



# TRƯỜNG ĐẠI HỌC FPT

Requirement & Design Specification

Global Assess Management System (GAMS)

Version: 1.0

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– Hanoi, November 2024 –

## Record of Changes

Version	Date	A* M, D	In charge	Change Description
V1.0	15/9	A	ThanhNT, LinhNT	Add Use case diagram, use case description.
V1.1	01/10	A	AnhBHN,	Add Screen Flow, Context Diagram, System Function, Functional Requirement
V1.2	12/10	A	ThanhNT, AnhBHN	Add entity relationship diagram
V1.3	15/10	M	LinhNT, ThanhNT	Update Context Diagram, Screenflow
V1.4	17/10	A	LongNQ	Add Function Requirements
V1.5	20/10	A,M,D	ThanhNT, AnhBHN	Docs II. Requirement Specifications (Role: Admin, Manager)
V1.6	23/10	A,M	ThanhNT, AnhBHN	Add, Modify Function Requirements, Modify ScreenFlow
V1.7	27/10	M	DungPC	Update Use Case
V2.0	29/10	A,M	LongNQ, DungPC	Add, Modify Business Rule

## Table contents

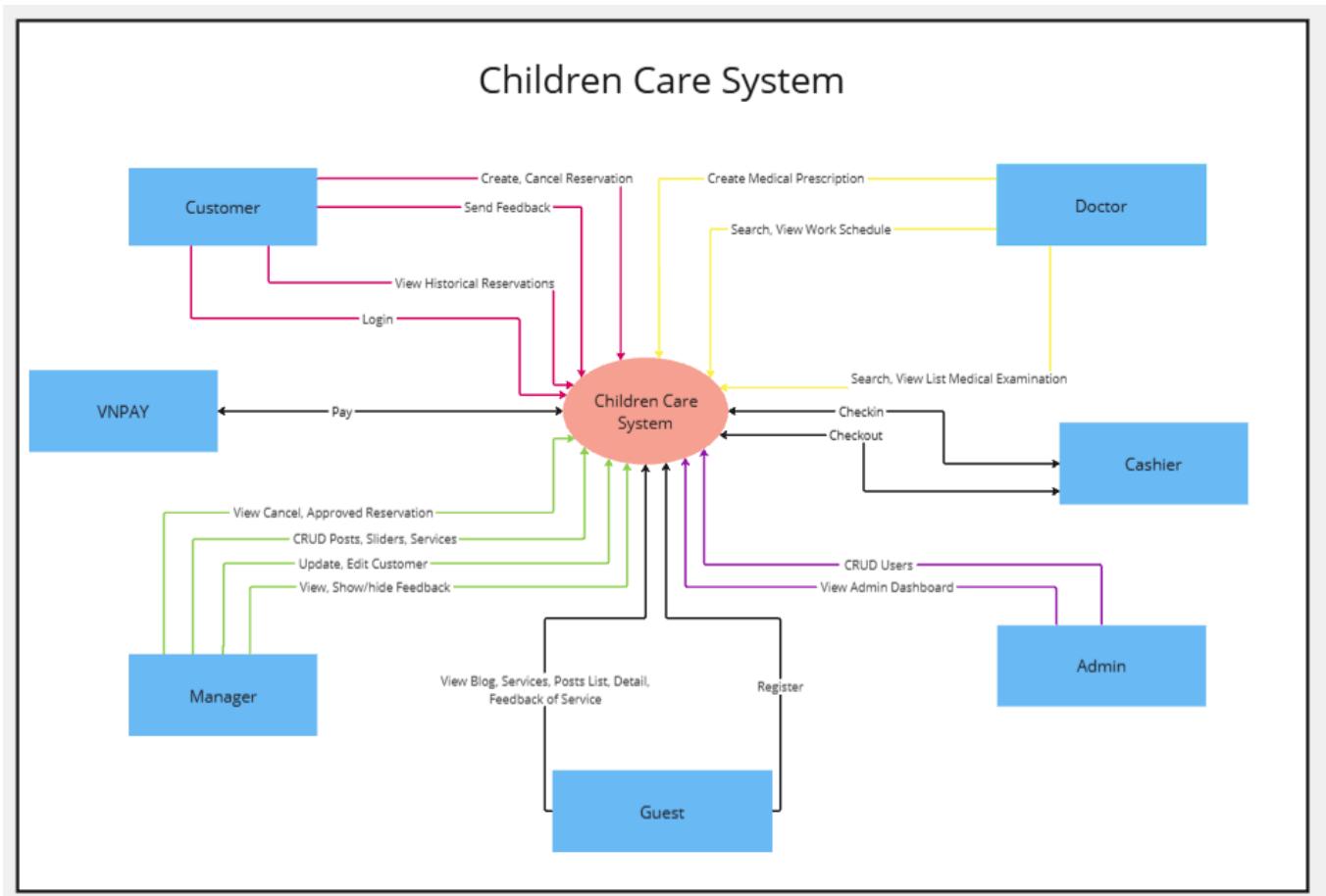
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# I. Overview

## 1. System Context

Children Care System is a new software system being developed to provide an online platform for parents and guardians to register reservations for their child. The system will support features such as scheduling doctor appointments and accessing child care information. The context diagram below illustrates the external entities and system interfaces. Future releases are planned to include additional services, such as integrating an online medical consultation service with paediatricians and payment processing through VNPay.



## 2. User Requirements

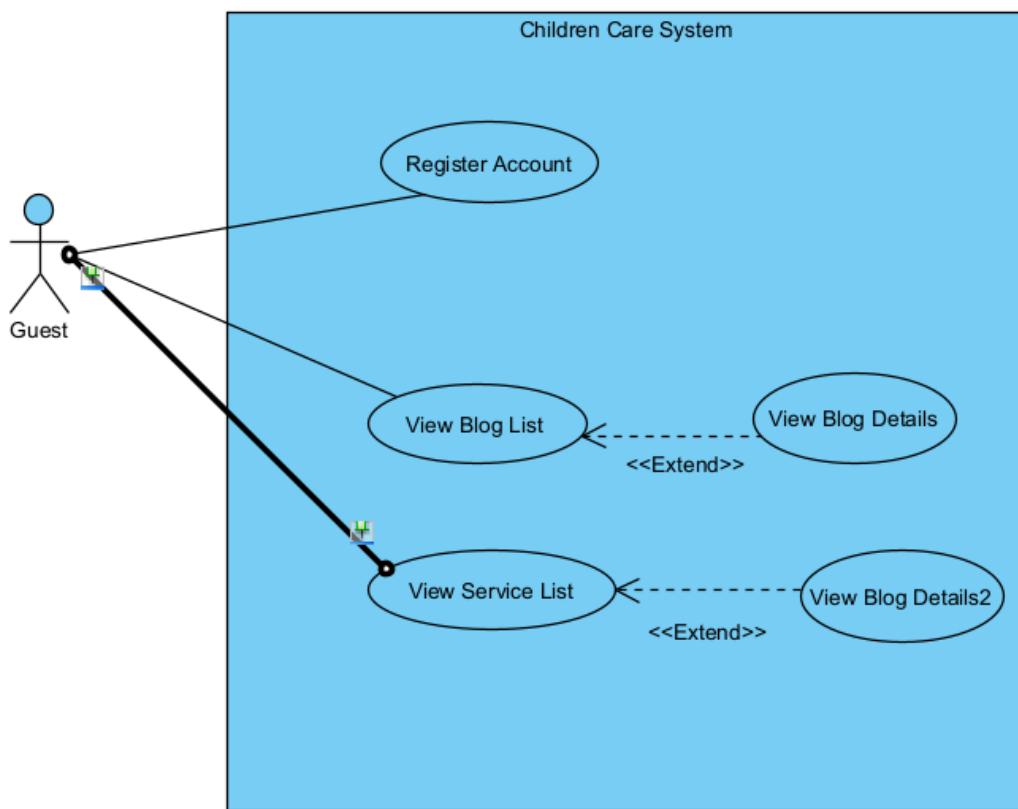
### 2.1 Actors

#	Actor	Description
1	Administrator	Can access, fix and change the system, function
2	Manager	Can manage doctor and services in the system
3	customer	Can view, search and use system services

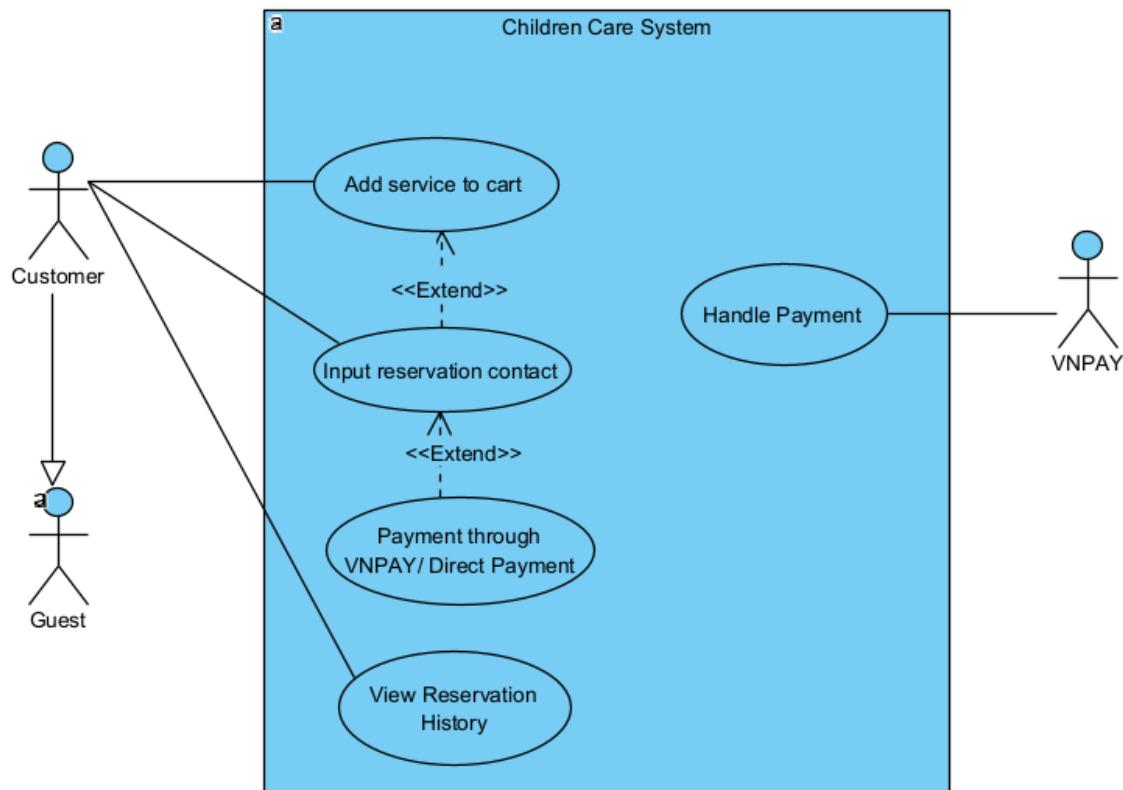
4	Doctor	Can view appointment schedule, receive appointment schedule and decline appointment schedule
5	Cashier	Check-in, check-out
5	VNPAY	Handle payment of customer
6	Guest	Can register

## 2.2 Diagrams

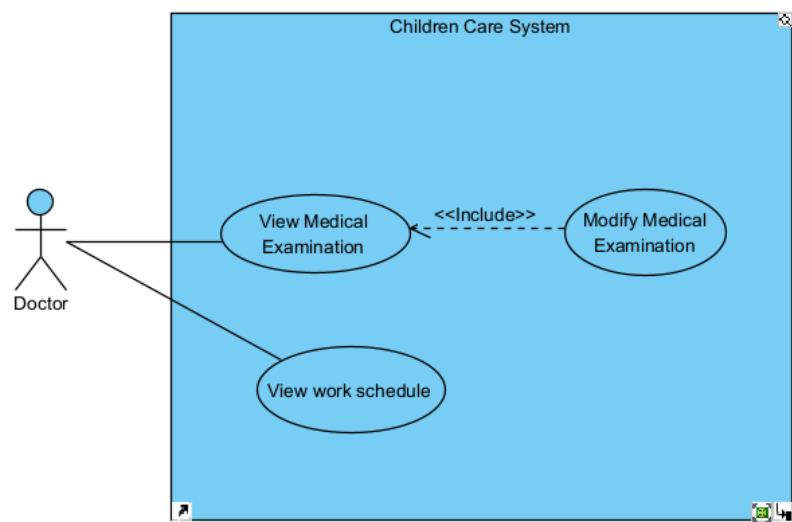
### 2.2.1 UCs for Guest



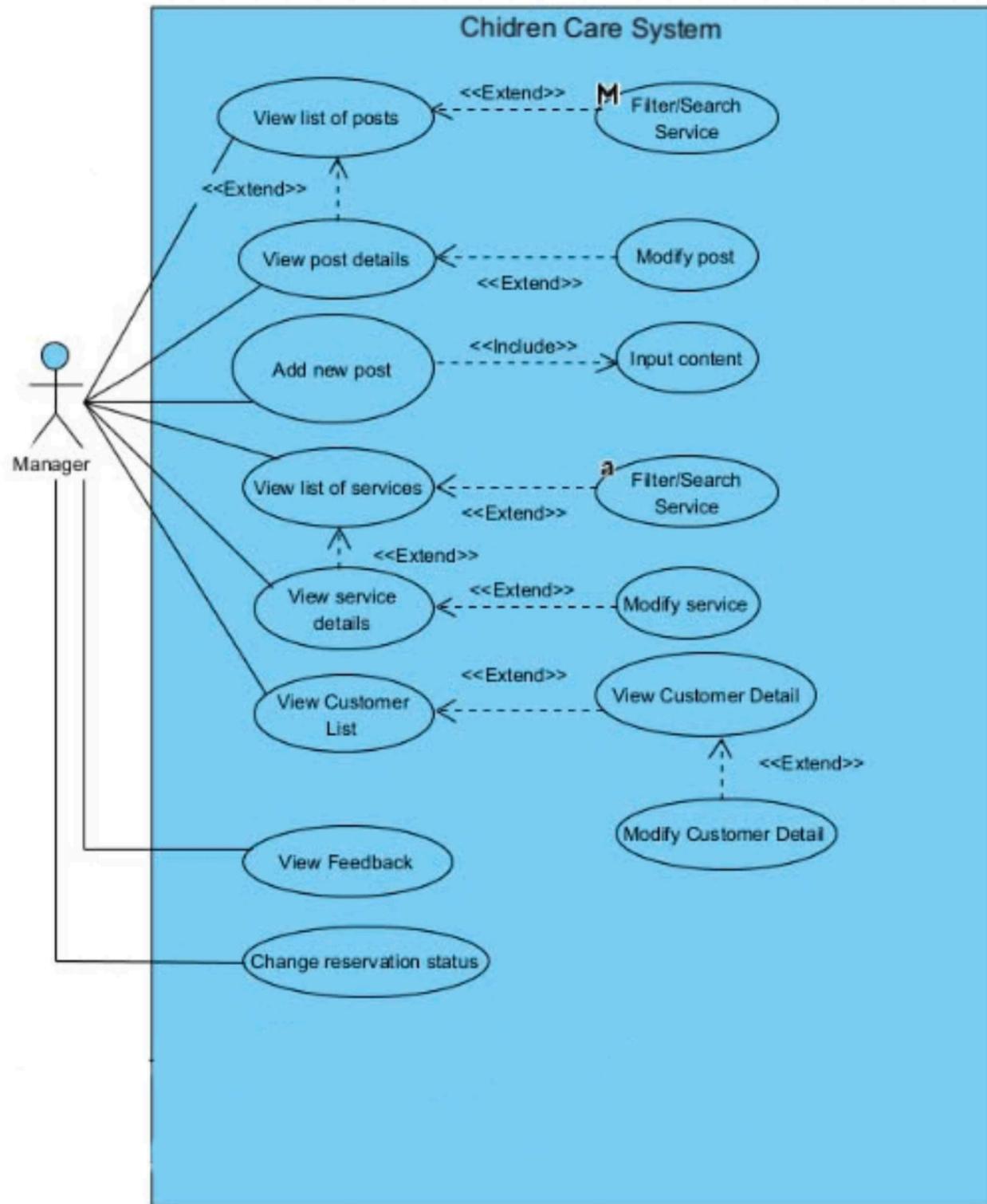
## 2.2.2 UCs for and VNPAY



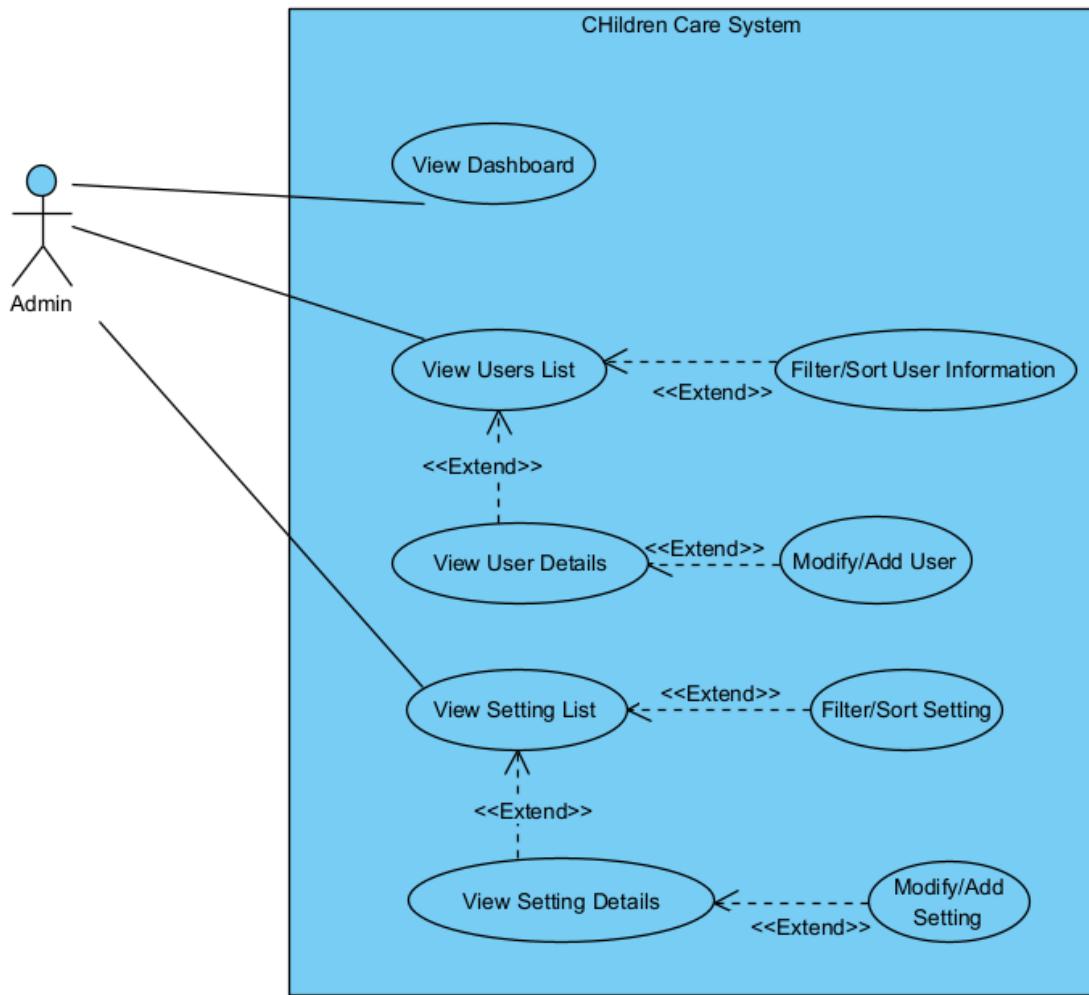
### 2.2.3 UCs for Doctor



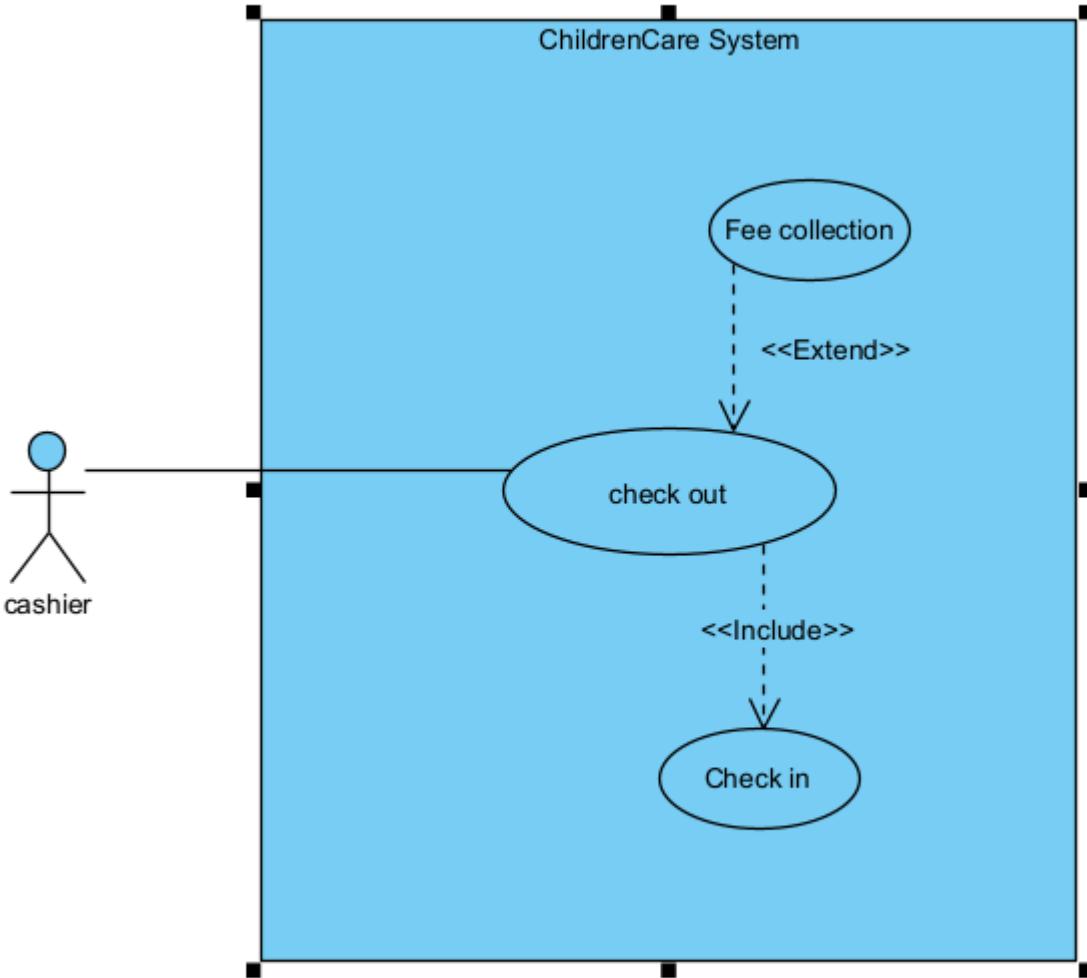
#### 2.2.4 UCs for Manager



#### 2.2.5 UCs for Admin



## 2.2.6 UCs for Cashier



## 2.3 Descriptions

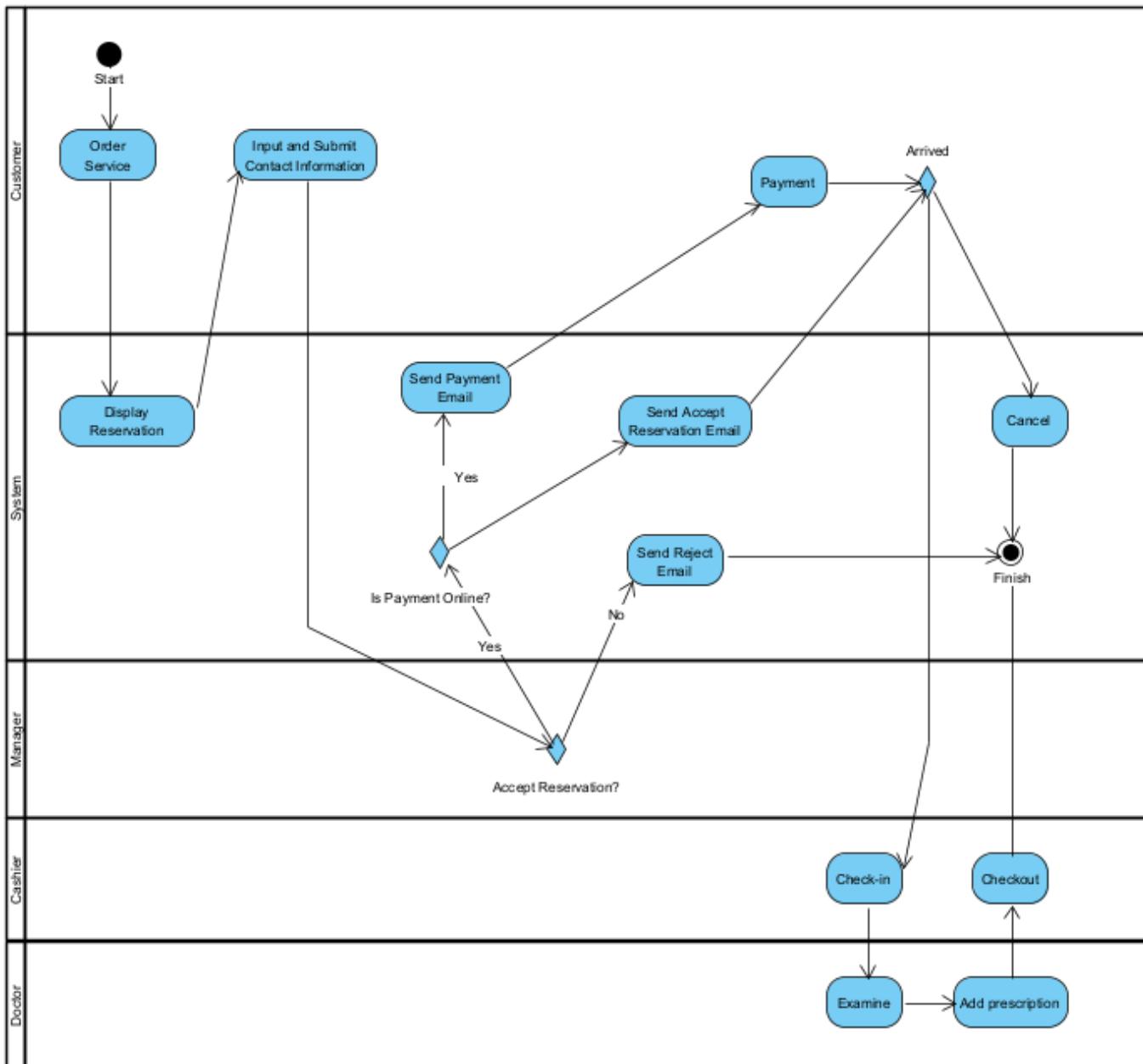
ID	Use Case	Actors	Use Case Description
01	View Home Page	All	The user accesses the home page to view sliders, hot posts, featured services, latest posts, and static contact information. The user can interact with the sliders, posts, and services by clicking on them to be redirected to their detailed pages.
02	View Blogs List	All	The user views a list of blog posts displayed paginated by updated date. Clicking on any post redirects the user to the post's details page.
03	View Blog Details	All	The user views detailed information on a blog post, including the title, author, updated date, category, and content.

04	View Services List	All	The user views a paginated list of services sorted by updated date. Each service displays its thumbnail, title, brief information, original price, and sale price. The user can add services to their cart or give feedback.
05	View Service Details	All	The user views detailed information about a specific service, including the title, category, images, original and sale prices, and detailed description.
06	View Cart	Customer	Users view cart details with their selected services, quantities, and total cost. The user can adjust service quantities, delete services, or proceed to check out.
07	Input Reservation Information	Customer	The user provides or edits receiver information for the reservation (this information is auto-filled). After verifying, the user submits the reservation.
08	View Reservation Confirmation	Customer	The user sees the reservation completion page, where the reservation status is updated, and they receive confirmation and payment instructions. The page also shows the assigned doctor.
09	Provide Feedback	Customer	After receiving a service, the user can provide feedback via the website. The feedback form includes contact information, star rating, and free-text feedback.
10	Login	All	The user logs in by entering their email and password. If they do not have an account, they can register, or if they forget their password, they can reset it.
11	Register	Guest	The user registers for the system by providing personal details. They receive an email for verification before accessing the system.
12	Reset Password	All	The user inputs their email to receive a reset password link. After clicking the link, the user is redirected to a password reset page, where they can set a new password.
13	Change Password	User	The user changes their password by entering the current password and a new password.
14	Edit user profile	User	The user edits their profile information, including full name, gender, mobile, and avatar image. They cannot change their email.
15	View User Reservations List (My Reservations)	User	The user views their past reservations with details such as service names, number of persons, and costs. Clicking on a reservation redirects the user to the Reservation Information page.
16	View Reservation Details	User	The user views detailed information about a reservation, including services reserved, unit price, number of persons, and total cost. They can choose to update or cancel the reservation.
17	Manage Posts	Manager	The manager can view, add, edit, or hide blog posts. They can filter or sort posts by various criteria (title, author, category).
18	Manage Services	Manager	The admin manages services by viewing, adding, editing, or hiding services. They can filter or sort services by title, category, or status.
19	Manage Customers	Manager	The admin manages customer information, including editing or viewing customer profiles. They can view customer activity and interaction history.
20	Manage Feedback	Manager	The admin views customer feedback, filters by rating or service, and changes the status of feedback entries.

21	Manage Reservations	Manager	The admin manages reservations by viewing, filtering, and sorting reservations. They can assign reservations to doctor or update reservation statuses.
22	View Admin Dashboard	Admin	The admin views reservations, revenues, feedbacks, and customer activity statistics on the dashboard. The admin can adjust the displayed date range.
23	Manage Users	Admin	The admin manages user accounts, viewing or editing user details, such as roles and statuses. The admin can add new users and reset passwords.
24	Manage Settings	Admin	The admin views and edits system settings, such as configurations for payments, reservation time slots, and other key information.
25	Make Payment	Customer	Customer can make payment online by VNPay
26	Manage Slider	Manager	The manager can view, add, edit, or hide the slider. They can filter or sort posts by various criteria (title, author, category).
27	View Medical Examination	Doctor	Doctor can crud, search examination that he/she create.
28	View Work Schedule	Doctor	Doctor can view, search work schedule
30	Create Medical Examination	Doctor	Doctor can an medical examination for an reservation
31	Check-in	Cashier	Check booking information through the system (if the customer has made a prior reservation).
32	Check-out	Cashier	Acknowledge the Departure
33	Fee collection	Cashier	Take cash from customer

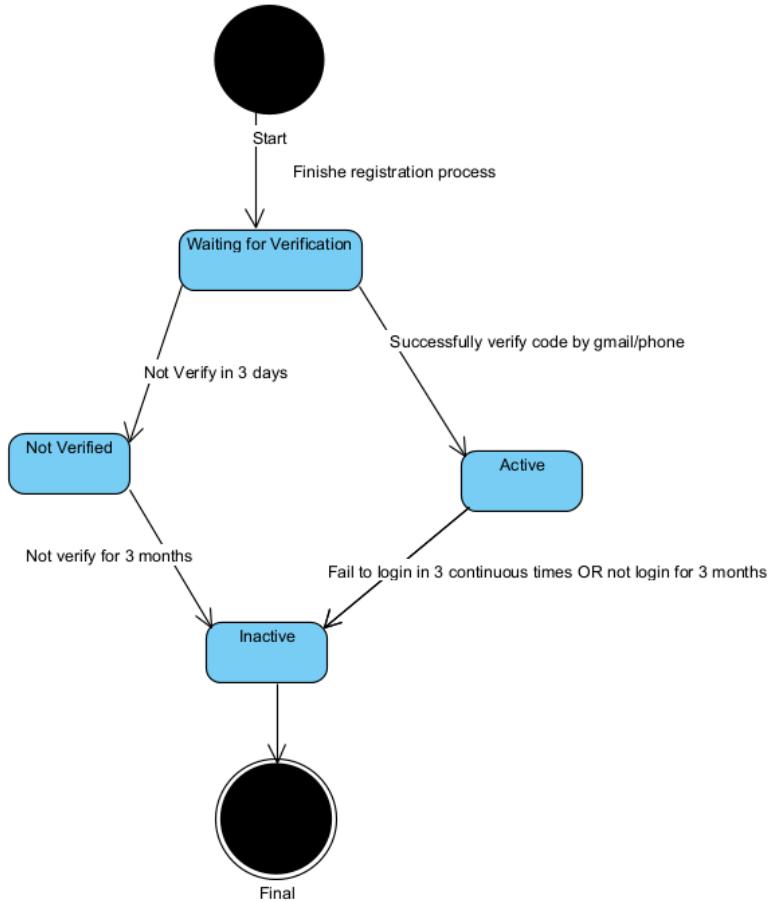
## 2.4 Main Workflows

### 1.2.1 Order Processing



## 1.2.2 State Flow

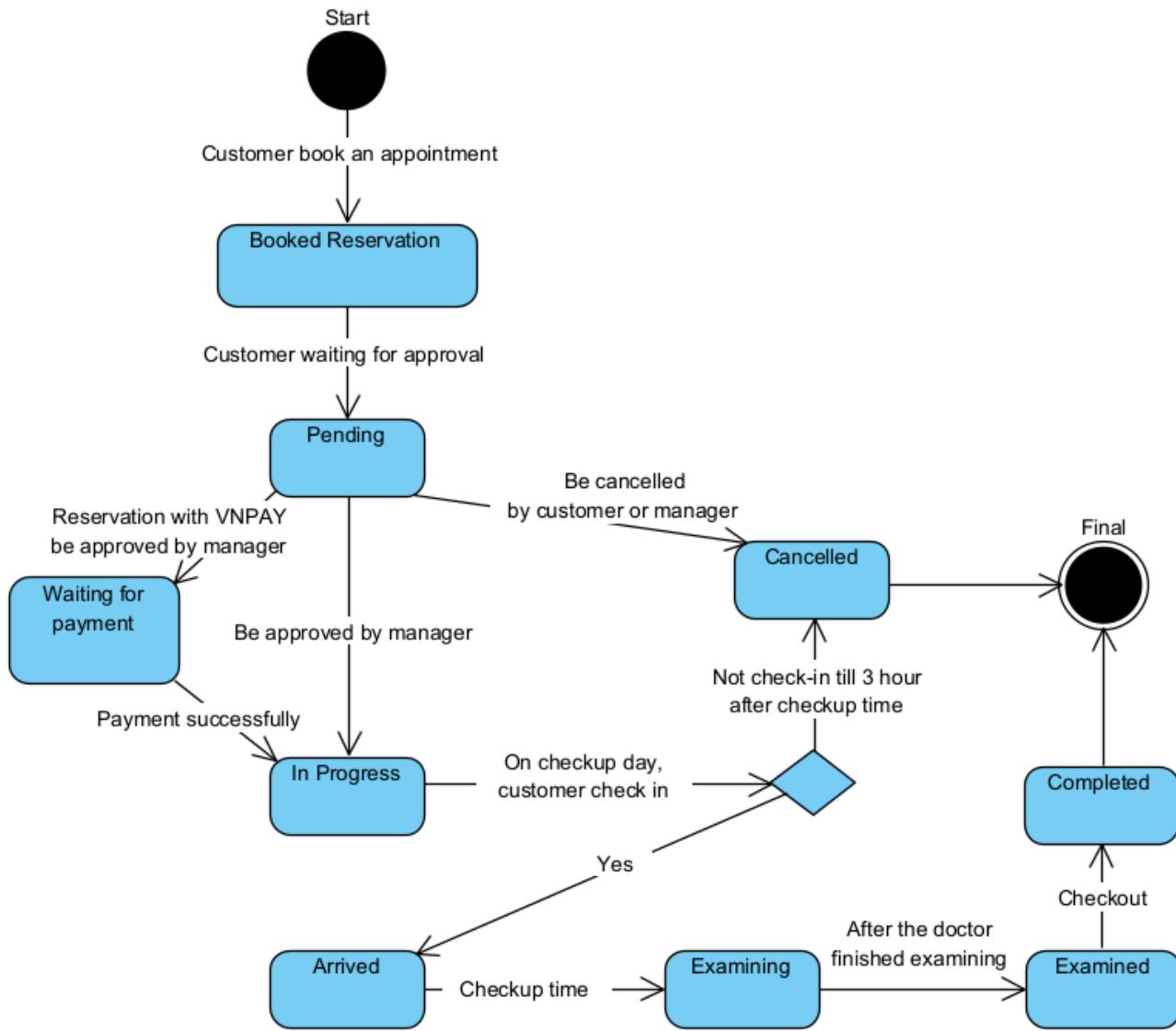
### 1.2.2.1 User State Flow



Account status description

#	State	Description
01	Waiting for Verification	After the user registers successfully, the system will send an email to verify the account, the status of the account is Waiting for Verification. User can not use the system with this status
02	Active	User verifies successfully by providing code in gmail/phone
03	Inactive	- When user logins fail 3 times, user becomes - inactive account OR not login over 3 months - User not verify in 3 months
04	Not verified	When user not verify for gmail/phone

### 1.2.2.2 Reservation State Flow

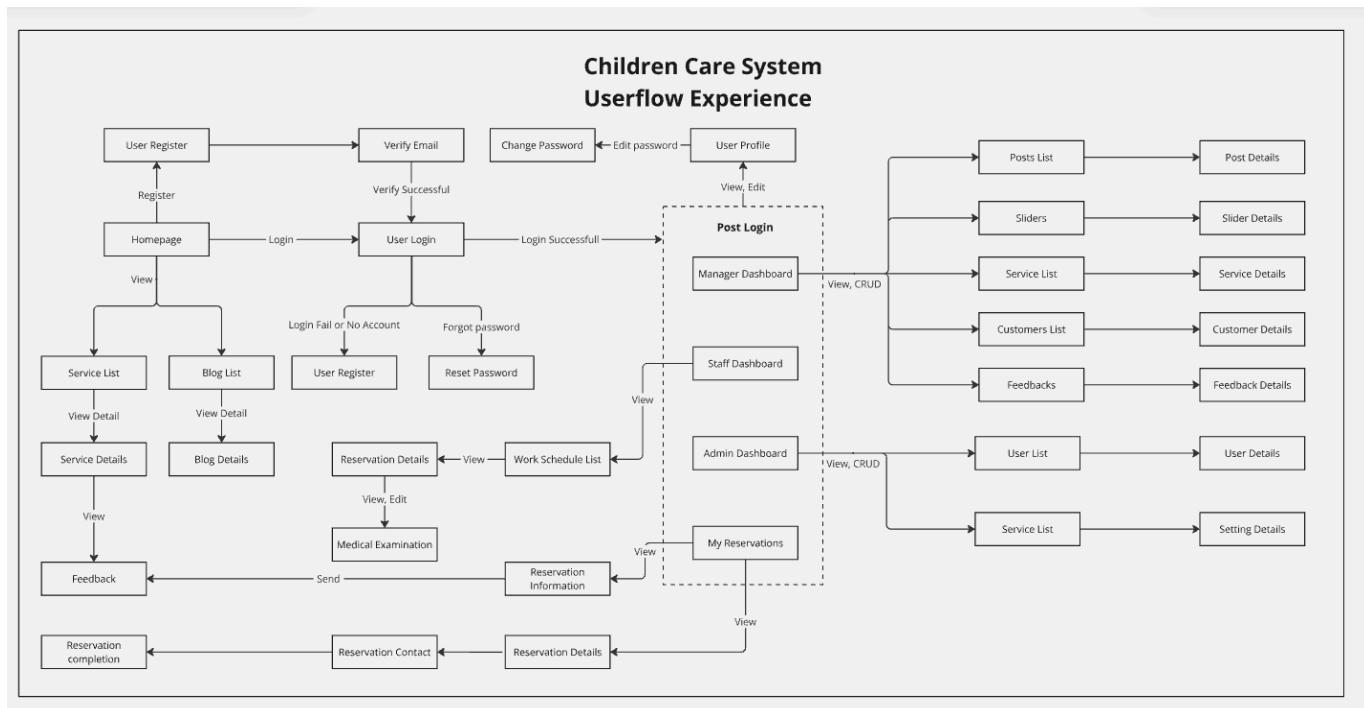


#	State	Description
01	New Reservation	This is the initial state when a customer books an appointment
02	Pending	Customer waiting for manager to approve their reservation.
03	In Progress	Reservation be approved by manager or customer payment success

04	Waiting for payment	Reservation with VNPAY be approved by manager
05	Cancelled	Be cancelled by customer or by manager or customer not check-in till 3 hour after checkup time
06	Arrived	On checkup day, customer checked-in
07	Examining	Checkup time
08	Examined	After the doctor finished examining
09	Completed	Customer checked-out

### 3. System Functionalities

## 3.1 Screens Flow



### 3.2 Screen Authorization

Screen	Admin	Manager	Doctor	Customer	Cashie	Cashier	Guest
Home Page	X	X	X	X	X		X
Register							X
Login	X	X	X	X	X		
Forget Password	X	X	X	X	X		X
User Profile	X	X	X	X	X		
Change Password	X	X	X	X	X		
Reset Password	X	X	X	X	X		
Blogs List	X	X	X	X	X		X
Blog Details	X	X	X	X	X		X
Services List	X	X	X	X	X		X

Service Details	X	X	X	X	X	X
Reservation Details	X	X	X	X		
Update Reservation Details	X	X		X		
Reservation Contact				X		
Reservation Completion				X		
My Reservation				X		
Reservation Information				X		
Reservation List			X	X		
Admin Dashboard	X					
View Posts List	X	X	X	X		
Post List	X	X				

Update Post Detail	X	X				
Sliders List		X				
Slider Details		X				
Update Services List		X				
Update Service Details		X				
Customer List		X				
Customer Details		X				
Feedback					X	
FeedBack List	X	X	X	X		
Feedback Detail	X	X			X	
Medical examination			X			

User List	X					
User Detail	X					
Admin Dashboard	X					
Settings List	X					
Setting Details	X					
Reception					X	

### 3.3 Non-UI Functions

#	Feature	System Function	Description
1	User Authentication and Role Management	configureGlobal	Configures authentication with a custom UserDetailsService and PasswordEncoder
2		securityFilterChain	Configures HTTP security, setting up URL authorization, form login, logout, and CSRF protection.
3		passwordEncoder	Provides a BCryptPasswordEncoder bean for password encryption.
4		authentication	Sets up a DaoAuthenticationProvider with the custom UserDetailsService and PasswordEncoder.
5		logout	Accessing this URL ends the user's session, clears authentication information, and invalidates the user's session in the application.
6	User Registration and Verification	onApplicationEvent	Handles user registration events, generating a verification token, saving it, and sending a verification email.

7		sendVerificationEmail	Constructs and sends an email to verify the user's email address.
8		sendPasswordResetVerificationEmail	Send a password reset verification email.
9		emailMessage	Utility method for constructing and sending email messages.
10	Default User Setup	setupDefaultUser	setupDefaultUser: Command line runner that creates default admin, manager, and blogger users if they do not already exist in the repository. Sets roles and encodes passwords.
11	MD5 Hashing	md5	Takes an input string and returns its MD5 hash. This is useful for generating unique and consistent hash values for strings.
12	SHA-256 Hashing	Sha256	Takes an input string and returns its SHA-256 hash. This is useful for generating secure hash values for strings.

## II. Functional Requirements

### 1. Common Function

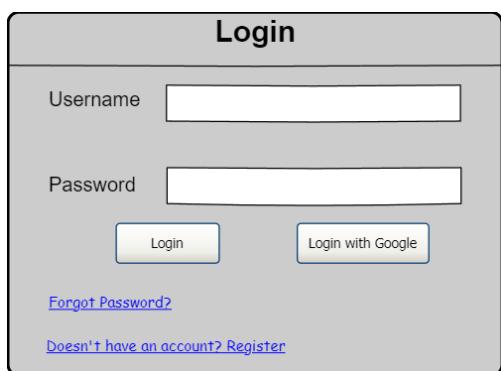
#### 1. 1 User Login

##### a. Description

- This screen allows users to be authenticated to the system screens/functionalities.
- The main login screen is shown to the user in one of below cases:
  - He/she clicks the Login link in the pages' header
  - He/she clicks the Login link in the User Register screen
  - He/she is accessing one of the authenticated page while not logging-in yet

##### b. UI Design

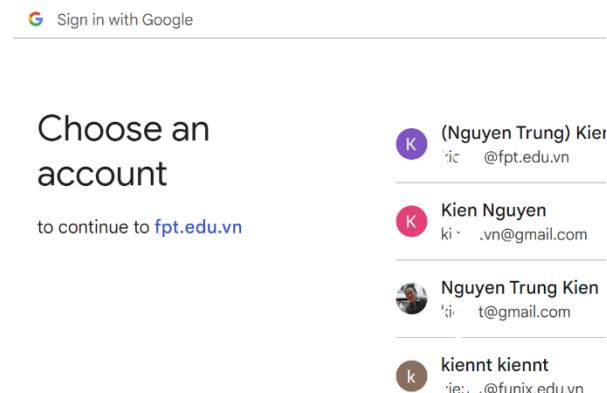
S1\_User Login screen



The screenshot shows a 'Login' form with the following fields and buttons:

- Username: A text input field.
- Password: A text input field.
- Login: A blue rectangular button.
- Login with Google: A blue rectangular button.
- [Forgot Password?](#): A blue link.
- [Doesn't have an account? Register](#): A blue link.

S2\_Select account to login (with Google)



##### c. User flow specification

UC ID and Name:	UC02: Login		
Created By:	AnhBHN	Update by:	
Primary Actor:	Customer	Secondary actor:	Manager
Trigger:	User clicks on Login button from Home Page		
Description:	The system allows users to login by an existed account to the system		
Preconditions:			
Postconditions:	1. Users successfully login to the system OR 2. User unsuccessfully login		
Normal Flow:	Step 1: From landing page, Users click on login button Step 2: System shows login page Step 3: Users input email, password. Step 4: Users click on Login button		

	Step 5: System validates input information (BR01, BR02, BR03) Step 6: If input information is valid, the system directs the user to the home page.
Alternative Flows:	Step 4.1: User login by Google Account
Exceptions:	Step 6: If the information is not valid, the system shows error message (EM01, EM02, EM03)
Priority:	High
Frequency of Use:	High frequency
Business Rules:	BR01, BR02, BR03
Other Information:	
Assumptions:	

## Business Rules

Rule ID	Rule Description	Note
BR01	Field: Email, password are mandatory	
BR02	Email must be valid and exist in the database	
BR03	Password must valid with the email in the database	

## Error Message

Error ID	Error Description	Business Rules
EM01	Email and Password need to input	BR01
EM02	Email is not exist or is not valid, please input again	BR02
EM03	Password is not valid (Wrong password for this email)	BR03

## 1.2 Change Password

### a. Description

- This screen allows users to change the password of their account in case they still remember the old password.
- The main login screen is shown to the user in one of below cases:
  - He/she clicks the Change Password link in the User Profile screen

*b. UI Design*

S1\_Enter Old and New Password

**Change Password**

Old Password	<input type="text"/>
New Password	<input type="text"/>
Repeat Password	<input type="text"/>
<input type="button" value="Change"/>	

*c. User flow specification*

UC ID and Name:	UC04: Change Password		
Created By:	AnhBHN	Update by	
Primary Actor:	Customer	Secondary actors	
Trigger:	User clicks on Change Password button		
Description:	The system allows users to change passwords.		
Preconditions:	1. User login to the system.		
Postconditions:	1. Users successfully change password OR 2. User unsuccessfully change		
Normal Flow:	Step 1: From profile page, user choose forgot password Step 2: System show the change password modal. Step 3: Users enter old password, new password and confirm new password.. Step 4: System validates input information (BR01, BR02, BR03) Step 5 : Informations verified, close modal and show success message		
Alternative Flows:			
Exceptions:	Step 4: If the information is not valid, the system shows error message (EM01,EM02,EM03)		
Priority:	High		
Frequency of Use:	High frequency		
Business Rules:	BR01, BR02, BR03		

Other Information:	
Assumptions:	

## Business Rules

Rule ID	Rule Description	Note
BR01	Old password must match the password in database	
BR02	Field: Old password, new password, confirm password are not leave blank	
BR03	Field: Repeat password must match the new password	

## Error Message

Error ID	Error Description	Business Rules
EM01	Wrong password	BR01
EM02	Old password, new password, confirm password must not blank	BR02
EM03	Confirm password does not match	BR03

### 1.3 Reset Password

#### a. *Description*

- This screen allows users to change the password of their account by email in case they don't remember their password .
- The main login screen is shown to the user in one of below cases:
- He/she clicks the Reset Password link in the User Login Screen

#### b. *UI Design*

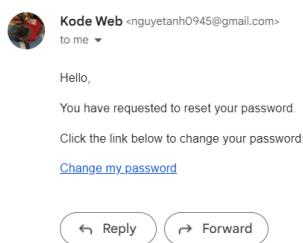
#### *S2\_Received Email*

#### *S1\_User Enter Username screen*



A screenshot of a 'Reset Password' form. It has a title bar 'Reset Password'. Below it is a 'Email' input field with a placeholder 'Email' and a 'Next' button at the bottom.

Here's the link to reset password [Inbox x](#)



S3\_Enter New Password Screen

The diagram shows a 'Reset Password' screen with a light gray header and footer. The main area contains two input fields: 'New Password' and 'Repeat Password', each with a small placeholder text ('New Password' or 'Repeat Password') to its left. Below these fields is a blue 'Reset' button.

c. *User flow specification*

UC ID and Name:	UC04: Reset Password		
Created By:	AnhBHN	Update by	
Primary Actor:	Customer	Secondary actors	
Trigger:	User clicks on Forgot Password button		
Description:	The system allows users to reset password with via email		
Preconditions:			
Postconditions:	1. Users successfully reset password OR 2. User unsuccessfully reset password		
Normal Flow:	Step 1: From login page, user choose forgot password Step 2: System send link to user's email. Step 3: Users click to the link. Step 4: User are redirect to reset password page Step 5: User enter new password and repeat the password below Step 6: System validates input information (BR01, BR02) Step 7: Informations are verified and user get redirect to login page		
Alternative Flows:			
Exceptions:	Step 6: If the information is not valid, the system shows error message (EM01, EM02)		
Priority:	High		
Frequency of Use:	High frequency		
Business Rules:	BR01, BR02		
Other Information:			
Assumptions:			

Business Rules

Rule ID	Rule Description	Note

BR01	Field: New password are not leave blank	
BR02	Field: Repeat password must match the new password	

#### Error Message

Error ID	Error Description	Business Rules
EM01	New password must nor blank	BR01
EM02	Confirm password does not match	BR02

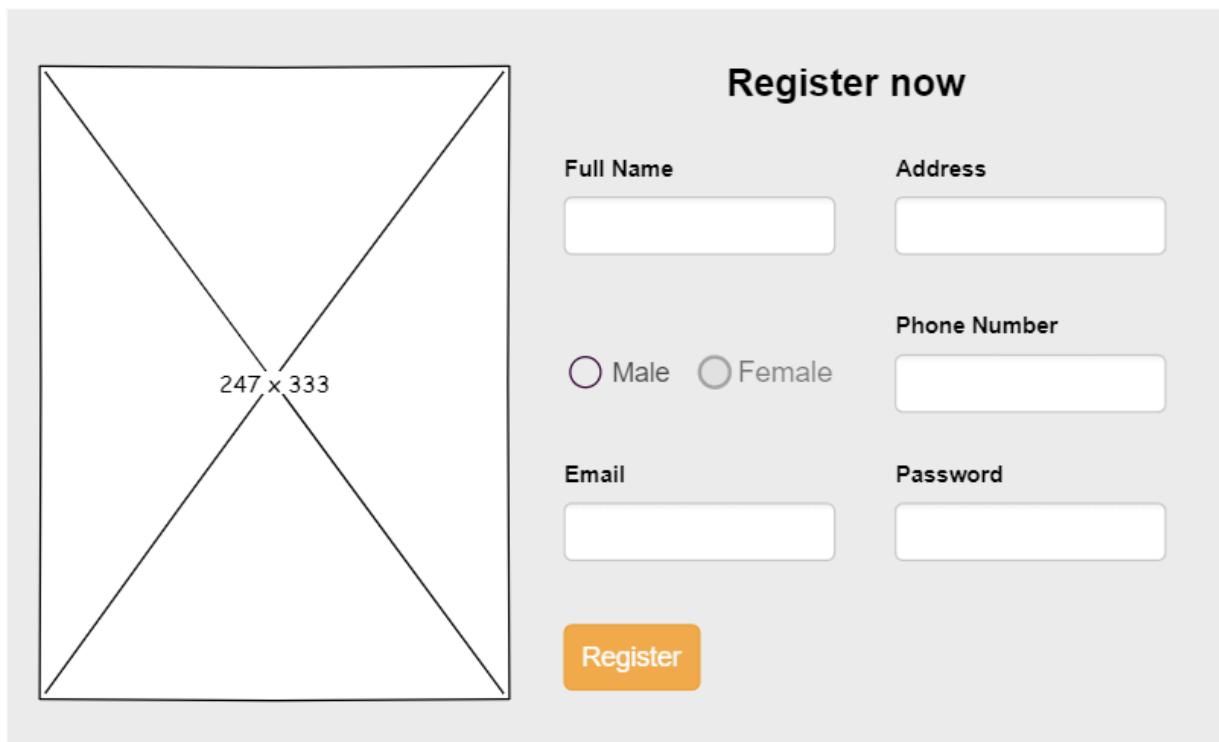
#### 1.4 Register

##### a. *Description*

- This screen allows users to register an account.
- The main login screen is shown to the user in one of below cases:
- He/she clicks the button Register on Home Page
- He/she clicks the Register link in the User Login Screen

##### b. *UI Design*

S1\_User Enter Information screen



The image shows a user registration form titled "Register now". The form is divided into two columns. The left column contains a large input field with a diagonal cross through it, indicating it is disabled or invalid. The right column contains fields for "Full Name" (input field), "Address" (input field), "Phone Number" (input field), "Email" (input field), and "Password" (input field). Below these fields are gender selection buttons: a purple circle labeled "Male" and a grey circle labeled "Female". At the bottom of the form is a prominent orange "Register" button.

*S2\_Verify the email*

## Verify Your Email

Please check your email for a link to verify your email address.

Once verified, you'll be able to continue.



Didn't receive an email? [Resend](#)

c. *User flow specification*

UC ID and Name:	UC04: Register		
Created By:	ThanhNT	Update by	
Primary Actor:	Customer	Secondary actors	
Trigger:	User clicks on Register button		
Description:	The system allows users to register an account to the system		
Preconditions:			
Postconditions:	1. Users successfully register to the system OR 2. User unsuccessfully register		
Normal Flow:	Step 1: From landing page, Users click on register button Step 2: System shows register page Step 3: Users input email, password, phone number and other information. Step 4: Users click on Register button Step 5: System validates input information (BR01, BR02, BR03) Step 6: If input information is valid, the system directs user to the verify page		

	Step 7: User click on the link that be sent to register email Step 8: System show the message “Register successful” and redirect to the Login Page.
Alternative Flows:	
Exceptions:	Step 6: If the information is not valid, the system shows error message (EM01,EM02,EM03)
Priority:	High
Frequency of Use:	High frequency
Business Rules:	BR01, BR02, BR03
Other Information:	
Assumptions:	

#### Business Rules

Rule ID	Rule Description	Note
BR01	Field: Email, password, phone number are mandatory	
BR02	Email, Phone Number must be valid or not exist in the database	
BR03	Password must have at least 8 characters and less than 24 characters, including at one number and one capital letter	

#### Error Message

Error ID	Error Description	Business Rules
EM01	Email and Password, Phone Number need to input	BR01
EM02	Email or phone number is used or is not valid, please input again	BR02
EM03	Password is not valid. It must have at least 8 characters, less than 24 characters, including one number and one capital letter	BR03

#### 1.5 User Profile

##### a. Description

- This is a pop-up screen which allows the user to edit his/her profile information, including the registered ones & the avatar image( s/he is not allowed to change the email )

##### b. UI Design

c. User flow specification

UC ID and Name:	UC05: User Profile		
Created By:	ThanhNT	Update by	
Primary Actor:	Customer	Secondary actors	
Trigger:	User hover on avatar, choose profile to get into profile screen		
Description:	The system allows users to view the information, change name, address, phone number and avatar.		
Preconditions:	1. Users are customers that successfully logged in.		
Postconditions:			
Normal Flow:	Step 1: From the homepage, the user clicks on the avatar Step 2: User can view the profile. Step 3: User can change the profile (name, address, phone number and the photo) (BR01, BR02, BR03, BR04)		
Alternative Flows:			
Exceptions:	Step 3.1: If user enter only spaces (leave blank) the name, system print out errors (EM01) Step 3.2: If user enter only address(leave blank) the name, system print out errors (EM02) Step 3.3: The phone enter not valid (not begin with 0 or 10 digits), system print out errors (EM03) Step 3.4: The photo file are not valid (not image file), system print out errors (EM04)		
Priority:	High		
Frequency of Use:	High frequency		

Business Rules:	BR01, BR02, BR03, BR04
Other Information:	
Assumptions:	

#### Business Rules

Rule ID	Rule Description	Note
BR01	Field: The name not blank	
BR02	Field: Address not blank	
BR03	Phone number must begin with 0 and and 10 digits	
BR04	Photos must be jpg, png, jpeg, webp, .... (images)	

#### Error Message

Error ID	Error Description	Business Rules
EM01	Does not leave the name blank	BR01
EM02	Does not leave the address blank	BR02
EM03	Phone are not valid (must begin with 0 and 10 digits)	BR03
EM04	Photo are not valid (must be image file)	BR04

## 2. Public Function

### 2.1 Home Page

#### a. *Description*

- This screen allows users to view sliders, hot posts, featured services, latest posts, and static contact information. The user can interact with the sliders, posts, and services by clicking on them to be redirected to their detailed pages.

#### b. *UI Design*

Address: Hoa Lac, Ha Noi, Viet Nam

+880 1234 56789 support@youremail.com

Home Services Blogs Register Login

Service 1  
Service 2

Image of slider

Service

ServiceName  
Information...

ServiceName  
Information...

ServiceName  
Information...

Posts

Post Name  
Information...

Post Name  
Information...

Post Name  
Information...

About us

Quick Link

Open Hours

Mon day- Saturday : 8:00-20:00

Home Blogs Service

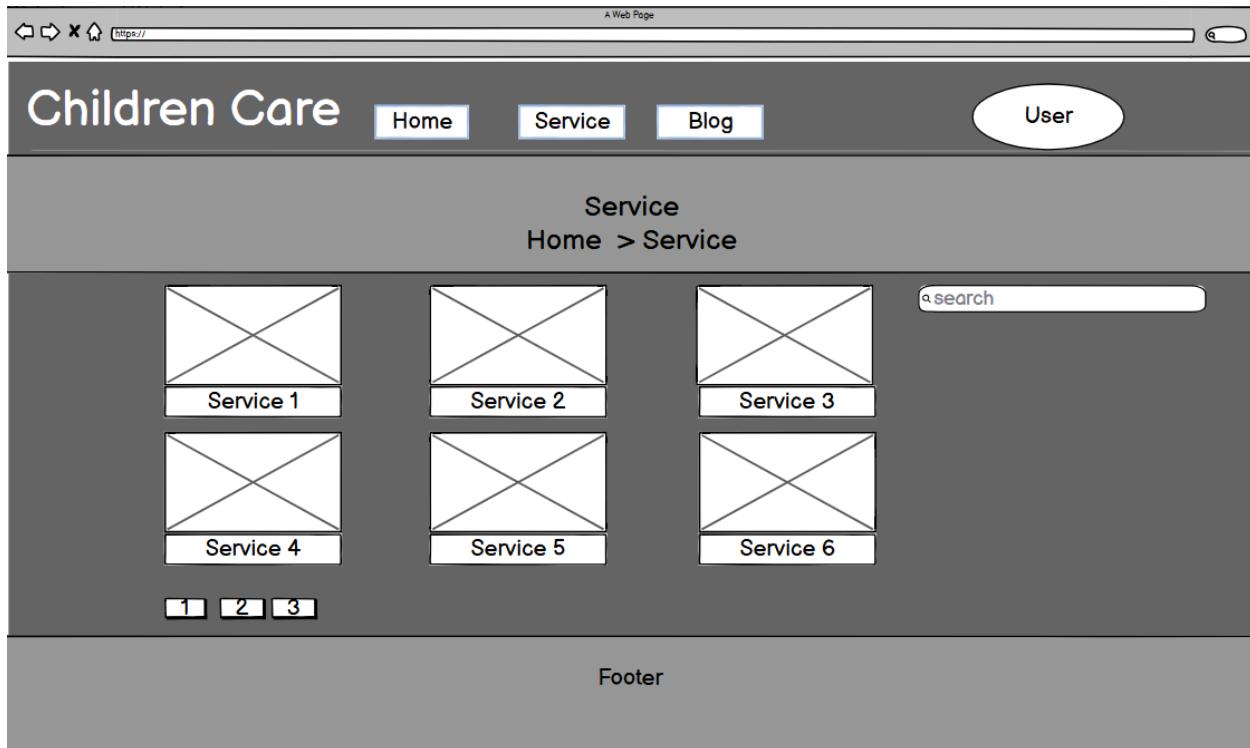


## 2.2 Service List

### a. Description

- Shown service information includes its thumbnail, title, brief information, original price, and sale price;
- The user is redirected to the service's details on his/her clicking on the service

### b. UI Design



UC ID and Name:	UC07: View Service	
Created By:	LongNQ	Update by
Primary Actor:	User	Secondary actors
Trigger:	User clicks on Service button	
Description:	The system allows users to view all the active service	
Preconditions:		
Postconditions:	Users successfully view service list the system OR	
Normal Flow:	Step1: The user opens the homepage or dashboard of the application. Step 2: Navigate to Services: <ul style="list-style-type: none"> <li>The user selects the "View Services" option or a similar menu item to access the services section.</li> </ul> Step 3: Display List of Services:	

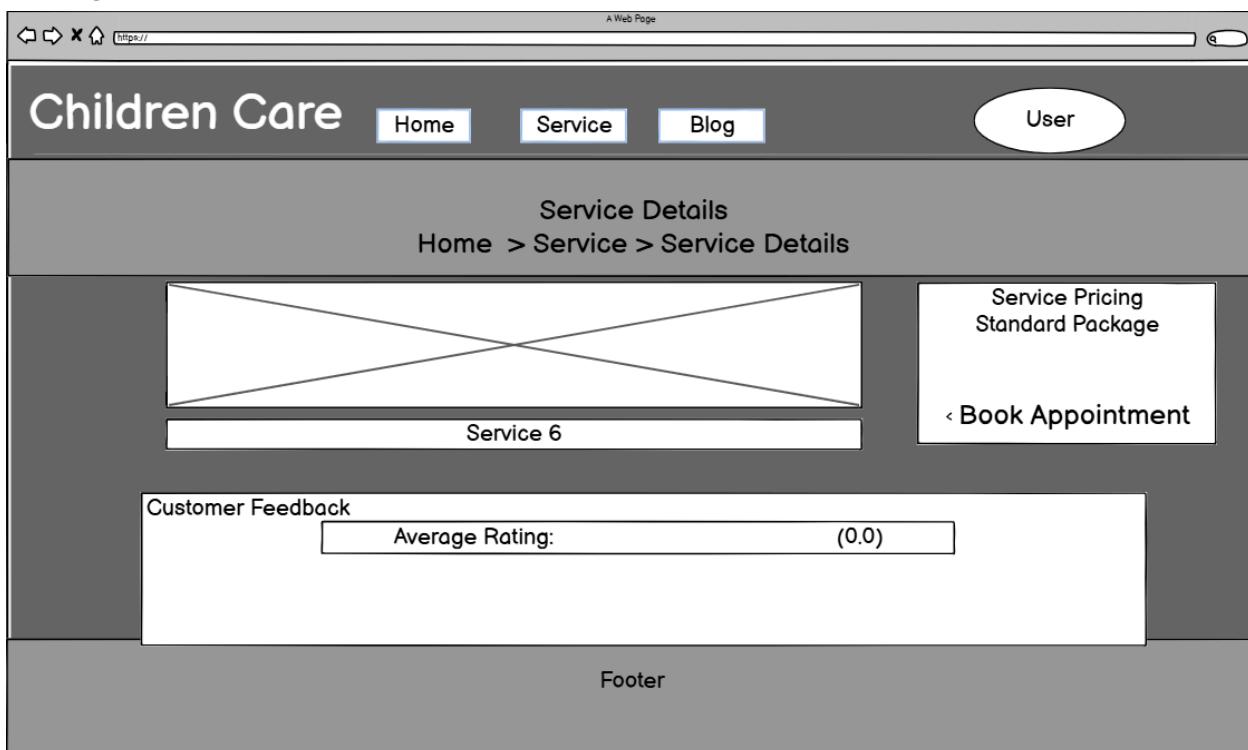
	<ul style="list-style-type: none"> <li>The system retrieves the list of available services from the database.</li> </ul>
Alternative Flows:	
Exceptions:	
Priority:	High
Frequency of Use:	High frequency
Business Rules:	BR01, BR02, BR03
Other Information:	
Assumptions:	

## 2.3 Service Details

### a. Description

- Show service details (including title, category, images, original price, sale price, and service details) + the sider with the service search box, service categories, static contacts/links

### b. UI Design

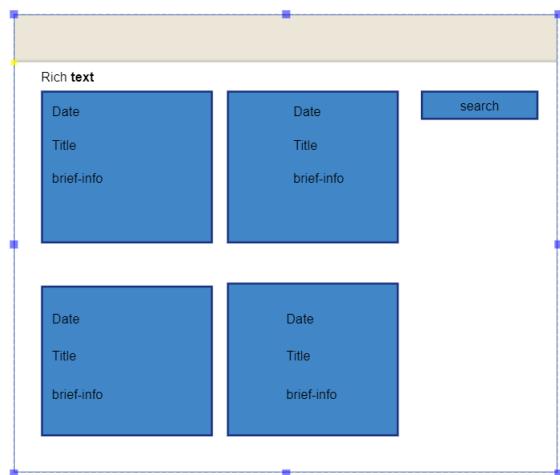


UC ID and Name:	UC07: View Service DetailDetails	
Created By:	LongNQ	Update by
Primary Actor:	User	Secondary actors
Trigger:	User clicks 1 Service	

Description:	The system allows users to view all the active service
Preconditions:	
Postconditions:	Users successfully view service details the system OR
Normal Flow:	<p>Step1: The user clicks 1 service from the page Service List.</p> <p>Step 2: Services Details:</p> <p>The system displays service details, showing basic details like the service name, brief description price (if applicable)..</p>
Alternative Flows:	
Exceptions:	
Priority:	High
Frequency of Use:	High frequency
Business Rules:	BR01, BR02, BR03
Other Information:	
Assumptions:	

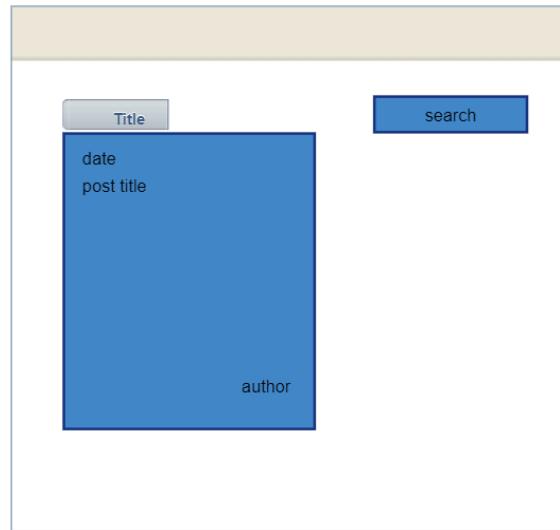
## 2.4 Blogs List

- Show the posts pagination (sorted by updated date, paginated)
- information includes its thumbnail, title, brief-info; the user is redirected to the post's details on his/her clicking



## 2.5 Blog details

- Show post details (including title, author, updated date, category, and post details)
- The sider with the post search box, posts categories, static contacts/links



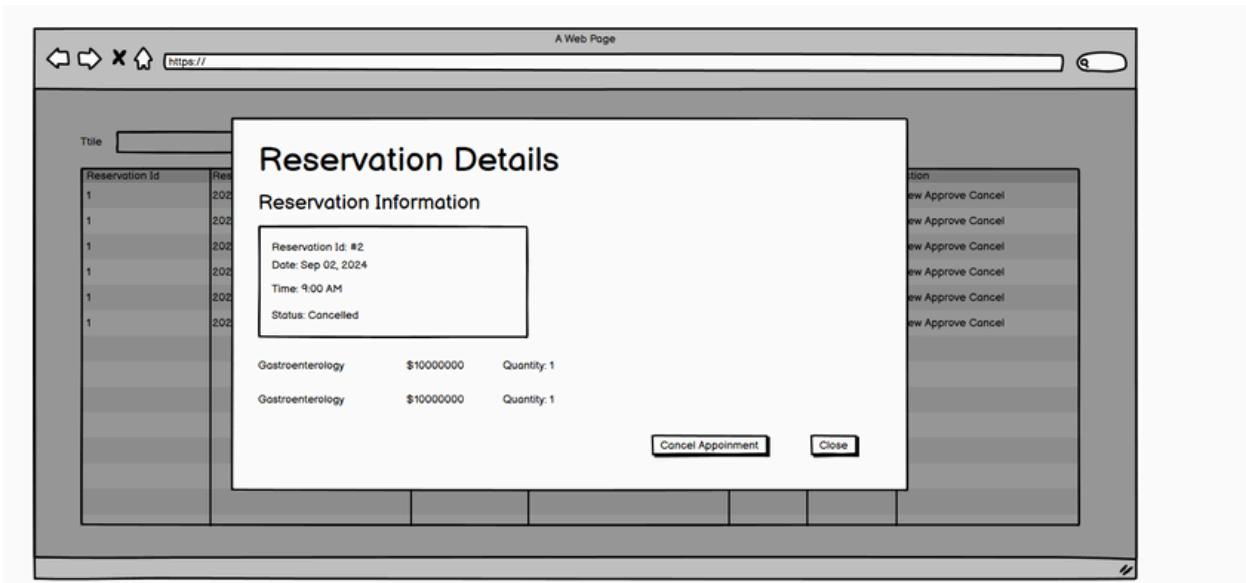
### 3. Customer Function

#### 3.1 My Reservation

- Show reservation list of a customer
- Search box to search reservation by first service name

#### 3.2 Reservation Information

- Show the reservation details, including the information as below + the sider with the post search box, posts categories, static contacts/links



### 3.3 Reservation Contact

#### Selected Services

Service Name	Price
Endocrinology	\$150000.0
<b>Total Amount:</b>	<b>\$150000.0</b>

#### Receiver Info

Full Name

Linh Linh

Gender:  Male  Female

Email

thuylinhnguyenat@gmail.com

Phone Number

Address

Viet Nam

Payment Method

VNPAY

Preferred Checkup Time

dd/mm/yyyy



Select Time ▾

**Close**

**Confirm Booking**

UC ID and Name:	UC07: Input Reservation Information		
Created By:	LinhNT	Update by	
Primary Actor:	Customer	Secondary actors	

Trigger:	User click button Book Appointment in Reservation Cart
Description:	The system allows users to book an appointment with the services in cart
Preconditions:	1. Users are customers who successfully logged in. 2. Cart is not empty
Postconditions:	
Normal Flow:	Step 1: From the homepage, the user clicks on cart button Step 2: Click Book Appointment Step 3: User fill in information (name, gender, address, phone number, payment method and preferred checkup time) (BR01, BR02, BR03)
Alternative Flows:	Step 1: From the homepage, the user clicks on service button Step 2: Click on a service to see details Step 3: Click on button Add to Cart Step 4: Click Book Appointment Step 5: User fill in information (name, gender, address, phone number, payment method and preferred checkup time) (BR01, BR02, BR03)
Exceptions:	Step 3.1: If user leave blank any field, system print out an error (EM01) Step 3.2: The phone enter not valid (not begin with 0 or 10 digits), system print out errors (EM02) Step 3.3: If user choose invalid preferred checkup time (not from tomorrow to 3 months from now), system print out errors (EM03)
Priority:	High
Frequency of Use:	High frequency
Business Rules:	BR01, BR02, BR03
Other Information:	
Assumptions:	

## Business Rules

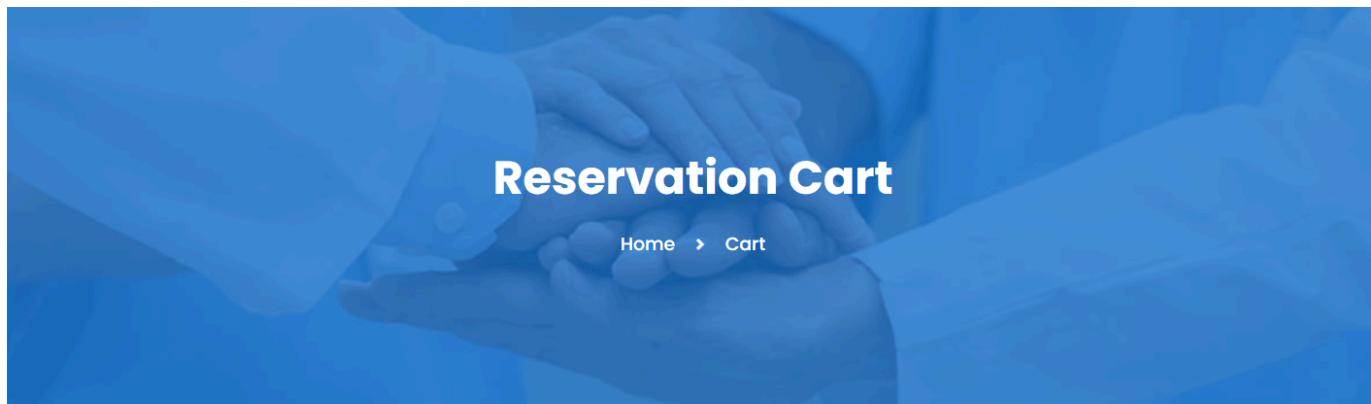
Rule ID	Rule Description	Note
BR01	No field blank	
BR02	Phone number must begin with 0 and and 10 digits	
BR03	Preferred checkup time must from tomorrow to 3 months from now	

## Error Message

Error ID	Error Description	Business Rules
EM01	Please fill in this field	BR01

EM02	Phone number must begin with 0 and and 10 digits	BR02
EM03	Preferred checkup time must from tomorrow to 3 months from now	BR03

### 3.4 Reservation



Service	Price	Action
Endocrinology	\$150000.0	<button>Remove</button>
Clinical Nutrition	\$100000.0	<button>Remove</button>

[Browse More Services](#)

**Customer Information**

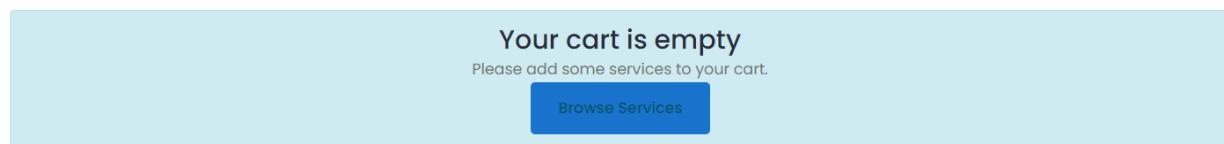
Name: Linh Linh

**Cart Total**

Total: \$250000.0

Clear Cart

Book Appointment



### 3.5. Reservation Completion

This screen allows users to view the cart completion notes.

This screen is shown to the user in one of below cases:

- He/she finish their Reservation Contact

A screenshot of a modal dialog box with a light gray header and footer. The main content area is titled "Your Reservation Status". It contains several input fields:

- A single-line input field labeled "Payment Status:"
- A row with three input fields: "Service 2", "Quantity:", and "Unit Price:"
- A row with three input fields: "Service 2", "Quantity:", and "Unit Price:"
- A row with three input fields: "Service 2", "Quantity:", and "Unit Price:"
- A large input field labeled "Your Reservation Information:"
- A large input field labeled "Apartment Address"

An "OK" button is located at the bottom right of the form.

### 3.6 My Feedback

- Show list feedback that provided of a customer
- Show the reservation that not has feedback

Header

Home / My Reservation / My Feedback

Feedback ProvideNo feedback

🔍

Reservation ID	First Service	Feedback Time	Content	Rate	Image
1	Clinical Nutrition	2014-10-19 08:00:00.0	Ok	4	
103	Clinical Nutrition	2021-07-29 00:00:00.0	Very good	5	
104	Anesthesiology	2021-07-29 00:00:00.0	Not good	3	

« 1 2 ... 49 50 »

Footer



Home / My Reservation / My Feedback

Feedback Provide      No feedback

No reservation needs feedback now



UC ID and Name:	UC06: My Feedback
Created By:	ThanhNT
Primary Actor:	Customer
Trigger:	
From My Reservation Page, users click on the button My Feedback	
Description:	
The system allows users to view the list feedback provided and the reservation needs feedback.	
Preconditions:	<ol style="list-style-type: none"><li>1. Users are customers that successfully logged in.</li><li>2. User must be a customer.</li></ol>
Postconditions:	
Normal Flow:	Step 1: From the homepage, the user clicks on the avatar, choose My Reservation on the dropdown Step 2: Users click the button My Feedback. Step 3: User can view the list feedback provided and the reservation needs feedback. Step 4: User can provide feedback to the reservation needs feedback (BR01,BR02)
Alternative Flows:	
Exceptions:	
Priority:	High

Frequency of Use:	High frequency
Business Rules:	BR01, BR02
Other Information:	
Assumptions:	

## Business Rules

Rule ID	Rule Description	Note
BR01	Field: The content feedback not blank	
BR02	Field: Rate Star not blank	

## Error Message

Error ID	Error Description	Business Rules
EM01	Does not leave the content feedback blank	BR01
EM02	Does not leave the rate stars blank	BR02

## 4. Manager Function

### 4.1 Slider List

- Show list slider
- Manager can change status, view or edit, create slider
- Manager can search slider by title, filter by status

Header

Home/ Profile / Slider List

Search by title		Filter by status	All ▾	Add Slider	
Slider ID	Title	Image	Back Link	Status	Action
1	1 A Response Plan to counter Covid-19	#		Public	<a href="#">View</a> <a href="#">Edit</a>
103	Medical Emergencies Always Come Unannounced!	#		Public	<a href="#">Delete</a>
104	2021-07-16 00:00:00.0	#		Hidden	

<< 1 2 ... 49 50 >>

Footer

## 4.2 Slider Detail

- Show the detail of the slider selected

Address: Hoa Lạc, Hà Nội, Việt Nam | +880 1234 56789 | childrencaresystems1874@gmail.com

CHILDREN CARE | Home | Services | Blogs | [Thanh](#)

Home / Profile / Dashboard / Slider List / Slider Detail

A Response Plan to counter Covid-19

**Back Link:** #

**Status:** Public

**Notes:** Pushing the boundaries of what's possible in children's health.

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Quick Links

Open Hours

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#### 4.3 Feedback List

Search by customer name, content		Filter:	Status	Service	All Stars	Display Status	
Feedback ID	Customer Name	Service Name	Rated Star	Content	Status	Display Status	Action
1	Bui Hoang Nguyet Anh	Neurosurgery	0	No feedback	Processed	Hidden	<button>View</button>
2	Bui Hoang Nguyet Anh	Pulmonology	0	No feedback	Processed	Hidden	<button>View</button>
3	Mariko Jacobs	Endocrinology	3	ok	Processed	Public	<button>View</button>
4	Mariko Jacobs	LGBTQ Health	0		Processing	Hidden	<button>View</button>
5	Ashton Houston	Anesthesiology	5		Processing	Public	<button>View</button>

1 2 3 4 5 Next

#### 4.4 Feedback Detail

Home / Profile / Feedback List / Feedback Detail

#### Feedback Detail

Contact FullName:	Bui Hoang Nguyet Anh	Email:	nguyetanh0945@gmail.com
Mobile:	0972427628	Service Name:	Neurosurgery
Rated Star:	0	Image Link:	
Status:	Processed	Content Feedback:	No feedback
Display Status:	Hidden	Reservation ID:	28

Edit Status

Feedback with 0 star cannot be public

#### 4.5 Service List

- Show the details service

A Web Page

# Children Care

- Home
- Service
- Blog

User

Filter by status: All Active Inactive

search keywords

Add Service

search keywords

Search

Edit Active	Edit Active	Edit Active	Edit Active
Edit Active	Edit Active	Edit Active	Edit Active

Prev 1 2 Next

Footer

#### 4.6 Edit Service

- Change content of current service

A Web Page

# Children Care

- Home
- Service
- Blog

User

Edit service

Service Name

Content

Origin Price

Sale Price

Content

Description

Details

Category

Category

Choose Image

Featured Service  Active Status

Update Service

Footer

## 4.7 Add Service

- Create a new Service

A Web Page

# Children Care

- [Home](#)
- [Service](#)
- [Blog](#)
- User

[Dashboard](#)  
[User List](#)  
[Setting List](#)  
[Manage Slider](#)  
[Manage Feedback](#)  
[Manage Reservation](#)  
**Manage Service**  
[Change password](#)  
[A Doctors](#)  
[Customer](#)  
[Apps](#)  
[Pharmacy](#)  
[Blogs](#)  
[Pages](#)

### Add service

Service Name

Origin Price

Sale Price

Description

Details

Category

Category

Featured Service  Active Status

## 4.8 Reservation List

UC ID and Name:	UC16: ReservationList		
Created By:	DungPC	Update by	

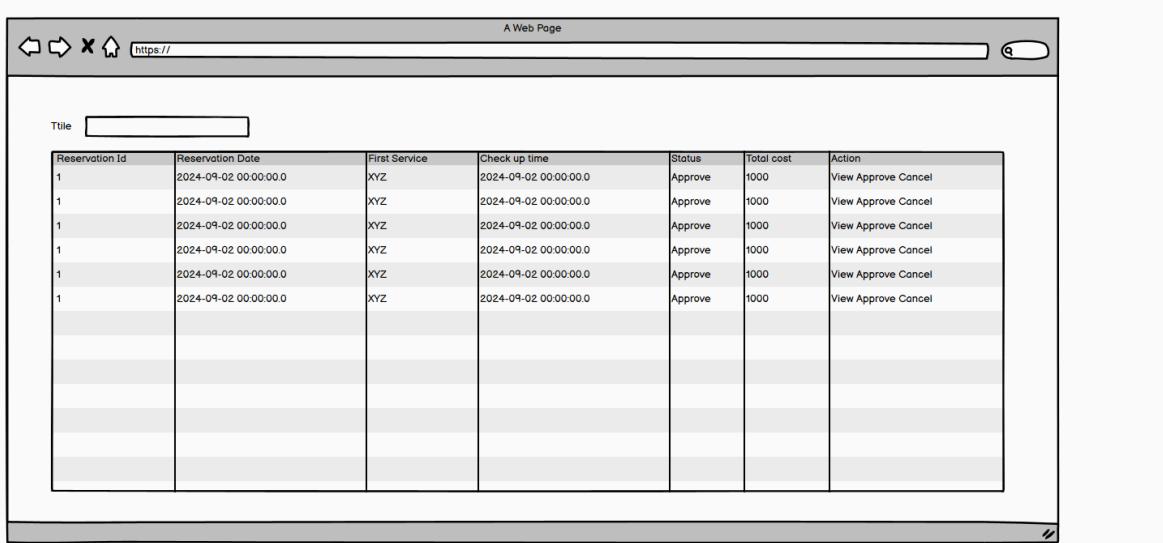
Primary Actor:	Manager	Secondary actors	Doctor
Trigger:	From sidebar dashboard, users click on the button Manage Reservation		
Description:	The system allows users to view the reservation and the use case manager can approve or cancel. Doctor can view the reservation		
Preconditions:	1. Users are customers that successfully logged in. 2. User must be a manager or doctor.		
Postconditions:			
Normal Flow:	Step 1: From the homepage, the user clicks on the avatar, choose My Reservation on the dropdown list. Step 2: Users click the button My Reservation. Step 3: User can view the reservation and the use case manager can approve or cancel. Doctor can view the reservation.		
Alternative Flows:			
Exceptions:			
Priority:	High		
Frequency of Use:	High frequency		
Business Rules:			
Other Information:			
Assumptions:			

#### 4.9 Reservation Details

UC ID and Name:	UC17: Reservation Details	
Created By:	DungPC	Update by

Primary Actor:	Manager	Secondary actors	Doctor
Trigger:	From sidebar dashboard, users click on the button Manage Reservation		
Description:	The system allows manager, doctor to view the reservation details		
Preconditions:	1. Users are customers that successfully logged in. 2. User must be a manager or doctor.		
Postconditions:			
Normal Flow:	Step 1: From the homepage, the user clicks on the avatar, choose My Reservation on the dropdown list. Step 2: Users click the button My Reservation. Step 3: Users click the button View.		
Alternative Flows:			
Exceptions:			
Priority:	Normal		
Frequency of Use:	Normal frequency		
Business Rules:			
Other Information:			
Assumptions:			

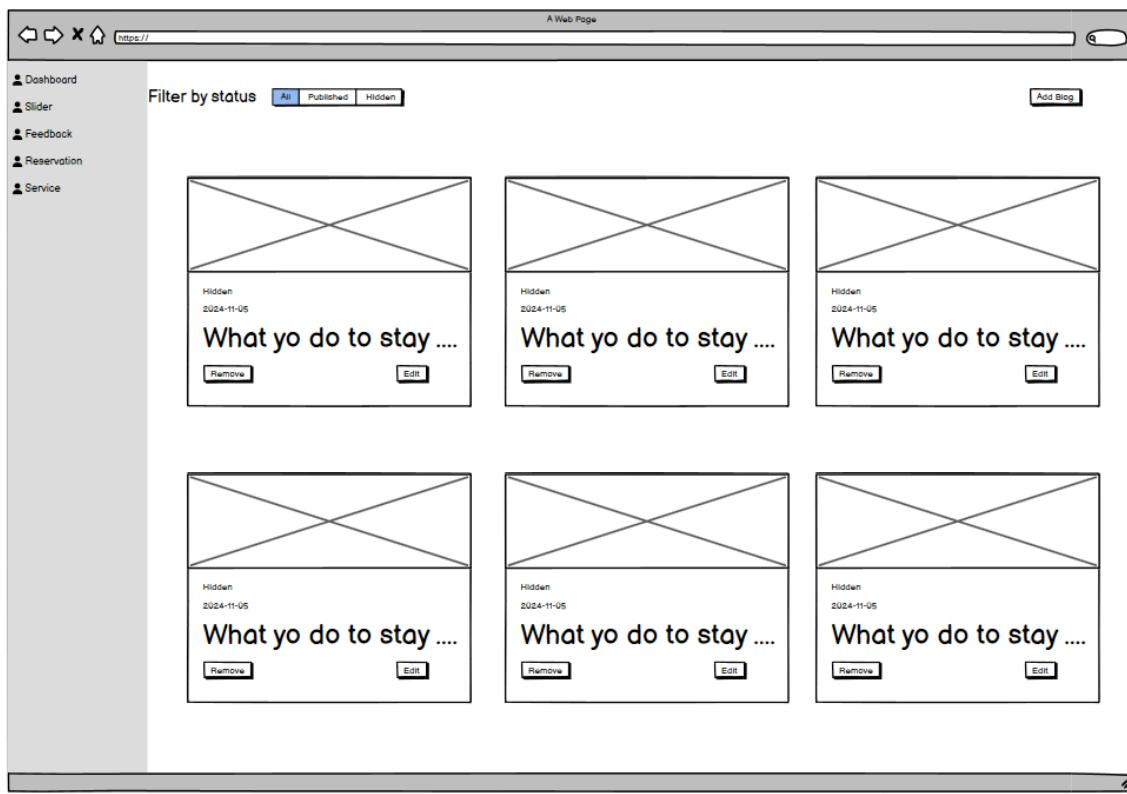
#### 4.10 Customer List



UC ID and Name:	UC18: Customer List	
Created By:	DungPC	Update by
Primary Actor:	Manager	Secondary actors
Trigger:	From sidebar dashboard, users click on the button Manage Customer	
Description:	The system allows manager, doctor to view the reservation details	
Preconditions:	1. Users are customers that successfully logged in.	

	2. User must be a manager or doctor.
Postconditions:	
Normal Flow:	Step 1: From the homepage, the user clicks on the avatar, choose Profile on the dropdown list. Step 2: Users click the button My Customer.
Alternative Flows:	
Exceptions:	
Priority:	Normal
Frequency of Use:	Normal frequency
Business Rules:	
Other Information:	
Assumptions:	

#### 4.11 Post List



UC ID and Name:	UC18: Blog List		
Created By:	DungPC	Update by	
Primary Actor:	Manager	Secondary actors	

Trigger:	From sidebar dashboard, users click on the button Manage Post
Description:	The system allows manager to view, filter the post
Preconditions:	3. Users are customers that successfully logged in. 4. User must be a manager.
Postconditions:	
Normal Flow:	Step 1: From the homepage, the user clicks on the avatar, choose Profile on the dropdown list. Step 2: Users click the button Manage Post.
Alternative Flows:	
Exceptions:	
Priority:	Normal
Frequency of Use:	Normal frequency
Business Rules:	
Other Information:	
Assumptions:	

#### 4.12 Post Details

A Web Page  
 https://

**ADD NEW BLOG LIST**

**Post Title \***

**Description \***  
 B I U |   

**Content \***  
 B I U |   

**Category \***  
 Children Care  
 Education  
 Health  
 Nutrition

**Status \***  
 Published  
 Hidden

**Upload image**

**Create Post**

UC ID and Name:	UC19: Post Details	
Created By:	DungPC	Update by
Primary Actor:	Manager	Secondary actors
Trigger:	From sidebar dashboard, users click on the button Manage Details	
Description:	The system allows manager to view post details	
Preconditions:	1. Users are customers that successfully logged in. 2. User must be a manager.	
Postconditions:		
Normal Flow:	Step 1: From the homepage, the user clicks on the avatar, choose Profile on the dropdown list.	

	Step 2: Users click the button title of the post.
Alternative Flows:	
Exceptions:	
Priority:	Normal
Frequency of Use:	Normal frequency
Business Rules:	
Other Information:	
Assumptions:	

## 5. System Administration

### 5.1 System Settings

#### 5.1.1 Setting List

**Settings Management**

The screenshot shows a user interface for managing system settings. At the top, there is a search bar labeled "Search by name or value..." and a "Search" button. To the right of the search bar is a blue button labeled "+ Add New Setting". Below the search area, there are two filter dropdowns: "Type:" and "Status:". The "Type:" dropdown has options "All" and "Post Category". The "Status:" dropdown also has options "All" and "Active". A blue "Apply Filters" button is located next to these dropdowns. The main content area is a table with the following columns: ID, TYPE, NAME, VALUE, DESCRIPTION, STATUS, and ACTIONS. The table contains 9 rows of data, each representing a different setting type. The "Actions" column for each row contains two icons: a magnifying glass and a pencil.

ID	TYPE	NAME	VALUE	DESCRIPTION	STATUS	ACTIONS
1	Post Category	Children Care	1	Category related to the care of children	Active	
2	Post Category	Education	2	Category related to the education of children	Active	
3	Post Category	Health	3	Category related to the health of children	Active	
4	Post Category	Nutrition	4	Category related to the nutrition of children	Active	
5	Post Category	LGBT	5	Category related to the nutrition of children	Active	
6	Service Category	Pediatrics	1	Pediatric services for children	Active	
7	Service Category	Cardiology	2	Cardiology services for children	Active	
8	Service Category	Neurosurgery	3	Neurosurgery services for children	Active	
9	Service Category	Cancer Care	4	Cancer care services for children	Active	

#### (1) Setting Type:

- Initialized with all the active setting types filled in,
- Allow user to filter and sort the setting list by a specific setting type
- Default value is “All Types”, allowing user to see the settings at all types

#### (2) Setting Status:

- Initialized with two values Active and Inactive filled in
- Allow user to filter the setting list by a specific status (Active or Inactive)
- Default value is “All Types”, allowing user to see the settings at all statuses

(3) The change-status action is Activate or Deactivate depending on the current status of the relevant setting (Inactive or Active). The user needs to confirm the status changing via a modal confirmation message before getting that done.

### 5.1.2 Setting Details

This page is shown after the user click the New Setting link or the Edit link in the Setting List page

This is for the administrator to add new or view/update an existing system setting

## Setting Details

[← Back To Settings List](#)

Type  
Post Category

Name  
Children Care

Value  
1

Description  
Category related to the care of children

Status  
Active

[Save Changes](#)

## 5.2 System account

### 5.2.1 User List

User List							
ID	FULL NAME	GENDER	EMAIL	MOBILE	ROLE	STATUS	ACTIONS
1	Giang	Male	childrencaresystemse1874@gmail.com	0974484610	Admin	Active	 
2	Ha	Female	hottnhel51322@gmail.com	0974039384	Customer	Active	 
3	Ngoc Anh	Female	anhntnhes151378@gmail.com	0974484610	Staff	Active	 
4	Nguyet Anh	Female	nguyetanh0944@gmail.com	0974484610	Manager	Active	 
5	Minh	Male	minhhnhel51181@gmail.com	0974484610	Staff	Active	 
7	Cameran Randall	Male	Fusce.dolor@gmail.com	03 3098 2170	Staff	Active	 
8	Travis Booth	Male	Aliquam.fringilla.cursus@gmail.com	05 2741 5626	Staff	Active	 
9	Erasmus Miles	Female	Cum.sociis@gmail.com	06 5922 9897	Staff	Active	 

### 5.2.1 User Details

#### User Details

[Back To Users List](#)

 Full Name   Email

 Gender   Mobile

 Address   Role  Admin role cannot be modified

 Status

 Save Changes

## 6. Doctor Function

### 6.1. Medical Examination History

#### Medical Examinations

Search by patient name...				Search	Add Examination	
No.	Patient Name	Gender	Email	Prescription	Create Date	Medicines
1	MacKensie Morris	Female	sociis@gmail.com	Cannot use more medicine.	2024-09-01 00:00:00.0	<button>View Details</button>
2	Bui Hoang Nguyet Anh	Female	nguyetanh0945@gmail.com	Must not use paracetamol	2024-09-01 00:00:00.0	<button>View Details</button>
3	Maryam Coffey	Female	auctor.Mauris@gmail.com	Should come back to hospital	2024-09-01 00:00:00.0	<button>View Details</button>
4	Ngoc Anh	Female	anhntnhei151378@gmail.com	3 times a day	2024-09-01 00:00:00.0	<button>View Details</button>

### 6.2 Add Examination

#### Add Medical Examination

Select Reservation:

Prescription:

Medicines:

Medicine Name	Dosage	Instructions	Action
<input type="text"/>	<input type="text"/>	<input type="text"/>	<button>Remove</button>

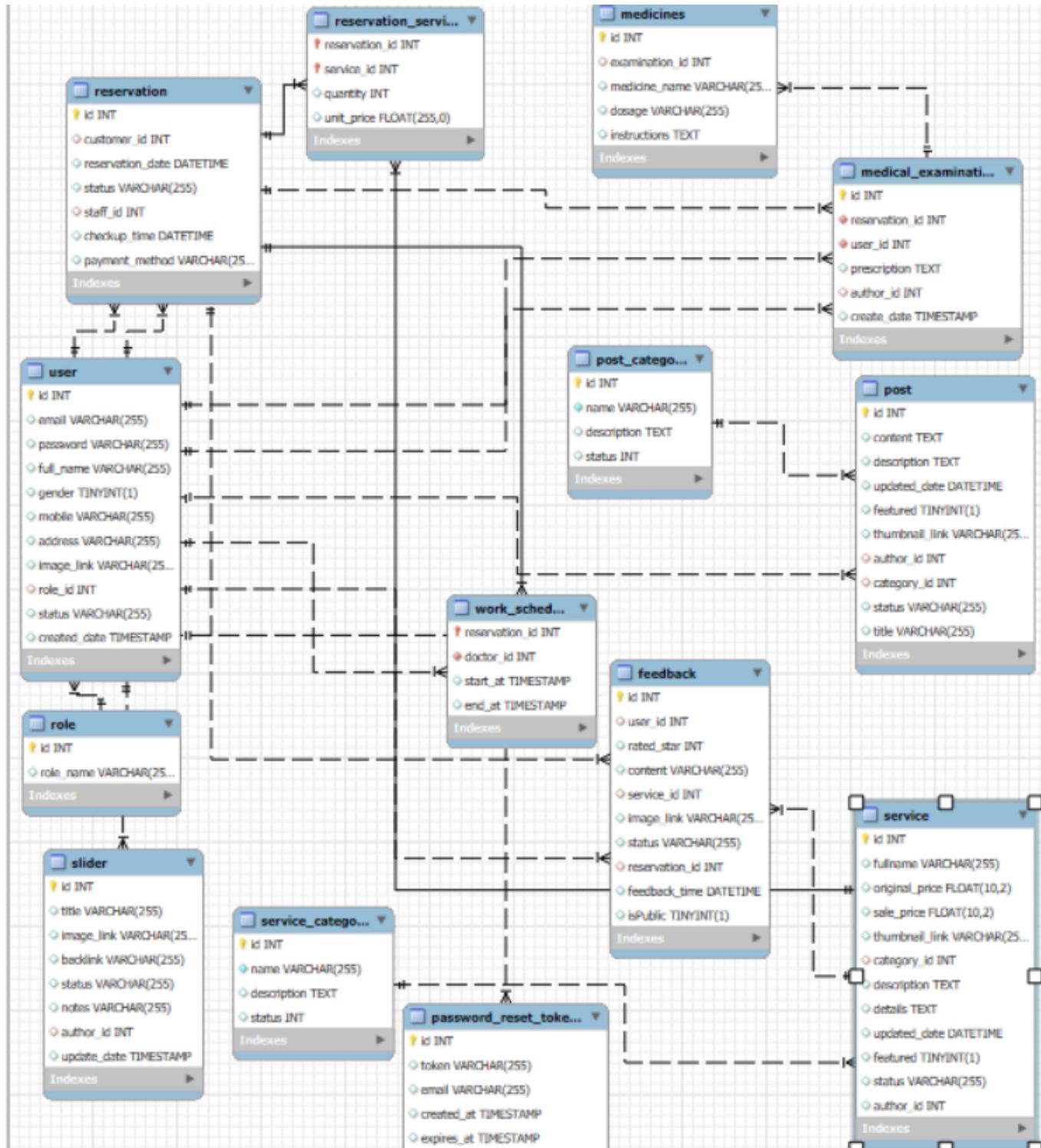
Add Medicine

Save Examination Cancel

### III. System Design

#### 1. Database Design

##### 1.1 Database Schema



## 1.2 Table Descriptions

No	Table	Description
01	user	<ul style="list-style-type: none"> <li>- Primary keys: id</li> <li>- Foreign keys: role_id references role(id)</li> <li>- Unique keys: mobile, email</li> </ul>
02	slider	<ul style="list-style-type: none"> <li>- Primary keys: id</li> <li>- Foreign keys: author_id references user(id)</li> <li>- Unique keys: none</li> </ul>
03	medical_examination	<ul style="list-style-type: none"> <li>- Primary keys: reservation_id, service_id, user_id</li> <li>- Foreign keys: <ul style="list-style-type: none"> <li>+ reservation_id references reservation(id)</li> <li>+ service_id references service(id)</li> <li>+ user_id references user(id)</li> </ul> </li> <li>- Unique keys: none</li> </ul>
04	work_schedule	<ul style="list-style-type: none"> <li>- Primary keys: reservation_id</li> <li>- Foreign keys: <ul style="list-style-type: none"> <li>+ reservation_id references reservation(id)</li> <li>+ doctor_id references user(id)</li> <li>+ user_id references user(id)</li> </ul> </li> <li>- Unique keys: none</li> </ul>
05	password_reset_token	<ul style="list-style-type: none"> <li>- Primary keys: id</li> <li>- Foreign keys: <ul style="list-style-type: none"> <li>+ user_id references user(id)</li> </ul> </li> <li>- Unique keys: none</li> </ul>
06	reservation	<ul style="list-style-type: none"> <li>- Primary keys: id, docter_id, customer_id</li> <li>- Foreign keys: <ul style="list-style-type: none"> <li>+ doctor_id references user(id)</li> <li>+ customer_id references user(id)</li> </ul> </li> <li>- Unique keys: none</li> </ul>
07	role	<ul style="list-style-type: none"> <li>- Primary keys: id</li> <li>- Unique key: none</li> <li>- Other field: role_name (varchar 255)</li> </ul>
08	post_category	<ul style="list-style-type: none"> <li>- Primary keys: id</li> <li>- Foreign keys: none</li> <li>- Unique keys: none</li> <li>- Other field: <ul style="list-style-type: none"> <li>+ name (varchar 255)</li> <li>+ description(text)</li> </ul> </li> </ul>
09	post	<ul style="list-style-type: none"> <li>- Primary keys: id</li> </ul>

No	Table	Description
		<ul style="list-style-type: none"> <li>- Foreign keys: <ul style="list-style-type: none"> <li>+ author_id references user(id)</li> <li>+ category_id references post_category(id)</li> </ul> </li> <li>- Unique keys: none</li> <li>- Other field: <ul style="list-style-type: none"> <li>+ content(text)</li> <li>+ description(text)</li> <li>+ update_date(date_time)</li> <li>+ featured (tinyint)</li> <li>+ thumbnail_link</li> <li>+ status</li> <li>+ title</li> </ul> </li> </ul>
10	service_category	<ul style="list-style-type: none"> <li>- Primary keys: id</li> <li>- Foreign keys: none</li> <li>- Unique keys: none</li> <li>- Other field: <ul style="list-style-type: none"> <li>+ name (varchar 255)</li> <li>+ description(text)</li> </ul> </li> </ul>
11	feedback	<ul style="list-style-type: none"> <li>- Primary keys: id</li> <li>- Foreign keys: <ul style="list-style-type: none"> <li>+ user_id</li> <li>+ service_id</li> <li>+ reservation_id</li> </ul> </li> <li>- Unique keys: none</li> <li>- Other field: <ul style="list-style-type: none"> <li>+ content(varchar 255)</li> <li>+ rated_star(int)</li> <li>+ image_link(varchar 255)</li> <li>+ feedback_time(date_time)</li> <li>+ status</li> </ul> </li> </ul>
12	reservation_service	<ul style="list-style-type: none"> <li>- Primary keys: <ul style="list-style-type: none"> <li>+ reservation_id</li> <li>+ service_id</li> </ul> </li> <li>- Foreign keys: <ul style="list-style-type: none"> <li>+ reservation_id: references reservation(id)</li> <li>+ service_id: references service(id)</li> </ul> </li> <li>- Unique keys: none</li> </ul>

No	Table	Description
		<ul style="list-style-type: none"> <li>- Other fields: <ul style="list-style-type: none"> <li>+ quantity (int)</li> <li>+ unit_price (float)</li> </ul> </li> </ul>
13	service	<ul style="list-style-type: none"> <li>- Primary keys: <ul style="list-style-type: none"> <li>+ id</li> </ul> </li> <li>- Foreign keys: <ul style="list-style-type: none"> <li>+ category_id: references service_category(id)</li> </ul> </li> <li>- Unique keys: none</li> <li>- Other fields: <ul style="list-style-type: none"> <li>+ fullname (varchar 255)</li> <li>+ original_price (float)</li> <li>+ sale_price (float)</li> <li>+ thumbnail_link (varchar 255)</li> <li>+ description (text)</li> <li>+ details (text)</li> <li>+ updated_date (datetime)</li> <li>+ featured (tinyint)</li> <li>+ status (varchar 255)</li> </ul> </li> </ul>
14	Medicines	<ul style="list-style-type: none"> <li>- Primary keys: <ul style="list-style-type: none"> <li>+ id</li> </ul> </li> <li>- Foreign keys: <ul style="list-style-type: none"> <li>+ examination_id: medical_examination(id)</li> </ul> </li> <li>- Unique keys: none</li> <li>- Other fields: <ul style="list-style-type: none"> <li>+ medicine_name (varchar 255)</li> <li>+ dosage (varchar 255)</li> <li>+ instruction (text)</li> </ul> </li> </ul>

2. System package diagram

