



CAPSTONE PROJECT REPORT

**EasyDoctor - An e-health platform that connects
patients and doctors**

Report 3 – Software Requirement Specification

– Da Nang, May 2022 –

Table of Contents

I. Record of Changes	6
II. Software Requirement Specification	7
1. Product Overview	7
2. User Requirements	7
2.1 Actors	7
2.2 Use Cases	8
2.2.1 Diagram(s)	8
2.1.1.1. Overview Use Case	8
2.1.1.2. Guest Use Case	9
2.1.1.3. Patient Use Case	10
2.1.1.4. Admin Use Case	11
2.1.1.5. Doctor Use Case	12
2.2.2 Descriptions	12
2.3 Feature Common	14
2.3.1 Login	14
2.3.2 Register	15
2.3.3 Change Password	16
2.3.4 Forgot Password	17
2.3.5 Edit profile	18
2.3.6 Logout	19
2.3.7 Search doctor	20
2.3.8 View doctor	21
2.3.8.1 View all doctor	21
2.3.8.2 View doctor detail	22
2.3.9 Make appointment doctor	23
2.3.10 Manage appointment	24
2.3.10.1 Cancel appointment of Patient	24
2.3.10.2 Cancel appointment of Doctor	25
2.3.10.3 Reject appointment	26

2.3.10.4 Accept reject appointment	27
2.3.10.5 Download QR	28
2.3.10.6 Chat realtime	29
2.3.11 Manage doctor	30
2.3.11.1 Create doctor	30
2.3.11.2 Update doctor	31
2.3.12 Manage patient	32
2.3.12.1 Create patient	32
2.3.12.2 Update patient	33
2.3.13 Manage clinic	34
2.3.13.1 Create clinic	34
2.3.13.2 Delete clinic	35
2.3.14 Manage invoice	36
2.3.14.1 Invoice appointment	36
2.3.14.2 Pay invoice	37
2.3.15 Manage Blog	38
2.3.15.1 Create post	38
2.3.15.2 Delete post	39
2.3.15.3 Update post	40
2.3.16 Review of doctor	41
2.3.17 Upload image profile	42
2.3.18 View declaration information	43
2.3.19 Read notification	43
2.3.20 Filter notification	44
2.3.21 Upload certification	45
2.3.22 View list post Blog	46
2.3.23 Add post	47
2.3.24 Edit post	48
2.3.25 Delete post	49
2.3.26 Like post	50
2.3.27 Comment post	51

2.3.28 Delete comment	51
2.3.29 Add medical examination package	52
2.3.30 Appointment statistics	53
2.3.31 Follow doctor	54
2.3.32 Unfollow doctor	55
2.3.32 View feedback of doctor	56
3. Functional Requirements	57
3.1 System Functional Overview	57
3.1.1 Screens Flow	57
Patient screen flow	57
Doctor screen flow	58
Admin screen flow	58
3.1.2 Screen Descriptions	58
3.1.2.1 Screen description of Patient	58
3.1.2.1 Screen description of Doctor	60
3.1.2.1 Screen description of Admin	61
3.1.3 Screen Authorization	62
3.1.4 Non-Screen Functions	62
3.1.5 Entity Relationship Diagram	62
3.1.6 Booking appointment state diagram	66
3.2 Wireframe	66
3.2.1 Sign in	66
3.2.2 Sign up	67
3.2.3 Forgot password	68
3.2.4 New password	69
3.3 User	70
3.3.1 User info	70
3.3.2 Change password	71
3.4 List doctors	72
3.5 Detail doctor	73
3.6 Booking doctor	74

3.6.1 Choose packages	74
3.6.2 Choose time	75
3.6.3 Summary appointment:	75
3.7 List appointment	77
3.8 Detail appointment:	77
3.9 Manage calendar	79
3.10 Change schedule	80
3.11 Landing page	81
3.12 Blog	82
3.13 List notification	83
3.14 Dashboard admin	84
3.15 CRUD admin	85
4. Non-Functional Requirements	85
4.1 External Interfaces	85
4.2.1 Usability	85
4.2.2 Reliability	85
4.2.3 Performance	86
4.2.4 Security	86
5. Requirement Appendix	86
5.1 Business Rules	86
5.2 Application Messages List	87

I. Record of Changes

Date	A* M, D	In charge	Change Description
			https://online.visual-paradigm.com/fr/diagrams/templates/?search=doctor
		Flow booking	https://www.mindmeister.com/map/2292850737
		Figma	https://www.figma.com/file/8EhKdKk8CRgXKOWMjQiCMg/Untitled?node-id=43%3A38
		Online web	https://easydoctors.herokuapp.com/

*A - Added M - Modified D - Deleted

II. Software Requirement Specification

1. Product Overview

EasyDoctor System is an online appointment booking system on the website. It replaces the traditional way of making an appointment of having to go to the clinic to get an order number. The system makes it possible for patients to book an appointment with the desired doctor, and it also helps patients connect and chat with a doctor online. With our system, patients just take a few simple steps and without having to move to the clinic, patients can still book an appointment through the website. Patients can be consulted by doctors about diseases, and treatments... Patients can also know more information about diseases, and health information through the blog page.

The system is expected to grow through multiple releases, taking all customer feedback into account, and always improving to the most complete version that is easiest to use for everyone.

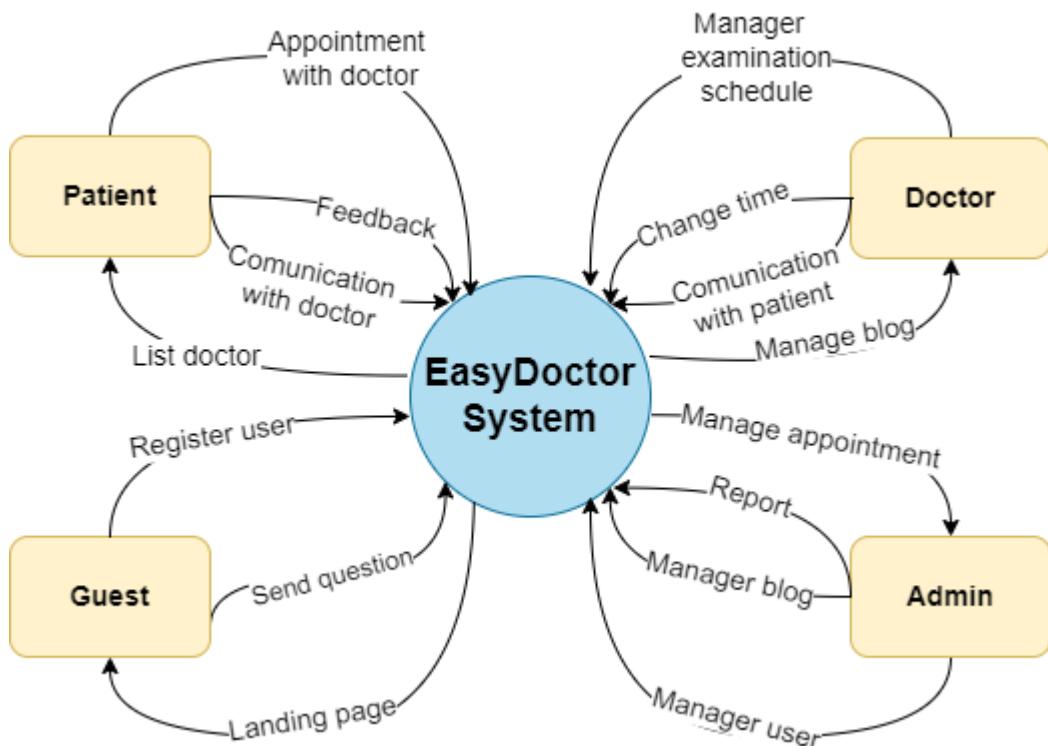


Figure 1: EasyDoctor Context Diagram

2. User Requirements

2.1 Actors

#	Actor	Description
1	Guest	The person has the right to view information about the web advertisement page and ask and answer questions for the admin.
2	Admin	The person who has the right to manage components in the system such as clinic management, examination packages, patients, doctors, appointments, invoices, Blogs, create reports.

3	Doctor	As the person responsible for managing the medical examination schedule, monitoring patients, having the right to cancel appointments, and creating posts on the Blog.
4	Patient	As a person, you can book an appointment with a doctor, view post information, doctor information, manage personal information, and rate doctors.

2.2 Use Cases

2.2.1 Diagram(s)

2.1.1.1. Overview Use Case

The system has 4 actors, including Guest, User, Doctor, and Admin.

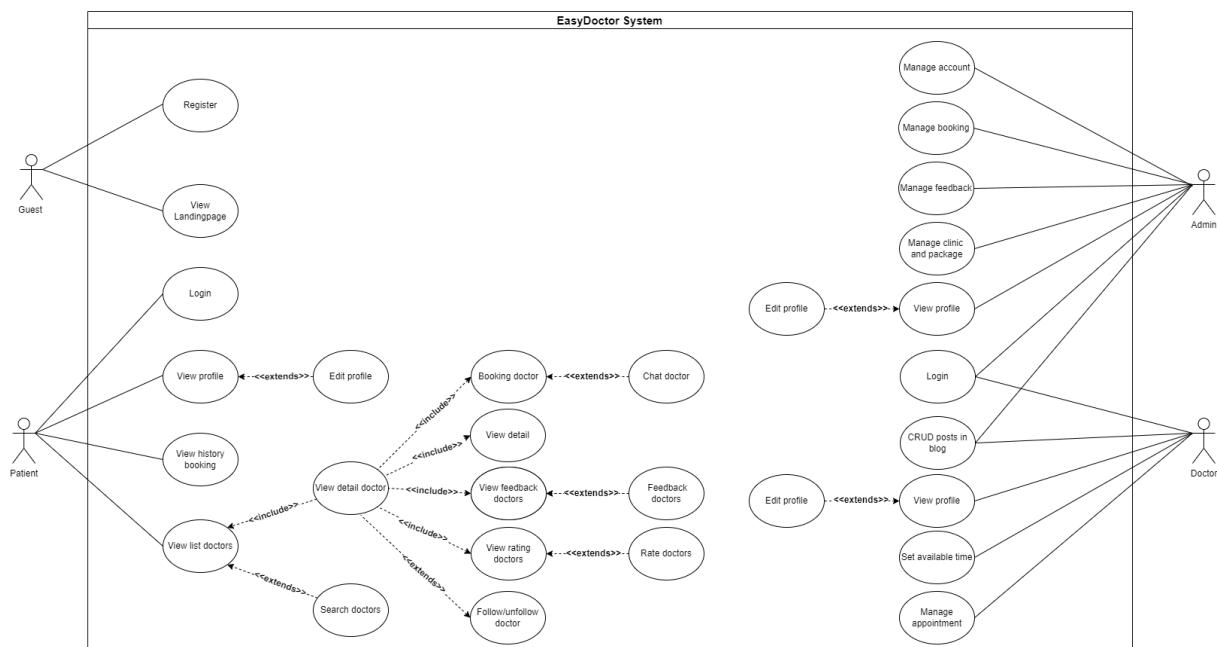


Figure 2: EasyDoctor Use Case Diagram

2.1.1.2. Guest Use Case

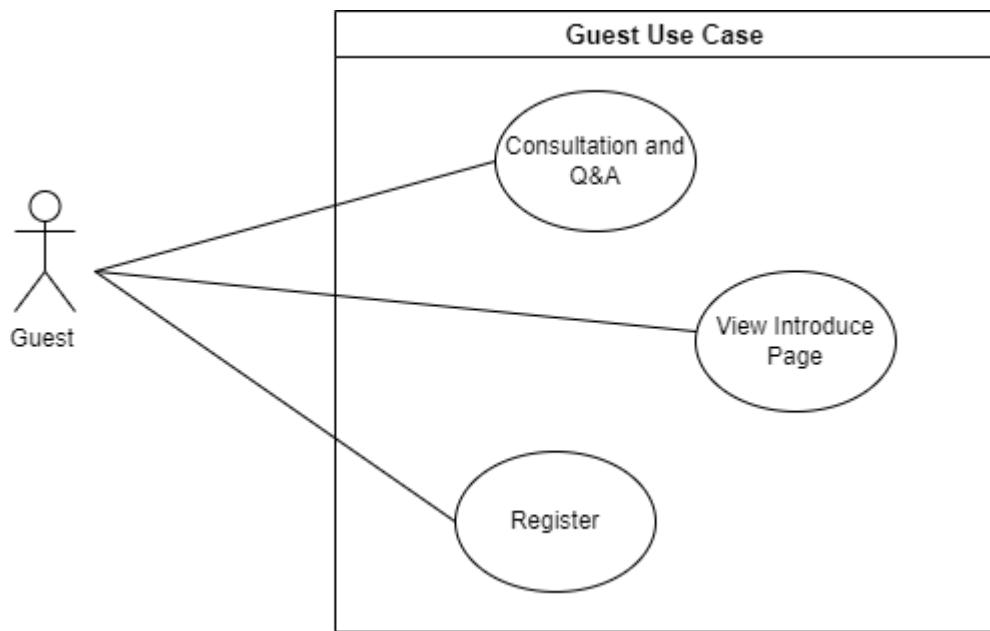


Figure 3: Guest Use Case

2.1.1.3. Patient Use Case

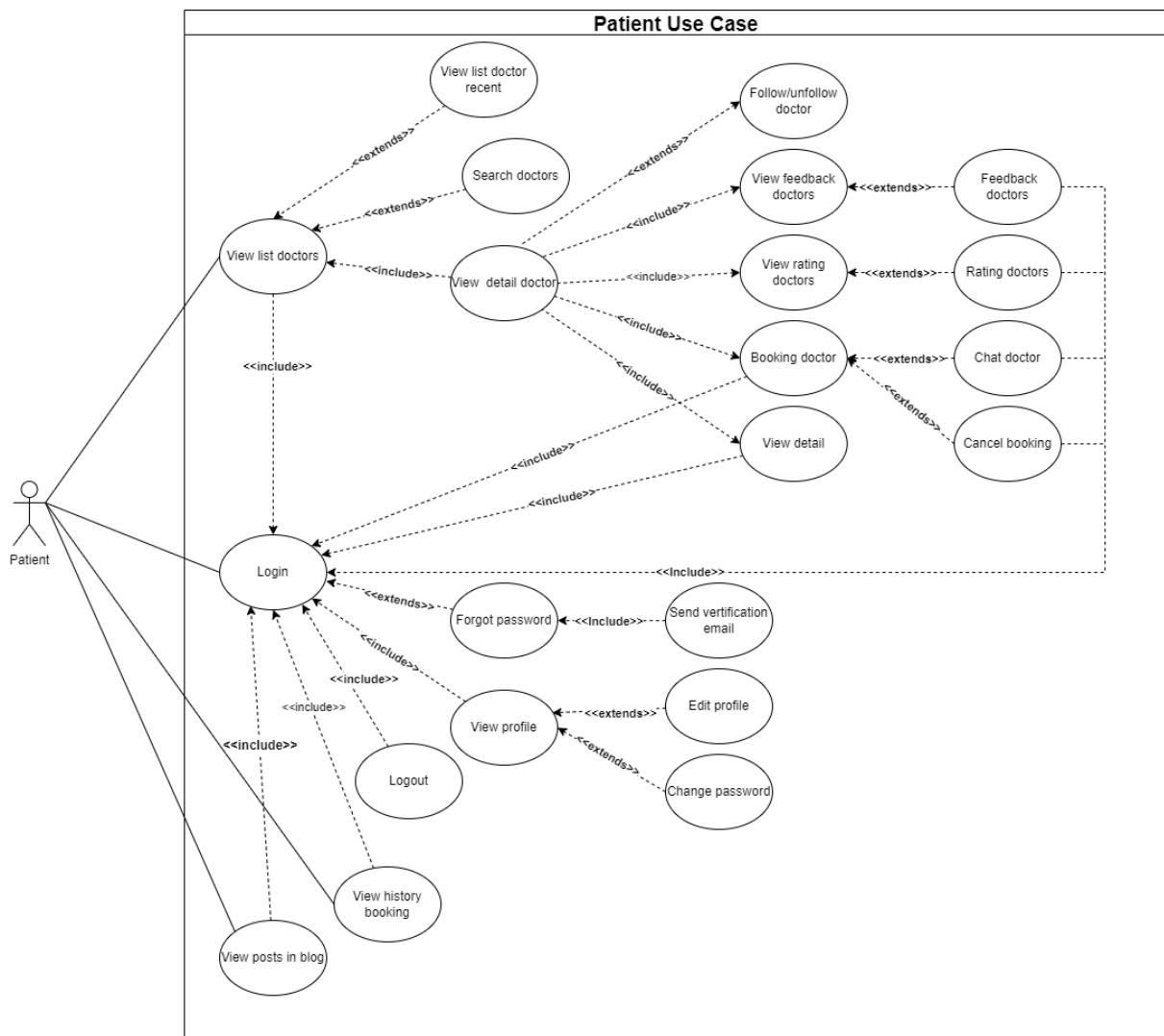


Figure 4: Patient Use Case

2.1.1.4. Admin Use Case

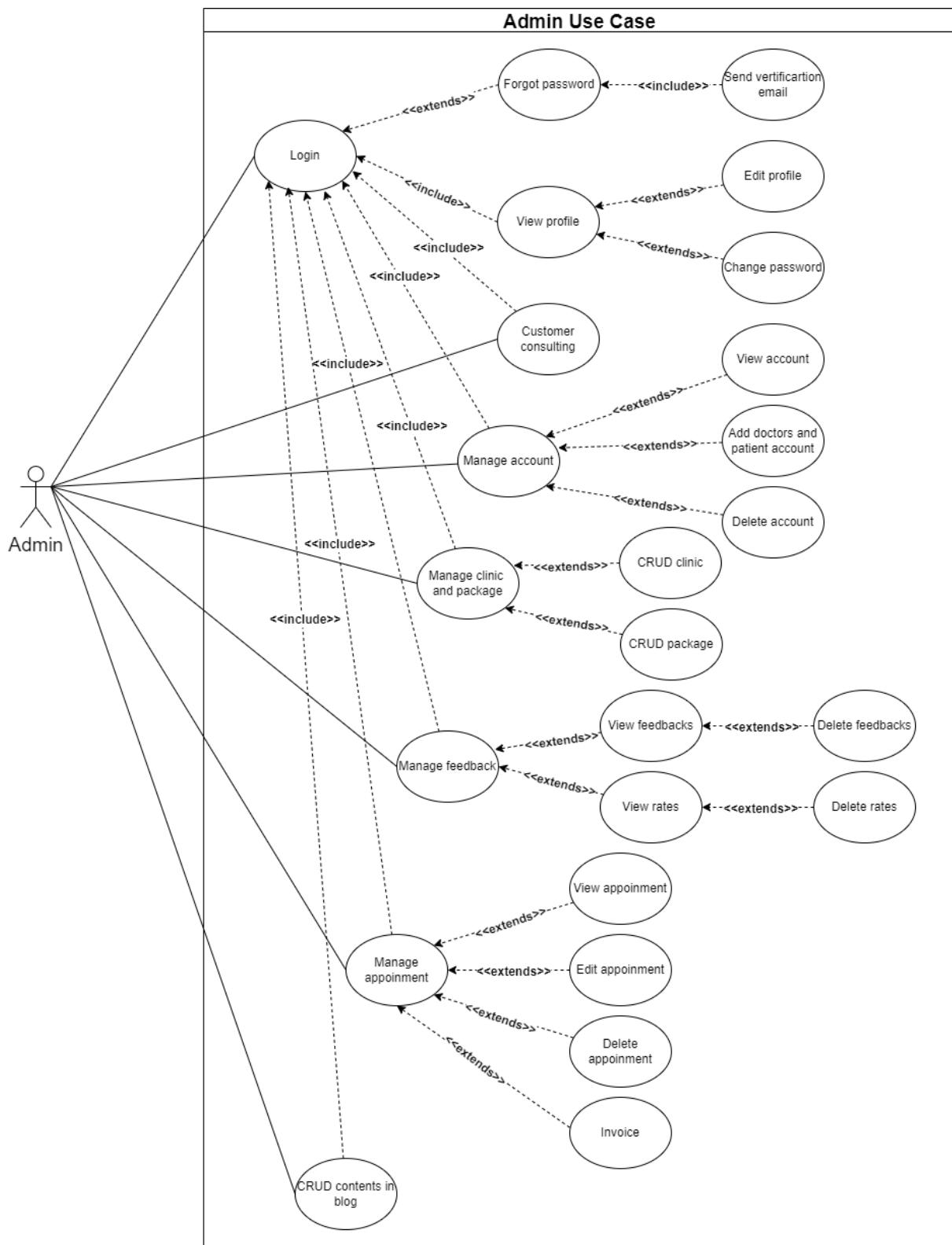


Figure 5: Admin Use Case

2.1.1.5. Doctor Use Case

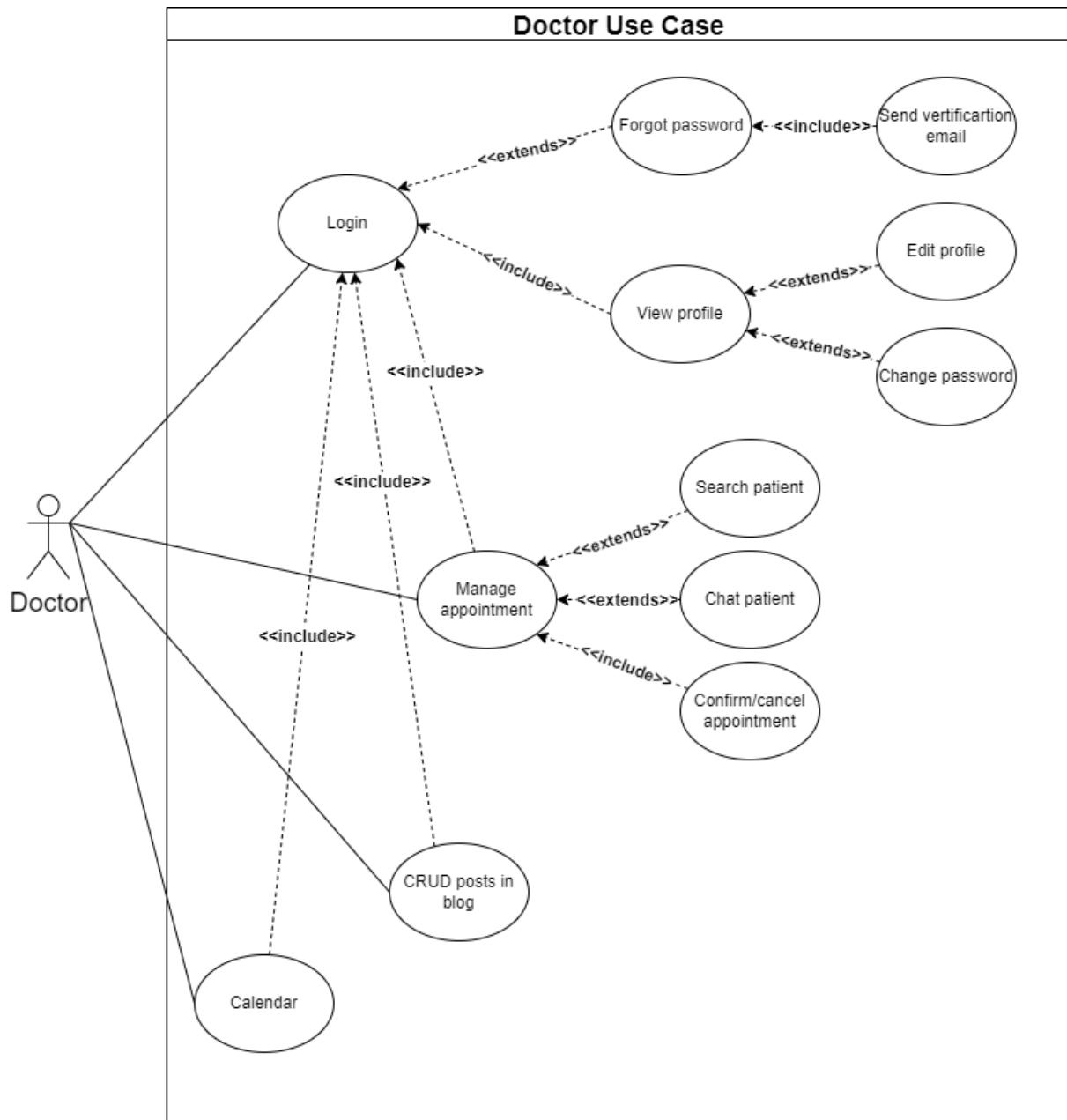


Figure 6: Doctor Use Case

2.2.2 Descriptions

ID	Use Case	Actors	Use Case Description
UC-01	Login	Admin, Doctor, Patient	Login in different roles
UC-02	Register	Patient	Register patient account and email
UC-03	Change password	Admin, Doctor, Patient	After logging in, doctors and patients can go to the information modification section to change the password
UC-04	Forgot password	Admin, Doctor, Patient	Forgot password must confirm with registered email when creating account

UC-05	Edit profile	Admin, Doctor, Patient	After logging in, the roles Admin, Doctor, Patient can change information about username, full name, email, gender, mobile age address
UC-06	Logout	Admin, Doctor, Patient	Sign out of your account
UC-07	Search doctor	Patient	Patients can search for doctors by specialty and name.
UC-08	View all doctors	Patient	See the list of doctors, currently active on the website
UC-09	Make an appointment doctor	Patient	Patients can schedule an appointment with the doctor they want through a specific time.
UC-10	Manage Appointment	Doctor, Admin	Doctor role: can provide free time during the week so that patients can book appointments with doctors. The doctor will be notified of the appointments that have been booked.
UC-11	Manage doctor	Admin	Add, edit, and delete doctor information on the system.
UC-12	Manage patient	Doctor, Admin	admin role: can delete patient accounts, and view patient information. Doctor role: view patient information, view patient's medical record.
UC-13	Manage clinic	Admin	Admin can create, view, or edit clinics on the system
UC-14	Manage invoice	Admin	Admin is the one who can bill the patient and confirm whether the patient has paid the bill or not
UC-15	Manage Blog	Doctor, Admin	Here doctors can post articles for patients to read and discuss.
UC-16	Review of doctor	Admin	View patient feedback for doctors, can delete inappropriate reviews
UC-17	Upload image profile	Patient, Doctor	Users can add and change their profile picture
UC-18	View declaration information	Patient	Patients can review the information reported when the patient makes an appointment
UC-19	Read notification	Patient, Doctor	Users can view and read notifications when the appointment ends, or is cancelled, ...
UC-20	Filter notification	Patient, Doctor	Users can filter notifications by states like unread, read or all notifications
UC-21	Upload certification	Doctor	Doctors can upload their certificates so that patients can trust them

UC-22	View list post Blog	Patient, Doctor	Patients and doctors can see doctor's posts on the Blog
UC-23	Add post Blog	Doctor	Doctors can post articles on the Blog
UC-24	Edit post Blog	Doctor	Doctors can edit articles on the Blog
UC-25	Delete post Blog	Doctor	Doctors can delete articles on the Blog
UC-26	Like post	Patient, Doctor	Patients can like doctor's posts and doctors can also like their own posts
UC-27	Comment post	Patient, Doctor	Patients can comment doctor's posts and doctors can also comment their own posts
UC-28	Delete comment	Patient, Doctor	Patients can delete comment doctor's posts and doctors can also delete comment their own posts
UC-29	Add medical examination package	Doctor	The doctor can add a new examination package so that the patient can choose the appropriate package
UC-30	Appointment statistics	Doctor	The doctor can statistics the status of the appointments
UC-31	Follow doctor	Patient	Patients can follow doctors so they can get notifications when they post
UC-32	Unfollow doctor	Patient	Patients can unfollow that doctor if they don't want to be notified of that doctor's posts
UC-33	View feedback of doctor	Patient	Patients can view feedback of doctors

2.3 Feature Common

2.3.1 Login

ID and Name:	UC01- Login		
Created By:	Trương Văn Huy	Date Created:	11/5/2022
Primary Actor:	All User	Secondary Actors:	
Trigger:	User click button “Đăng nhập” on Landing Page		
Description:	Everyone who wants to access the system needs to log in with a registered account		
Preconditions:	<ul style="list-style-type: none"> - User has account in system - User must enter the username and password of the registered account 		
Post-conditions	<ul style="list-style-type: none"> - User successfully logged in and gained access to Homepage 		

Normal Flow:	<ol style="list-style-type: none"> 1. User click button “Đăng nhập” on Homepage 2. The user enters the correct username and password of the registered account in the fields 3. Then the user clicks on the "Đăng nhập" button. 4. The system will redirect to the system page
Alternative Flows:	N/A
Exceptions:	<ol style="list-style-type: none"> 1. Wrong username or password System will display message "Tên đăng nhập hoặc mật khẩu không đúng" 2. If the user enters a password of less than 6 characters System will display message "Mật khẩu phải chứa ít nhất 6 ký tự" 3. If the user does not enter a username or password System will display message "Không được để trống"
Priority:	High
Frequency of Use:	High
Business Rules:	BR-17, BR-01
Other Information:	N/A
Assumptions:	N/A

2.3.2 Register

ID and Name:	UC02- Register		
Created By:	Trương Văn Huy	Date Created:	11/5/2022
Primary Actor:	Patient	Secondary Actors:	
Trigger:	User click “Tạo mới” on login screen		
Description:	All user who wants to use this website need to register for an account		
Preconditions:	<ul style="list-style-type: none"> - Username is created must not existed in system - User must enter all information in the fields 		
Post-conditions	<ul style="list-style-type: none"> - New user is added to the system - Login page screen will be displayed 		

Normal Flow:	<ol style="list-style-type: none"> 1. User click “Tạo mới” on login screen. 2. Users enter necessary information such as Username, Email, Password, Confirm Password on the screen. 3. After clicking the “Đăng ký” button to register for an account. 4. The system redirects guests to the login page
Alternative Flows:	N/A
Exceptions:	<ol style="list-style-type: none"> 1. Username is created must not existed in system System will display message “Oops! Đã có người dùng đăng ký” 2. User entered incorrect format of email System will display message “Email phải đúng định dạng: abc@gmail.com” 3. Password less than 6 characters System will display message “Mật khẩu phải chứa ít nhất 6 ký tự” 4. Confirm password is not the same with Password System will display message “Mật khẩu không trùng khớp” 5. Username less than 6 characters System will display message “Tên đăng nhập phải chứa ít nhất 6 ký tự” 6. One or more fields are empty System will display message “Không được để trống”
Priority:	High
Frequency of Use:	High
Business Rules:	BR-03
Other Information:	N/A
Assumptions:	N/A

2.3.3 Change Password

ID and Name:	UC03- Change Password		
Created By:	Trương Văn Huy	Date Created:	11/5/2022
Primary Actor:	All User	Secondary Actors:	
Trigger:	User click “Mật khẩu” on “Tài khoản của tôi” screen		

Description:	User want to change password in system
Preconditions:	<ul style="list-style-type: none"> - User has account in system - User has logged in system
Post-conditions	User's password is changed
Normal Flow:	<ol style="list-style-type: none"> 1. User click “Tài khoản của tôi” on header 2. After user click “Mật khẩu” on “Tài khoản của tôi” screen 3. Users are required to enter the fields Current Password, New Password, Repeat Password if they want to change a new password 4. After pressing the “Lưu” to save. 5. System change password and notices user
Alternative Flows:	N/A
Exceptions:	<ol style="list-style-type: none"> 1. Current password is not corrected in system System will display message “Mật khẩu cũ không đúng!!” 2. New password not enough 6 characters System will display message “Mật khẩu phải có ít nhất 6 ký tự” 3. The new password is the same as the old password System will display message “Mật khẩu mới không được giống với mật khẩu cũ” 4. Repeat Password does not match New Password System will display message “Mật khẩu không trùng khớp”
Priority:	Low
Frequency of Use:	Low
Business Rules:	N/A
Other Information:	N/A
Assumptions:	N/A

2.3.4 Forgot Password

ID and Name:	UC04- Forgot Password		
Created By:	Trương Văn Huy	Date Created:	11/5/2022
Primary Actor:	All User	Secondary Actors:	

Trigger:	User clicks “Quên mật khẩu?” on login page
Description:	User forgot password and want to reset password in system
Preconditions:	<ul style="list-style-type: none"> - User has account in system - User has logged in system
Post-conditions	User's password is changed and sent to user's email
Normal Flow:	<ol style="list-style-type: none"> 1. User clicks “Quên mật khẩu?” on login page 2. System redirects to forgot password screen. 3. User input email used to register to the system in the fields. 4. After user click button “Xác nhận” 5. The system will send to the user's email a link to the password change page 6. User enters Password and Confirm Password fields 7. After pressing the “Lưu” to save.
Alternative Flows:	N/A
Exceptions:	<ol style="list-style-type: none"> 1. Email user inputed is not existed in system System will display message “Email xác nhận không tồn tại” 2. Once the user has entered the email and clicked the "Reset" button System will display message “Email xác nhận đã được gửi đến email của bạn”
Priority:	Medium
Frequency of Use:	Medium
Business Rules:	N/A
Other Information:	N/A
Assumptions:	N/A

2.3.5 Edit profile

ID and Name:	UC05- Edit Profile		
Created By:	Trương Văn Huy	Date Created:	11/5/2022
Primary Actor:	Patient, Doctor	Secondary Actors:	

Trigger:	User click “Tài khoản của tôi” on header
Description:	Users want to update their personal information for accuracy
Preconditions:	<ul style="list-style-type: none"> - User has account in system - User has logged in system
Post-conditions	The user's personal information is changed
Normal Flow:	<ol style="list-style-type: none"> 1. After successfully logging in, the user clicks on "Tài khoản của tôi" on header 2. Users enter information in the fields they want to change 3. After user pressing the “Lưu thay đổi” to save
Alternative Flows:	N/A
Exceptions:	1. User cannot change Username and Email
Priority:	Medium
Frequency of Use:	Medium
Business Rules:	N/A
Other Information:	N/A
Assumptions:	N/A

2.3.6 Logout

ID and Name:	UC06- Logout		
Created By:	Trương Văn Huy	Date Created:	11/5/2022
Primary Actor:	All User	Secondary Actors:	
Trigger:	User click button “Đăng xuất” on Homepage		
Description:	User wants to log out when finished using		
Preconditions:	<ul style="list-style-type: none"> - User has account in system - User has logged in system 		
Post-conditions	<ul style="list-style-type: none"> - User's account is logged out of the system - Login page screen will be displayed 		

Normal Flow:	<ol style="list-style-type: none"> 1. User click button “Đăng xuất” on Homepage screen 2. The system will log out the account from the system and go to the login page and display the message "Đăng xuất thành công"
Alternative Flows:	N/A
Exceptions:	N/A
Priority:	High
Frequency of Use:	High
Business Rules:	N/A
Other Information:	N/A
Assumptions:	N/A

2.3.7 Search doctor

ID and Name:	UC07- Search doctor		
Created By:	Trương Văn Huy	Date Created:	11/5/2022
Primary Actor:	Patient	Secondary Actors:	
Trigger:	Enter the patient's name or select the specialty that the patient wants to search in the search field		
Description:	Patient wants to find a famous doctor or a doctor known before		
Preconditions:	<ul style="list-style-type: none"> - User has account in system - User has logged in system 		
Post-conditions	Patients will find a doctor they want to schedule an appointment		
Normal Flow:	<ol style="list-style-type: none"> 1. Enter the patient's name or select the specialty that the patient wants to search in the search field 2. The system will output the doctor the patient searched for (if any). 		
Alternative Flows:	N/A		
Exceptions:	<ol style="list-style-type: none"> 1. The doctor's name the patient searched for is not in the list System will display message “Không có bác sĩ nào được tìm 		

	thầy”
Priority:	Medium
Frequency of Use:	Medium
Business Rules:	N/A
Other Information:	N/A
Assumptions:	N/A

2.3.8 View doctor

2.3.8.1 View all doctor

ID and Name:	UC08-01 - View all doctor		
Created By:	Trương Văn Huy	Date Created:	11/5/2022
Primary Actor:	Patient	Secondary Actors:	
Trigger:	After the patient logs in, a list of all doctors will appear		
Description:	Patient wants to see a list of all doctors so that he can choose the right one to schedule an appointment		
Preconditions:	<ul style="list-style-type: none"> - User has account in system - User has logged in system 		
Post-conditions	Patients can see a list of all doctors in the system to choose the right doctor to schedule an appointment		
Normal Flow:	<ol style="list-style-type: none"> 1. Patient logs into the system 2. The system will automatically display a list of all doctors in the system so that the patient can view and choose 		
Alternative Flows:	N/A		
Exceptions:	N/A		
Priority:	High		
Frequency of Use:	High		

Business Rules:	N/A
Other Information:	N/A
Assumptions:	N/A

2.3.8.2 View doctor detail

ID and Name:	UC08-02 - View doctor detail		
Created By:	Trương Văn Huy	Date Created:	11/5/2022
Primary Actor:	Patient	Secondary Actors:	
Trigger:	Patient clicks on the name of the doctor that the patient wants to see details about that doctor		
Description:	View detailed information about the doctor that the patient is interested in. You can view the specialty, which hospital you are working at, the information of the staff...		
Preconditions:	<ul style="list-style-type: none"> - User has account in system - User has logged in system 		
Post-conditions	The doctor's detailed information screen appears and the patient can see all that information		
Normal Flow:	<ol style="list-style-type: none"> 1. Patient logs into the system 2. The system will automatically display a list of all doctors in the system so that the patient can view and choose 3. Patient clicks on the name of the doctor that the patient wants to see details about that doctor 		
Alternative Flows:	N/A		
Exceptions:	N/A		
Priority:	High		
Frequency of Use:	High		
Business Rules:	N/A		
Other Information:	N/A		

Assumptions:	N/A
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2.3.9 Make appointment doctor

ID and Name:	UC09- Make appointment doctor		
Created By:	Trương Văn Huy	Date Created:	11/5/2022
Primary Actor:	Patient	Secondary Actors:	
Trigger:	User clicks the "Đặt ngay" button at the doctors that the user wants to make an appointment with.		
Description:	User wants to book an appointment with the doctor that the patient wants		
Preconditions:	<ul style="list-style-type: none"> - User has account in system - User has logged in system 		
Post-conditions	<ul style="list-style-type: none"> - Scheduled appointment with the doctor selected by the patient - The system will display the details of the appointment and chat with the doctor on the screen 		
Normal Flow:	<ol style="list-style-type: none"> 1. User clicks the "Đặt ngay" button at the doctors that the user wants to make an appointment with. 2. The patient declares his background disease information, blood type,... on the declaration page. Then click "Lưu thay đổi" button. 3. Then the user clicks the "Chọn" button at the desired medical examination package 4. The system will display the available hours of the doctor and then the user will click on the time they want to see 5. The appointment details screen appears and if the user wants to book an appointment, user enter OTP then click the "Xác nhận đặt" button. 6. Then the system will list out the list of appointments that you have booked 7. If the user wants to review the appointment details and chat with the doctor, click the "Chi tiết" button at the appointment you want to view. 		
Alternative Flows:	N/A		
Exceptions:	N/A		
Priority:	High		

Frequency of Use:	High
Business Rules:	BR-13
Other Information:	N/A
Assumptions:	N/A

2.3.10 Manage appointment

2.3.10.1 Cancel appointment of Patient

ID and Name:	UC10-01- Cancel appointment of Patient		
Created By:	Trương Văn Huy	Date Created:	11/5/2022
Primary Actor:	Patient	Secondary Actors:	
Trigger:	User click “Cuộc hẹn” in header		
Description:	Users are allowed to cancel an appointment if they want, provided that they can only cancel 1 appointment in a month and not less than 24 hours before the appointment start date.		
Preconditions:	<ul style="list-style-type: none"> - User has account in system - User has logged in system 		
Post-conditions	<ul style="list-style-type: none"> - Cancelled appointment with doctor - The appointment will be displayed as Canceled status 		
Normal Flow:	<ol style="list-style-type: none"> 1. User click “Cuộc hẹn” on header 2. The system will display all the appointments that the user has booked and then the user will click the "Chi tiết" button on the appointment that the user wants to cancel. 3. Then the system displays the detailed screen and chats with the doctor. If the user wants to cancel, click the "Hủy cuộc hẹn" button. 		
Alternative Flows:	N/A		
Exceptions:	<ol style="list-style-type: none"> 1. User cancelled appointment more than 1 time per month The system will display "Bạn không thể hủy cuộc hẹn này vì bạn đã vượt quá số lần hủy tối đa trong tháng này" in the "cancellation" section of the appointment details screen 2. When the user cancels the appointment in the case where only 		

	<p>the doctor has the right to cancel the appointment, the patient cannot cancel the appointment.</p> <p>The system will display "Loại cuộc hẹn này chỉ có thể được hủy bởi bác sĩ" in the "cancellation" section of the appointment details screen</p> <p>3. When a user schedules an appointment, it will take place within 24 hours from the time of booking</p> <p>The system will display "Bạn không thể hủy cuộc hẹn này vì cuộc hẹn này sẽ xảy ra trong vòng 24h" section of the appointment details screen</p>
Priority:	High
Frequency of Use:	High
Business Rules:	BR-04, BR-06, BR-07
Other Information:	N/A
Assumptions:	N/A

2.3.10.2 Cancel appointment of Doctor

ID and Name:	UC10-02- Cancel appointment of Doctor		
Created By:	Trương Văn Huy	Date Created:	11/5/2022
Primary Actor:	Doctor	Secondary Actors:	
Trigger:	Doctor click "Cuộc hẹn" on header		
Description:	The doctor can cancel any appointment if there is an unexpected job that cannot see the patient		
Preconditions:	<ul style="list-style-type: none"> - User has account in system - User has logged in system 		
Post-conditions	<ul style="list-style-type: none"> - Cancelled appointment with patient - The appointment will be displayed as Canceled status 		
Normal Flow:	<ol style="list-style-type: none"> 1. Doctor clicks "Cuộc hẹn" on the title 2. The system will display all the appointments that the user has booked and then the doctor clicks the "Chi tiết" button on the appointment that the doctor wants to cancel. 3. The system will then display the appointment details screen. If the doctor wants to cancel, click the "Hủy cuộc hẹn" button. 		

Alternative Flows:	N/A
Exceptions:	N/A
Priority:	High
Frequency of Use:	High
Business Rules:	BR-05, BR-07
Other Information:	N/A
Assumptions:	N/A

2.3.10.3 Reject appointment

ID and Name:	UC10-03- Reject appointment		
Created By:	Trương Văn Huy	Date Created:	11/5/2022
Primary Actor:	Patient	Secondary Actors:	
Trigger:	The patient clicks the "Tù chối" button on the appointment information page in the Finished state		
Description:	When a patient has already booked an appointment, but cannot come, after the 24 hour period ends, they have the right to refuse the appointment so as not to be charged.		
Preconditions:	<ul style="list-style-type: none"> - User has account in system - User has logged in system 		
Post-conditions	When a patient has already booked an appointment, but cannot come, after the 24 hour period ends, they have the right to refuse the appointment so as not to be charged.		
Normal Flow:	<ol style="list-style-type: none"> 1. The patient clicks the "Tù chối" button on the appointment information page in the Finished state 2. The patient clicks "click ở đây" on the website's notification email sent to the patient 		
Alternative Flows:	N/A		

Exceptions:	N/A
Priority:	Medium
Frequency of Use:	Medium
Business Rules:	BR-09
Other Information:	N/A
Assumptions:	N/A

2.3.10.4 Accept reject appointment

ID and Name:	UC10-04- Accept reject appointment		
Created By:	Trương Văn Huy	Date Created:	11/5/2022
Primary Actor:	Doctor	Secondary Actors:	
Trigger:	The patient clicks the "Chấp nhận" button on the appointment information page in the Finished state		
Description:	The doctor is the one who accepts the request to refuse the appointment when the patient does not show up		
Preconditions:	<ul style="list-style-type: none"> - User has account in system - User has logged in system 		
Post-conditions	The doctor is the one who accepts the request to refuse the appointment when the patient does not show up		
Normal Flow:	<ol style="list-style-type: none"> 1. Doctor clicks "Cuộc hẹn" on the title 2. The system will display all the appointments that the user has booked and then the doctor clicks the "Chi tiết" button on the appointment finished state that the doctor wants to accept and reject the appointment. 3. The system will then display the appointment details screen. If the doctor wants to cancel, click the "Chấp nhận" button. 		
Alternative Flows:	N/A		
Exceptions:	N/A		
Priority:	Medium		

Frequency of Use:	Medium
Business Rules:	BR-18
Other Information:	N/A
Assumptions:	N/A

2.3.10.5 Download QR

ID and Name:	UC10-05- Download QR		
Created By:	Trương Văn Huy	Date Created:	11/5/2022
Primary Actor:	Patient	Secondary Actors:	
Trigger:	Doctor click "Cuộc hẹn" on header then click the "Chi tiết" button at the appointment you want to download the QR		
Description:	Patients can download the QR code so they can scan the appointment information		
Preconditions:	<ul style="list-style-type: none"> - User has account in system - User has logged in system 		
Post-conditions	The patient can download the QR code to the device and view the details of the appointment by scanning the QR code		
Normal Flow:	<ol style="list-style-type: none"> 1. User click "Cuộc hẹn" in header 2. The system will display all the appointments that the user has booked and then the user will click the "Chi tiết" button on the appointment that the user wants to download QR. 3. Then the system displays the detailed screen and chats with the doctor. If the user wants to download QR, click the "Download" button. 		
Alternative Flows:	N/A		
Exceptions:	N/A		
Priority:	Medium		
Frequency of Use:	Medium		
Business Rules:	N/A		

Other Information:	N/A
Assumptions:	N/A

2.3.10.6 Chat realtime

ID and Name:	UC10-06- Chat realtime		
Created By:	Trương Văn Huy	Date Created:	11/5/2022
Primary Actor:	Patient, Doctor	Secondary Actors:	
Trigger:	Select the appointment details of the doctor you want to chat with		
Description:	Doctor and patient can chat online with each other after successful appointment		
Preconditions:	<ul style="list-style-type: none"> - User has account in system - User has logged in system 		
Post-conditions	Doctor and patient can chat with each other at any time		
Normal Flow:	<ol style="list-style-type: none"> 1. User login in system 2. The clicks "Cuộc hẹn" in header 3. Clicks the "Details" button on the appointment you want to see the details of that appointment 4. Then the screen showing the details of the appointment and chat real time appears 5. After typed a message into the chat and then pressed the "Gửi" button 		
Alternative Flows:	N/A		
Exceptions:	N/A		
Priority:	High		
Frequency of Use:	High		
Business Rules:	BR-19		
Other Information:	N/A		
Assumptions:	N/A		

2.3.11 Manage doctor

2.3.11.1 Create doctor

ID and Name:	UC11-01- Create doctor		
Created By:	Trương Văn Huy	Date Created:	11/5/2022
Primary Actor:	Admin	Secondary Actors:	
Trigger:	User click “Bác sĩ” on sidebar after choose “Thêm bác sĩ”		
Description:	Admin is the one who can add new doctors to the system		
Preconditions:	<ul style="list-style-type: none"> - User has account in system - User has logged in system 		
Post-conditions	Admin has added a new doctor to the system so that the patient can book an appointment with that doctor		
Normal Flow:	<ol style="list-style-type: none"> 1. Log in to the system with an admin account 2. User click “Bác sĩ” on sidebar after choose “Thêm bác sĩ” 3. The Create doctor screen will appear 4. Enter complete and correct information in all fields 5. After click button “Lưu” 6. New doctor will be added to the list of system doctors 		
Alternative Flows:	N/A		
Exceptions:	<ol style="list-style-type: none"> 1. If you do not enter information in one of those fields, you press the "Lưu" button. System will display message “Đây là phần bắt buộc, hãy nhập thông tin đầy đủ vào!” 		
Priority:	High		
Frequency of Use:	High		
Business Rules:	BR-10		
Other Information:	N/A		
Assumptions:	N/A		

2.3.11.2 Update doctor

ID and Name:	UC11-03- Update doctor		
Created By:	Trương Văn Huy	Date Created:	11/5/2022
Primary Actor:	Admin	Secondary Actors:	
Trigger:	User click “Bác sĩ” on sidebar after choose “Thêm bác sĩ”		
Description:	Admin is the one who can update doctors to the system		
Preconditions:	<ul style="list-style-type: none"> - User has account in system - User has logged in system 		
Post-conditions	The doctor's information is edited and updated into the system		
Normal Flow:	<ol style="list-style-type: none"> 1. Log in to the system with an admin account 2. User click “Bác sĩ” on sidebar after choose “Thêm bác sĩ” 3. A list of doctors will appear 4. Click the update button at the doctor you want to update 		
Alternative Flows:	N/A		
Exceptions:	<ol style="list-style-type: none"> 1. Admin cannot change Email and Username The system will not allow admin to touch the Email and Username fields 		
Priority:	Medium		
Frequency of Use:	Medium		
Business Rules:	BR-10		
Other Information:	N/A		
Assumptions:	N/A		

2.3.12 Manage patient

2.3.12.1 Create patient

ID and Name:	UC12-01- Create patient		
Created By:	Trương Văn Huy	Date Created:	11/5/2022
Primary Actor:	Admin	Secondary Actors:	

Trigger:	User click “Bệnh nhân” on sidebar after choose “Xem bệnh nhân”
Description:	Admin is the person who can add new patients to the system
Preconditions:	<ul style="list-style-type: none"> - User has account in system - User has logged in system
Post-conditions	Newly added patient information to the system's patient list
Normal Flow:	<ol style="list-style-type: none"> 1. Log in to the system with an admin account 2. User click “Bệnh nhân” on sidebar after choose “Xem bệnh nhân” 3. A list of patients will appear 4. Click the edit button at the patient you want to update 5. Enter complete and accurate information in the fields 6. After pressing the “Lưu” to save.
Alternative Flows:	N/A
Exceptions:	<ol style="list-style-type: none"> 1. Username exists in the system The system will display "Username already exists!"
Priority:	Medium
Frequency of Use:	Medium
Business Rules:	N/A
Other Information:	N/A
Assumptions:	N/A

2.3.12.2 Update patient

ID and Name:	UC12-02- Update patient		
Created By:	Trương Văn Huy	Date Created:	11/5/2022
Primary Actor:	Admin	Secondary Actors:	
Trigger:	User click “Bệnh nhân” on sidebar after choose “Xem bệnh nhân”		
Description:	Admin is the one who can update patient on the system		
Preconditions:	<ul style="list-style-type: none"> - User has account in system - User has logged in system 		

Post-conditions	The patient's information is edited and updated into the system
Normal Flow:	<ol style="list-style-type: none"> 1. Log in to the system with an admin account 2. User click “Bệnh nhân” on sidebar after choose “Xem bệnh nhân” 3. A list of patients will appear 4. Enter complete and accurate information in the fields 5. After pressing the “Lưu” to save.
Alternative Flows:	N/A
Exceptions:	N/A
Priority:	Medium
Frequency of Use:	Medium
Business Rules:	N/A
Other Information:	N/A
Assumptions:	N/A

2.3.13 Manage clinic

2.3.13.1 Create clinic

ID and Name:	UC13-01- Create clinic		
Created By:	Trương Văn Huy	Date Created:	11/5/2022
Primary Actor:	Admin	Secondary Actors:	
Trigger:	User click “Phòng khám” on sidebar after choose “Thêm phòng khám”		
Description:	Admin is the one who can create clinic on the system		
Preconditions:	<ul style="list-style-type: none"> - User has account in system - User has logged in system 		
Post-conditions	Clinics are added to the system when that clinic wants to cooperate with the website		
Normal Flow:	<ol style="list-style-type: none"> 1. Log in to the system with an admin account 2. User click “Phòng khám” on sidebar after choose “Thêm phòng 		

	<p>khám”</p> <ol style="list-style-type: none"> 3. The Create clinic screen will appear 4. Enter complete and correct information in all fields 5. After pressing the “Lưu” to save.
Alternative Flows:	N/A
Exceptions:	<ol style="list-style-type: none"> 1. If you do not enter information in one of those fields, you press the "Lưu" button. System will display message "Đây là phần bắt buộc, hãy nhập thông tin đầy đủ vào!"
Priority:	Low
Frequency of Use:	Low
Business Rules:	BR-20
Other Information:	N/A
Assumptions:	N/A

2.3.13.2 Delete clinic

ID and Name:	UC13-02- Delete clinic		
Created By:	Trương Văn Huy	Date Created:	11/5/2022
Primary Actor:	Admin	Secondary Actors:	
Trigger:	User click “Phòng khám” on sidebar after choose “Thêm phòng khám”		
Description:	Admin is the one who can Delete clinic on the system		
Preconditions:	<ul style="list-style-type: none"> - User has account in system - User has logged in system 		
Post-conditions	The clinic will be deleted from the system by admin if that clinic don't want to cooperate with the website anymore		
Normal Flow:	<ol style="list-style-type: none"> 1. Log in to the system with an admin account 2. User click “Phòng khám” on sidebar after choose “Thêm phòng khám” 3. A list of clinic will appear 		

	4. Click the delete button at the clinic you want to delete
Alternative Flows:	N/A
Exceptions:	N/A
Priority:	Low
Frequency of Use:	Low
Business Rules:	BR-20
Other Information:	N/A
Assumptions:	N/A

2.3.14 Manage invoice

2.3.14.1 Invoice appointment

ID and Name:	UC14-01- Invoice appointment		
Created By:	Trương Văn Huy	Date Created:	11/5/2022
Primary Actor:	Admin	Secondary Actors:	
Trigger:	User click “Đặt lịch khám” on sidebar after choose “Xem lịch khám”		
Description:	Admin is the one who can bill the patient		
Preconditions:	<ul style="list-style-type: none"> - User has account in system - User has logged in system 		
Post-conditions	The system will send an email containing the invoice PDF file to the patient with the billing status paid or unpaid.		
Normal Flow:	<ol style="list-style-type: none"> 1. After login to the account, admin select the "Xem lịch khám" item of the navigation bar on the left. 2. Click the "Xuất hóa đơn" button in the "Hành động" section to invoice an appointment. 		

	3. It will display an alert with 2 options "PAID" and "ISSUED". Select 1 to confirm invoice printing.
Alternative Flows:	N/A
Exceptions:	N/A
Priority:	Low
Frequency of Use:	Low
Business Rules:	BR-16
Other Information:	N/A
Assumptions:	N/A

2.3.14.2 Pay invoice

ID and Name:	UC14-02- Pay invoice		
Created By:	Trương Văn Huy	Date Created:	11/5/2022
Primary Actor:	Admin	Secondary Actors:	
Trigger:	User click “Đặt lịch khám” on sidebar after choose “Hóa đơn”		
Description:	Admin is the one to confirm whether the patient has paid the bill or not		
Preconditions:	<ul style="list-style-type: none"> - User has account in system - User has logged in system 		
Post-conditions	The system will send an email containing the invoice PDF file to the patient with the billing status paid.		
Normal Flow:	<ol style="list-style-type: none"> 1. After login to the account, admin select the "Hóa đơn" item of the navigation bar on the left. 2. Click the "Thanh toán" button to confirm bill payment. 3. Display an alert to confirm bill payment. Click "OK" to confirm payment. 		
Alternative Flows:	N/A		

Exceptions:	N/A
Priority:	Medium
Frequency of Use:	Medium
Business Rules:	N/A
Other Information:	N/A
Assumptions:	N/A

2.3.15 Manage Blog

2.3.15.1 Create post

ID and Name:	UC15-01- Create post		
Created By:	Trương Văn Huy	Date Created:	11/5/2022
Primary Actor:	Admin	Secondary Actors:	
Trigger:	User click “Blog tư vấn” on sidebar after choose “Thêm bài”		
Description:	Admin is the one who can create article on the Blog		
Preconditions:	<ul style="list-style-type: none"> - User has account in system - User has logged in system 		
Post-conditions	Posts are newly added and displayed on the blog		
Normal Flow:	<ol style="list-style-type: none"> 1. Log in to the system with an admin account 2. User click “Blog tư vấn” on sidebar after choose “Thêm bài” 3. The create article screen will appear 4. Enter the post you want to post on the Blog 5. After pressing the “Lưu” to save. 		
Alternative Flows:	N/A		
Exceptions:	N/A		
Priority:	Medium		

Frequency of Use:	Medium
Business Rules:	N/A
Other Information:	N/A
Assumptions:	N/A

2.3.15.2 Delete post

ID and Name:	UC15-02- Delete post		
Created By:	Trương Văn Huy	Date Created:	11/5/2022
Primary Actor:	Admin	Secondary Actors:	
Trigger:	User click “Blog tư vấn” on sidebar after choose “Thêm bài”		
Description:	Admin is the one who can delete article on the Blog		
Preconditions:	<ul style="list-style-type: none"> - User has account in system - User has logged in system 		
Post-conditions	The post has been successfully deleted and no longer appears on the Blog		
Normal Flow:	<ol style="list-style-type: none"> 1. Log in to the system with an admin account 2. User click “Blog tư vấn” on sidebar after choose “Thêm bài” 3. The create article screen will appear 4. Click the delete button in the post you want to delete 		
Alternative Flows:	N/A		
Exceptions:	N/A		
Priority:	Medium		
Frequency of Use:	Medium		
Business Rules:	N/A		

Other Information:	N/A
Assumptions:	N/A

2.3.15.3 Update post

ID and Name:	UC15-03 Update post		
Created By:	Trương Văn Huy	Date Created:	11/5/2022
Primary Actor:	Admin	Secondary Actors:	
Trigger:	User click “Blog tư vấn” on sidebar after choose “Thêm bài”		
Description:	Admin is the one who can update article on the Blog		
Preconditions:	<ul style="list-style-type: none"> - User has account in system - User has logged in system 		
Post-conditions	The post has been edited successfully and a new post appears on the Blog		
Normal Flow:	<ol style="list-style-type: none"> 1. Log in to the system with an admin account 2. User click “Blog tư vấn” on sidebar after choose “Thêm bài” 3. The create article screen will appear 4. Click the edit button in the post you want to update 5. Enter the post you want to edit then pressing the "Lưu" to save 		
Alternative Flows:	N/A		
Exceptions:	N/A		
Priority:	Medium		
Frequency of Use:	Medium		
Business Rules:	N/A		
Other Information:	N/A		
Assumptions:	N/A		

2.3.16 Review of doctor

ID and Name:	UC16- Review of doctor		
Created By:	Trương Văn Huy	Date Created:	11/5/2022
Primary Actor:	Admin	Secondary Actors:	
Trigger:	User click “Đánh giá” on side bar after choose “Xem đánh giá”		
Description:	Admin is the one who can see patient reviews for doctor		
Preconditions:	<ul style="list-style-type: none"> - User has account in system - User has logged in system 		
Post-conditions	<ul style="list-style-type: none"> - A list of reviews by doctors appears on the screen - Admin view the reviews of the doctors on the system to be able to manage the doctor's quality 		
Normal Flow:	<ol style="list-style-type: none"> 1. Log in to the system with an admin account 2. User click “Đánh giá” on side bar after choose “Xem đánh giá” 3. A list of review for doctor will appear 		
Alternative Flows:	N/A		
Exceptions:	N/A		
Priority:	Medium		
Frequency of Use:	Medium		
Business Rules:	N/A		
Other Information:	N/A		
Assumptions:	N/A		

2.3.17 Upload image profile

ID and Name:	UC17- Upload image profile		
Created By:	Trương Văn Huy	Date Created:	11/5/2022

Primary Actor:	Patient, Doctor	Secondary Actors:	
Trigger:	User click "Tài khoản của tôi" on header		
Description:	Users can add and change their profile picture		
Preconditions:	<ul style="list-style-type: none"> - User has account in system - User has logged in system 		
Post-conditions	Newly added profile picture to your account page		
Normal Flow:	<ol style="list-style-type: none"> 1. After login to the account, users go to the "Tài khoản của tôi" page. 2. Click on the image on the left side of the screen. 3. It will display the images in your computer. Click to select the appropriate image to post on the system. 		
Alternative Flows:	N/A		
Exceptions:	N/A		
Priority:	Medium		
Frequency of Use:	Medium		
Business Rules:	N/A		
Other Information:	N/A		
Assumptions:	N/A		

2.3.18 View declaration information

ID and Name:	UC18- View declaration information		
Created By:	Trương Văn Huy	Date Created:	11/5/2022
Primary Actor:	Patient	Secondary Actors:	
Trigger:	User click "Tài khoản của tôi" on header		
Description:	Patients can review the information reported when the patient makes		

	an appointment
Preconditions:	<ul style="list-style-type: none"> - User has account in system - User has logged in system
Post-conditions	The declaration information will appear on the screen
Normal Flow:	<ol style="list-style-type: none"> 1. After login to the account, users go to the "Tài khoản của tôi" page. 2. Then the patient clicks on "Thông tin khai báo" 3. The information that the patient has declared when making an appointment will be displayed on the screen
Alternative Flows:	N/A
Exceptions:	N/A
Priority:	Medium
Frequency of Use:	Medium
Business Rules:	BR-15
Other Information:	N/A
Assumptions:	N/A

2.3.19 Read notification

ID and Name:	UC19- Read notification		
Created By:	Trương Văn Huy	Date Created:	11/5/2022
Primary Actor:	Patient, Doctor	Secondary Actors:	
Trigger:	Users click on the bell icon to the left of their name		
Description:	Users can view and read notifications when the appointment ends, or is cancelled, ...		
Preconditions:	<ul style="list-style-type: none"> - User has account in system - User has logged in system 		
Post-conditions	All notifications will appear on the screen		

Normal Flow:	<ol style="list-style-type: none"> 1. After login to the account, user clicks on the bell icon to the right of the navigation bar 2. The user clicks on the message view icon on each message on the board. 3. It will navigate to that notification's appointment details page.
Alternative Flows:	N/A
Exceptions:	N/A
Priority:	High
Frequency of Use:	High
Business Rules:	N/A
Other Information:	N/A
Assumptions:	N/A

2.3.20 Filter notification

ID and Name:	UC20- Filter notification		
Created By:	Trương Văn Huy	Date Created:	11/5/2022
Primary Actor:	Patient, Doctor	Secondary Actors:	
Trigger:	Users click on the bell icon to the left of their name		
Description:	Users can filter notifications by states like unread, read or all notifications		
Preconditions:	<ul style="list-style-type: none"> - User has account in system - User has logged in system 		
Post-conditions	The screen will display the correct status messages that you have selected to filter		
Normal Flow:	<ol style="list-style-type: none"> 1. Login to the account, user clicks on the bell icon to the right of the navigation bar 2. The user selects the notification status in the combo box. 		
Alternative Flows:	N/A		

Exceptions:	N/A
Priority:	Medium
Frequency of Use:	Medium
Business Rules:	N/A
Other Information:	N/A
Assumptions:	N/A

2.3.21 Upload certification

ID and Name:	UC21- Upload certification		
Created By:	Trương Văn Huy	Date Created:	11/5/2022
Primary Actor:	Doctor	Secondary Actors:	
Trigger:	Users click “Tài khoản của tôi” on header after click “Thông tin cá nhân”		
Description:	Doctors can upload their certificates so that patients can trust them		
Preconditions:	<ul style="list-style-type: none"> - User has account in system - User has logged in system 		
Post-conditions	Certificates and degrees are saved by the system		
Normal Flow:	<ol style="list-style-type: none"> 1. Login to the account, users go to the "Tài khoản" page. 2. Select tab "Thông tin cá nhân". Select the certificate item to upload the certificate file in PDF format. 3. Reload this page to review the certificate online. 		
Alternative Flows:	N/A		
Exceptions:	N/A		
Priority:	Medium		
Frequency of Use:	Medium		
Business Rules:	N/A		

Other Information:	N/A		
Assumptions:	N/A		

2.3.22 View list post Blog

ID and Name:	UC22- View list post Blog		
Created By:	Trương Văn Huy	Date Created:	11/5/2022
Primary Actor:	Patient, Doctor	Secondary Actors:	
Trigger:	Users click "Blog tư vấn" on header		
Description:	Patients and doctors can see doctor's posts on the Blog		
Preconditions:	<ul style="list-style-type: none"> - User has account in system - User has logged in system 		
Post-conditions	Posts that doctors have posted will appear on the Blog screen		
Normal Flow:	<ol style="list-style-type: none"> 1. Login to the account, user click "Blog tư vấn" 2. Posts that doctors have posted will appear on the Blog screen 		
Alternative Flows:	N/A		
Exceptions:	N/A		
Priority:	High		
Frequency of Use:	High		
Business Rules:	N/A		
Other Information:	N/A		
Assumptions:	N/A		

2.3.23 Add post

ID and Name:	UC23- Add post		
Created By:	Trương Văn Huy	Date Created:	11/5/2022
Primary Actor:	Doctor	Secondary	

		Actors:	
Trigger:	Users click “Blog tư vấn” in header		
Description:	Doctors can post articles on the Blog		
Preconditions:	<ul style="list-style-type: none"> - User has account in system - User has logged in system 		
Post-conditions	Doctor's posts are posted on the Blog for patients to see		
Normal Flow:	<ol style="list-style-type: none"> 1. Login to the account, user click "Blog tư vấn" 2. Posts that doctors have posted will appear on the Blog screen 3. After doctor click button “Bác sĩ ơi đăng bài nào!” 4. Enter the article you want to post in the box. Add attachments if needed. 5. Then the doctor clicks the "Đăng bài" button to post the article on the Blog or clicks the "Đóng" button to close the tab. 		
Alternative Flows:	N/A		
Exceptions:	N/A		
Priority:	High		
Frequency of Use:	High		
Business Rules:	N/A		
Other Information:	N/A		
Assumptions:	N/A		

2.3.24 Edit post

ID and Name:	UC24- Edit post		
Created By:	Trương Văn Huy	Date Created:	11/5/2022
Primary Actor:	Doctor	Secondary Actors:	
Trigger:	Users click “Blog tư vấn” in header		
Description:	Doctors can edit articles on the Blog		
Preconditions:	<ul style="list-style-type: none"> - User has account in system 		

	<ul style="list-style-type: none"> - User has logged in system
Post-conditions	The post has been edited and posted on the Blog
Normal Flow:	<ol style="list-style-type: none"> 1. Login to the account, user click "Blog tư vấn" 2. Posts that doctors have posted will appear on the Blog screen 3. The doctor then clicks the edit button in the article that he wants to edit 4. Enter the post you want to edit in the box then press the "Đăng bài" button to edit or the "Đóng" button to close the tab
Alternative Flows:	N/A
Exceptions:	N/A
Priority:	Medium
Frequency of Use:	Medium
Business Rules:	N/A
Other Information:	N/A
Assumptions:	N/A

2.3.25 Delete post

ID and Name:	UC25- Delete post		
Created By:	Trương Văn Huy	Date Created:	11/5/2022
Primary Actor:	Doctor	Secondary Actors:	
Trigger:	Users click "Blog tư vấn" in header		
Description:	Doctors can delete articles on the Blog		
Preconditions:	<ul style="list-style-type: none"> - User has account in system - User has logged in system 		
Post-conditions	The post will be removed from the system and the patient will no longer be able to view it		
Normal Flow:	<ol style="list-style-type: none"> 1. Login to the account, user click "Blog tư vấn" 2. Posts that doctors have posted will appear on the Blog screen 3. The doctor then clicks the delete button in the article that he 		

	wants to delete 4. The post will be removed from the system and the patient will no longer be able to view it
Alternative Flows:	N/A
Exceptions:	N/A
Priority:	Medium
Frequency of Use:	Medium
Business Rules:	N/A
Other Information:	N/A
Assumptions:	N/A

2.3.26 Like post

ID and Name:	UC26- Like post		
Created By:	Trương Văn Huy	Date Created:	11/5/2022
Primary Actor:	Patient, Doctor	Secondary Actors:	
Trigger:	Users click "Blog tư vấn" on header		
Description:	Patients can like doctor's posts and doctors can also like their own posts		
Preconditions:	<ul style="list-style-type: none"> - User has account in system - User has logged in system 		
Post-conditions	The post is liked and the number of likes will increase in the post		
Normal Flow:	<ol style="list-style-type: none"> 1. Login to the account, user click "Blog tư vấn" 2. Posts that doctors have posted will appear on the Blog screen 3. Then click the like button on the post you want to like 		
Alternative Flows:	N/A		
Exceptions:	N/A		
Priority:	High		

Frequency of Use:	High
Business Rules:	N/A
Other Information:	N/A
Assumptions:	N/A

2.3.27 Comment post

ID and Name:	UC27- Comment post		
Created By:	Trương Văn Huy	Date Created:	11/5/2022
Primary Actor:	Patient, Doctor	Secondary Actors:	
Trigger:	Users click "Blog tư vấn" on header		
Description:	Patients can comment doctor's posts and doctors can also comment their own posts		
Preconditions:	<ul style="list-style-type: none"> - User has account in system - User has logged in system 		
Post-conditions	Comment posted on that post		
Normal Flow:	<ol style="list-style-type: none"> 1. Login to the account, user click "Blog tư vấn" 2. Posts that doctors have posted will appear on the Blog screen 3. Enter a comment in the box then pressing the "Bình luận" to comment 		
Alternative Flows:	N/A		
Exceptions:	N/A		
Priority:	High		
Frequency of Use:	High		
Business Rules:	N/A		
Other	N/A		

Information:	
Assumptions:	N/A

2.3.28 Delete comment

ID and Name:	UC28- Delete comment		
Created By:	Trương Văn Huy	Date Created:	11/5/2022
Primary Actor:	Patient, Doctor	Secondary Actors:	
Trigger:	Users click "Blog tư vấn" in header		
Description:	Patients can delete comment doctor's posts and doctors can also delete comment their own posts		
Preconditions:	<ul style="list-style-type: none"> - User has account in system - User has logged in system 		
Post-conditions	Comment has been removed from the post		
Normal Flow:	<ol style="list-style-type: none"> 1. Login to the account, user click "Blog tư vấn" 2. Posts that doctors have posted will appear on the Blog screen 3. Click the "Xóa" button in the comment you want to delete 		
Alternative Flows:	N/A		
Exceptions:	N/A		
Priority:	High		
Frequency of Use:	High		
Business Rules:	N/A		
Other Information:	N/A		
Assumptions:	N/A		

2.3.29 Add medical examination package

ID and Name:	UC29- Add medical examination package		
Created By:	Trương Văn Huy	Date Created:	11/5/2022

Primary Actor:	Doctor	Secondary Actors:	
Trigger:	Users click “Tài khoản của tôi” on header		
Description:	The doctor can add a new examination package so that the patient can choose the appropriate package		
Preconditions:	<ul style="list-style-type: none"> - User has account in system - User has logged in system 		
Post-conditions	The medical examination package has been added so that the patient can choose the appropriate package		
Normal Flow:	<ol style="list-style-type: none"> 1. Login to the account, user click “Tài khoản của tôi” 2. The personal information screen will appear 3. Select the package that the doctor wants to add 4. After pressing the “Lưu thay đổi” to save 		
Alternative Flows:	N/A		
Exceptions:	N/A		
Priority:	Medium		
Frequency of Use:	Medium		
Business Rules:	N/A		
Other Information:	N/A		
Assumptions:	N/A		

2.3.30 Appointment statistics

ID and Name:	UC30- Appointment statistics		
Created By:	Trương Văn Huy	Date Created:	11/5/2022
Primary Actor:	Doctor	Secondary Actors:	
Trigger:	Users click “Cuộc hẹn” on header		
Description:	The doctor can statistics the status of the appointments		
Preconditions:	<ul style="list-style-type: none"> - User has account in system 		

	<ul style="list-style-type: none"> - User has logged in system
Post-conditions	The status of the appointment is listed in the form of a pie chart
Normal Flow:	<ol style="list-style-type: none"> 1. Login to the account, user click "Cuộc hẹn" 2. List appointment screen will appear 3. The doctor selects the date you want to make statistics and then clicks the "Thống kê" button
Alternative Flows:	N/A
Exceptions:	N/A
Priority:	Low
Frequency of Use:	Low
Business Rules:	N/A
Other Information:	N/A
Assumptions:	N/A

2.3.31 Follow doctor

ID and Name:	UC31 - Follow doctor		
Created By:	Trương Văn Huy	Date Created:	11/5/2022
Primary Actor:	Patient	Secondary Actors:	
Trigger:	Patient clicks on the name of the doctor that the patient wants to follow that doctor		
Description:	Patients can follow doctors so they can get notifications when they post		
Preconditions:	<ul style="list-style-type: none"> - User has account in system - User has logged in system 		
Post-conditions	Follow the doctor successfully and when the doctor posts, the patient will receive a notification		
Normal Flow:	<ol style="list-style-type: none"> 1. Patient logs into the system 2. The system will automatically display a list of all doctors in the system so that the patient can view and choose 3. Patient clicks on the name of the doctor that the patient wants 		

	<p>to follow</p> <p>4. Then click the "Theo dõi" button on the doctor's details page</p>
Alternative Flows:	N/A
Exceptions:	N/A
Priority:	High
Frequency of Use:	High
Business Rules:	N/A
Other Information:	N/A
Assumptions:	N/A

2.3.32 Unfollow doctor

ID and Name:	UC31 - Unfollow doctor		
Created By:	Trương Văn Huy	Date Created:	11/5/2022
Primary Actor:	Patient	Secondary Actors:	
Trigger:	Patient clicks on the name of the doctor that the patient wants to unfollow that doctor		
Description:	Patients can unfollow that doctor if they don't want to be notified of that doctor's posts		
Preconditions:	<ul style="list-style-type: none"> - User has account in system - User has logged in system 		
Post-conditions	Unfollow the doctor successfully and don't get notifications from that doctor's posts anymore		
Normal Flow:	<ol style="list-style-type: none"> 1. Patient logs into the system 2. The system will automatically display a list of all doctors in the system so that the patient can view and choose 3. Patient clicks on the name of the doctor that the patient wants to unfollow 4. Then pressing the "Bỏ theo dõi" button on the doctor's details page 		
Alternative	N/A		

Flows:	
Exceptions:	N/A
Priority:	High
Frequency of Use:	High
Business Rules:	BR-08
Other Information:	N/A
Assumptions:	N/A

2.3.32 View feedback of doctor

ID and Name:	UC32 - View feedback of doctor		
Created By:	Trương Văn Huy	Date Created:	11/5/2022
Primary Actor:	Patient	Secondary Actors:	
Trigger:	Patient clicks on the name of the doctor that the patient wants to see feedback about that doctor		
Description:	Patients can view feedback of doctors		
Preconditions:	<ul style="list-style-type: none"> - User has account in system - User has logged in system 		
Post-conditions	The doctor's rating will appear on the doctor's details page		
Normal Flow:	<ol style="list-style-type: none"> 1. Patient logs into the system 2. The system will automatically display a list of all doctors in the system so that the patient can view and choose 3. Patient clicks on the name of the doctor that the patient wants to see feedback 4. The doctor's rating will appear on the doctor's details page 		
Alternative Flows:	N/A		
Exceptions:	N/A		
Priority:	High		

Frequency of Use:	High
Business Rules:	N/A
Other Information:	N/A
Assumptions:	N/A

3. Functional Requirements

3.1 System Functional Overview

3.1.1 Screens Flow

- *Patient screen flow*

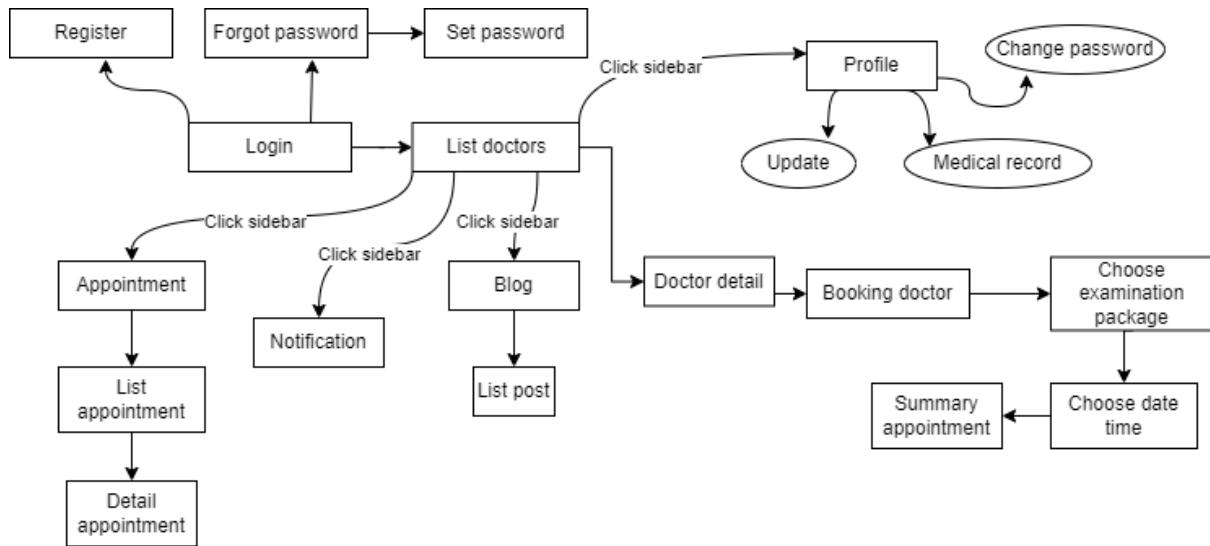


Figure 7: Patient Screen Flow

- **Doctor screen flow**

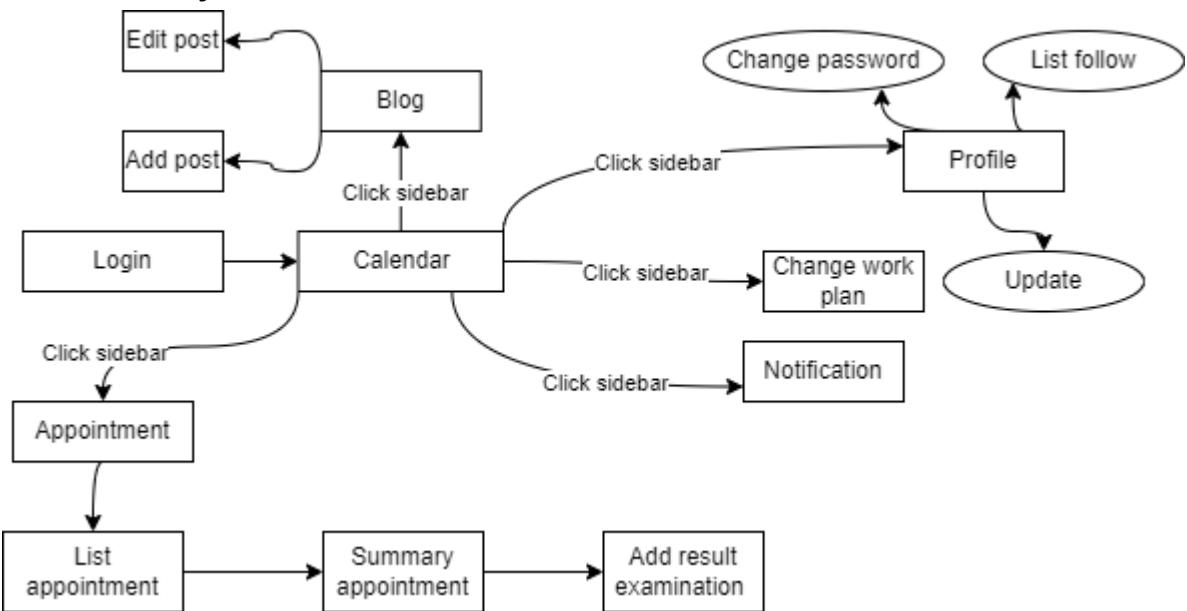


Figure 8: Doctor Screen Flow

- **Admin screen flow**

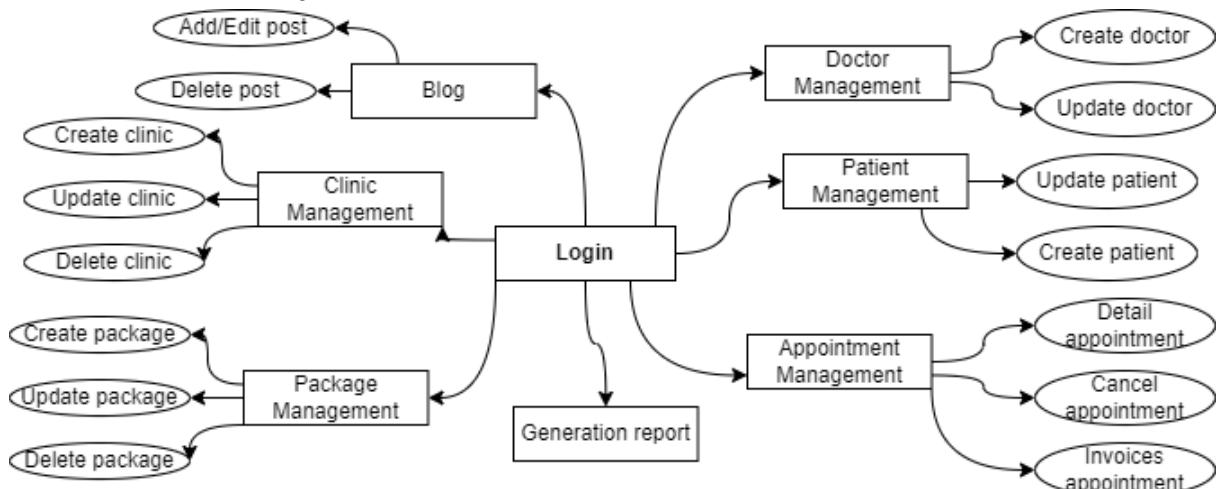


Figure 9: Admin Screen Flow

3.1.2 Screen Descriptions

3.1.2.1 Screen description of Patient

#	Feature	Screen	Description
1	Login	Login	Use this screen when the user wants to log into the system.
2	Register	Register	Use this screen when the user wants to sign up to the system.
3	Reset password	Forgot password	Use this screen when the user wants to reset password.
4	View profile	Profile	Use this screen when the user wants to see a profile.

5	Edit profile	Profile	Use this screen when the user wants to edit a profile.
6	Change password	Change password	Use this screen when the user wants to change password.
7	List doctor	List doctor	Use this screen when the user wants to view list doctors
8	Update declaration	List doctor	Use this screen when the user wants to update declaration
9	Search name, location and specials	List doctor	Use this screen when the user wants to search doctor
10	Detail doctor	Detail doctor	Use this screen when the user wants to view detail doctor
11	List review	Detail doctor	Use this screen when the user wants to view reviews of doctor
12	Follow/Unfollow doctor	Detail doctor	Use this screen when the user wants to follow/unfollow of doctor
13	Post of detail	Detail doctor	Use this screen when the user wants to view posts of doctor
14	Choose doctor	List doctor	Use this screen when the user wants to booking doctor
15	Choose packages	Choose packages	Use this screen when the user wants to choose packages of doctor
16	Choose time	Choose time	Use this screen when the user wants to choose time of doctor
17	List appointment	List appointment	Use this screen when the user wants to list appointment
18	Detail appointment	Detail appointment	Use this screen when the user wants to see detail appointment
19	Cancel appointment	Detail appointment	Use this screen when the user wants to cancel appointment
20	Reject appointment	Detail appointment	Use this screen when the user wants to reject appointment because not come to the appointment
21	Review doctor	Detail appointment	Use this screen when the user wants to review doctor after successful appointment
22	Chat realtime	Detail appointment	Use this screen when the user wants to chat real time with doctor in appointment
23	Download QR	Detail appointment	Use this screen when the user wants to download QR contain information of appointment
24	Download invoice	Detail appointment	Use this screen when the user wants to download invoice in appointment
25	View medical record	Medical record	Use this screen when the user wants to view medical record
26	List post	Blog	Use this screen when the user wants to view list post

2 7	Add/edit post	Blog	Use this screen when the user wants to add post
2 8	Comment post	Blog	Use this screen when the user wants to comment post
2 9	Like post	Blog	Use this screen when the user wants to like post
3 0	Follow doctor	Detail doctor	Use this screen when the user wants to follow posts of doctor
3 1	List notification	List notification	Use this screen when the user wants to see list notification
3 2	Read notification	List notification	Use this screen when the user wants to read notification

3.1.2.1 Screen description of Doctor

#	Feature	Screen	Description
1	Login	Login	Use this screen when the user wants to log into the system.
2	Reset password	Forgot password	Use this screen when the user wants to reset password.
3	View profile	Profile	Use this screen when the user wants to see a profile.
4	Edit profile	Profile	Use this screen when the user wants to edit a profile.
5	Change password	Change password	Use this screen when the user wants to change password.
6	Check the calendar	Calendar	Use this screen when the user wants to see a calendar
7	List appointment	List appointment	Use this screen when the user wants to list appointment
8	View statistics	View statistics	Use this screen when the user wants to see statistics about appointment
9	Detail appointment	Detail appointment	Use this screen when the user wants to see detail appointment
10	Add result	Detail appointment	Use this screen when the user wants to add examination results of appointment
11	Cancel appointment	Detail appointment	Use this screen when the user wants to cancel appointment
12	Accept reject appointment	Detail appointment	Use this screen when the user wants to reject appointment because not come to the appointment
13	Chat realtime	Detail appointment	Use this screen when the user wants to chat real time with patient in appointment
14	Edit scheme	Change scheme	Use this screen when the user wants to change scheme
15	View medical record	Medical record	Use this screen when the user wants to view medical record

1 6	List post	Blog	Use this screen when the user wants to view list post
1 7	Add/edit post	Blog	Use this screen when the user wants to add post
1 8	Comment post	Blog	Use this screen when the user wants to comment post
1 9	Like post	Blog	Use this screen when the user wants to like post
2 0	List notification	List notification	Use this screen when the user wants to see list notification
2 1	Read notification	List notification	Use this screen when the user wants to read notification

3.1.2.1 Screen description of Admin

#	Feature	Screen	Description
1	Login	Login	Use this screen when the user wants to log into the system.
2	View profile	Profile	Use this screen when the user wants to see a profile.
3	Dashboard	Dashboard	Use this screen when the user wants to view info about the system .
4	List Clinic	Manage Clinic	Use this screen when the admin wants to see the clinic in the system.
6	CRUD Clinic	Manage Clinic	Use this screen when the admin wants to CRUD a clinic
7	List Package	Manage Package	Use this screen when the admin wants to see the package in the system.
8	CRUD Package	Manage Package	Use this screen when the admin wants to CRUD a package
9	List Doctor	Manage doctor	Use this screen when the admin wants to list a doctor
1 0	Create, Update Doctor	Manage doctor	Use this screen when the admin wants to Create, Update a doctor
1 1	View Patient	Manage patient	Use this screen when the admin wants to see list the patient in the system.
1 2	Add/Edit Patient	Manage patient	Use this screen when the admin wants to add/edit the patient in the system.
1 3	List appointment	List appointment	Use this screen when the user wants to list appointment
1 4	Cancel appointment	List appointment	Use this screen when the user wants to cancel appointment
1 5	Invoice appointment	List appointment	Use this screen when the user wants to invoice appointment
1 6	All Invoice appointment	List appointment	Use this screen when the user wants to invoice all appointment

1 7	Pay invoice	Invoice appointment	Use this screen when the user wants to invoice appointment
1 8	List post	Manage post	Use this screen when the admin wants to see list the post in the system.
1 9	CRUD post	Manage post	Use this screen when the admin wants to CRUD a post
2 0	List review	List review	Use this screen when the user wants to list review
2 1	Delete review	Delete review	Use this screen when the user wants to delete review
2 2	Report doctor	Generator report	Use this screen when the admin wants to report doctor in the system.
2 3	Report patient	Generator report	Use this screen when the admin wants to report patient in the system.
2 4	Report appointment	Generator report	Use this screen when the admin wants to report appointment in the system.

3.1.3 Screen Authorization

Screen	Guest	Patient	Doctor	Admin
Landing page		X	X	X
Login	X	X	X	X
Register	X			
Forgot password		X	X	X
Profile		X	X	X
Change password		X	X	X
List doctors		X		X
Detail doctor		X		X
Review & Evaluate		X		X
Choose packages		X		
Choose time		X		
Summary appointment		X		
List appointment		X	X	X
Change scheme			X	
Manage calendar			X	
Blog		X	X	X
Statistic system				X
CRUD doctor				X
CRUD patient				X
List all appointment				X
CRUD post		X	X	X
CRUD clinic				X
Generator report				X

3.1.4 Non-Screen Functions

#	Feature	System Function	Description
1	Logout	Logout	Logout the current user session in the system

3.1.5 Entity Relationship Diagram

Below is an entity-relationship diagram, we focus on showing entities and the relationship between entities as well as the nature of the relationship. Specific parts of an attribute include attributes which we specify in the database design in report 4.

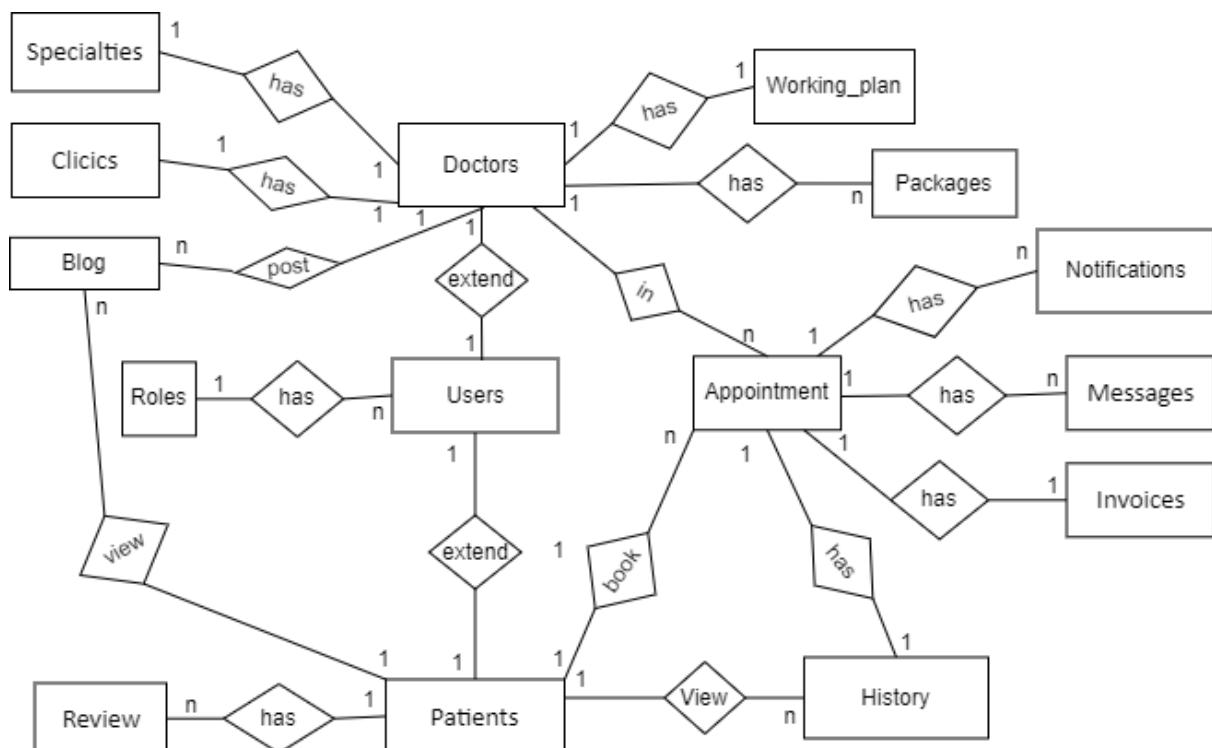


Figure 10: Entity Relationship Diagram

Entities Description

#	Entity	Description
1	Users	Attribute: <ul style="list-style-type: none"> • id • age • confirmation_token • email • enabled • fullname • gender • mobile • password • profile_img • username

2	Roles	Attribute: <ul style="list-style-type: none">• id• name
3	Users_roles	Attribute: <ul style="list-style-type: none">• user_id• role_id
4	Patients	Attribute: <ul style="list-style-type: none">• address• id_patient• id_pathological
5	Doctors	Attribute: <ul style="list-style-type: none">• certification• description• start_practice_date• id_doctor• id_clinic• id_specialty
6	Specialties	Attribute: <ul style="list-style-type: none">• id• description• name
7	Packages	Attribute: <ul style="list-style-type: none">• id• description• duration• editable• name• price• target
8	Packages_doctorsff	Attribute: <ul style="list-style-type: none">• id_packages• id_user
9	Clicics	Attribute: <ul style="list-style-type: none">• id• address• description• name• telephone• website
10	Working_plan	Attribute: <ul style="list-style-type: none">• id_doctor• friday• monday• saturday• sunday• thursday• tuesday

		<ul style="list-style-type: none"> ● wednesday
11	Post	<p>Attribute:</p> <ul style="list-style-type: none"> ● id ● userid ● specialId ● message ● img ● like ● totalLike
12	Invoices	<p>Attribute:</p> <ul style="list-style-type: none"> ● id ● issued ● number ● status ● total_amount
13	Appointment	<p>Attribute:</p> <ul style="list-style-type: none"> ● id ● canceled_at ● end ● start ● status ● id_canceler ● id_doctor ● id_invoice ● id_packages ● id_patient
14	Messages	<p>Attribute:</p> <ul style="list-style-type: none"> ● id ● created_at ● message ● id_appointment ● id_author
15	Notifications	<p>Attribute:</p> <ul style="list-style-type: none"> ● id ● created_at ● is_read ● message ● title ● url ● id_user
16	Reviews	<p>Attribute:</p> <ul style="list-style-type: none"> ● id ● rating ● review ● id_doctor ● id_patient ● feedback

		Attribute
17	Comment	<ul style="list-style-type: none"> • id • postId • message • createdAt • updatedAt • parentId • userId

3.1.6 Booking appointment state diagram

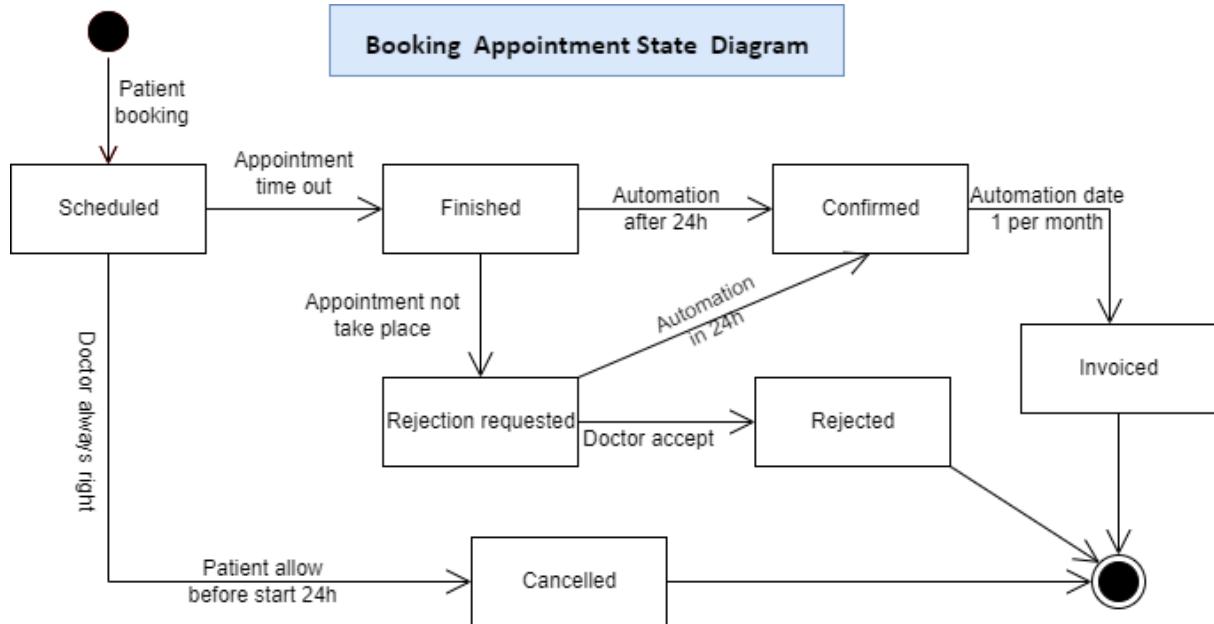


Figure 11: Booking Appointment State Diagram

3.2 Wireframe

3.2.1 Sign in



Figure 12: Login Screen

- Function Details:
 - Validation: User must fill all field to sign in the system
 - Functionality: Sign in the system

3.2.2 Sign up

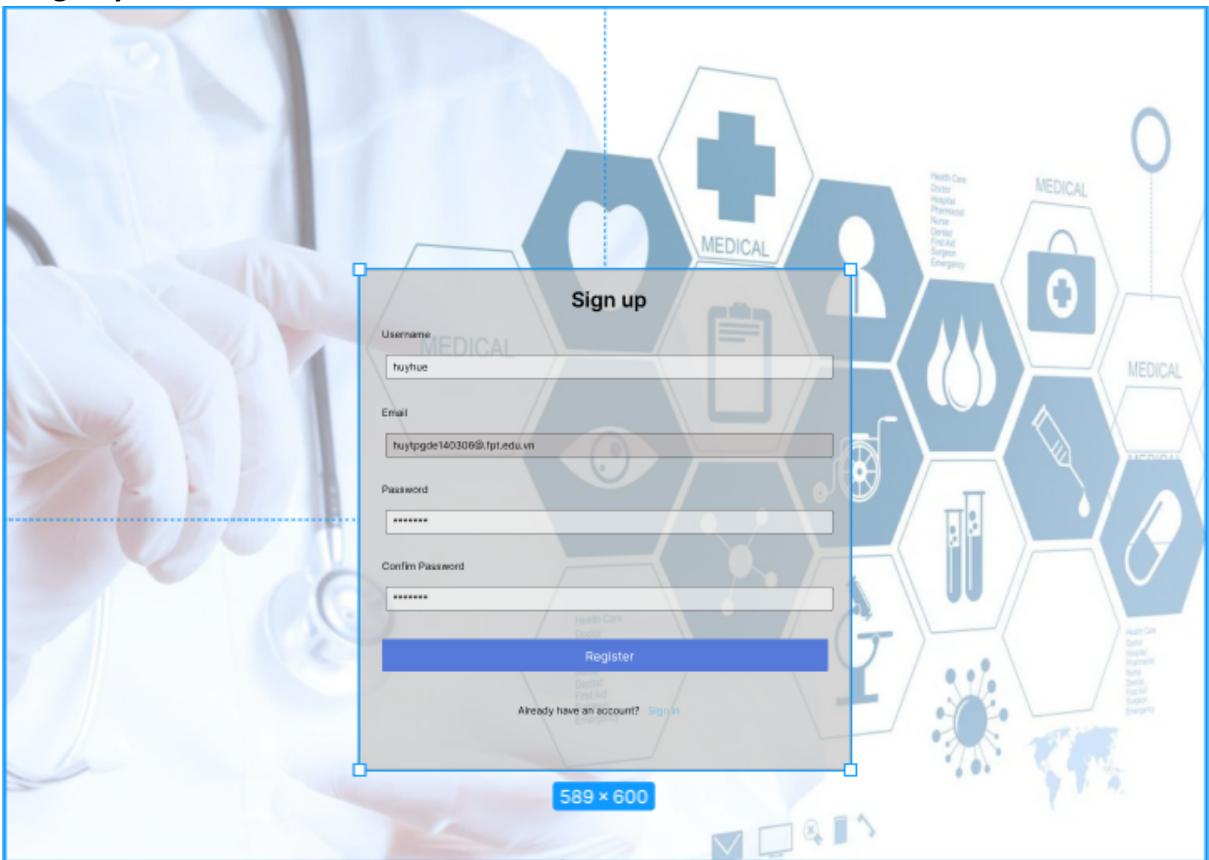


Figure 13: Sign up screen

● Function Details:

- Validation: User must fill all field to sign up the system
- Functionality: Sign up the system and confirm email code validation.

3.2.3 Forgot password

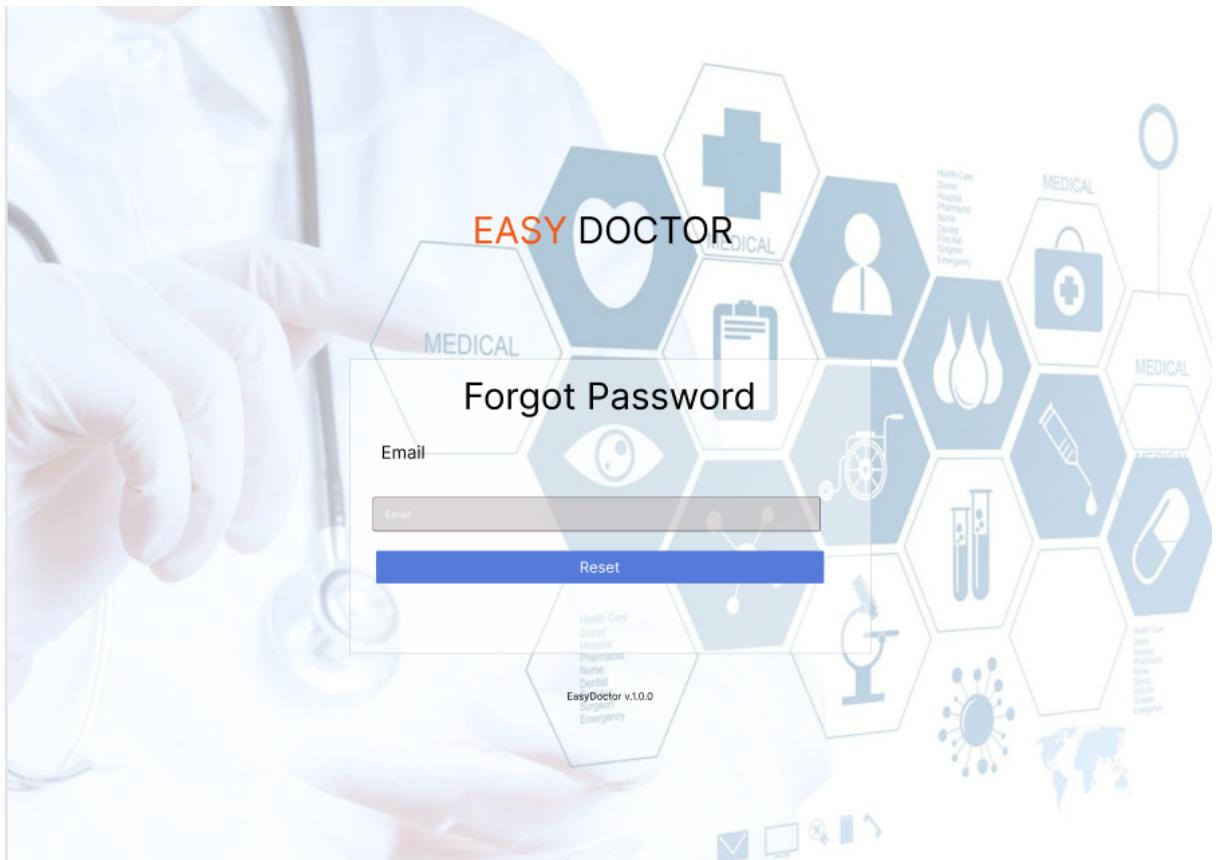


Figure 14: Reset password screen

- Function Details:
 - Validation: User must fill email's field to get code for reset the password
 - Functionality: Send reset password link to user's email

3.2.4 New password

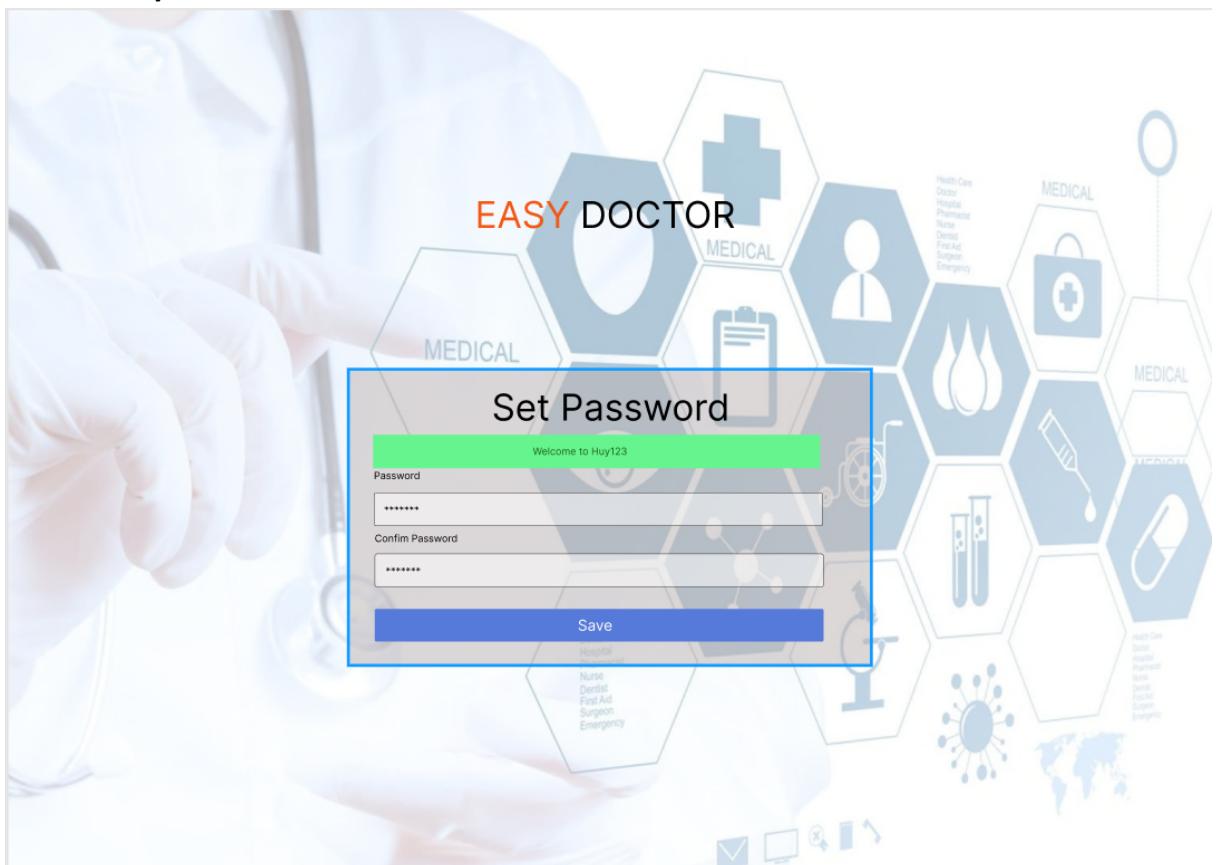


Figure 15: Set new password screen

- Function Details:
 - Functionality: reset the password

3.3 User

3.3.1 User info

The screenshot shows the 'Profile' tab selected in the navigation bar. The main area is titled 'BASIC INFO' and contains fields for 'FIRST NAME', 'LAST NAME', 'Mobile', 'Age', 'EMAIL', and 'Address'. There are 'CANCEL' and 'SAVE' buttons at the bottom right. On the left, there's a sidebar with 'Appointments' and two buttons: 'Scheduled' (with 1 notification) and 'Cancel this moth' (with 2 notifications). An 'Upload new avatar' button is also present.

Home Appointments Forum My account Logged as: huy123 | Log out

Profile Password Pathological Inbox

BASIC INFO

FIRST NAME LAST NAME

Mobile Age

EMAIL

Address

CANCEL SAVE

Upload new avatar

Appointments

Scheduled 1

Cancel this moth 2

EasyDoctor v1.0.0

Figure 16: User Information Screen

- Function Details:

- Validation: Users must fill all required fields to save user information.
- Functionality: Create, update user information.

3.3.2 Change password

The screenshot shows the 'Change Password' screen of the EasyDoctor v10.0 application. At the top, there is a navigation bar with links for 'Home', 'Appointments', 'Forum', 'My account', and 'Logged as: huy123 | Log out'. Below the navigation bar, there is a circular profile picture placeholder with a 'Upload new avatar' button below it. To the right of the profile picture, there are three tabs: 'Profile' (selected), 'Password' (highlighted in blue), and 'Pathological'. The main content area contains three input fields: 'Current Password' (disabled), 'Password' (containing '*****'), and 'Repeat New Password' (containing '*****'). A 'Save' button is located at the bottom right of these fields. On the left side, there is a sidebar titled 'Appointments' with two items: 'Scheduled' (with a red notification badge '1') and 'Cancel this month' (with a red notification badge '2'). At the bottom center of the page, the text 'EasyDoctor v10.0' is visible.

Figure 17: Change Password Screen

- **Function Details:**

- Validation: User must fill in all required fields to change user password.
- Functionality: change user password.

3.4 List doctors

The screenshot shows a user interface for listing recently examined doctors. At the top, there is a navigation bar with links for 'Doctor', 'Appointments', 'Forum', and 'My account'. On the right side of the top bar, it says 'Logged as: huyhue | Log out'. Below the navigation bar, the title 'Recent Doctors' is displayed in blue, followed by the subtitle 'view a list of recently examined doctors'. The page features three doctor profiles, each enclosed in a white rectangular box with a circular profile picture on the left and text details on the right. The first doctor listed is 'PGS.TS.Phan Huỳnh Chiến Thắng' from 'Phòng khám Tâm Đức' in 'Khoa Tâm Lý Trị Liệu' with 'Hỗ Trợ Nhiệt tình'. The second doctor is 'PGS.Lê Quang Long' from 'Phòng khám Tâm Đức' in 'Khoa Chấn thương Chính Hình' with 'Hỗ Trợ Nhiệt tình'. The third doctor is 'PGS.Tống Phước Gia Huy' from 'Phòng khám Tâm Đức' in 'Khoa Chấn thương Chính Hình' with 'Hỗ Trợ Nhiệt tình'. Each profile includes a red 'Book Online' button at the bottom. The background of the page has decorative abstract shapes in light blue, yellow, green, and pink.

Figure 18: List Doctor Screen

- Function Details:
 - Functionality: View the list of doctors.

3.5 Detail doctor

The screenshot shows the 'Detail Doctor' screen. At the top, there is a navigation bar with links for 'Doctor', 'Appointments', 'Forum', and 'My account'. On the right side of the navigation bar, it says 'Logged as: huyhue | Log out'. Below the navigation bar, the title 'PGS.TS.Phan Huỳnh Chiến Thắng' is displayed in green. To the left of the title is a small thumbnail image of a person standing outside a building. To the right of the title are several text labels and their corresponding descriptions: 'Phòng khám' (Treatment room) followed by 'Phòng khám Tâm Đức', 'Chuyên khoa' (Specialty) followed by 'Khoa Tâm Lý Trị Liệu', 'Kinh nghiệm' (Experience), 'Chứng chỉ' (Certification), 'Mô tả' (Description) followed by 'Tận tình giúp đỡ bệnh nhân', and 'Rating' followed by a five-star rating icon. Below this section is a heading 'Review of doctor'. Underneath the heading, there is a review entry for 'Tống Phước Gia Huy' with a five-star rating icon. At the bottom of the screen, the text 'EasyDoctor v1.0.0' is visible.

Figure 19: Detail Doctor Screen

- Function Details:
 - Functionality: View information and reviews about doctors.

3.6 Booking doctor

3.6.1 Choose packages

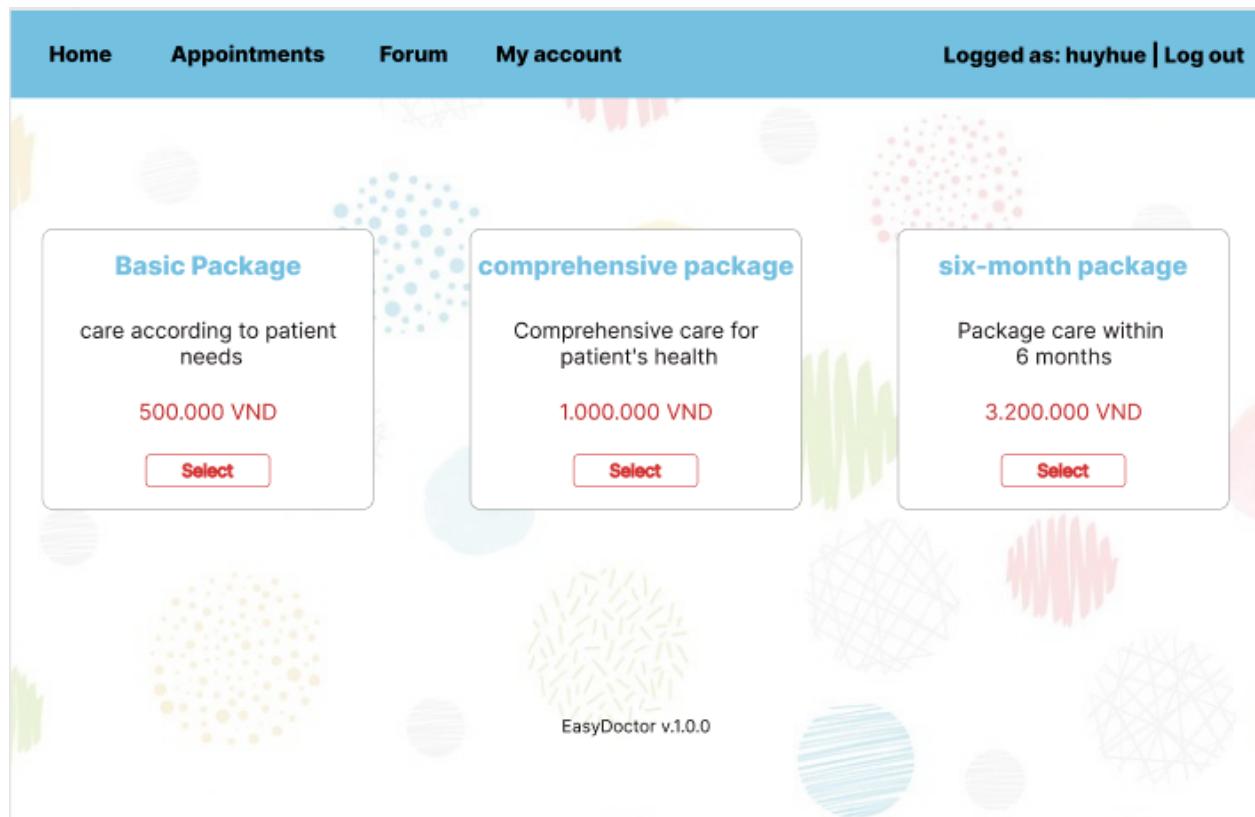


Figure 20: Booking Doctor Screen

- Function Details:
 - Validation: Users must select medical examination packages.
 - Functionality: Select medical examination package.

3.6.2 Choose time

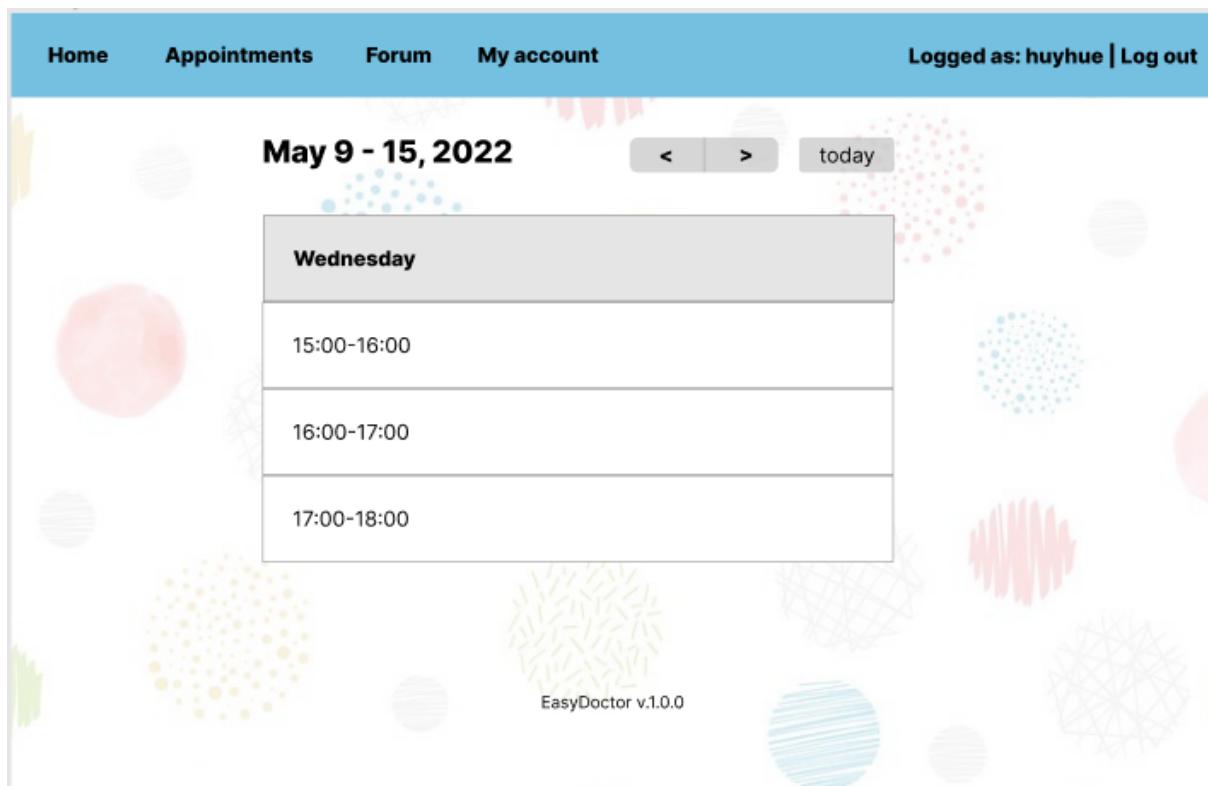


Figure 21: Choose time Screen

- Function Details:
 - Validation: The user must choose the time to visit the doctor.
 - Functionality: Choose the time of medical examination.

3.6.3 Summary appointment:

The screenshot shows a web-based appointment summary page. At the top, there is a blue header bar with navigation links: "Home", "Appointments", "Forum", and "My account" on the left, and "Logged as: huyhue | Log out" on the right. Below the header, the main content area has a light gray background with decorative circular patterns in blue, red, and green. The title "Your new appointments summary" is centered at the top of this area. Below the title, there is a table-like structure with horizontal rows, each containing a label (in bold) and its corresponding value. The data is as follows:

Date	14-5-2022
Time	16:00-17:00
Doctor	BS CKII Ha Ngoc Hung
Packages	comprehensive package
Description	Comprehensive care for patient's health
Price	1.000.000 VND
Cancellable by patient?	yes

At the bottom of the summary table, there is a red button labeled "Book now →".

Figure 22: Summary Appointment Screen

- Function Details:
 - Functionality: View appointment summary.

3.7 List appointment

work	Status	Start	Doctor	Duration	Action
Basic Package	Schedule	25-1-2022 12:00	BS Ha Ngoc Hung	60 min	<button>Details</button>
comprehensive package	Schedule	25-1-2022 15:00	BS Ha Ngoc Hung	60 min	<button>Details</button>
six-month package	Schedule	25-1-2022 16:00	BS Ha Ngoc Hung	60 min	<button>Details</button>
comprehensive package	Schedule	25-1-2022 17:00	BS Ha Ngoc Hung	60 min	<button>Details</button>

Showing 1 to 1 of 1 entries(filtered from 14 total entries)

EasyDoctor v1.0.0

Previous 1 Next

Figure 23: List Appointment Screen

- Function Details:

- Validation: Users must book to see the list of appointments.
- Functionality: View the list of appointments.

3.8 Detail appointment:

The screenshot displays the 'Detail Appointment' screen of the EasyDoctor application. At the top, there is a navigation bar with links for 'Home', 'Appointments', 'Forum', and 'My account'. On the right side of the top bar, it shows the user is 'Logged as: huy123 | Log out'. The main content area on the left lists appointment details in a table format:

status	SCHEDULED
date	14-5-2022
time	12:00-14:00
Patient	Tong Phuoc Gia Huy
Doctor	BS CKII Ha Ngoc Hung
Packages	comprehensive package
description	Comprehensive care for patient's health
price	1.00.000 vnd
exchange	Done

On the right side, there is a dark grey box titled 'Appointment chat with BS CKII Ha Ngoc Hung'. Below this box is a text input field with the placeholder 'Writer your message here' and a 'send' button. At the bottom center of the screen, the text 'EasyDoctor v.1.0.0' is visible.

Figure 24: Detail Appointment Screen

- Function Details:
 - Functionality: View appointment details.

3.9 Manage calendar

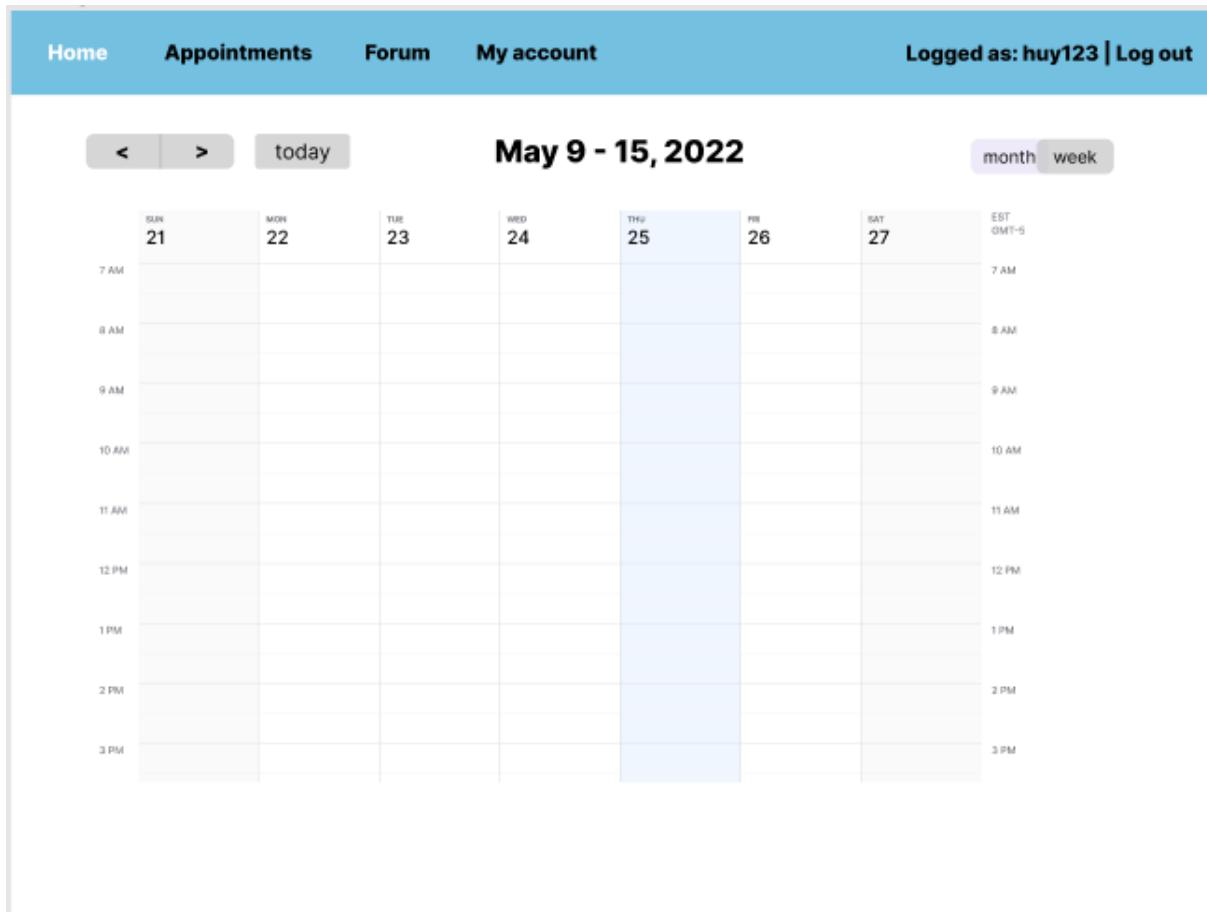


Figure 25: Manager Calendar Screen

- Function Details:
 - Functionality: The doctor views the scheduled appointment.

3.10 Change schedule

The screenshot shows a web-based application for managing a work schedule. At the top, there is a navigation bar with links for Home, Appointments, Change working plan, Forum, and My account. To the right of the navigation is a user status message: "Logged as: huy123 | Log out". Below the navigation, the main title "Change woking plan" is displayed. The central part of the screen is a table with a header row labeled "work", "Start", "End", and "Break". The table lists days of the week with their corresponding start times, end times, and break durations. A "Save" button is located at the bottom center of the table.

work	Start	End	Break
Monday	12:00 SA ⏱	06:00 CH ⏱	1
Tuesday	10:03 SA ⏱	06:00 CH ⏱	1
Wednesday	03:03 CH ⏱	06:00 CH ⏱	0
Wednesday	06:00 SA ⏱	06:00 CH ⏱	0
Friday	10:03 SA ⏱	06:00 CH ⏱	0
Saturday	02:00 SA ⏱	06:00 CH ⏱	0
Sunday	10:03 SA ⏱	06:00 CH ⏱	0

Save

Figure 26: Change Schedule Screen

- Function Details:
 - Functionality: The doctor changes the appointment schedule.

3.11 Landing page

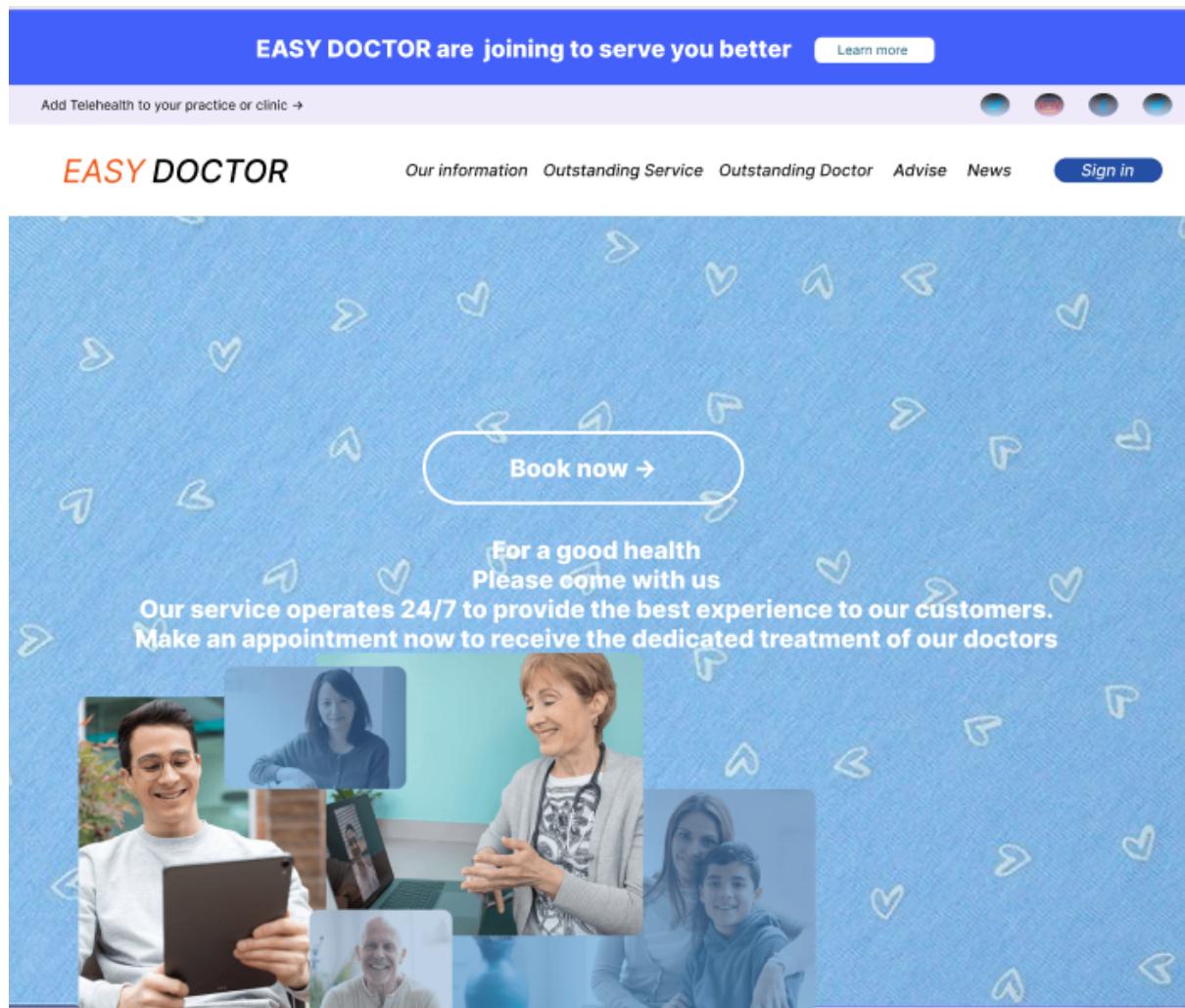


Figure 27: Landing Page

- Function Details:

- Functionality: Patients view information about the site and can ask questions.

3.12 Blog

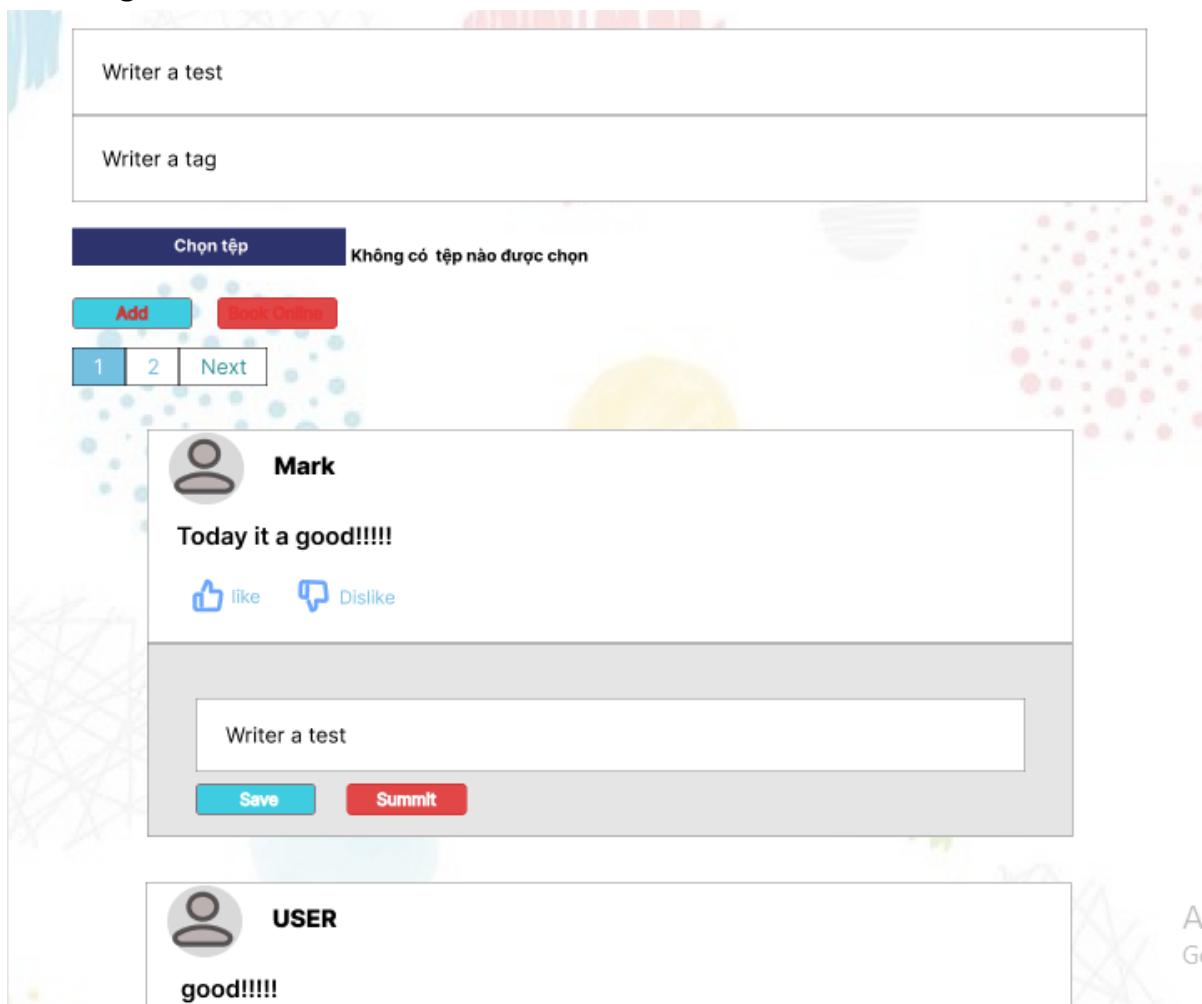


Figure 28: Blog Screen

- Function Details:
 - Functionality: Patients view doctor's posts.

3.13 List notification

The screenshot shows a web application interface for 'THÔNG BÁO EASYDOCTOR'. At the top, there is a navigation bar with links for 'Home', 'Appointments', 'Forum', and 'My account'. On the right side of the top bar, it says 'Logged as: huyhue | Log out'. Below the navigation bar, there is a search bar with placeholder text 'Search:' and a dropdown menu labeled 'All' with a 'Read all' button next to it. There is also a dropdown menu for 'Show entries' set to '1'. The main content area is titled 'THÔNG BÁO EASYDOCTOR' and displays a table of notifications. The table has columns for 'Time', 'Title', 'Content', and 'View'. The data in the table is as follows:

Time	Title	Content	View
25-1-2022	Lịch khám đã kết thúc	Lịch khám đã kết thúc, bạn có thể từ chối cuộc hẹn nếu nó không diễn ra cho đến khi 25-1-2022 12:00	
25-1-2022	Xuất hóa đơn	Xuất hóa đơn đã gửi đến bạn	
25-1-2022	lịch khám đã bị hủy	Bác sĩ BS CKII Hà Ngọc Hùng đã hủy lịch khám vào lúc 25-1-2022 12:00	

At the bottom left of the table, it says 'Showing 1 to 1 of 1 entries(filtered from 14 total entries)'. At the bottom center, it says 'AppointmentScheduler v1.0.1'.

Figure 29: List Notification Screen

- Function Details:
 - Functionality: Patients view the notices of the website.

3.14 Dashboard admin

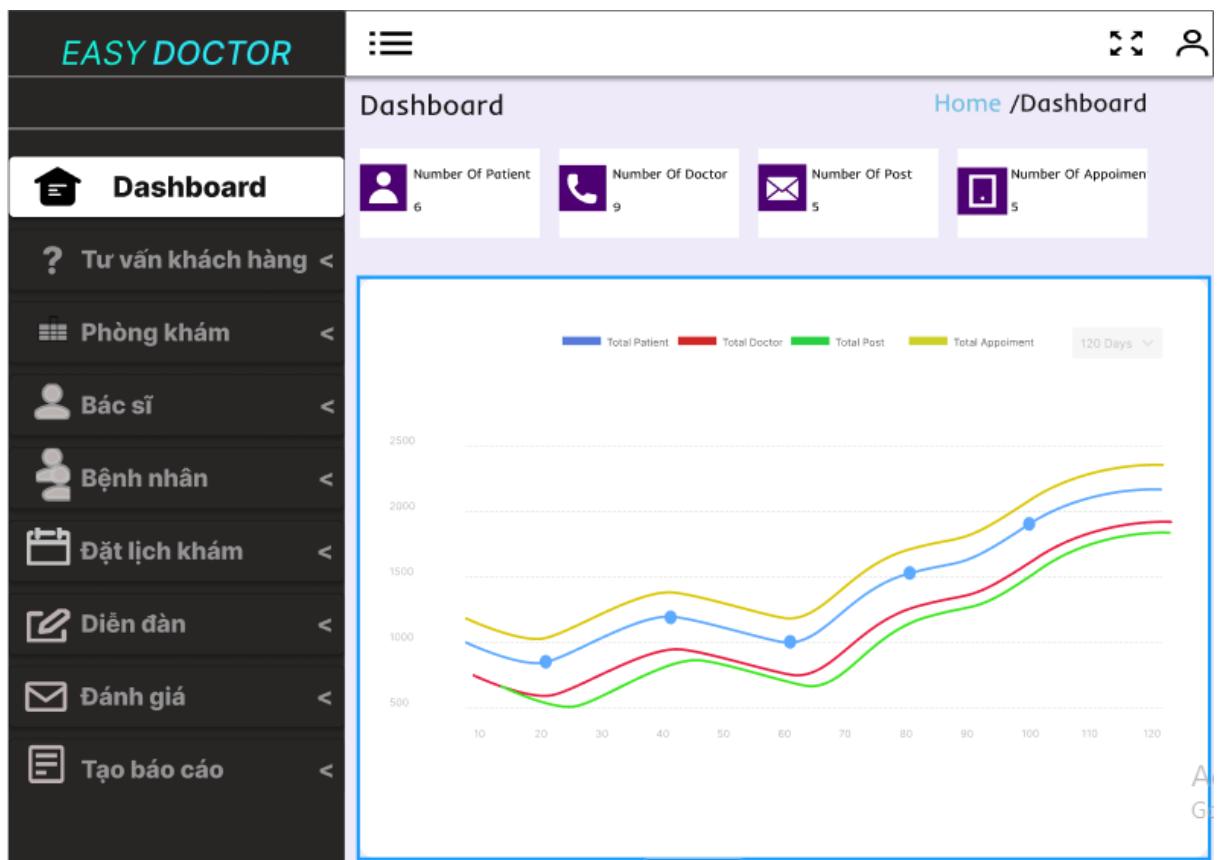


Figure 30: Dashboard Admin Screen

- Function Details:

- Functionality: Admin views the website's medical examination information chart.

3.15 CRUD admin

The screenshot shows the 'EASY DOCTOR' application interface. On the left is a dark sidebar with icons and labels for Dashboard, Clinic (with Add clinic and Add package options), Doctor, Patient, Appointment, Forum, Review, and Generate report. The main area has a title 'Packages infomation' and a breadcrumb 'Home / Packages'. It contains two forms: one for adding a new package with fields for Name, Description, Price, Duration, and Cancelable (Yes/No), and another for viewing a list of packages with columns for #, Name, Price, Duration, Cancelable, Description, and Action (edit and delete).

#	Name	Price	Duration	Cancelable	Description	Action
1	Gói cơ bản	500	60	true	Chăm sóc tùy nhu cầu bệnh nhân	
2	Gói toàn diện	1000	60	true	Chăm sóc toàn diện sức khỏe bệnh nhân	

Figure 31: CRUD Admin Screen

- Function Details:

- Functionality: Admin adds, edits, deletes medical examination packages.

4. Non-Functional Requirements

4.1 External Interfaces

- User interface: GUI should be simple, clear and have recognizable elements.
- Software interface: The system can run smoothly on Chrome, Microsoft Edge, Cốc Cốc, Firefox.
- Availability: The system shall be at least 99 percent available on weekdays.

4.2.1 Usability

- An untrained user shall be able to submit a request for an appointment in an average of three minutes, and in a maximum of five minutes.
- The user interface is eye-catching, clear and especially easy to use for all ages.

4.2.2 Reliability

- The mean time between failures of the system shall be at least 180 days.
- The application should be used whenever the internet is on.

4.2.3 Performance

- All appointment requests are responded to in no more than 3 seconds.

4.2.4 Security

- The system shall lock a user's account after four consecutive unsuccessful login attempts within a period of five minutes.
- A user shall have to change the temporary password assigned by the security officer to a previously unused password immediately following the first successful logon with the temporary password.
- Only Admin have the right to provide and manage accounts of doctors.

5. Requirement Appendix

5.1 Business Rules

ID	Rule Definition
BR-01	Guests are only allowed to enter the Blog page and landing page.
BR-02	The patient is only allowed to review the booked doctor after the appointment is complete.
BR-03	Patient must use a valid email to register new account
BR-04	Patients cannot cancel an appointment when it is due in less than 24 hours.
BR-05	The doctor always has the right to cancel the appointment when in state "SCHEDULED"
BR-06	Patients are only allowed to cancel 1 appointment per month
BR-07	Admin is not allowed to cancel the appointment
BR-08	The patient can only unfollow with doctor once the patient has followed that doctor
BR-09	The patient has the right to refuse an appointment if it does not occur within 24 hours of its closing.
BR-10	Only admins can create and update doctors.
BR-11	When the patient booked the appointment in the INVOICED state, the doctor was reviewed.
BR-12	An appointment can only review the doctor once
BR-13	Patients must update their declaration before making an appointment
BR-14	The doctor is only allowed to comment on the examination results when the appointment is not more than 24 hours from the end.
BR-15	Guests are not allowed to view the patient's medical records.
BR-16	On the first day of each month, the system will automatically issue the invoice of the appointment in the confirmed state.

BR-17	Patients must log in to their account if they want to schedule an appointment with a doctor
BR-18	A doctor can accept a patient's request to decline when that patient submits a request to decline an appointment
BR-19	Patients can only chat real-time with a doctor once an appointment has been made with that doctor
BR-20	Only admins can add and delete clinics

5.2 Application Messages List

#	Message code	Message Type	Context	Content
1	MSG01	In line	There is not any search result	<i>Không tìm thấy kết quả</i>
2	MSG02	In red, under the text box	Input-required fields are empty	<i>Không được để trống</i>
3	MSG03	Toast message	Updating asset(s) information successfully	<i>Thay đổi thành công</i>
4	MSG04	Toast message	Adding new asset successfully	<i>Thêm thành công</i>
5	MSG05	In line	Confirming email of asset hand-over is sent successfully	<i>Xác nhận được gửi tới {email_address} thành công.</i>
6	MSG06	Toast message	Confirm a request with a business action.	<i>Bạn có chắc chắn muốn {yêu cầu} không</i>
7	MSG07	Toast message	Deleting asset information successfully	<i>Xóa thành công</i>
8	MSG08	In red, under the text box	Input value length > max length	<i>Không vượt quá {max_length}.</i>
9	MSG09	In line	Username or password is not correct when clicking sign-in	<i>Tài khoản và mật khẩu không đúng</i>
10	MSG10	In line	This field already exists in the system, so it cannot be added, updated.	<i>{field} đã tồn tại</i>
11	MSG011	In line	The re-entered password does not match the new password.	<i>Mật khẩu không trùng khớp</i>

