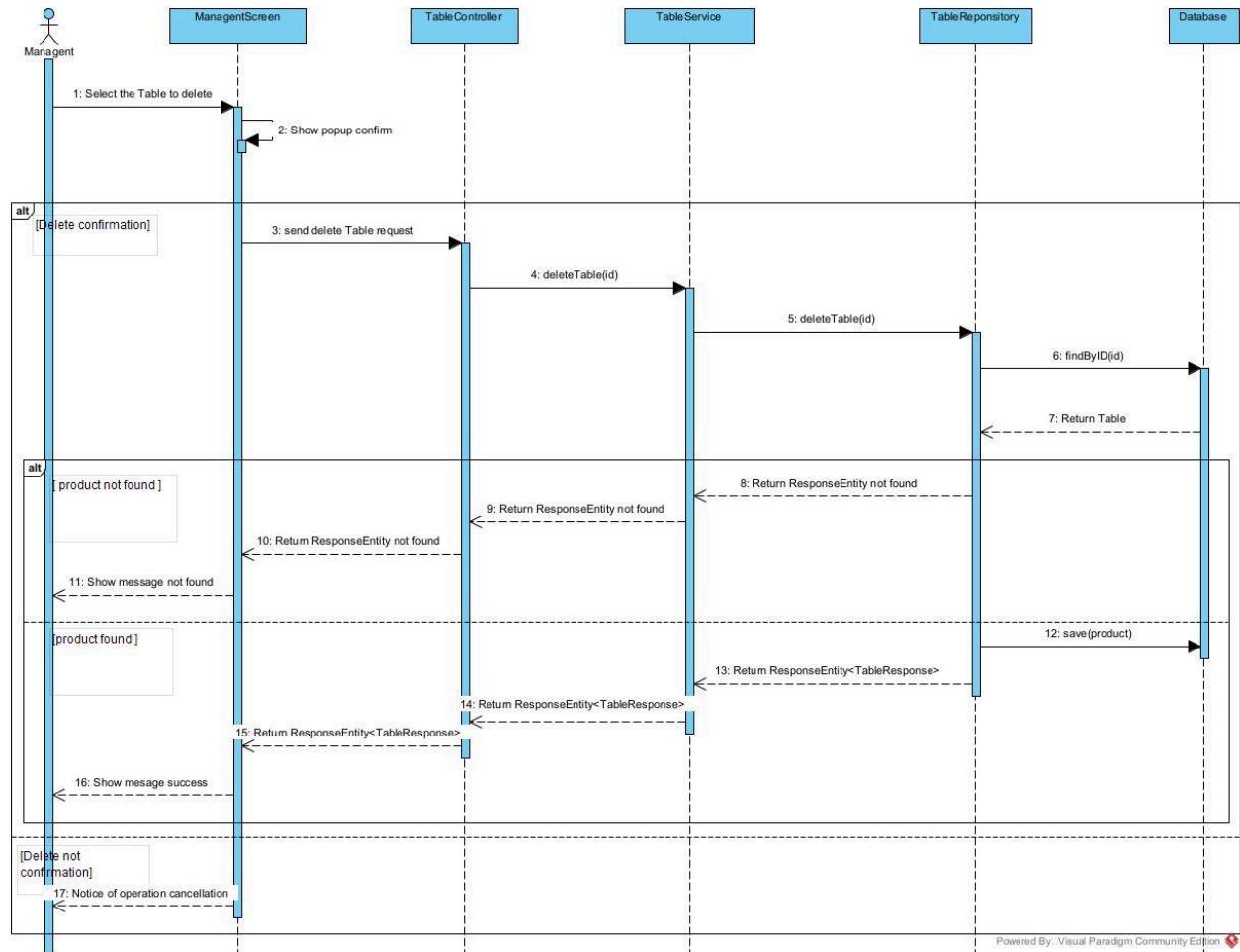


Figure: Delete Order Sequence

3.7. Waiter

3.7.1 Class Diagram

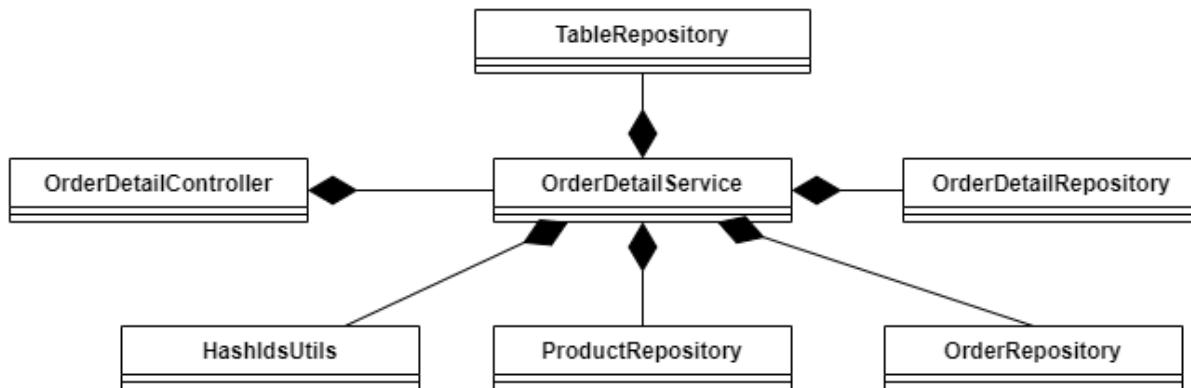


Figure: OrderDetail Class Diagram

3.7.2 Update Order Status

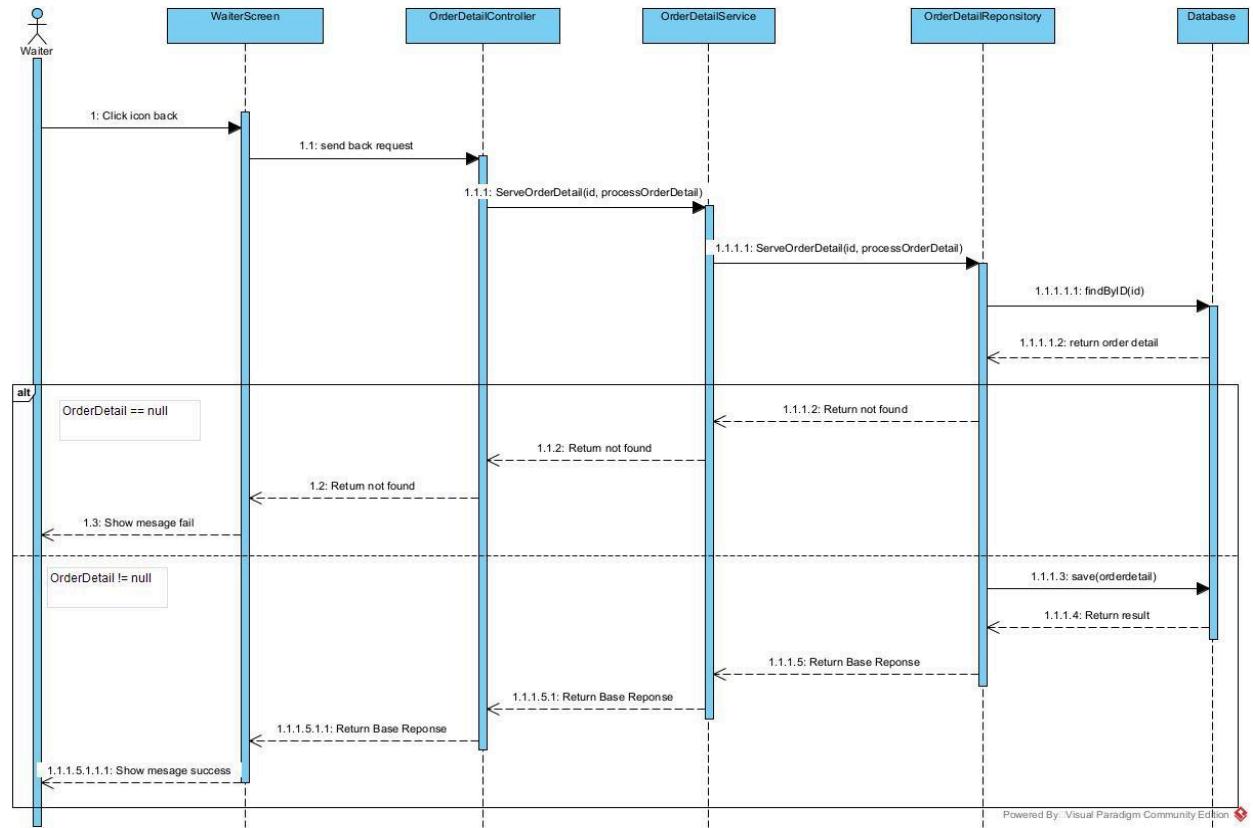


Figure: Change status of order from waiting to served Sequence

3.7.3 Update Order Status

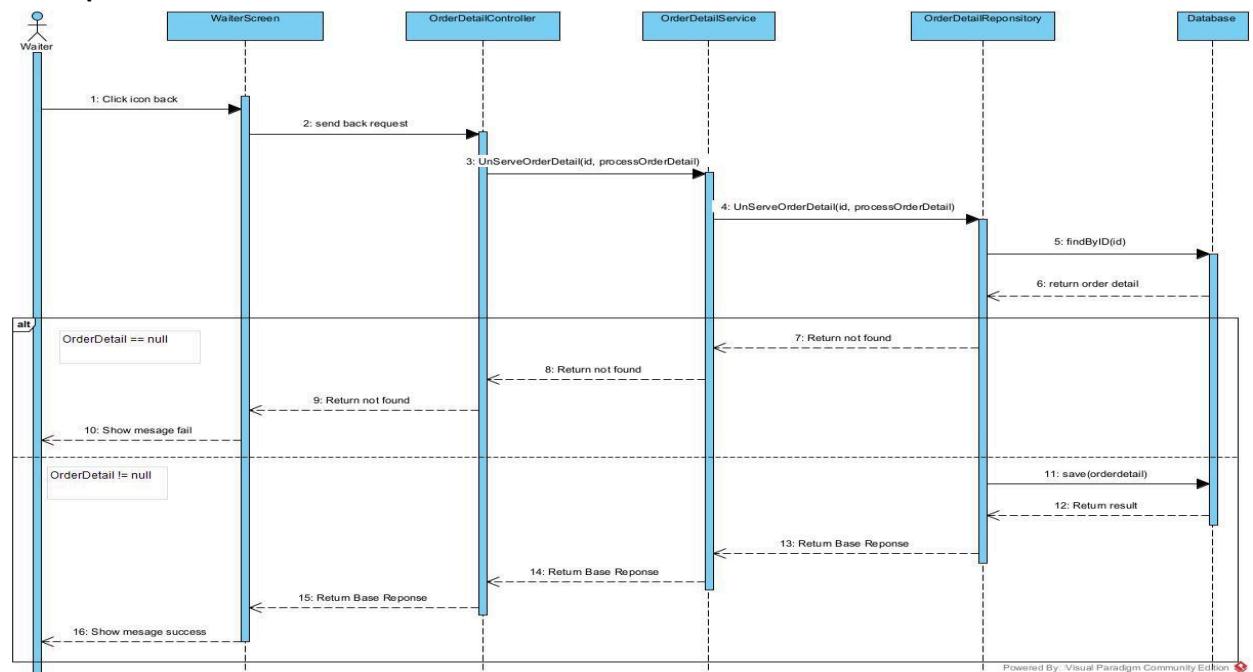


Figure: Change status of order served to waiting Sequence

3.7.4 View Table List

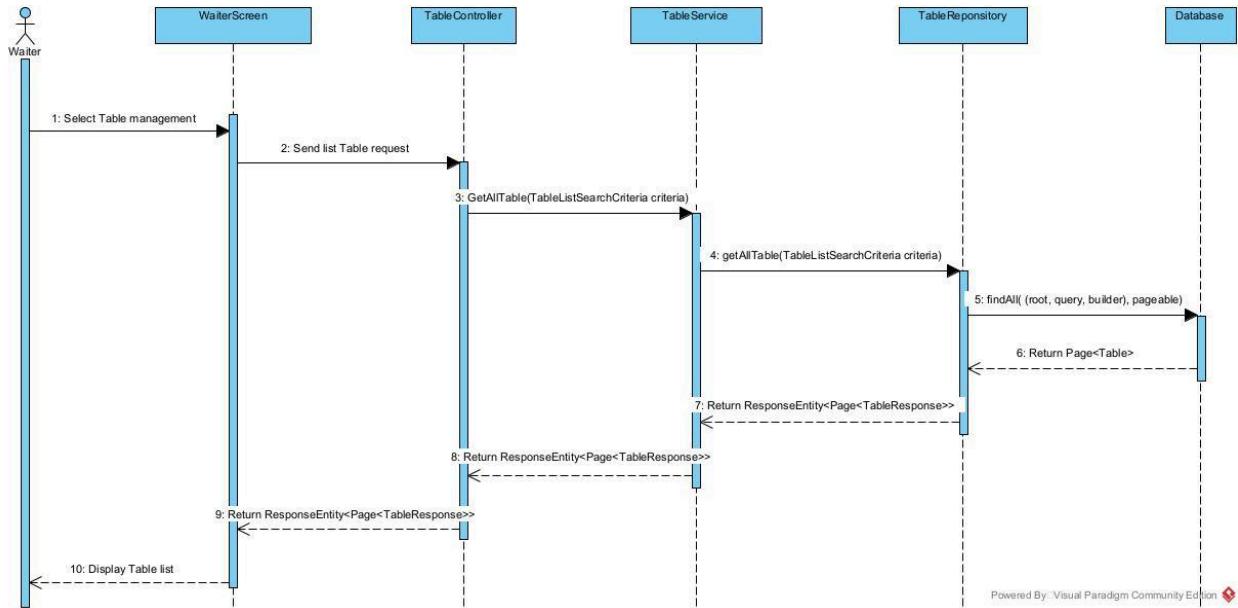


Figure: View Table List Sequence

3.7.5 Filter Table

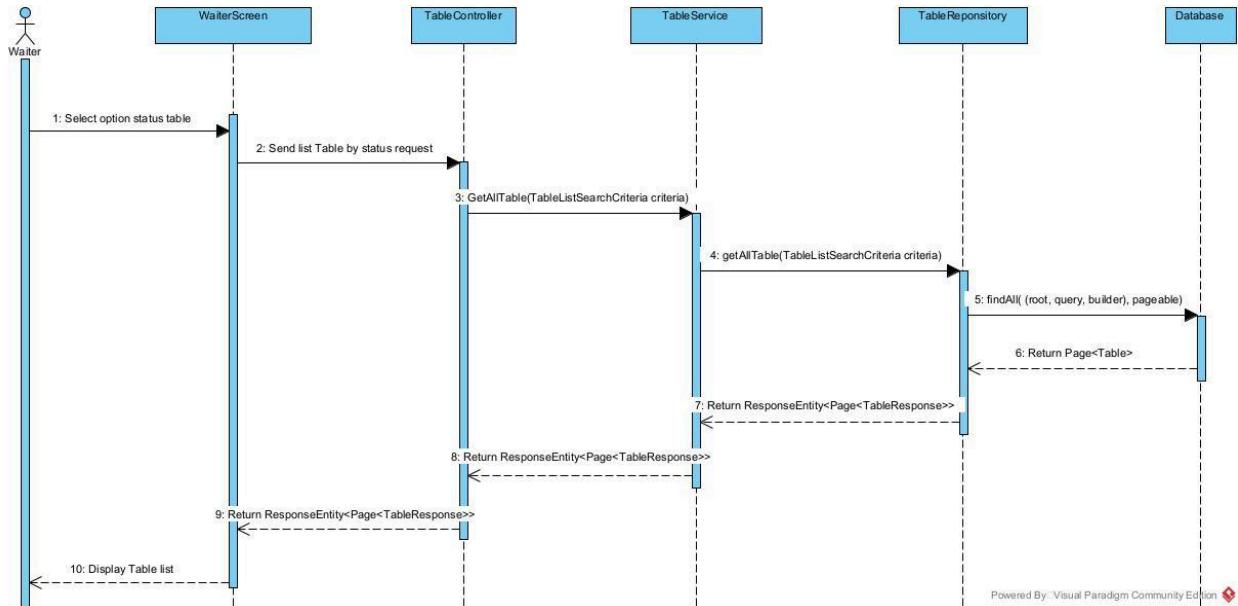


Figure: Filter table by status Sequence

3.7.6. Create Order

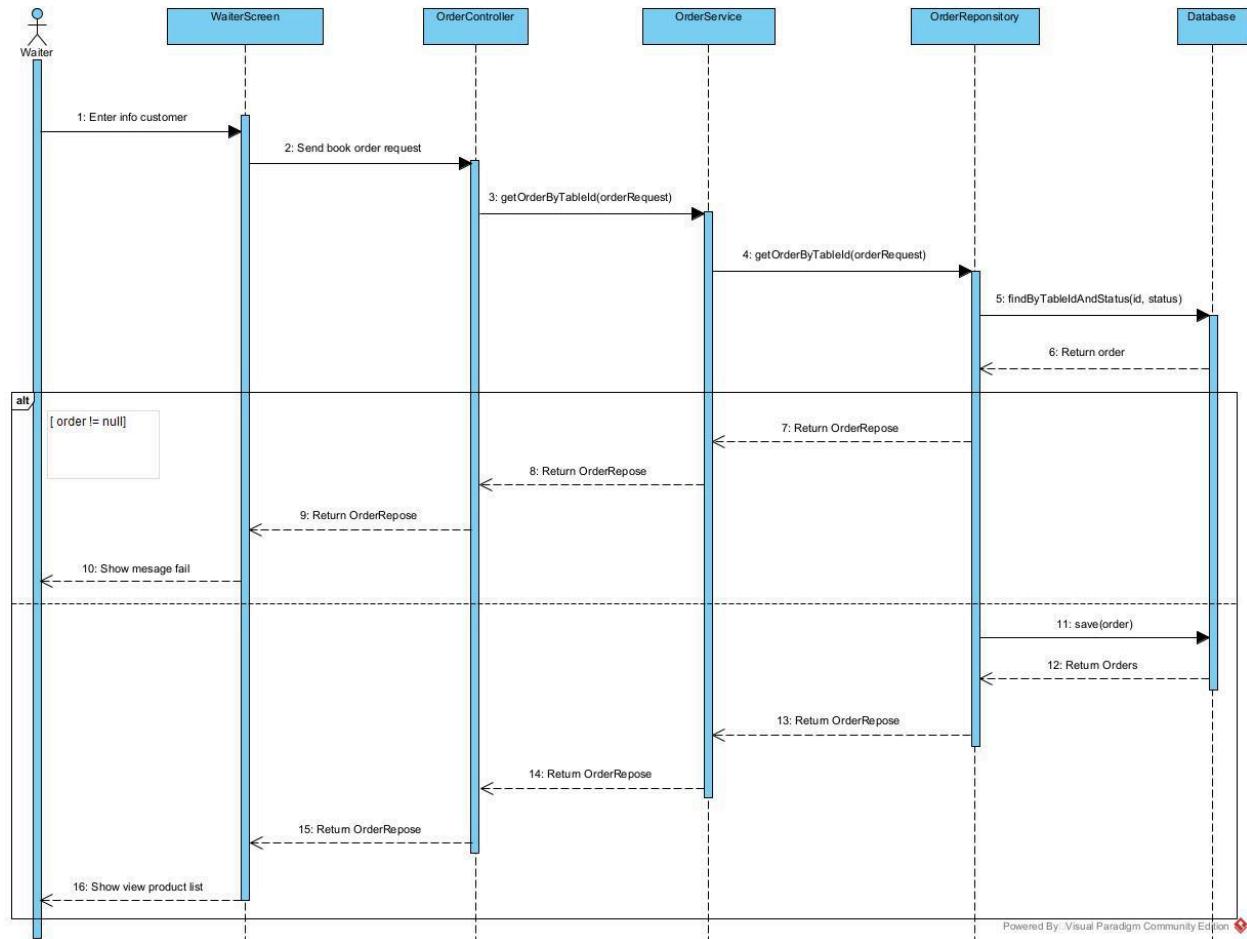


Figure: Create Order Sequence

3.7.7 Filter Menu

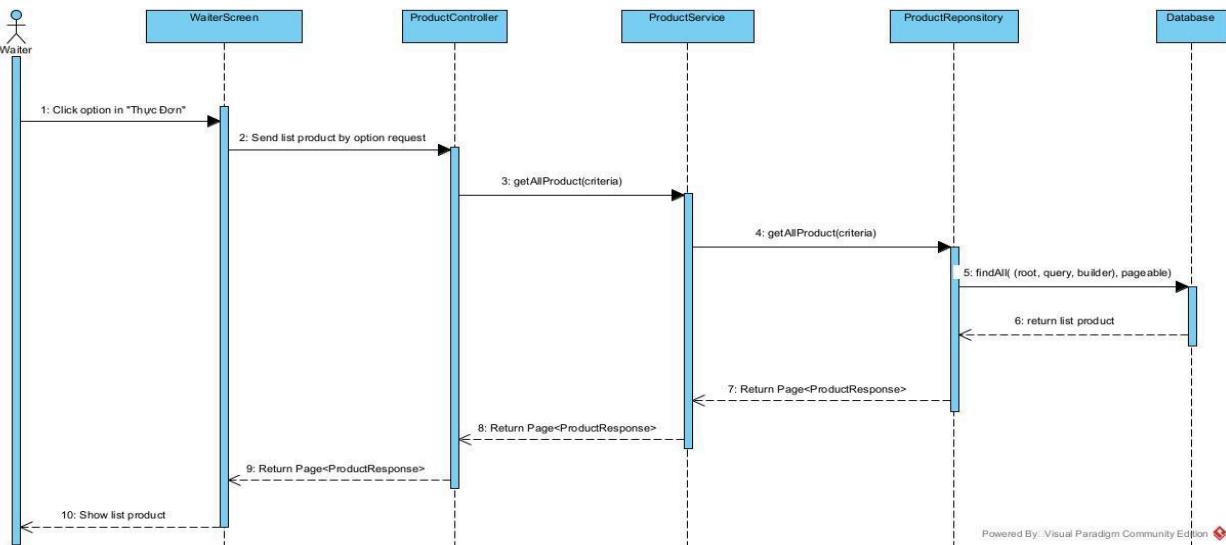


Figure: Filter Menu Sequence

3.7.8 View Order Dish

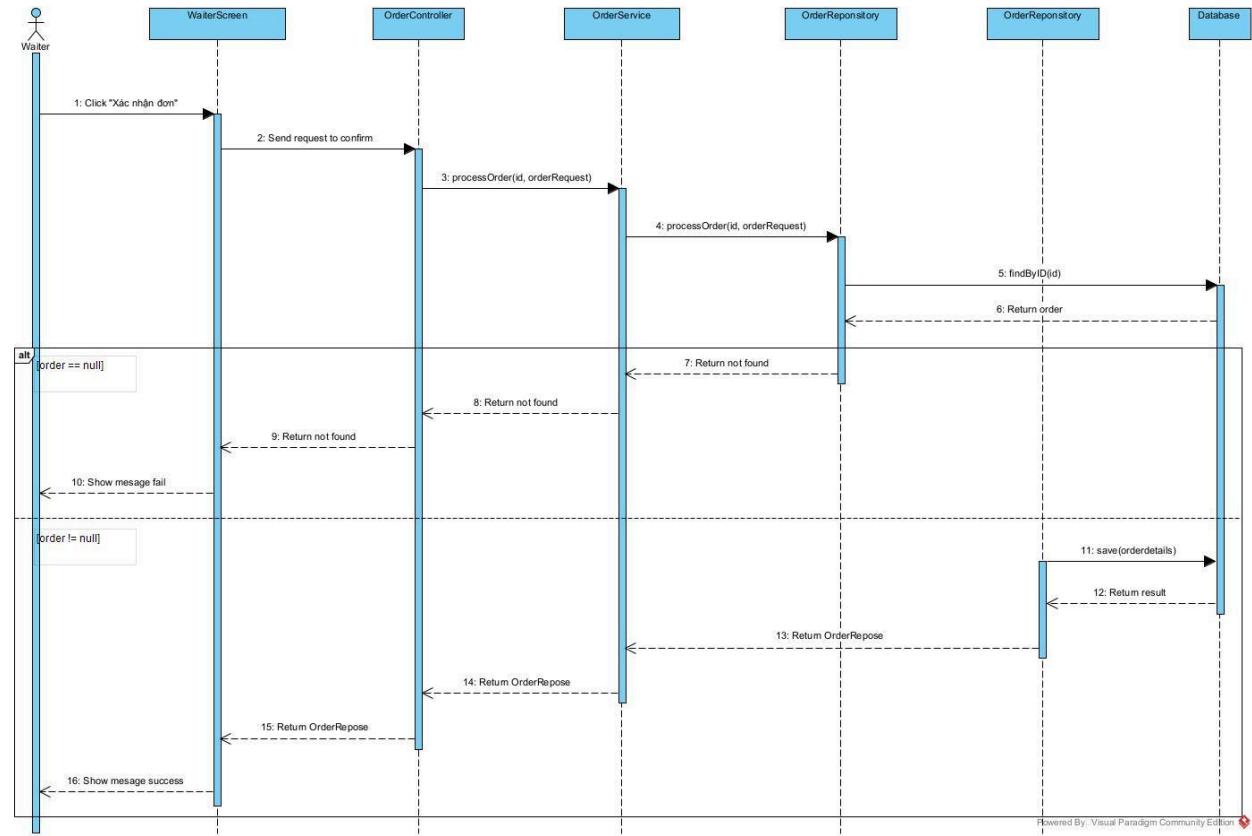


Figure: View Order Dish Sequence

3.7.9 View List Of Dish

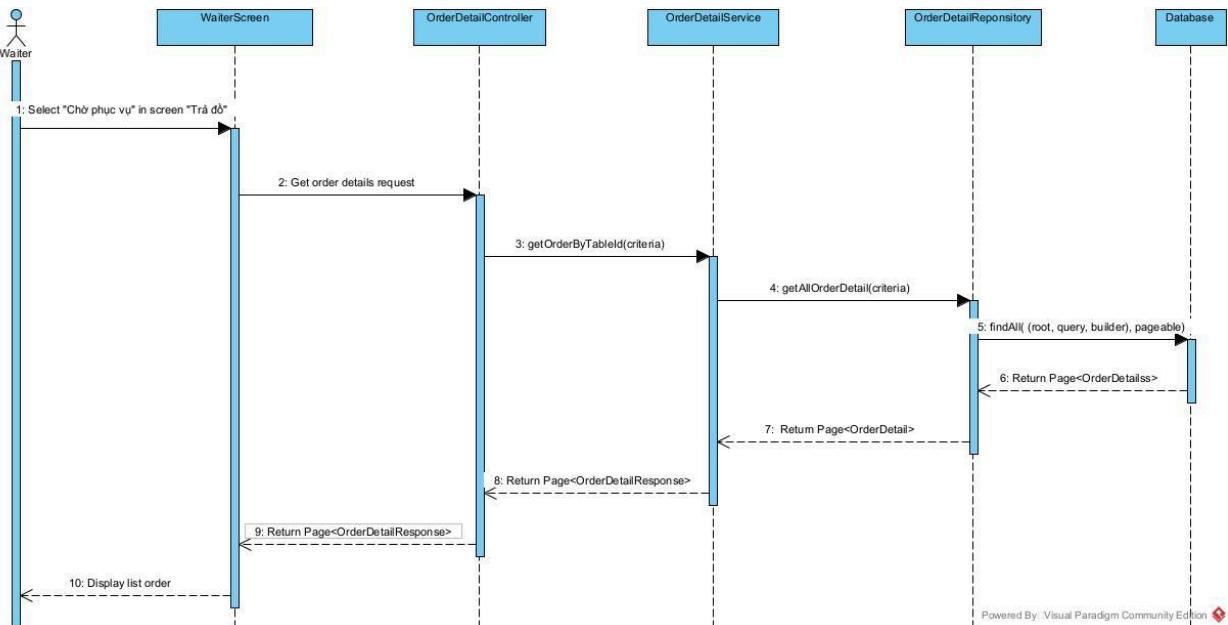


Figure: See list of dishes waiting to be served Sequence

3.7.10 View list finished dish

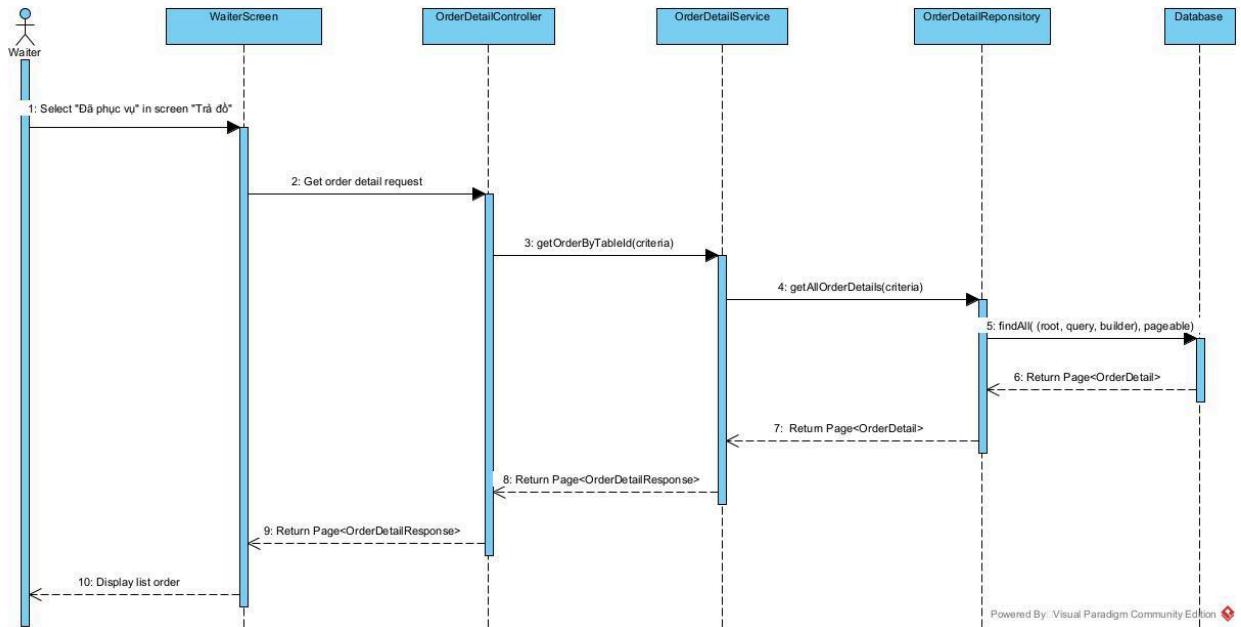


Figure: See the list of dishes served Sequence

3.7.11 View OrderDetail

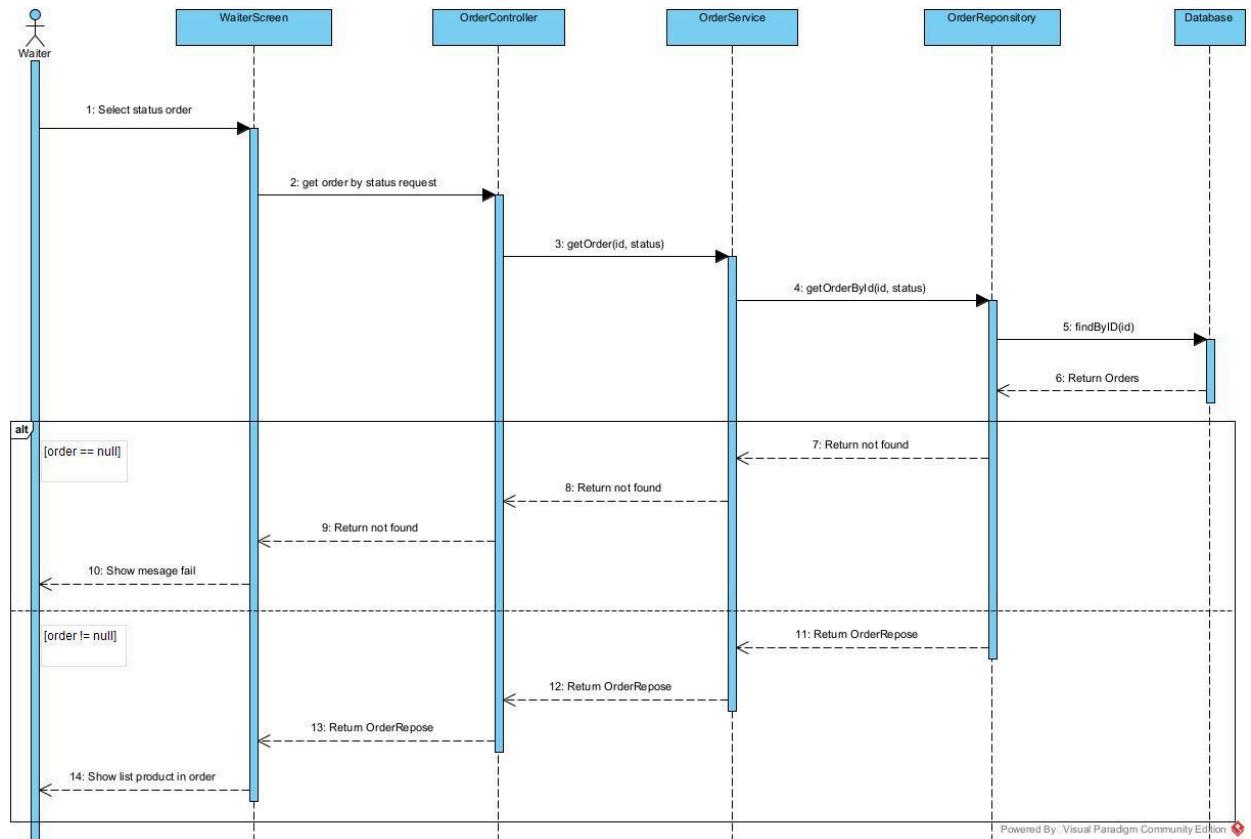


Figure: View order details of tables Sequence

3.7.12 View Invoice

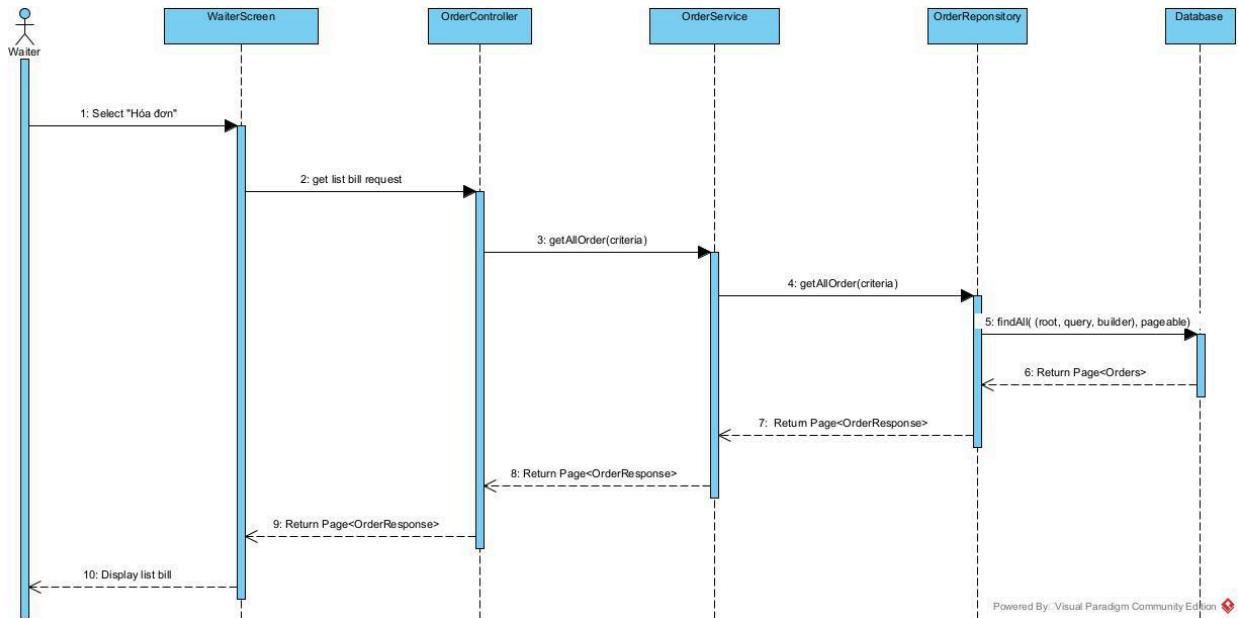


Figure: View Invoice List Sequence

3.7.13 View Detail Invoice

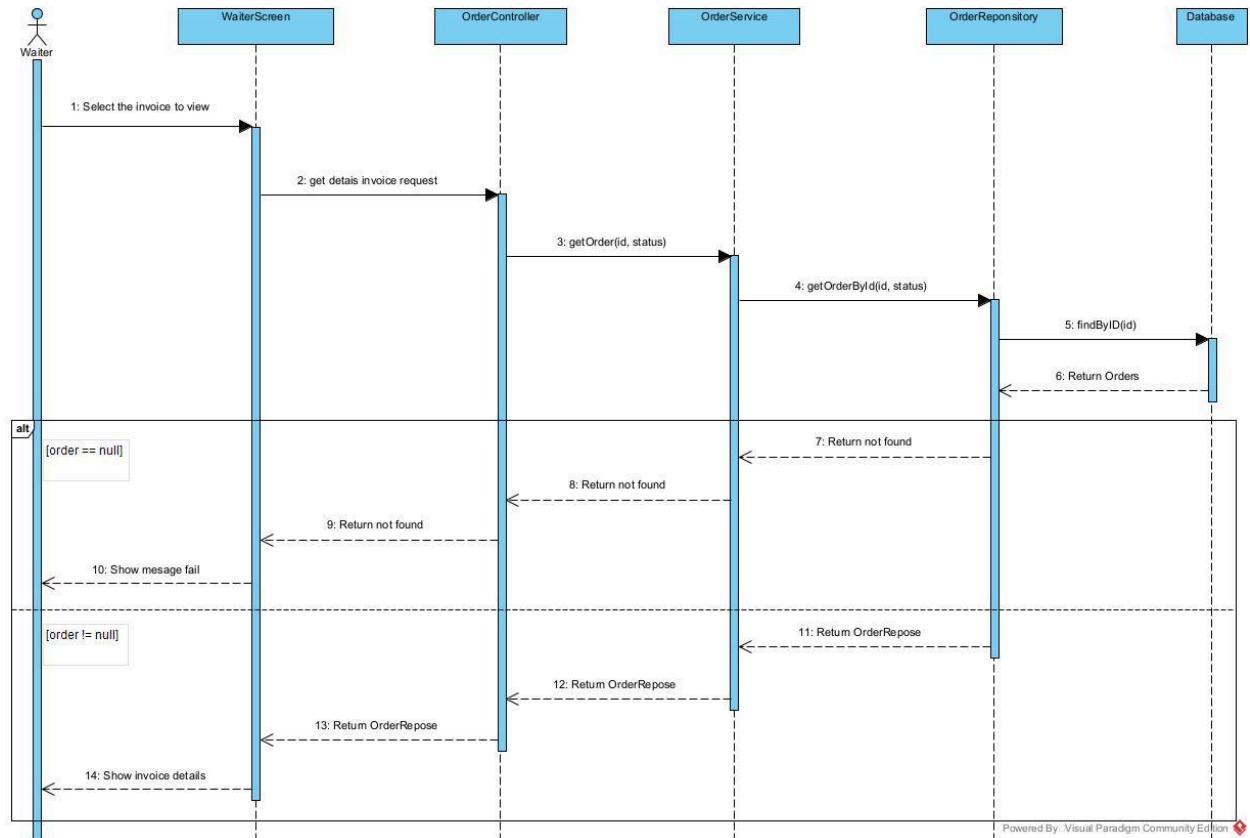


Figure: View Detail Invoice Sequence

3.8 Cashier

3.8.1 Class Diagram

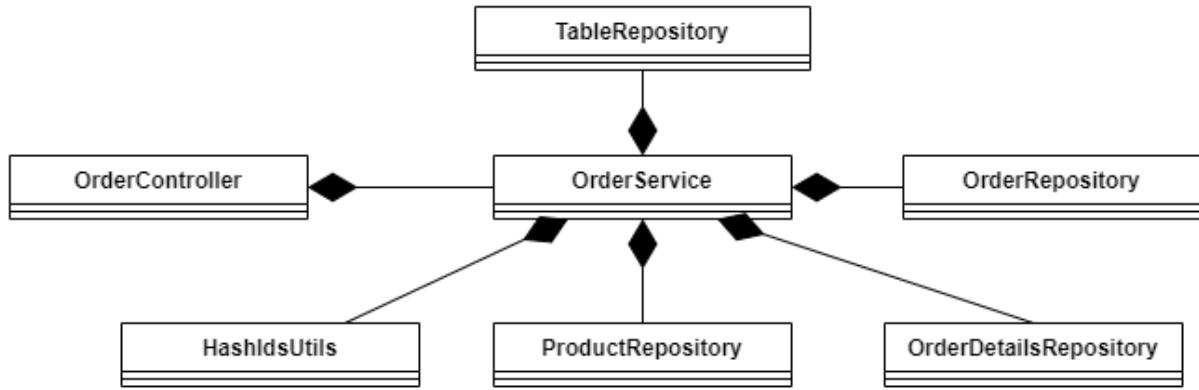


Figure: Order Class Diagram

3.8.2 View Bill

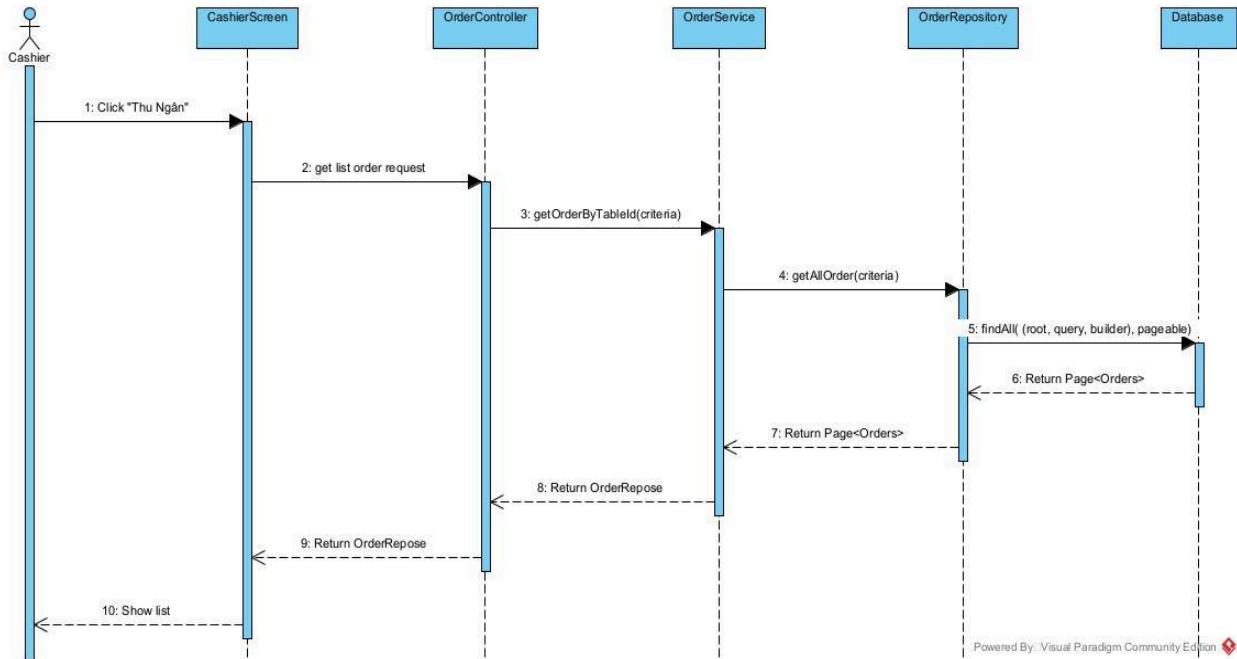


Figure: View List Bill Sequence

3.8.3 Detail Bill

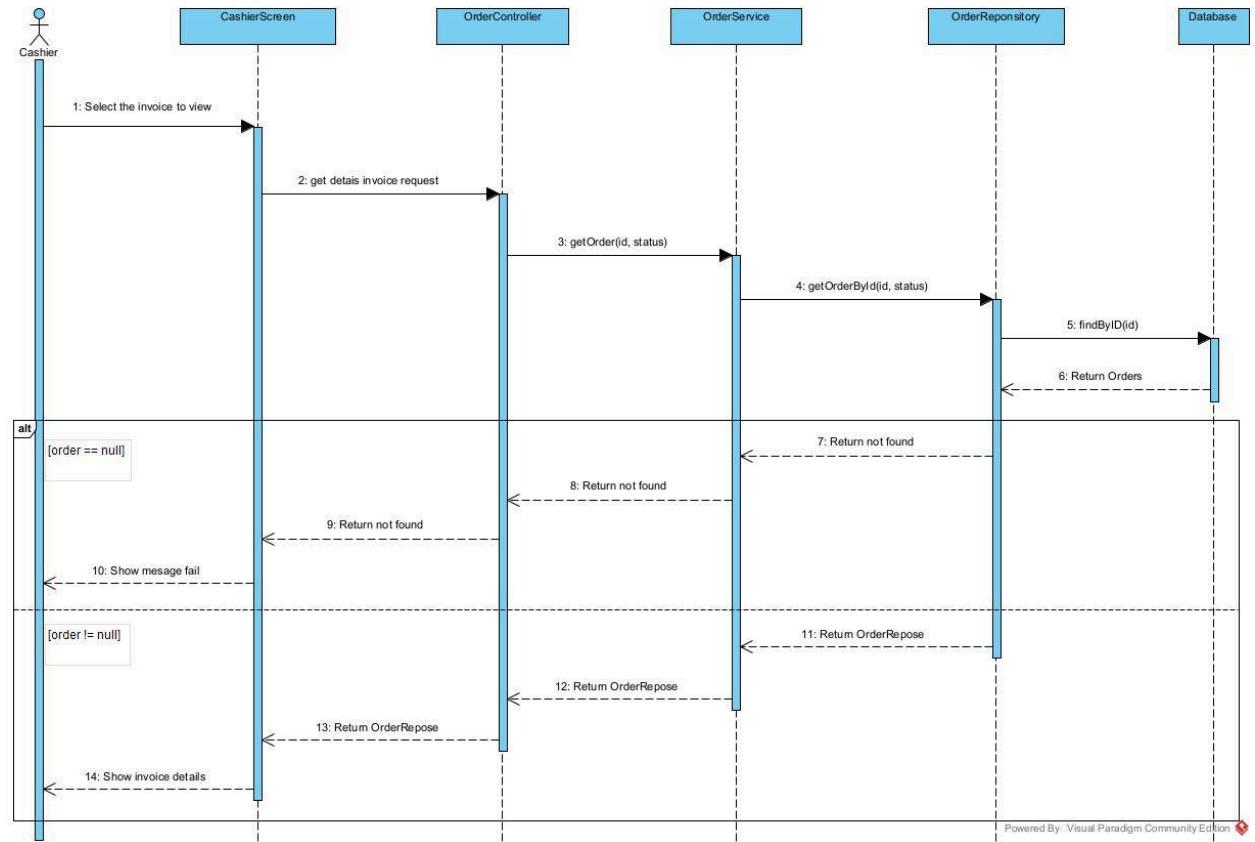


Figure: View Detail Bill Sequence

3.8.4 View Transition

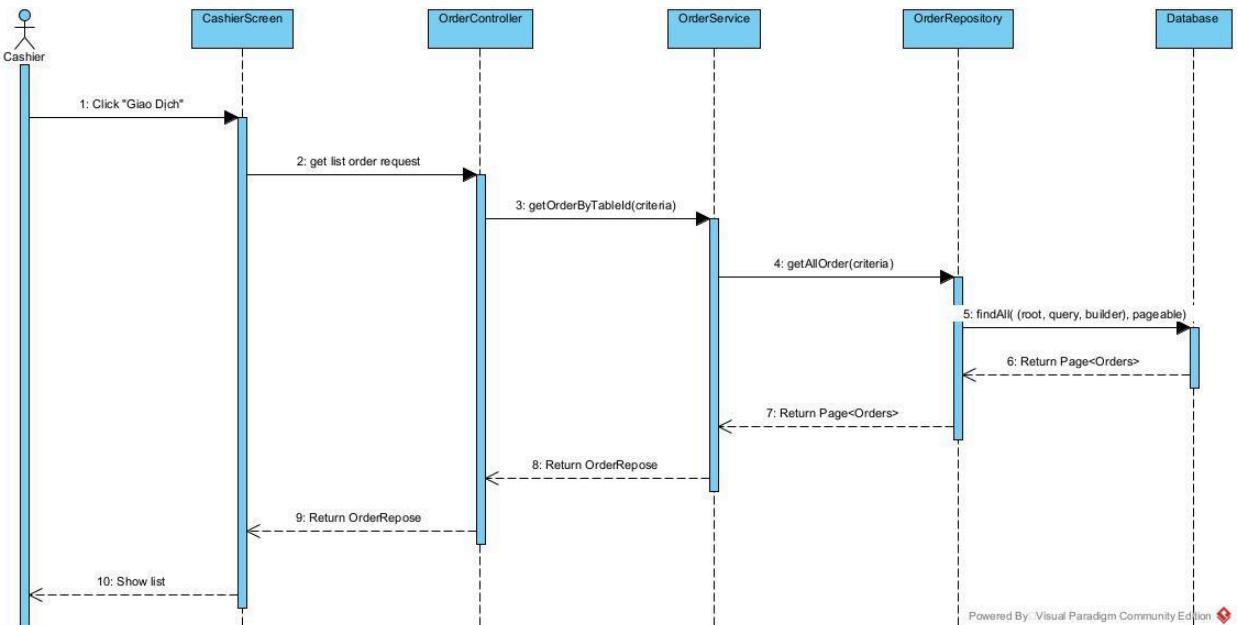


Figure: View Transition Sequence

3.8.5 Search Order

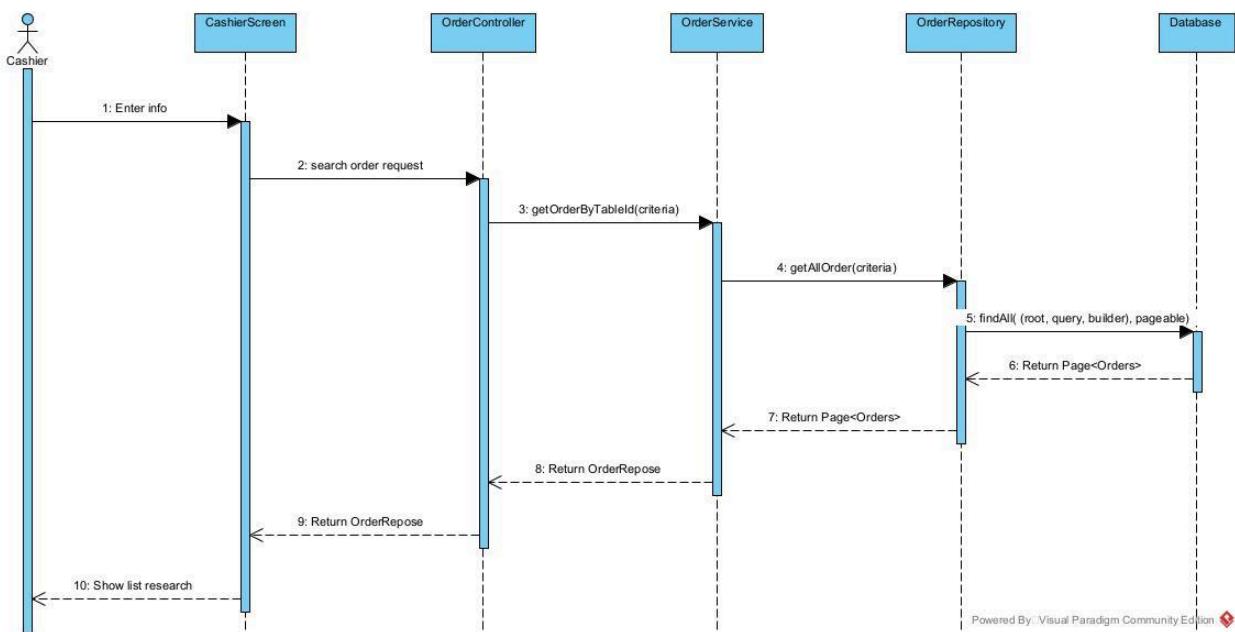


Figure: Search Order Sequence

3.8.6 Confirm Payment

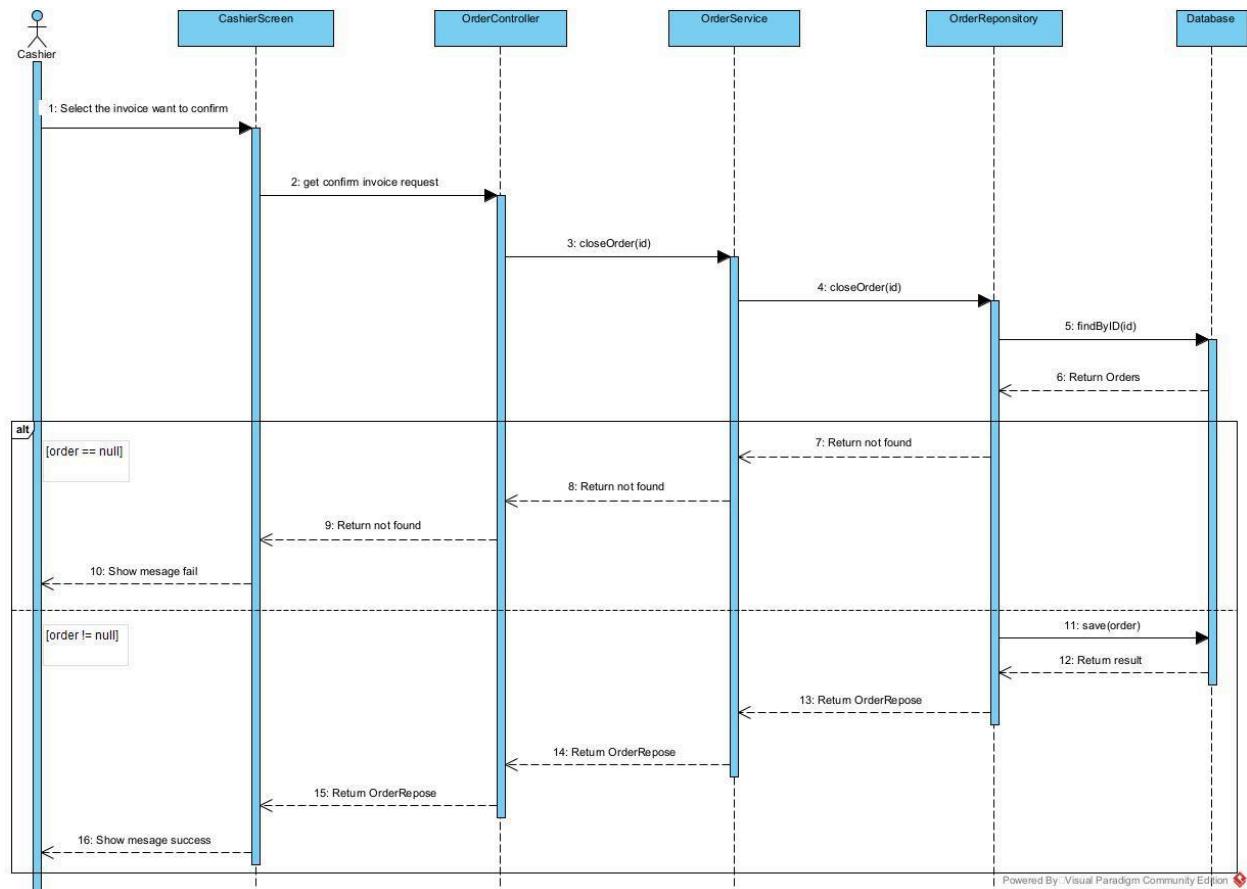


Figure: Confirm Payment Sequence

3.9 Chef

3.9.1 Class Diagram

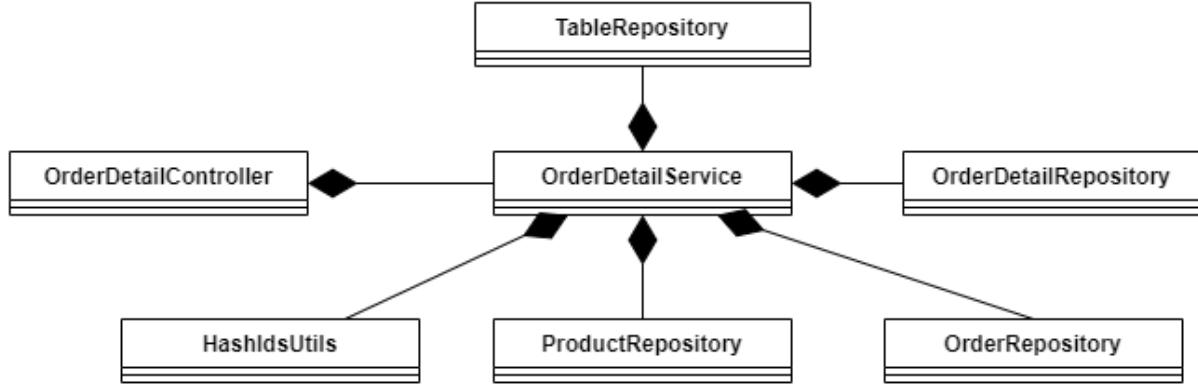


Figure: OrderDetail Class Diagram

3.9.2 View Dishes

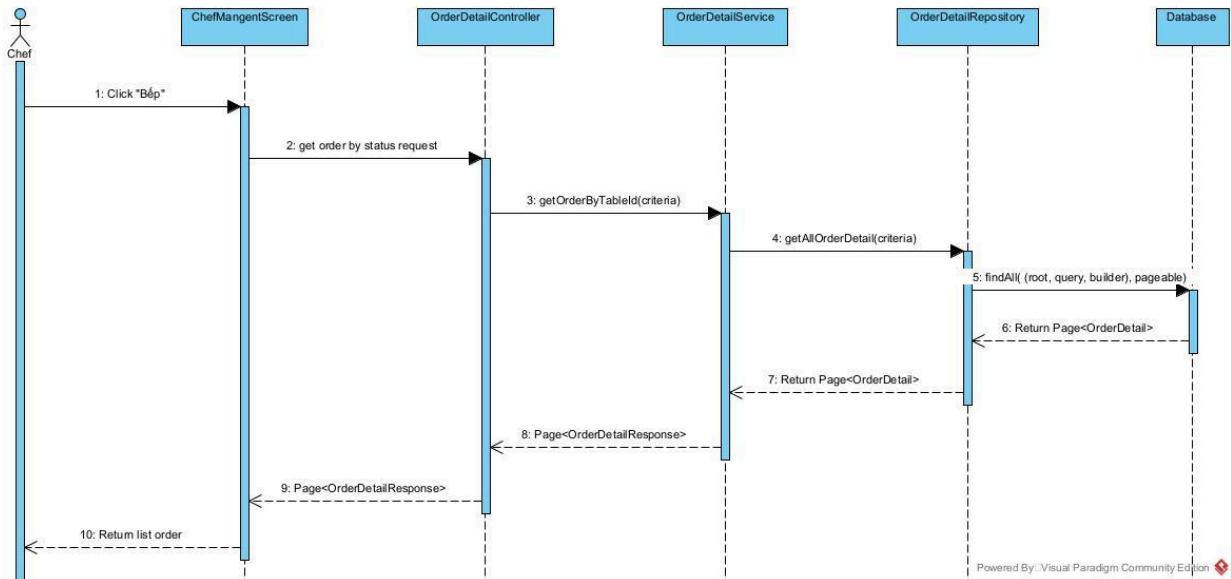


Figure: See the list of dishes that need to be processed and have been processed Sequence

3.9.3 Edit Dish status

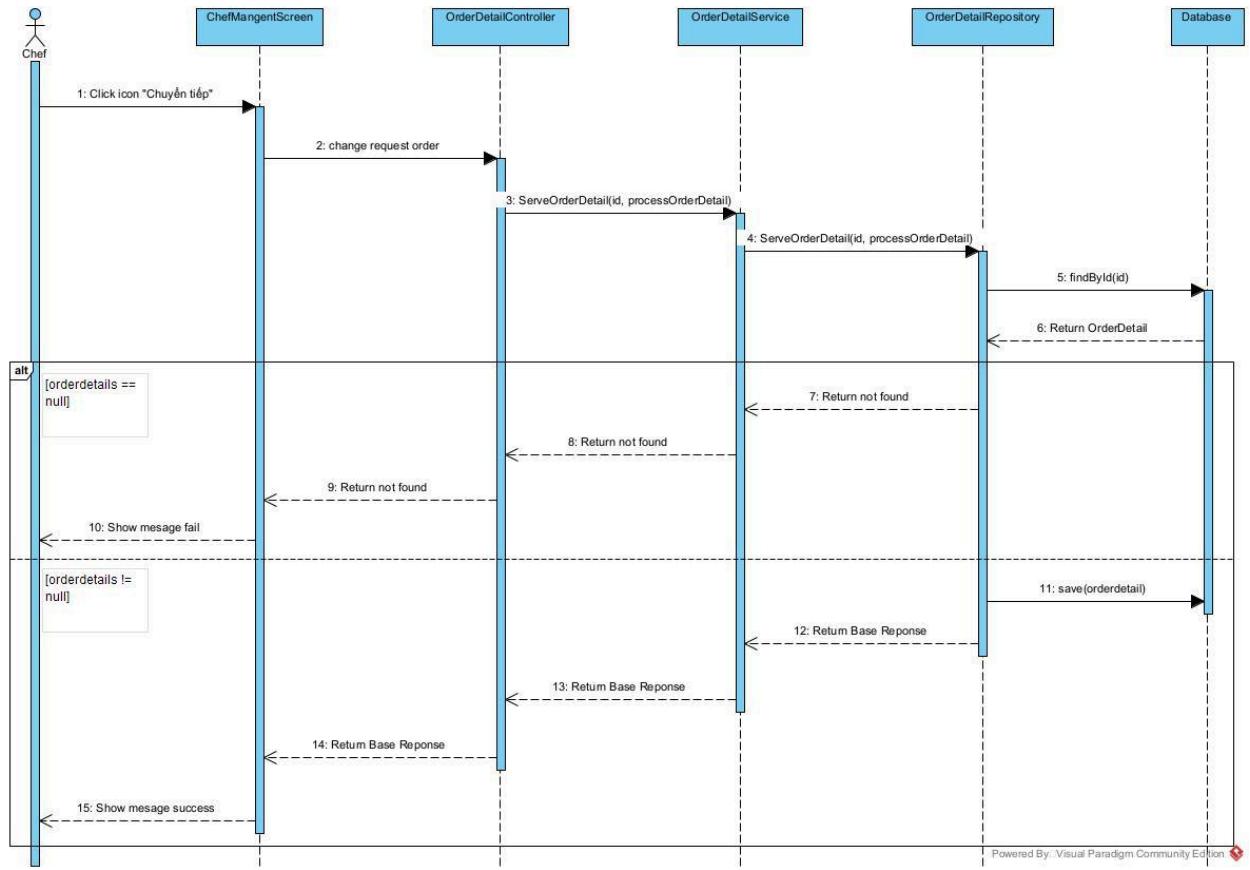


Figure: Change the status from waiting for processing to completed Sequence

3.10 Customer

3.10.1 Class Diagram

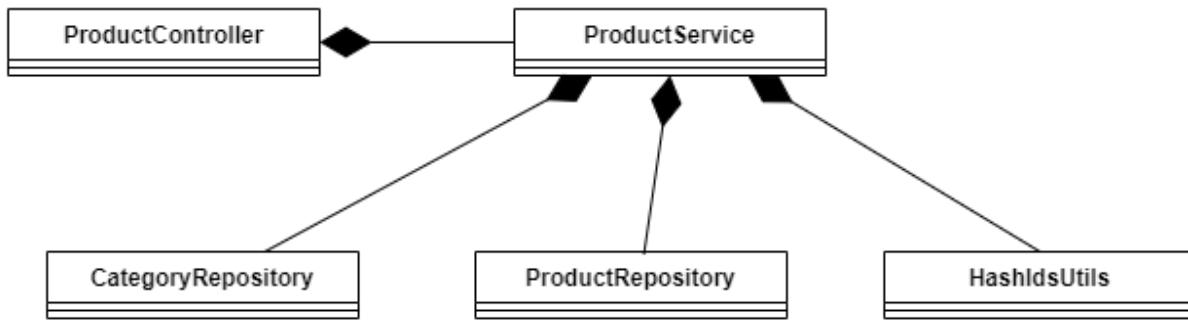


Figure: Product Class Diagram

3.10.2 View Menu

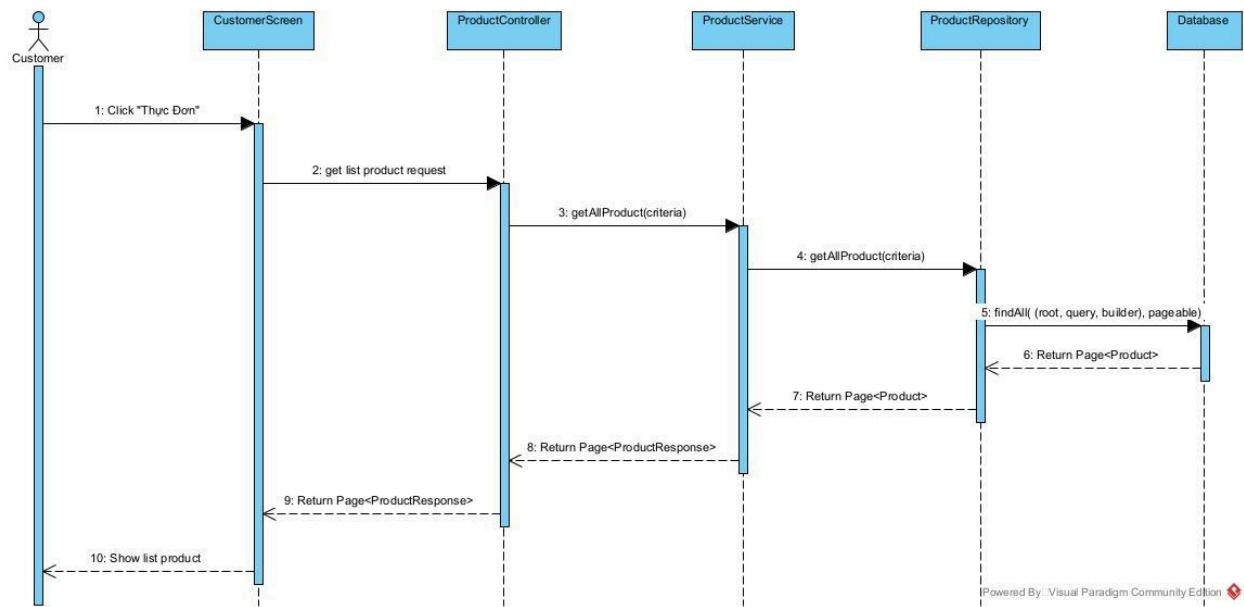


Figure: View Menu Sequence

3.10.3 Filter Menu

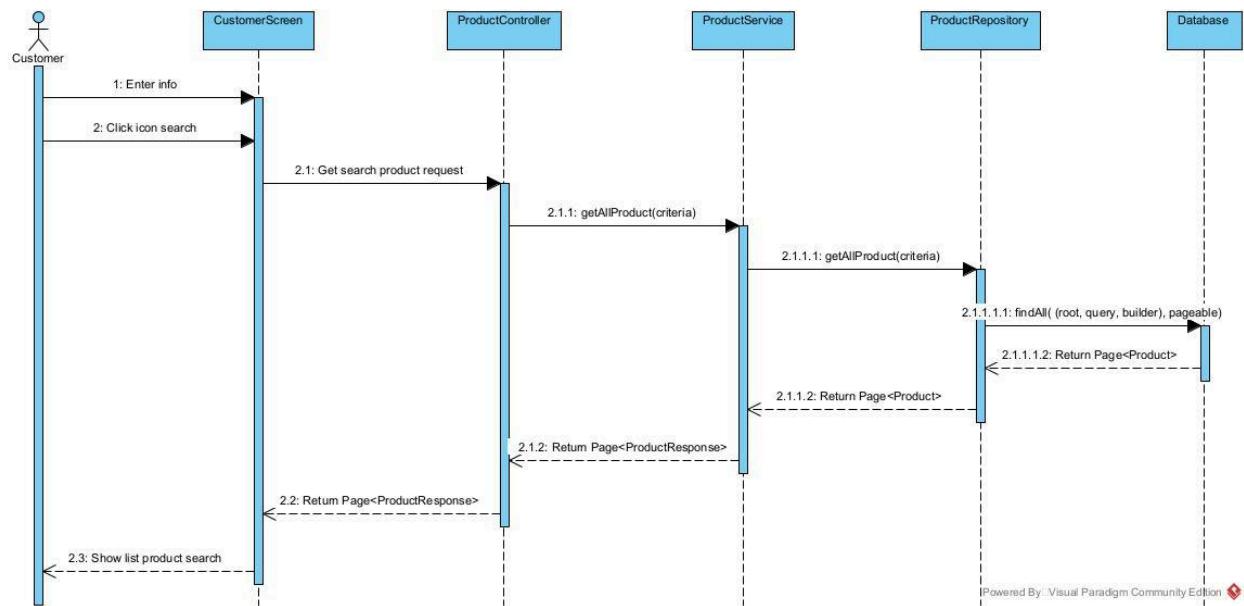


Figure: Filter Menu Sequence

3.10.4 View Order

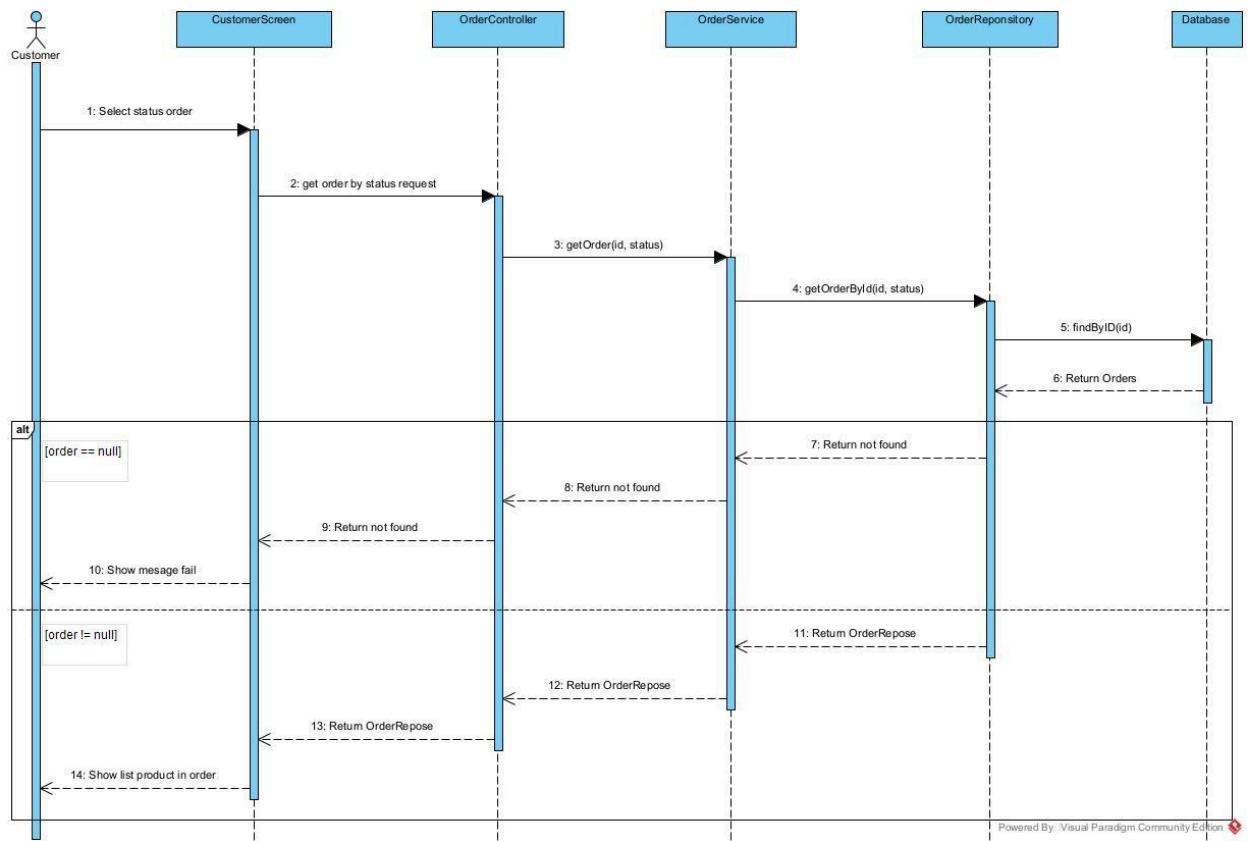


Figure: View Order Sequence

3.10.5 Payment Request

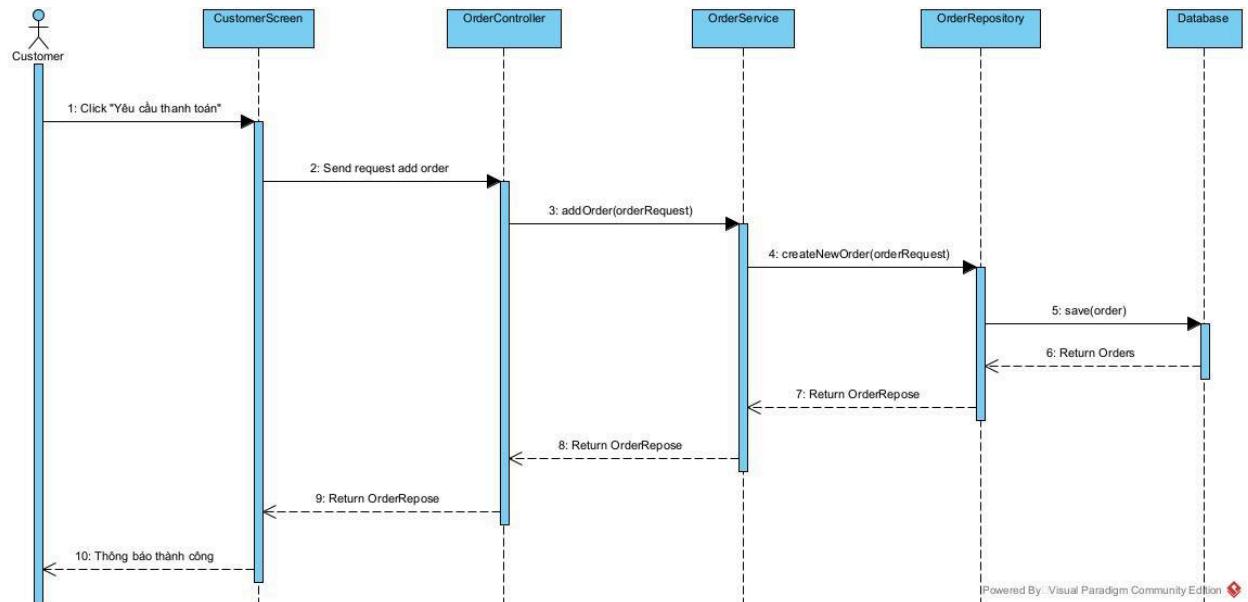


Figure: Payment Request Sequence

