

FPT UNIVERSITY

CAPSTONE PROJECT DOCUMENT

Contract Management System Report #4 – Software Design Specification

Contract Management System		
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1 ARCHITECTURE DESIGN

1.1 Choice of Architecture Design

The main objective of CMS is to help users keep track on each specific contract status, quickly search by name, date or status. The system supports dynamic report, users can export reports with different criteria. CMS listens to users' request and retrieve appropriate data from the storage and display it for users. So the system is most structured based on ASP.NET MVC Framework.

1.1.1 What is the MVC?

MVC stands for model – view – controller and is one of three ASP.NET programming models. MVC is a framework for building web applications using a MVC design. The model consists of application data, business rules, logic and functions. A view can be any output representation of data, such as a chart or a diagram. Multiple views of the same information are possible, such as a bar chart for management and a tabular view for accountants. Controller read data from a view, control user input, and send input data to the model.

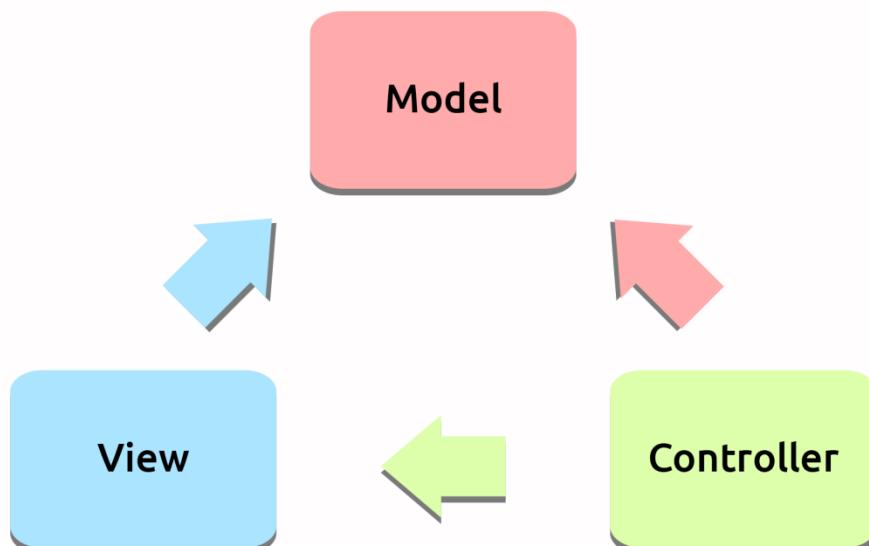


Figure 4-1: MVC

In addition to dividing the application into three kinds of components, the Model–View–Controller design defines the interactions between them:

- ⊕ A **model**: notifies its associated views and controllers when there has been a change in its state. Model objects are the parts of the application that implement the logic for the application's data domain, retrieve and store model state in a database.
- ⊕ A **view**: requests from the model the information that it needs to generate an output representation to the user. It handles the display of data and is created from the model data.

- ⊕ A **controller**: can send commands to the model to update the model's state. It handles user interaction and can also send commands to its associated view to change the view's presentation of the model

1.1.2 Advantages and disadvantages:

- ⊕ **Advantages:** It makes it easier to manage complexity by dividing an application into the model, the view, and the controller. It does not use view state or server-based forms. This makes the MVC framework ideal for developers who want full control over the behavior of an application.
- ⊕ **Disadvantages:** The complexity is high to develop the applications using this pattern. The isolated development process by UI authors, business logic authors and controller authors may leads to delay in their respective modules development.

1.1.3 The reason of choosing MVC Model

- ⊕ It fits the scope and pattern of CMS project: receive request, call function, retrieve data and display for users.
- ⊕ Easily manage the complexity of application by dividing the application into three components: model, view and controller.
- ⊕ Better support for test driven development.

1.2 Architectural Presentation

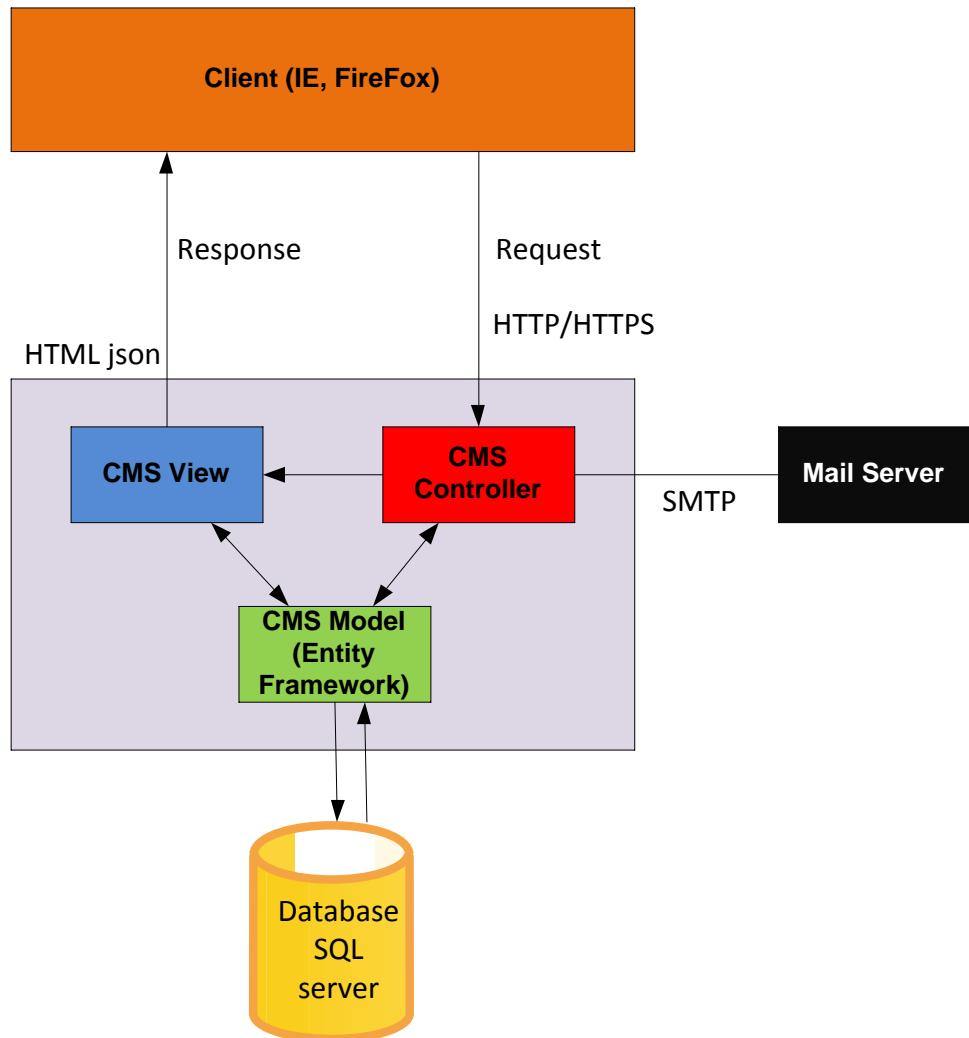


Figure 4-2: System overview

We follow MVC architecture to implement the CMS Project. MVC offers architectural benefits over standard JavaScript — it helps us write better organized, and therefore more maintainable code.

Model is where the application's data objects are stored. A model object is in charge of encapsulating application state and one object could be related to other objects establishing a one-to-one or one-to-many relationship. The model object does not talk directly to a View, instead is made available to a controller, which accesses it when needed. When a model changes, typically it will notify its observers that a change has occurred. As with any data object it contains instance variables and getter/setter methods.

View is what's presented to the users and how users interact with the system. The view is expected to render the model in a meaningful way to the user. In CMS, the view is made with .cshtml file including css, JavaScript or jQuery, it sends user gestures to controller and allows controller to select view.

Controller is the decision maker and the glue between the model and view; it handles user actions and gestures, and responds to user events. For example, in CMS, when a user clicks the “Create” button to create a new contract, the controller for that action is invoked.

The controller will then make changes to the contract model. The view will then render the modified contract model to the display so that user can view the new contract he added in the contract list.

1.3 Package Design

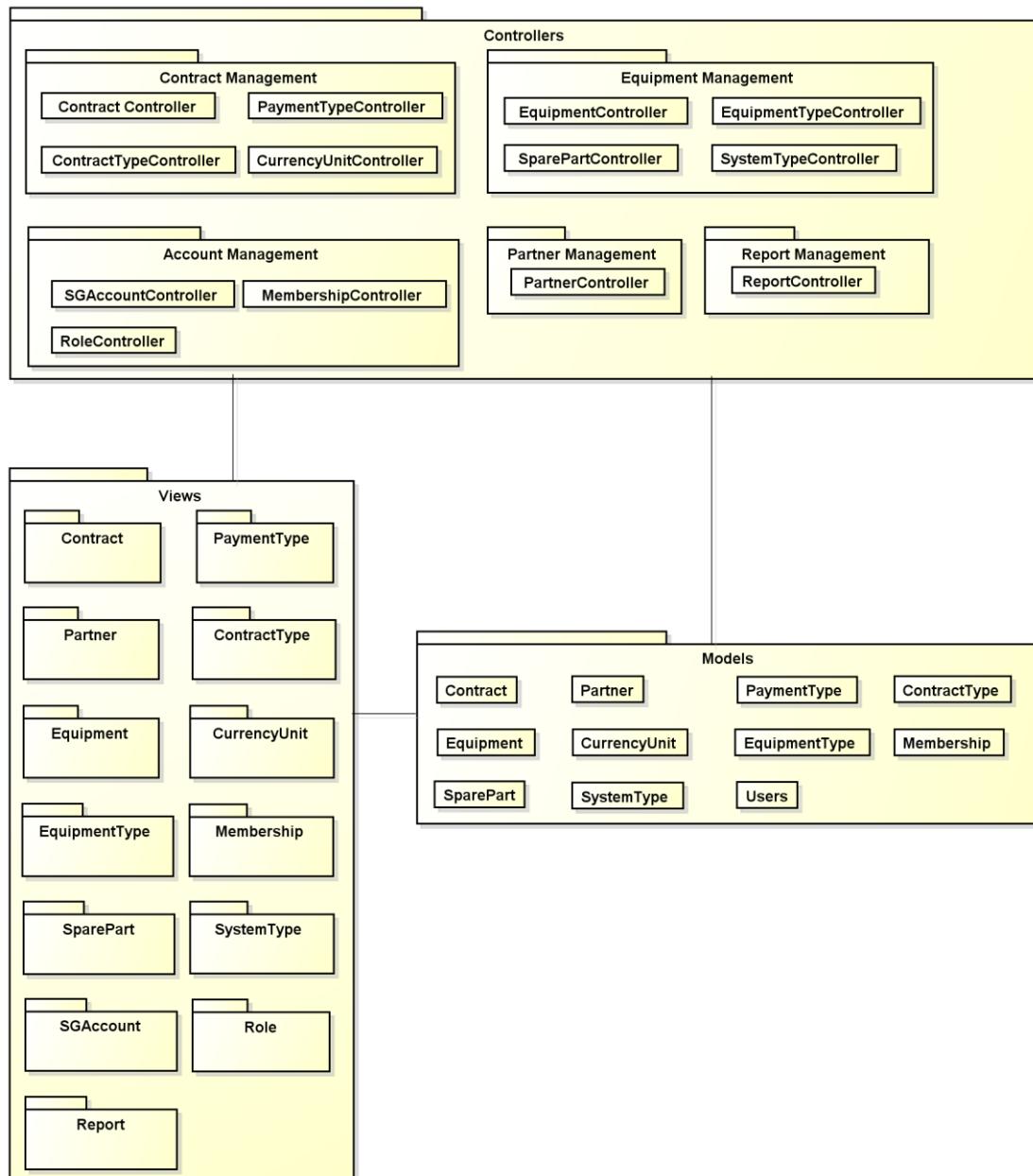


Figure 4-3: Packages Diagram

2 DETAILED DESIGN

2.1 UC001- Authentication

2.1.1 Class Diagram

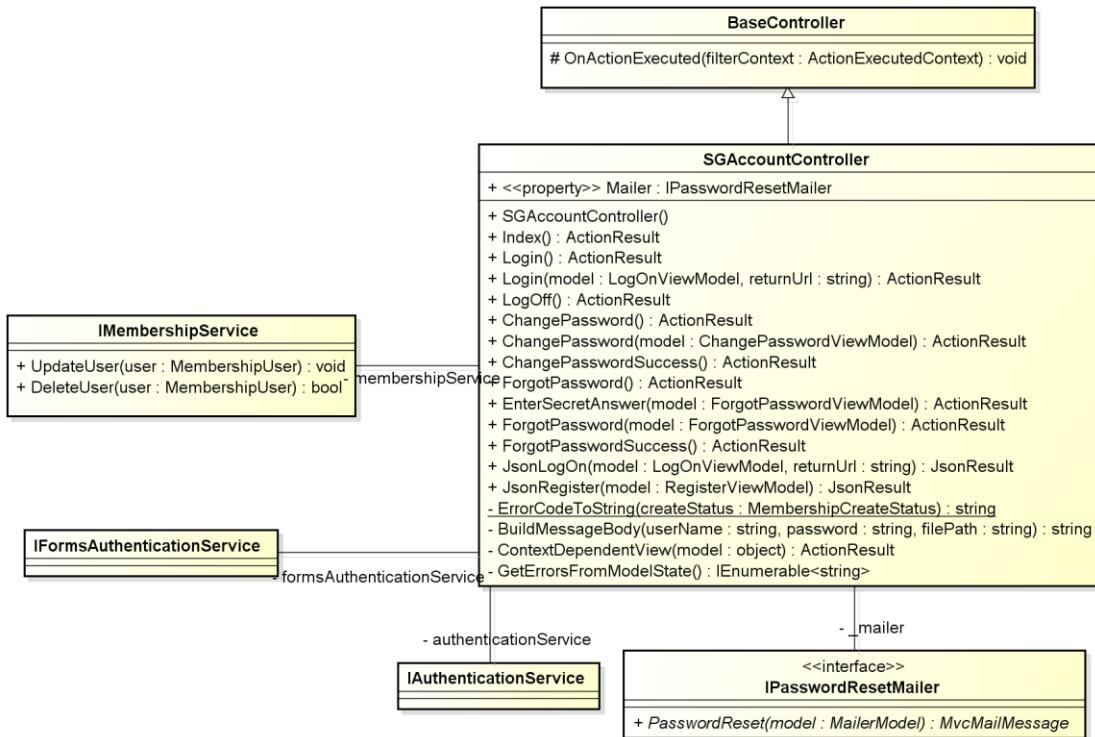


Figure 4-4: Authentication Class Diagram

2.1.2 Class Description

2.1.2.1 SGAccountController

Class	SGAccountController		
Description	Contains declare and constructor for all Authentication's attributes.		
Base Class	BaseController		
Constructor	N/A		
Prototype	N/A		
Source File	SGAController.cs		
Namespace	ContractManagement.Controllers		
Attributes	Name	Type	Description

	Mailer	IPasswordReset Mailer	Use to reset forgotten password
Methods			
Name	Input	Output	Description
Login		ActionResult	Display login page
Login	Model, returnUrl	ActionResult	Verify input to login to system
LogOff		ActionResult	Logoff user from system
ChangePassword		ActionResult	Display change password page
ChangePassword	Model	ActionResult	Change password
ChangePasswordSuccess		ActionResult	Display change password success page
ForgotPassword		ActionResult	Display forgot password page
ForgotPassword	Model	ActionResult	Reset password and send to email
ForgotPasswordSuccess		ActionResult	Display forgot password success page

2.1.2.2 BaseController

Class	BaseController
Description	Provide simple feedback to the ModelState in case of errors
Base Class	N/A
Constructor	N/A
Prototype	N/A
Source File	BaseController.cs
Namespace	ContractManagement.Controllers
Attributes	N/A
Methods	

Name	Input	Output	Description
OnActionExecuted	filterContext	Void	Provide simple feedback to the modelstate in case of errors

2.1.3 UC001-01: Login

2.1.3.1 Screen Design

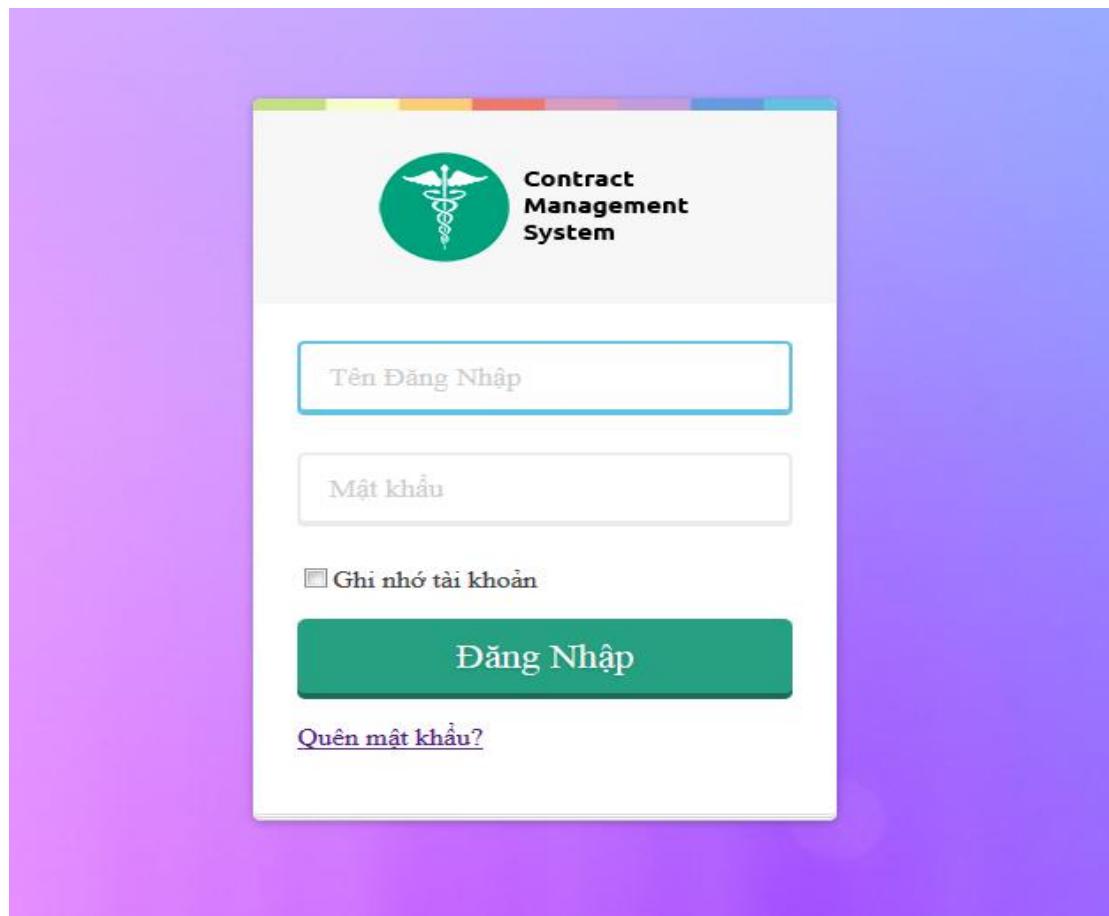


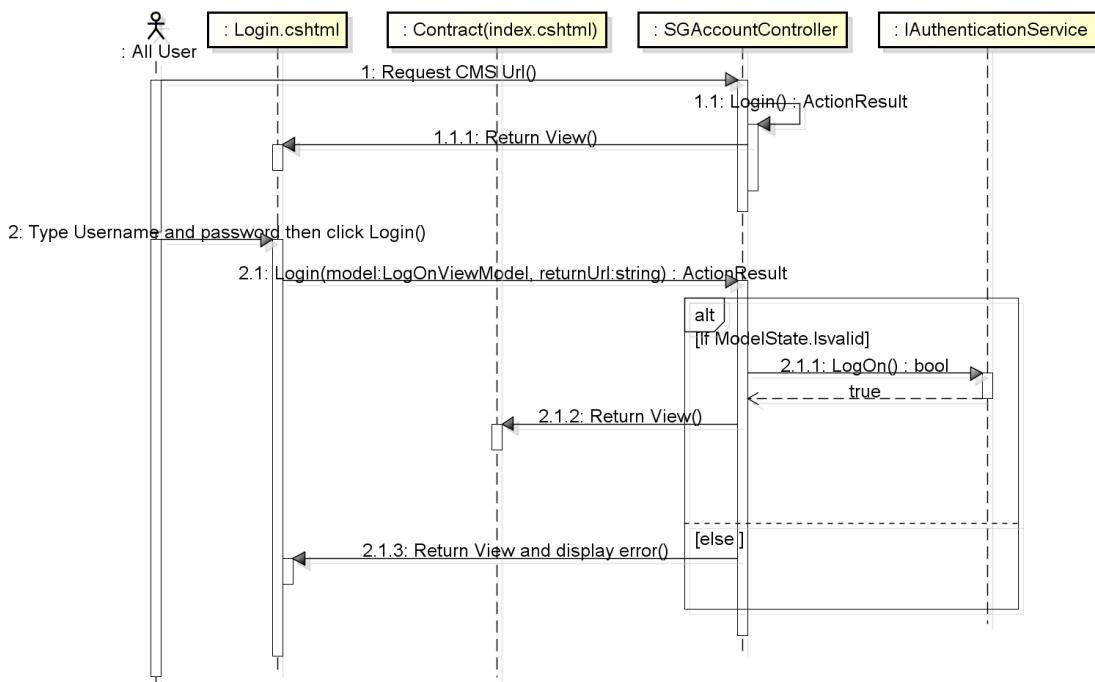
Figure 4-5: Login Screen

No	Object Name	Object Name in English	Type	Required	Length	Description
1	Tên Đăng Nhập	User Name	Textbox	Y	50	Name of user use to login to system
2	Mật khẩu	Password	Textbox	Y	6	Password of user use to login of system

3	Ghi nhớ tài khoản	Remember me	Checkbox	N	N/A	Checkbox to remember authentication
4	Đăng nhập	Login	Button	Y	N/A	Login user to system
5	Quên mật khẩu	Forgot password	Link	N	N/A	Redirect to forgot password form to reset password.

Table 4-1: Fields on login screen

2.1.3.2 Sequence Diagram

**Figure 4-6: Login Sequence Diagram**

2.1.4 UC001-02: Logoff

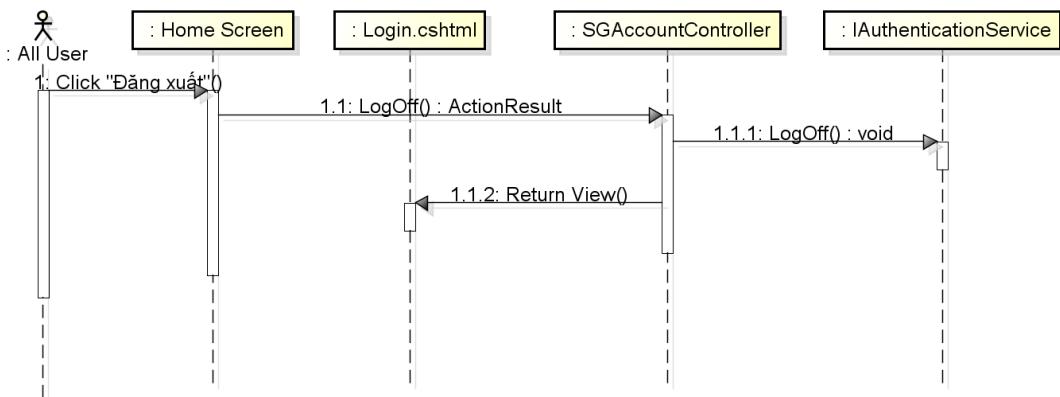
2.1.4.1 Screen Design

**Figure 4-7: Logoff screen**

No	Object Name	Object Name in English	Type	Required	Length	Description
1	Xin chào User	Hello User	Label	N	N/A	Hello User
2	Đăng xuất	Logoff	Link	N	N/A	Logoff user from system

Table 4-2: Field on logoff screen

2.1.4.2 Sequence Diagram

**Figure 4-8: Logoff Sequence Diagram**

2.1.5 UC001-03: Change Password

2.1.5.1 Screen Design

Đổi mật khẩu

Yêu cầu

- Mật khẩu có ít nhất 6 kí tự

Mật khẩu hiện tại(*)
Mật khẩu mới(*)
Xác nhận mật khẩu mới(*)

Lưu

Xin chào Thanh Bình Đăng xuất

HỢP ĐỒNG ĐỐI TÁC THIẾT BỊ BÁO CÁO TÀI KHOẢN

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Figure 4-9: Display change password screen

No	Object Name	Object Name in English	Type	Required	Length	Description
1	Mật khẩu hiện tại	Current Password	Textbox	Y	6	Current Password
2	Mật khẩu mới	New Password	Textbox	Y	6	New password
3	Xác nhận mật khẩu mới	Confirm new password	Textbox	Y	6	Confirm new password

Table 4-3: Fields on change password screen

2.1.5.2 Sequence Diagram

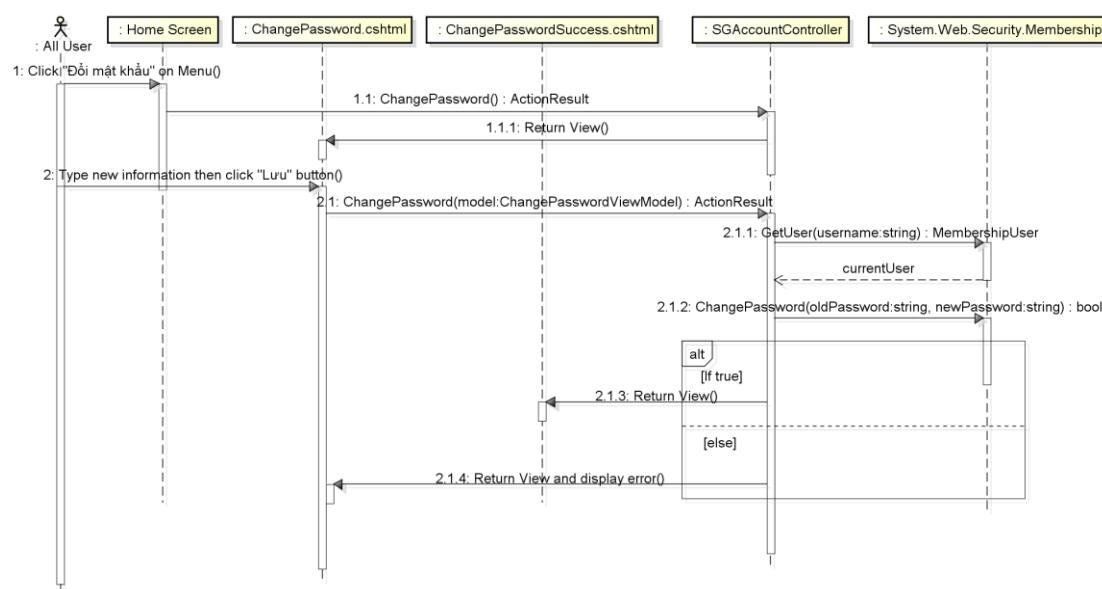


Figure 4-10: Change Password Sequence Diagram

2.1.6 UC001-04: Forgot Password

2.1.6.1 Screen Design

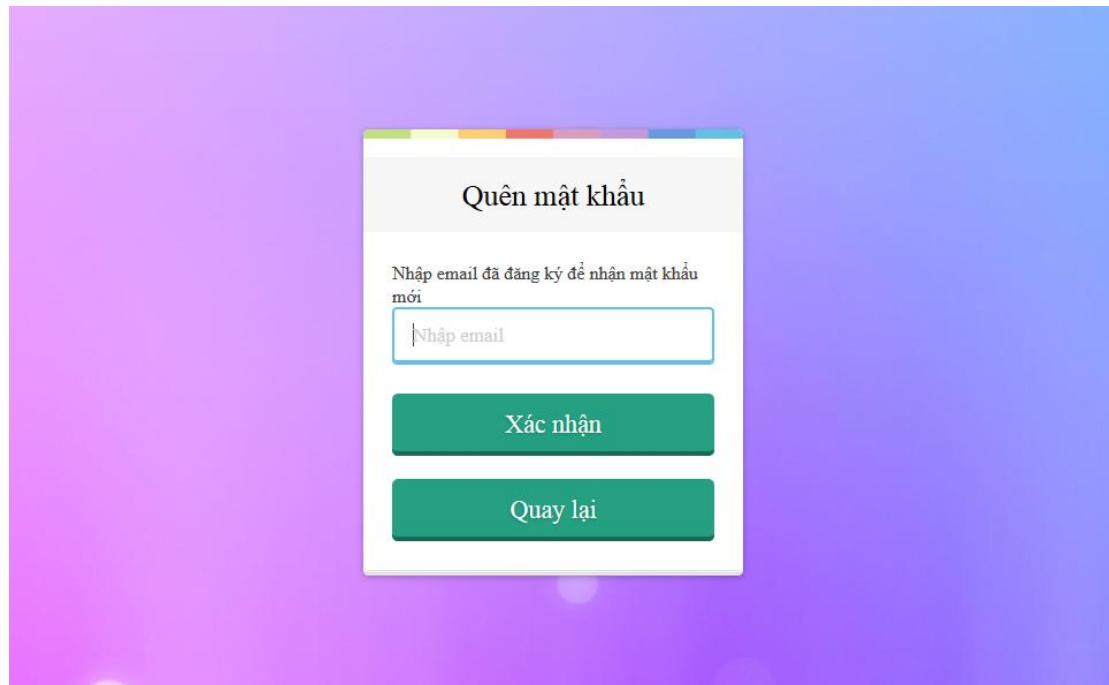


Figure 4-11: Display forgot password screen

No	Object Name	Object Name in English	Type	Required	Length	Description
1	Email	Email	Textbox	Y	50	Email to reset password
2	Xác nhận	Confirm	Button	Y	N/A	Confirm to reset password
3	Quay lại	Back	Button	Y	N/A	Redirect to login page

Table 4-4: Fields on display forgot password screen

2.1.6.2 Sequence Diagram

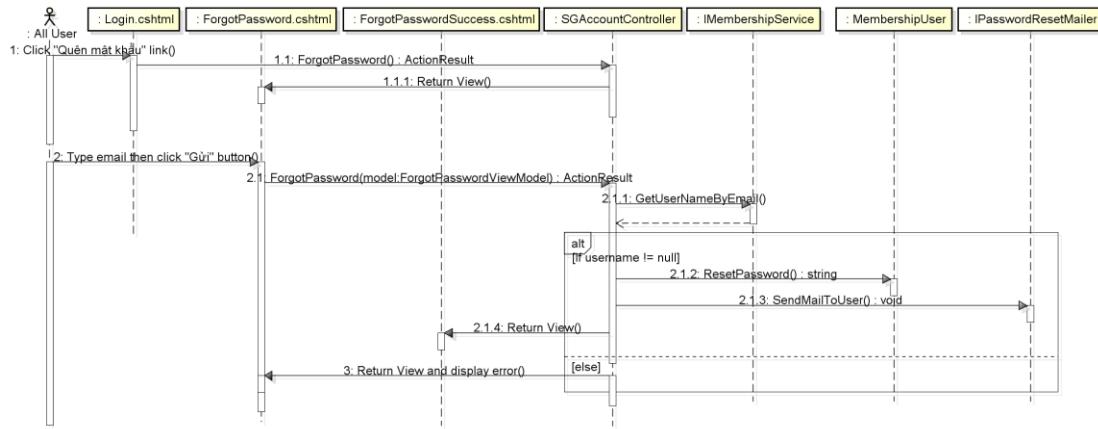


Figure 4-12: Forgot Password Sequence Diagram

2.2 UC002- Contract Management

2.2.1 Class Diagram

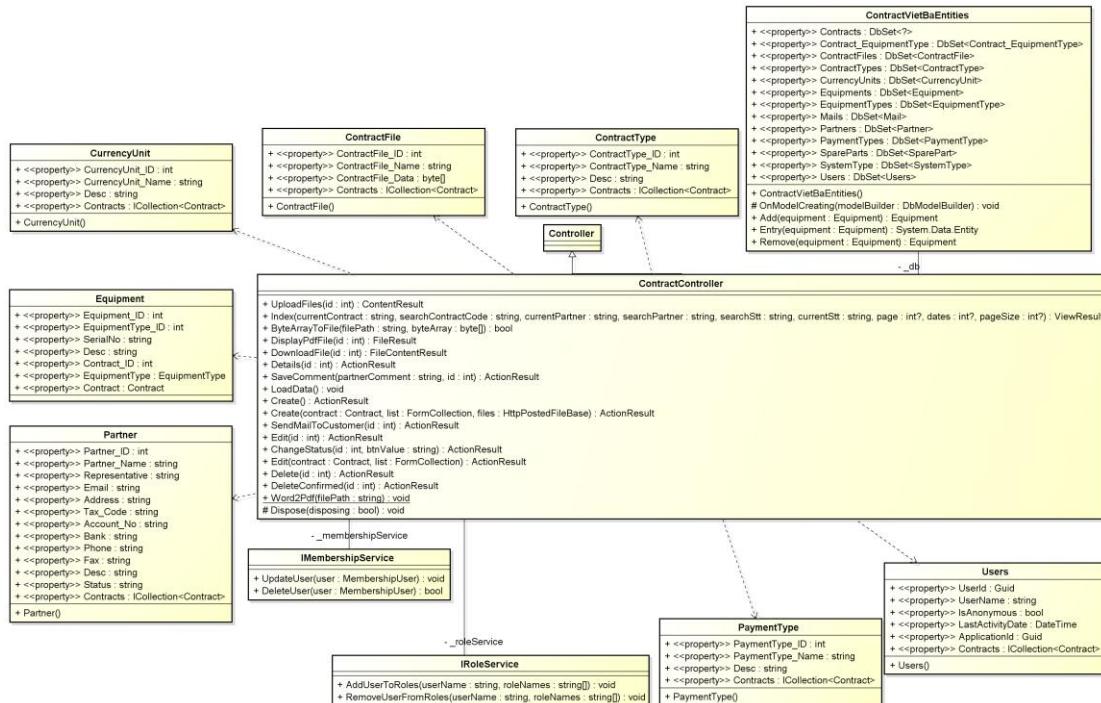


Figure 4-13: Contract Management Class Diagram

2.2.2 Class Description

2.2.2.1 ContractController

Class	ContractController		
Description	Contains declare and constructor for all ContractController's attributes.		
Base Class	Controller		
Constructor	N/A		
Prototype	N/A		
Source File	ContractController.cs		
Namespace	ContractManagement.Controllers		
Attributes	N/A		
Methods			
Name	Input	Output	Description
Index	currentContract, searchContractCo de, currentPartner, searchPartner, stt, page, Dates, Partners, PageSize	ViewResult	Search contract with conditions
ByteArrayToFile	filePath, byteArray	Bool	Convert uploaded file's data
DisplayPDFFile	Id	FileResult	Display file in browser
Word2PDF	filePath	Void	Convert word to PDF
DownloadFile	Id	FileContentResult	Download uploaded file
Details	Id	ActionResult	Display details page
LoadData		Void	Load common data into page
Create		ActionResult	Display create new page
Create	Contract, list, files	ActionResult	Add new contract to

			database
ChangeStatus	Id, btnValue	ActionResult	Change status of contract
Edit		ActionResult	Display edit contract page
Edit	Contract, list	ActionResult	Edit and save contract to database
DeleteConfirmed	Id	ActionResult	Delete contract from database

2.2.3 UC002-01: Search Contract

2.2.3.1 Screen Design

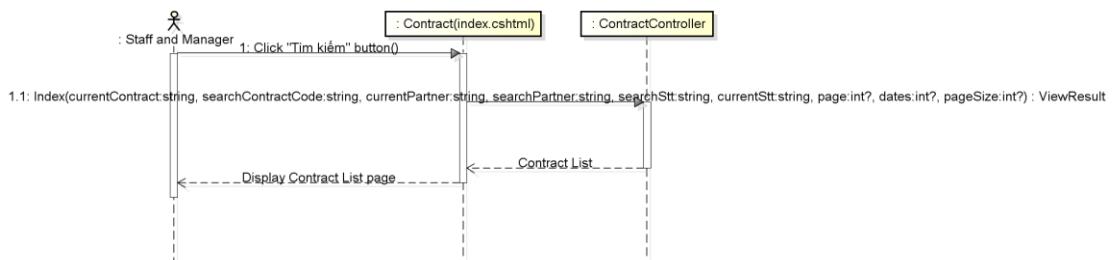
Số Hợp Đồng	Loại Thiết bị	Đối Tác	Loại Hợp Đồng	Ngày Hiệu Lực	Thời hạn	Tình trạng	
test123	- Máy in phim khô Agfa Drystar	- Bệnh viện ĐK Mỹ Lộc	Mua bán	04/04/2014	3 ngày	New	Sửa Chi Tiết Xóa
323243434343	- Máy in phim khô Agfa Drystar - Bóng phát tia	- Bệnh viện ĐK Mỹ Lộc	Mua bán	02/03/2014	Đã hết hạn	Re-worked	Chi Tiết
se	- Máy in phim khô Agfa Drystar - Tấm cảm biến DR-Tech	- Bv ĐK Ngõ Quyền	Mua bán	01/03/2014	Đã hết hạn	Approved	Chi Tiết
dit	- Máy in phim khô Agfa Drystar - Tấm cảm biến DR-Tech - Máy phát tia cao tần	- Bệnh viện ĐK Mỹ Lộc	Mua bán	01/03/2014	Đã hết hạn	New	Sửa Chi Tiết Xóa
sadad	- Máy in phim khô Agfa Drystar - Máy in phim khô Agfa Drystar - Tấm cảm biến DR-Tech	- Bệnh viện ĐK Mỹ Lộc	Mua bán	01/03/2014	Đã hết hạn	New	Sửa Chi Tiết Xóa
tesst	- Máy in phim khô Agfa Drystar	- BỆNH VIỆN BỆNH NHIỆT ĐỔI TRUNG ƯƠNG	Mua bán	01/03/2014	Đã hết hạn	New	Sửa Chi Tiết Xóa

Figure 4-14: Search Contract

No	Object Name	Object Name in English	Type	Required	Length	Description
1	Số hợp đồng	Contract Code	Textbox	N	50	User can search contract with contract code

2	Ngày hết hiệu lực	Date end	Dropdown list	N	N/A	User can search contract with range of date.
3	Loại thiết bị	Equipment Type	Textbox	N	50	User can search contract with equipment type
4	Đối tác	Partner	Textbox	N	50	User can search contract with partner name
5	Tình trạng	Status	Dropdown list	N	N/A	User can search contract with specified status
6	Tìm kiếm	Search	Button	N	N/A	User click on search button to get contract they want.
7	Số hợp đồng hiển thị	Number of contracts to display	Dropdown list	N	N/A	User choose number of contracts to display
8	Trang	Paging	Link	N	N/A	User can choose page to display
9	Tạo mới	Create	Link	N	N/A	Redirect to create contract screen
10	Số hợp đồng	Contract Code	Label	N	N/A	Contract code of contracts
11	Thiết bị	Equipment	Label	N	N/A	Equipment of contracts
12	Đối tác	Partner	Label	N	N/A	Partners of contracts
13	Loại hợp đồng	Contract type	Label	N	N/A	Contract type of contracts

14	Ngày hiệu lực	Date start	Label	N	N/A	Date start of contracts
15	Thời hạn	Validation within	Label	N	N/A	Validation within
16	Tình trạng	Status	Label	N	N/A	Status of contracts
17	Sửa	Edit	Link	N	N/A	Redirect to edit contract screen
18	Chi tiết	Detail	Link	N	N/A	Redirect to detail contract screen
19	Xóa	Delete	Link	N	N/A	Pop-up ask whether user confirm to delete contract.

Table 4-5: Fields on search contract screen**2.2.3.2 Sequence Diagram****Figure 4-15: Search Contract Sequence Diagram**

2.2.4 UC002-02: Create Contract

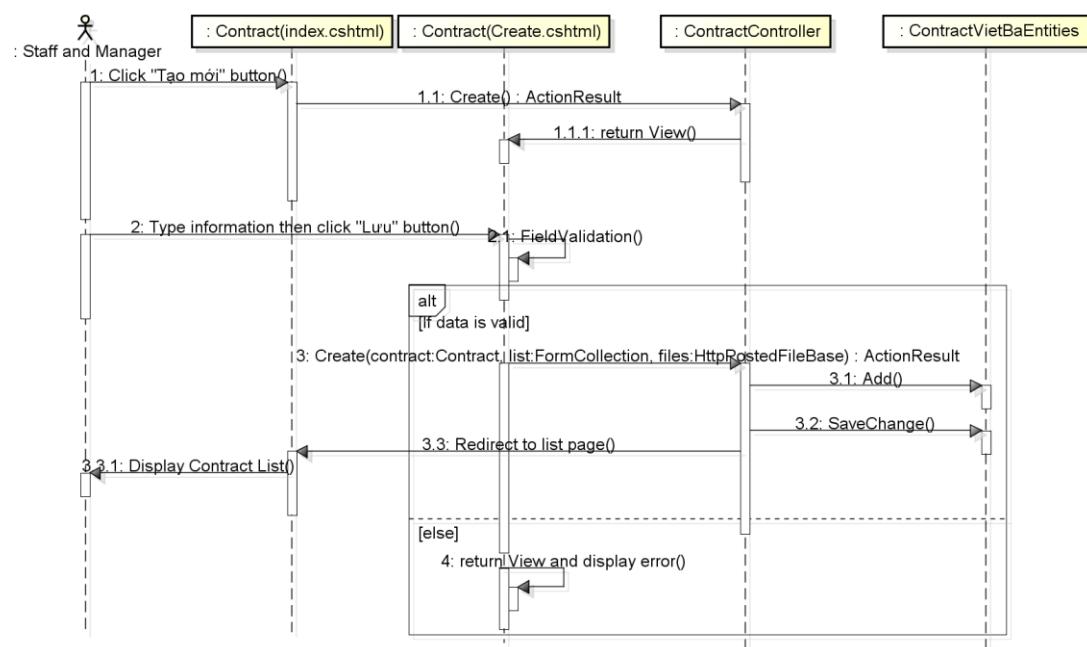
2.2.4.1 Screen Design

The screenshot shows the 'Contract Management System' interface. At the top, there's a navigation bar with icons for Home, Partners, Equipment, Reports, and Accounts. A user greeting 'Xin chào Thanh Bình Đăng xuất' is on the right. Below the navigation is a sub-menu bar with 'HỢP ĐỒNG', 'ĐỐI TÁC', 'THIẾT BỊ', 'BAO CÁO', and 'TÀI KHOẢN'. The main content area is titled 'Thêm Mới Hợp Đồng' (Create New Contract). It contains several input fields: 'Số Hợp Đồng (*)' (Contract Code), 'Loại Hợp Đồng (*)' (Contract Type), 'Đối tác (*)' (Partner), 'Loại Thiết bị (*)' (Equipment Type), 'Ngày Hiệu Lực (*)' (Start Date), 'Ngày Hết Hiệu Lực (*)' (End Date), 'Phương Thức Thanh Toán' (Payment Type), 'Giá trị', 'Trạng thái (*)' (Status), 'Đơn vị tiền tệ' (Currency), 'Mô Tả' (Description), and a file upload field for 'Tài liệu (doc, docx, pdf, ảnh)' (Documents). At the bottom are 'Lưu' (Save) and 'Quay lại' (Back) buttons.

Figure 4-16: Create Contract

No	Object Name	Object Name in English	Type	Required	Length	Description
1	Số hợp đồng	Contract Code	Textbox	Y	50	User input contract code
2	Loại hợp đồng	Contract Type	Dropdown list	Y	N/A	User choose contract type
3	Thiết bị	Equipment	MultipleSelectBox	Y	N/A	User choose equipment
4	Đối tác	Partner	MultipleSelectBox	Y	N/A	User choose partners
5	Ngày hiệu lực	Date Start	Datetimepicker	Y	N/A	User choose date start
6	Ngày hết hiệu lực	Date End	Datetimepicker	Y	N/A	User choose date end
7	Phương thức thanh toán	Payment Type	Dropdown list	N	N/A	User choose payment type
8	Chi phí	Contract Cost	Textbox	N	18	User input contract cost
9	Đơn vị tính	Currency Unit	Dropdown list	N	N/A	User choose currency unit
10	Mô tả	Description	Text Area	N	MAX	User input additional description

11	Tải lên	Upload multiple files	Upload	N	5MB	User upload relevant files
12	Tình trạng	Status	Dropdown list	Y	N/A	User choose status of contract
13	Lưu	Save	Button	N	N/A	User save contract to database
14	Quay trở lại danh sách	Back	Button	N	N/A	Redirect to contract list.

Table 4-6: Fields on create contract screen**2.2.4.2 Sequence Diagram****Figure 4-17: Create Contract Sequence Diagram**

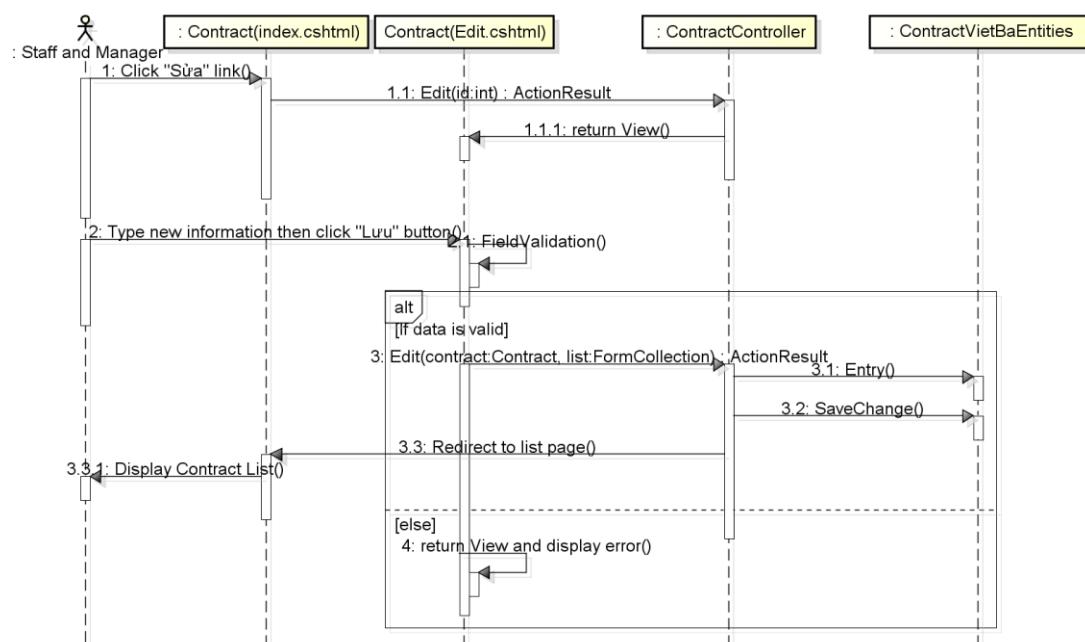
2.2.5 UC002-03: Edit Contract

2.2.5.1 Screen Design

Figure 4-18: Edit Contract

No	Object Name	Object Name in English	Type	Required	Leng th	Description
1	Số hợp đồng	Contract Code	Textbox	Y	50	User modify contract code
2	Loại hợp đồng	Contract Type	Dropdown list	Y	N/A	User modify contract type
3	Thiết bị	Equipment	MultipleSelectBox	Y	N/A	User modify equipment
4	Đối tác	Partner	MultipleSelectBox	Y	N/A	User modify partners
5	Ngày hiệu lực	Date Start	Datetimepicker	Y	N/A	User modify date start
6	Ngày hết hiệu lực	Date End	Datetimepicker	Y	N/A	User modify date end
7	Phương thức thanh toán	Payment Type	Dropdown list	N	N/A	User modify payment type
8	Chi phí	Contract Cost	Textbox	N	18	User modify contract cost
9	Đơn vị tính	Currency Unit	Dropdown list	N	N/A	User modify currency unit
10	Mô tả	Description	Text Area	N	MAX	User modify additional description

11	Tải lên	Upload multiple files	Upload	N	5MB	User modify uploaded files or upload more
12	Tình trạng	Status	Dropdown list	Y	N/A	User modify status of contract
13	Lưu	Save	Button	Y	N/A	User save contract to database
14	Quay trở lại danh sách	Back	Button	N	N/A	Redirect to contract list.

Table 4-7: Fields on edit contract screen**2.2.5.2 Sequence Diagram****Figure 4-19: Edit Contract Sequence Diagram**

2.2.6 UC002-04: Delete Contract

2.2.6.1 Screen Design

The screenshot shows the 'Contract Management System' interface. At the top, there is a navigation bar with tabs: HỢP ĐỒNG (selected), ĐỐI TÁC, THIẾT BỊ, BÁO CÁO, and TÀI KHOẢN. On the right side of the header, there are links for 'Xin chào Thanh Bình' and 'Đang xuất'. Below the header, a search bar with placeholder text 'Tim kiếm' and a 'Tạo mới' button are visible. The main area displays a table titled 'Danh Sách Hợp Đồng' (List of Contracts) with columns: Số Hợp Đồng, Loại Thiết Bị, Đối Tác, Thời Hạn, Tình Trạng, Người Thực Hiện, and Chi Tiết. A modal dialog box titled 'Xác nhận' (Confirm) is overlaid on the screen, containing the question 'Bạn có chắc chắn muốn xóa không?' (Are you sure to delete?) with 'Có' (Yes) and 'Không' (No) buttons.

Figure 4-20: Delete Contract

No	Object Name	Object Name in English	Type	Required	Length	Description
1	Bạn có chắc chắn muốn xóa không	Are you sure to delete	Label	N	N/A	Ask whether user want to delete
2	Có	Yes	Button	N	N/A	User sure to delete
3	Không	No	Button	N	N/A	User do not want to delete

Table 4-8: Fields on delete contract screen

2.2.6.2 Sequence Diagram

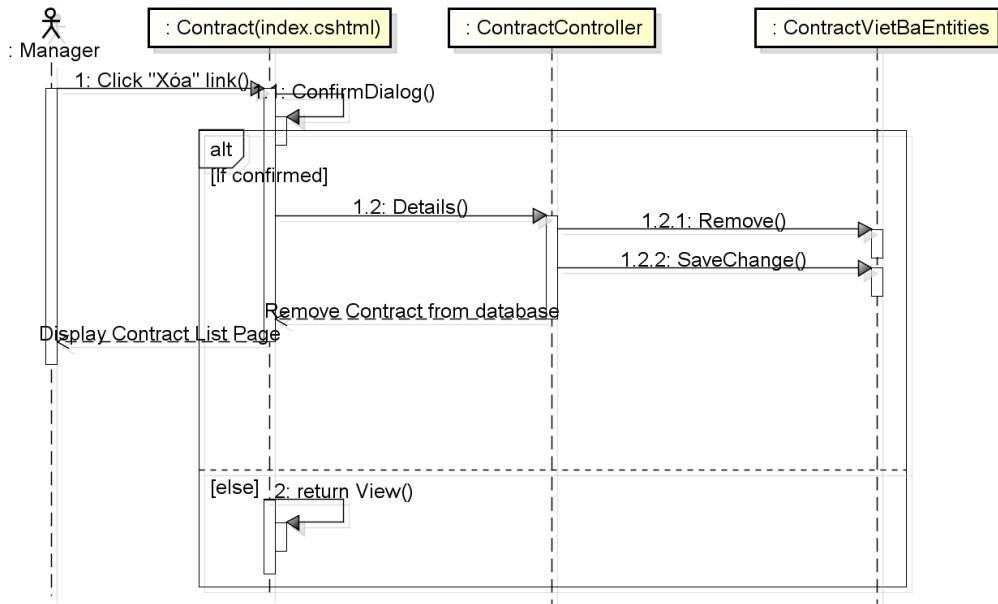


Figure 4-21: Delete Contract Sequence Diagram

2.2.7 UC002-05: Display contract detail

2.2.7.1 Screen Design

The screenshot shows the 'Contract Management System' interface. At the top, there's a navigation bar with links for HỢP ĐỒNG, ĐỐI TÁC, THIẾT BỊ, BÁO CÁO, and TÀI KHOẢN. On the right, a welcome message says 'Xin chào Nguyễn Thành Bình Đăng xuất'. Below the navigation, a title 'Chi Tiết Hợp Đồng' is displayed. The main content area shows detailed information about a contract:

Số Hợp Đồng	01.2013/HĐDM – VB/LSND	Loại Hợp Đồng	Mua bán
Thiết bị:	Máy xét nghiệm tự động hoàn toàn Tấm cảm biến DR-Tech Máy in phim khô Agfa Drystar	Đối tác:	Bv ĐK Ngô Quyền
Ngày Hiệu Lực	11/01/2012	Ngày Hết Hiệu Lực	05/01/2013
Phương Thức Thanh Toán	Tiền mặt	Giá trị	1,500,000,000VND
File đã tải lên	hello.jpg - Xem - Tải xuống Report 1.docx - Xem - Tải xuống Thêm file...	Mô Tả	
Tài thêm	0% complete	Trạng thái	Approved Sign Cancel
Người thực hiện	binhntse02353@fpt.edu.vn	Gửi mail cho đối tác	
Góp ý			

At the bottom right of the form is a button labeled 'Quay lại' (Back).

Figure 4-22: Display contract detail

No	Object Name	Object Name in English	Type	Required	Length	Description
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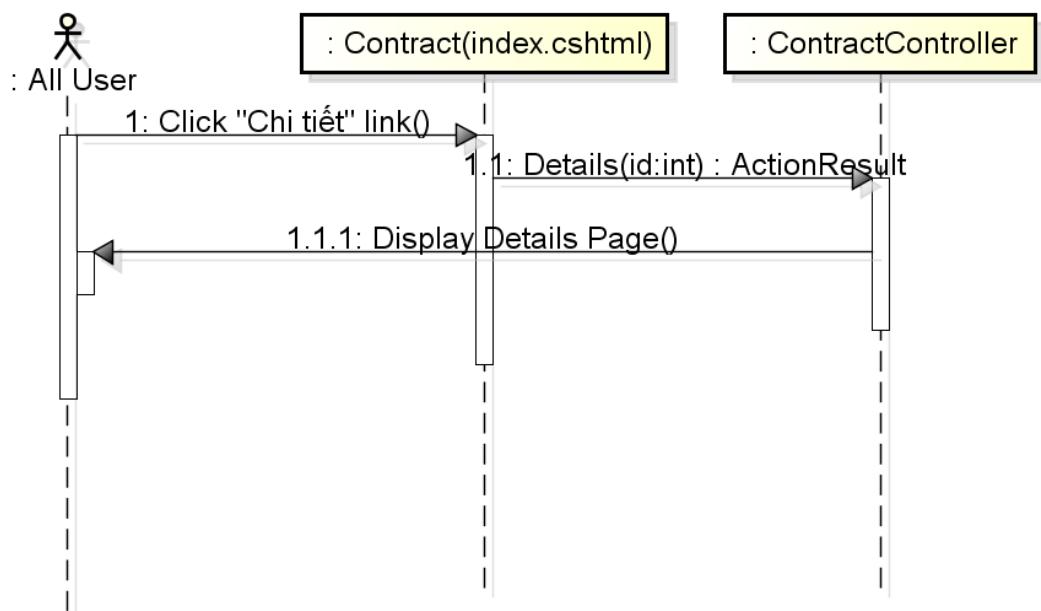
1	Số hợp đồng	Contract Code	Label	Y	N/A	Contract code of contract
2	Loại hợp đồng	Contract Type	Label	Y	N/A	Contract type of contract
3	Thiết bị	Equipment	Label	Y	N/A	Equipment of contract
4	Đối tác	Partner	Label	Y	N/A	Partners of contract
5	Ngày hiệu lực	Date Start	Label	Y	N/A	Date start of contract
6	Ngày hết hiệu lực	Date End	Datetimepicker	Y	N/A	Date end of contract
7	Phương thức thanh toán	Payment Type	Dropdown list	N	N/A	Payment type of contract
8	Chi phí	Contract Cost	Textbox	N	18	Contract cost of contract
9	Đơn vị tính	Currency Unit	Dropdown list	N	N/A	Currency unit of contract
10	File đã tải lên	Uploaded files	Label	N	N/A	Name of uploaded files
11	Xem	Display	Link	N	N/A	Display file in new tab
12	Tải xuống	Download	Link	N	N/A	Downloaded file
13	Mô tả	Description	Text Area	N	MAX	Additional description of contract
14	Tải lên	Upload multiple files	Upload	N	5MB	Relevant files of contract
15	Tình trạng	Status	Label	N	N/A	Status of contract

16	Người thực hiện	User	Label	N	N/A	User who creates contract
----	-----------------	------	-------	---	-----	---------------------------

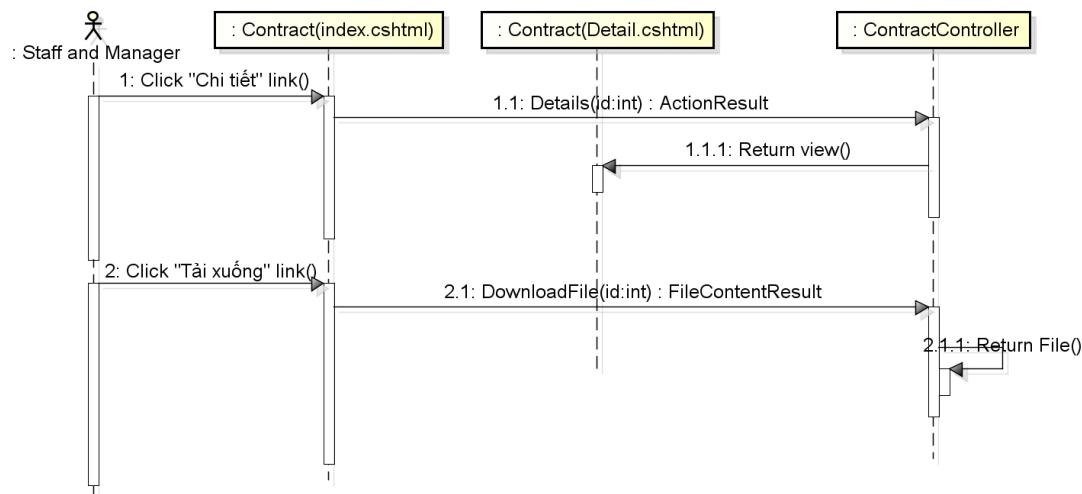
Table 4-9: Fields on contract detail screen

2.2.7.2 Sequence Diagram

2.2.7.2.1 Detail Contract

**Figure 4-23: Display Contract Detail Sequence Diagram**

2.2.7.2.2 Download uploaded contract file

**Figure 4-23: Download uploaded contract file Sequence Diagram**

2.2.7.2.3 Display uploaded contract file on browser

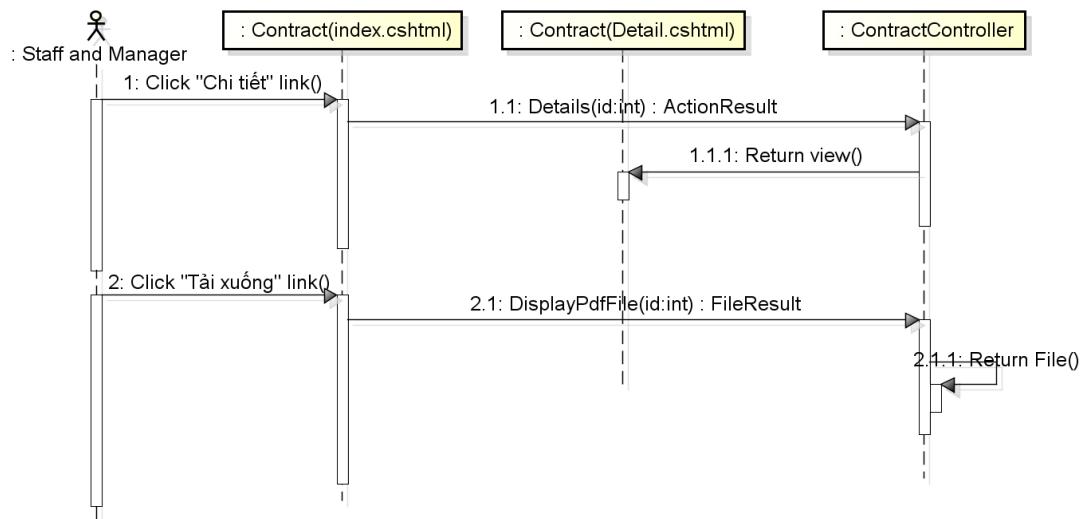


Figure 4-23: Display uploaded contract file Sequence Diagram

2.2.7.2.4 Upload contract file

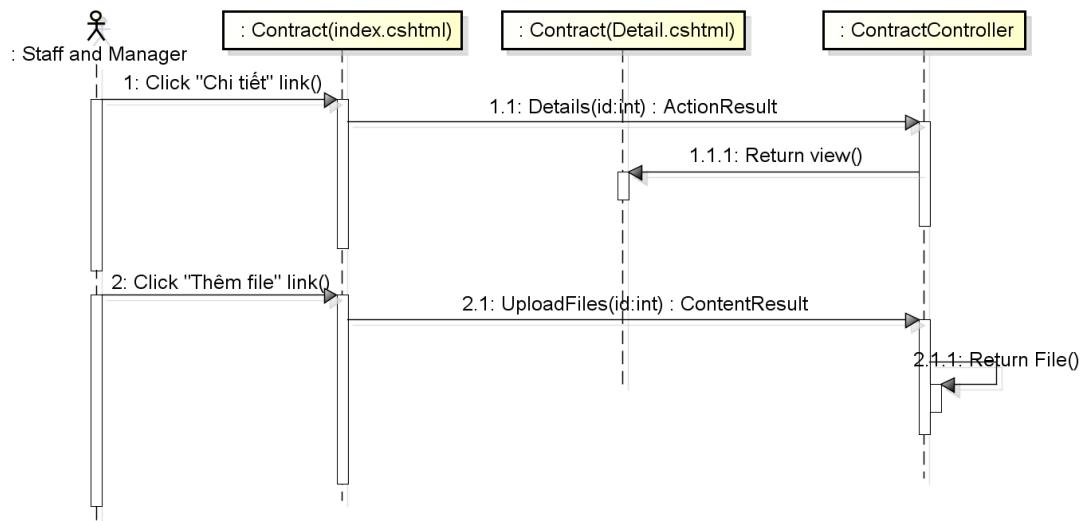


Figure 4-23: Upload contract file Sequence Diagram

2.2.7.2.5 Update contract status

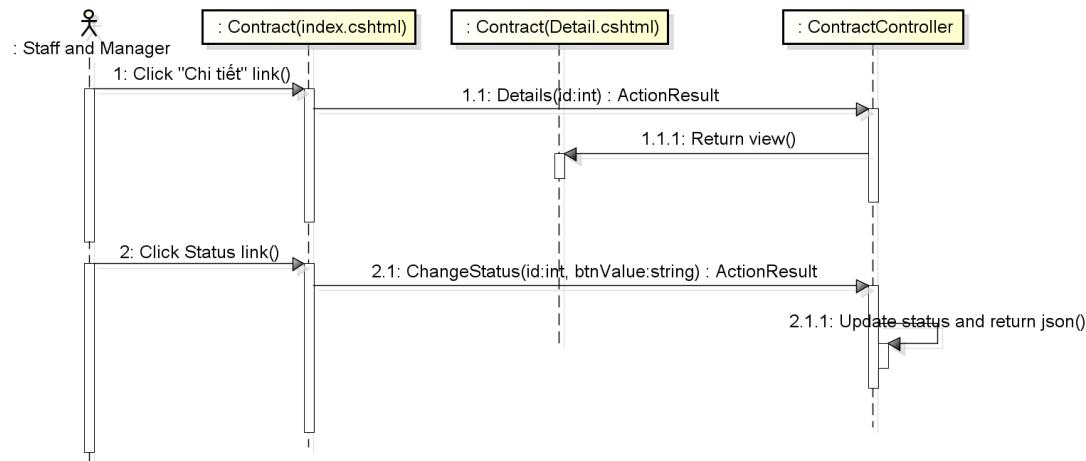


Figure 4-23: Update contract status Sequence Diagram

2.2.7.2.6 Comment Contract

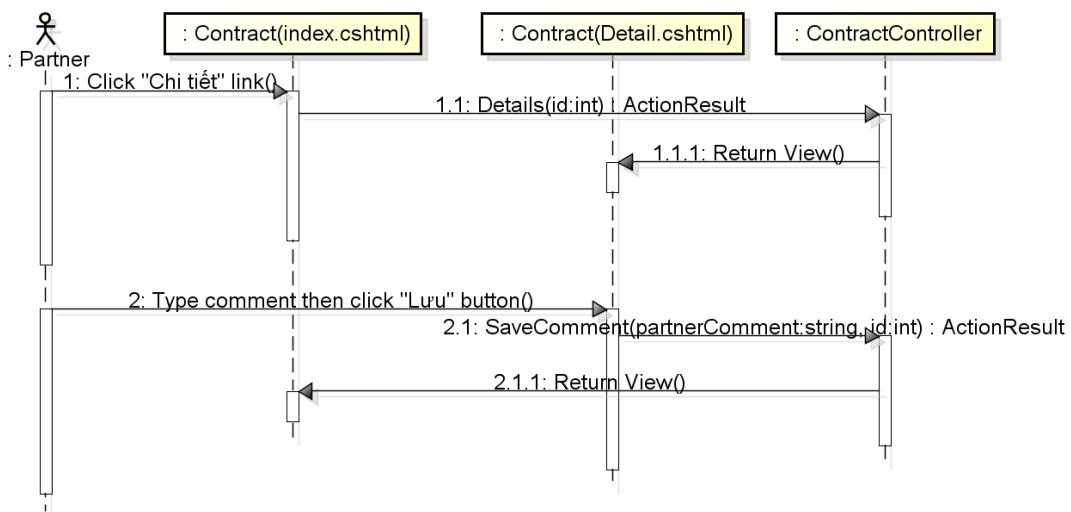


Figure 4-23: Comment contract Sequence Diagram

2.2.7.2.7 Send mail to Partner

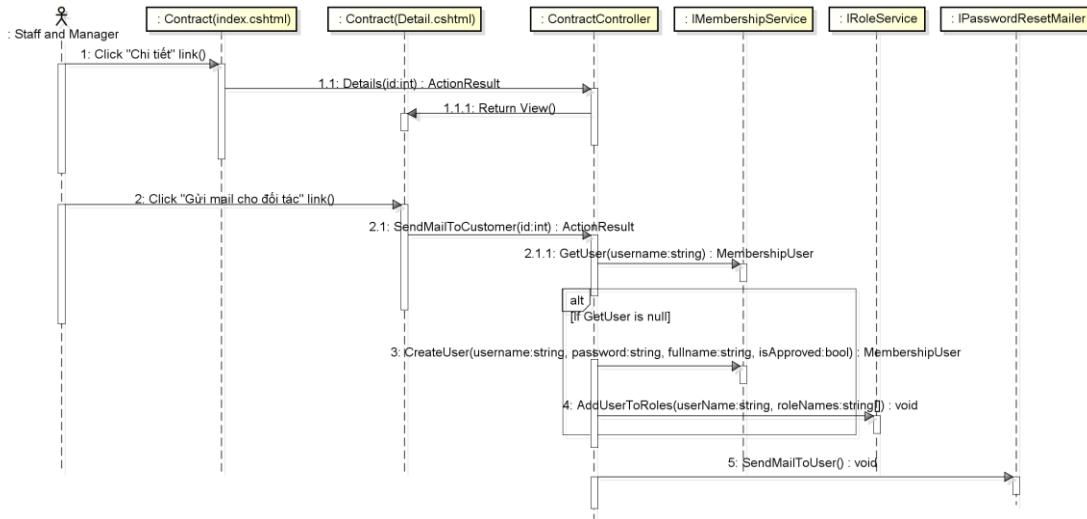


Figure 4-23: Send mail to partner Sequence Diagram

2.3 UC003- Payment Type Management

2.3.1 Class Diagram

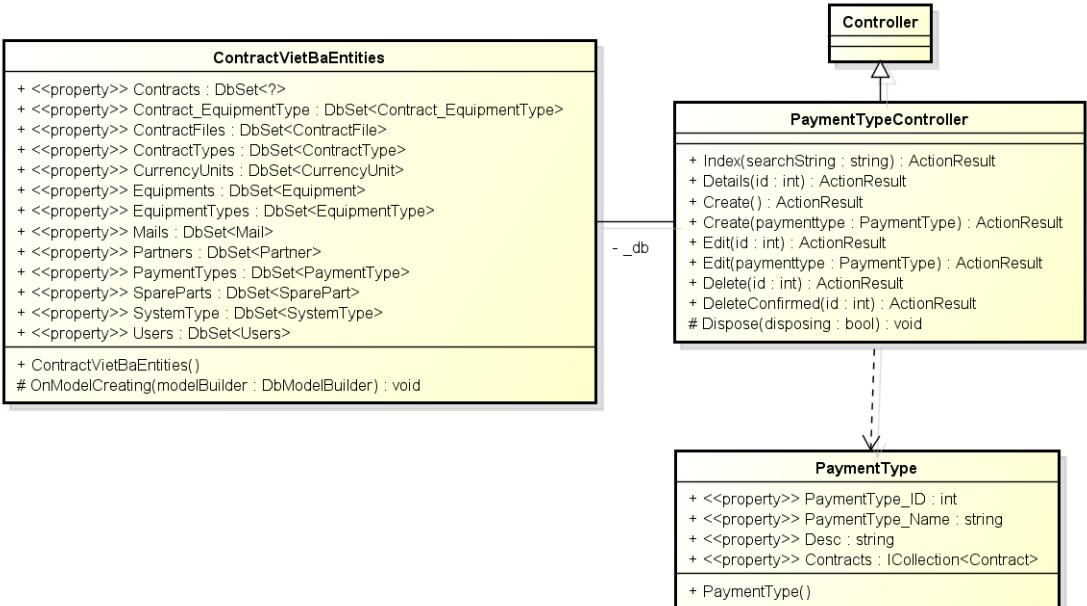


Figure 4-24: Payment Type Management Class Diagram

2.3.2 Class Description

2.3.2.1 PaymentTypeController

Class	PaymentTypeController		
Description	Contains declare and constructor for all PaymentTypeController's attributes.		
Base Class	Controller		
Constructor	N/A		
Prototype	N/A		
Source File	PaymentTypeController.cs		
Namespace	ContractManagement.Controllers		
Attributes	N/A		
Methods			
Name	Input	Output	Description
Index	currentPaymentType ,Description	ViewResult	Display PaymentType with conditions
Details	Id	ActionResult	Display details page
LoadData		Void	Load common data into page
Create		ActionResult	Display create new page
Create	Contract, list, files	ActionResult	Add new paymenttype to database
Edit		ActionResult	Display edit paymentType page
Edit	Contract, list	ActionResult	Edit and save PaymentType to database
DeleteConfirmed	Id	ActionResult	Delete PaymentType from database

2.3.3 UC003-01: Search Payment Type

2.3.3.1 Screen Design

Figure 4-25: Search Payment Type Screen

No	Object Name	Object Name in English	Type	Required	Length	Description
1	Tên phương thức thanh toán	Payment Type Name	Textbox	N	N/A	User can search with payment type name
2	Tìm kiếm	Search	Button	N	N/A	User click on search button to get payment type they want.
3	Tạo mới	Create	Link	N	N/A	Redirect to create new payment type screen
4	Phương thức thanh toán	Payment Type Name	Label	N	N/A	Name of payment type
5	Mô tả	Description	Label	N	N/A	Description of payment type
6	Sửa	Edit	Link	N	N/A	Redirect to edit payment type screen
7	Chi tiết	Detail	Link	N	N/A	Redirect to detail payment type screen
8	Xóa	Delete	Link	N	N/A	Pop-up window ask whether

						user confirm to delete payment type.
--	--	--	--	--	--	--------------------------------------

Table 4-10: Fields on search payment type screen

2.3.3.2 Sequence Diagram

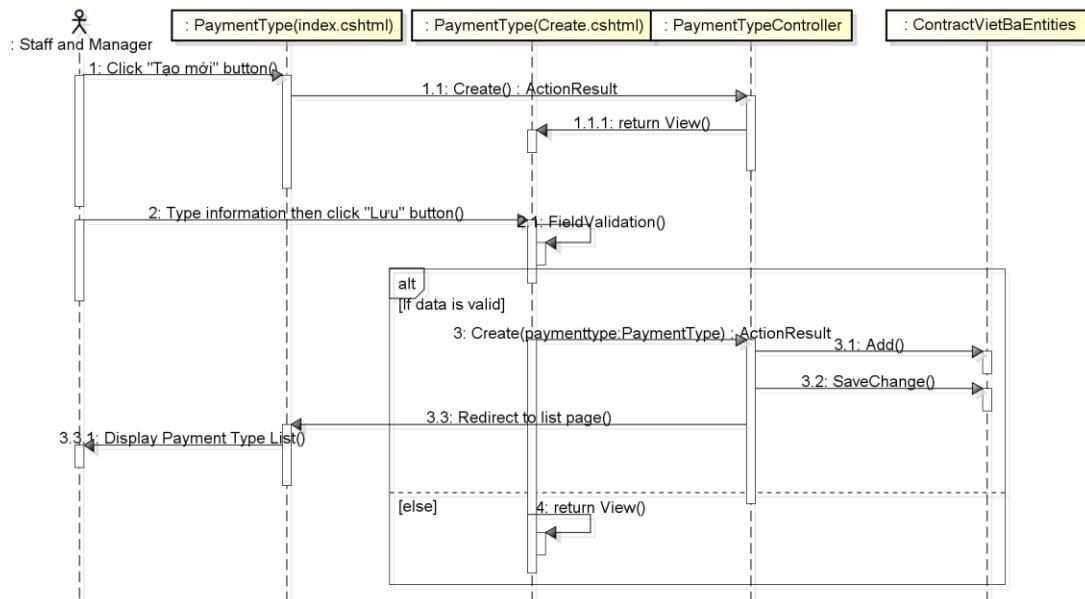


Figure 4-26: Search Contract Sequence Diagram

2.3.4 UC003-02: Create Payment Type

2.3.4.1 Screen Design

The screenshot shows the "Thêm Mới Phương Thức Thanh Toán" (Add New Payment Method) form. The form has two input fields: "Phương Thức Thanh Toán (*)" and "Mô Tả". Below the fields are two buttons: "Lưu" (Save) and "Quay lại" (Back). At the bottom of the page, there are navigation links: Hợp Đồng, Đối Tác, Thiết bị, and a copyright notice: Copyright © 2014 Viet Ba Medical Equipment Company Limited. All rights reserved.

Figure 4-27: Create Payment Type Screen

No	Object Name	Object Name in English	Type	Required	Length	Description
1	Phương thức thanh toán	Payment Type	Textbox	Y	50	User input payment type
2	Mô tả	Description	Text Area	N	N/A	User input description
3	Lưu	Save	Button	N	N/A	User save payment type to database
4	Quay trở lại danh sách	Back	Button	N	N/A	Redirect to payment type list.

Table 4-11: Fields on create payment type screen

2.3.4.2 Sequence Diagram

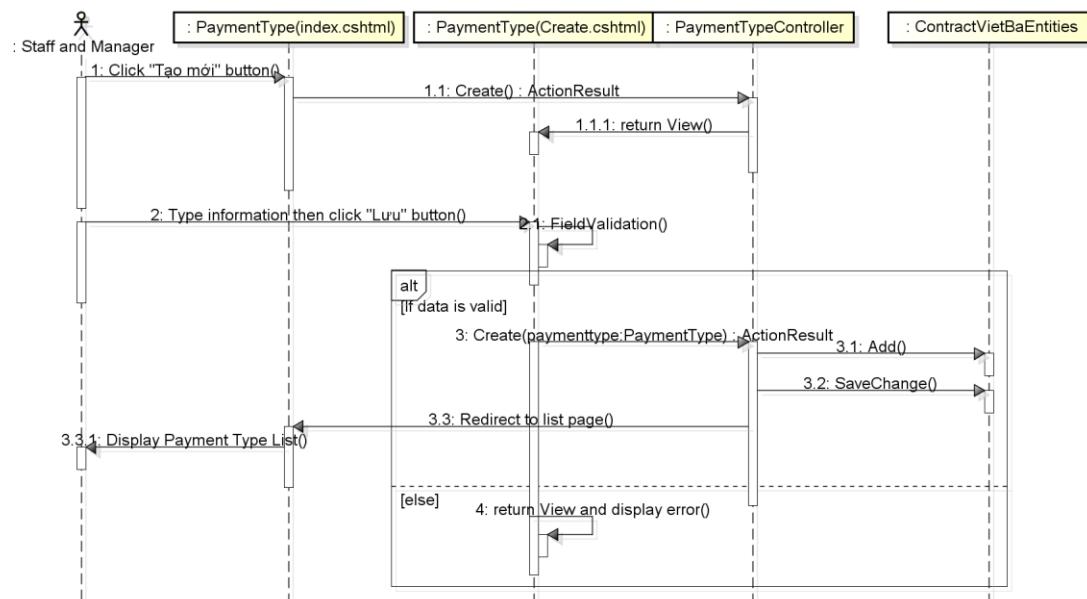


Figure 4-28: Create Payment Type Sequence Diagram

2.3.5 UC003-03: Edit Payment Type

2.3.5.1 Screen Design

Xin chào Nguyễn Thành Bình Đăng xuất

HỢP ĐỒNG ĐỐI TÁC THIẾT BỊ BÁO CÁO TÀI KHOẢN

Sửa Thông Tin Phương Thức Thanh Toán

Phương Thức Thanh Toán (*) Tiền mặt

Mô Tả a

Lưu Quay lại

Hợp Đồng Đối Tács Thiết bị Copyright © 2014 Viet Ba Medical Equipment Company Limited. All rights reserved.

Figure 4-29: Edit Payment Type Screen

No	Object Name	Object Name in English	Type	Required	Length	Description
1	Phương thức thanh toán	Payment Type	Textbox	Y	50	User modify payment type
2	Mô tả	Description	Text Area	Y	N/A	User modify description
3	Lưu	Save	Button	Y	N/A	User save payment type to database
4	Quay trở lại danh sách	Back	Button	N	N/A	Redirect to payment type list.

Table 4-12: Fields on edit payment type screen

2.3.5.2 Sequence Diagram

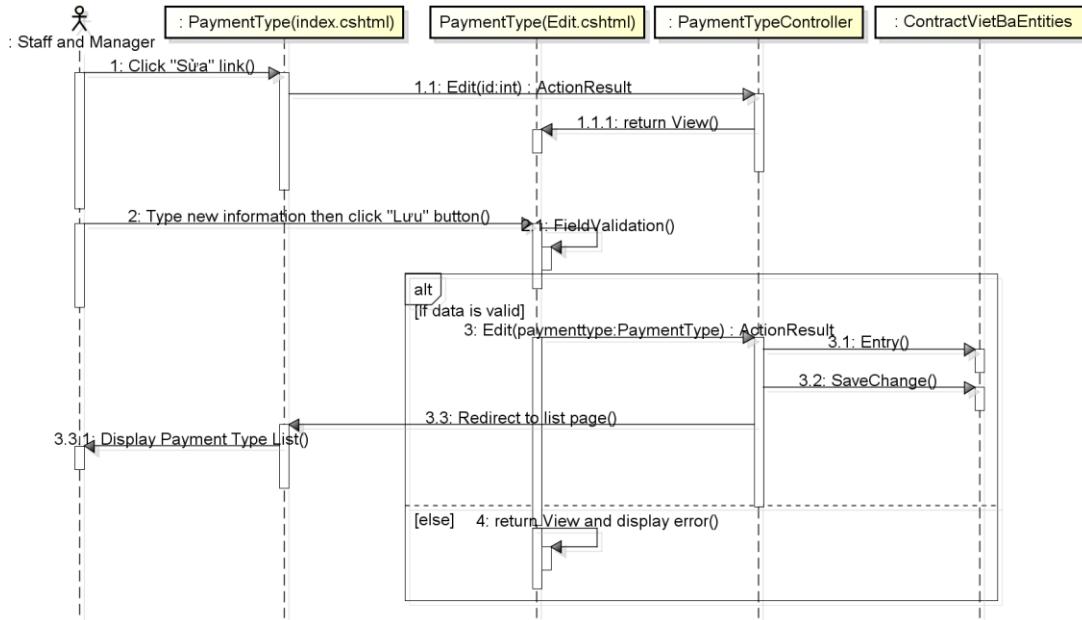


Figure 4-30: Edit Payment Type Sequence Diagram

2.3.6 UC003-04: Delete Payment Type

2.3.6.1 Screen Design

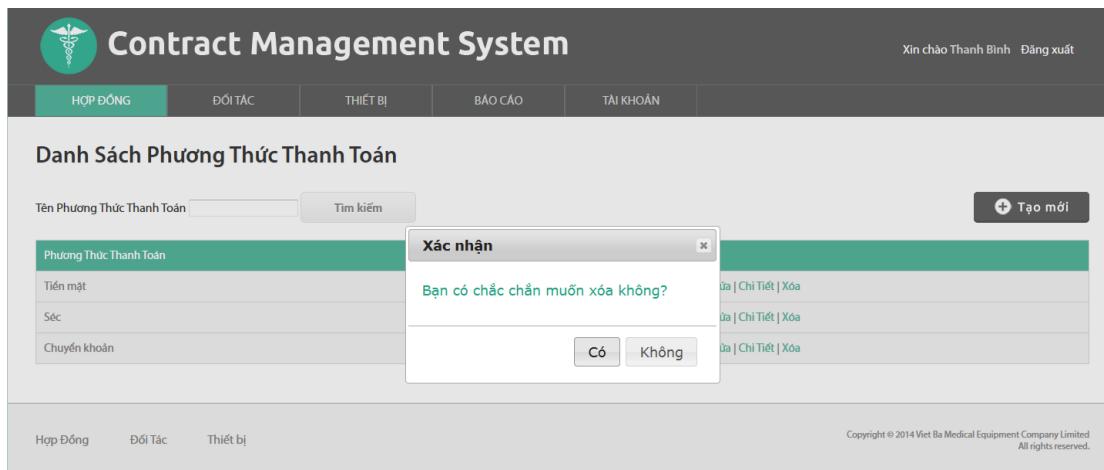


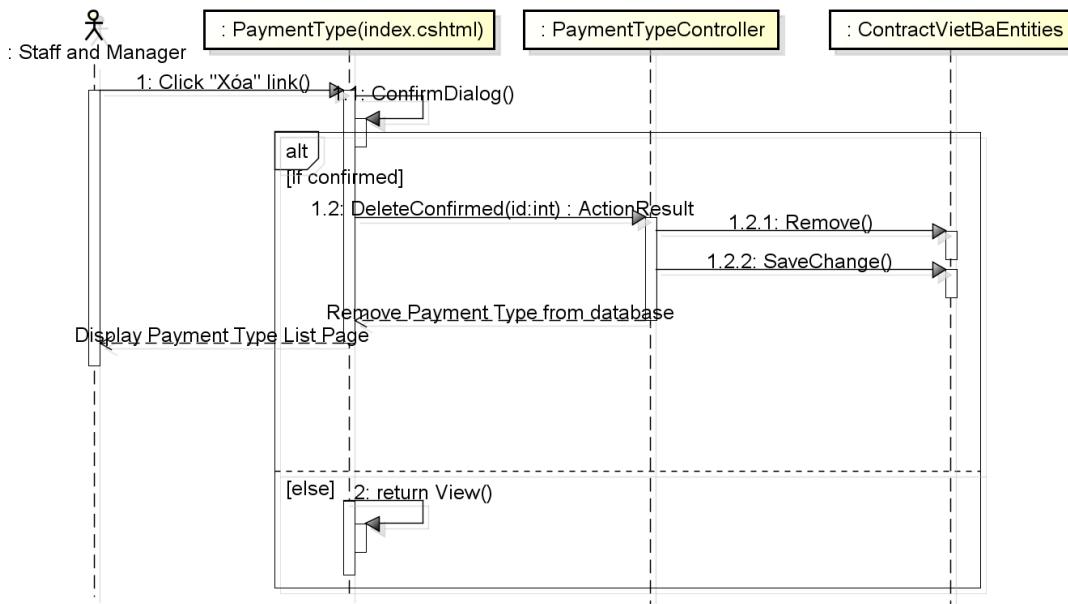
Figure 4-31: Delete Payment Type

No	Object Name	Object Name in English	Type	Required	Length	Description
1	Bạn có chắc chắn muốn xóa không	Are you sure to delete	Label	N	N/A	Ask whether user want to delete

2	Có	Yes	Button	N	N/A	User sure to delete
3	Không	No	Button	N	N/A	User do not want to delete

Table 4-13: Fields on delete payment type screen

2.3.6.2 Sequence Diagram

**Figure 4-32: Delete Payment Type Sequence Diagram**

2.3.7 UC003-05: Display Payment Type Detail

2.3.7.1 Screen Design

The screenshot shows the 'Contract Management System' interface. At the top, there's a navigation bar with links for HỢP ĐỒNG, ĐỐI TÁC, THIẾT BỊ, BÁO CÁO, and TÀI KHOẢN. On the right, there are links for Xin chào Nguyễn Thành Bình and Đăng xuất. Below the navigation, a header says 'Chi tiết Phương Thức Thanh Toán'. The main content area displays a table with columns for Phương Thức Thanh Toán (selected), Tiền mặt, Mô Tả (with value 'a'), and a 'Quay lại' button. At the bottom, there are links for Hợp Đồng, Đối Tác, Thiết bị, and a copyright notice: Copyright © 2014 Viet Ba Medical Equipment Company Limited. All rights reserved.

Figure 4-33: Display payment type detail screen

No	Object Name	Object Name in English	Type	Required	Length	Description
1	Phương thức thanh toán	Payment Type	Label	Y	N/A	Payment Type name
2	Mô tả	Description	Label	Y	N/A	Description of payment type
3	Quay lại	Back	Label	Y	N/A	Redirect to payment type list

Table 4-14: Fields on payment type detail screen

2.3.7.2 Sequence Diagram

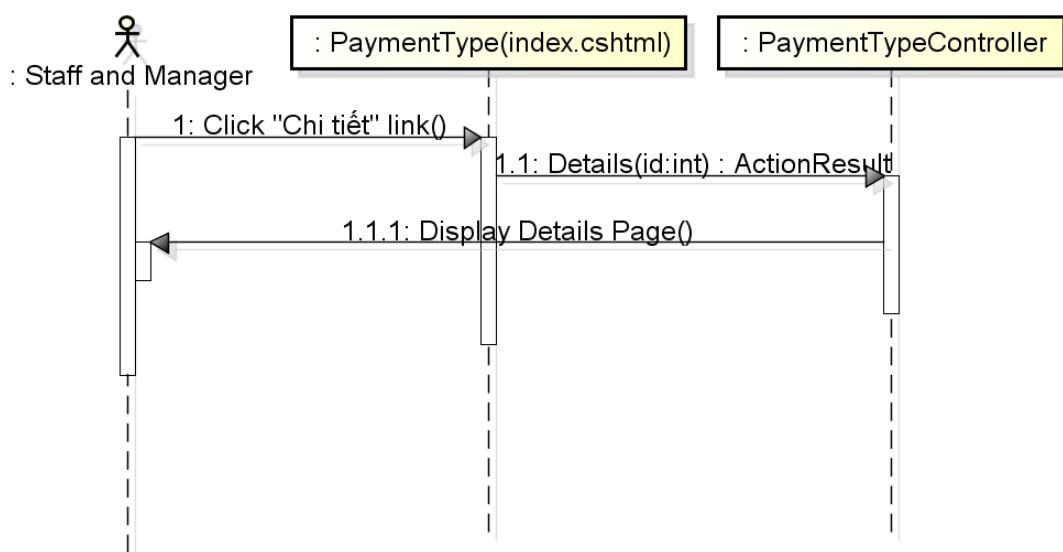


Figure 4-34: Display Payment Type Sequence Diagram

2.4 UC004- Contract Type Management

2.4.1 Class Diagram

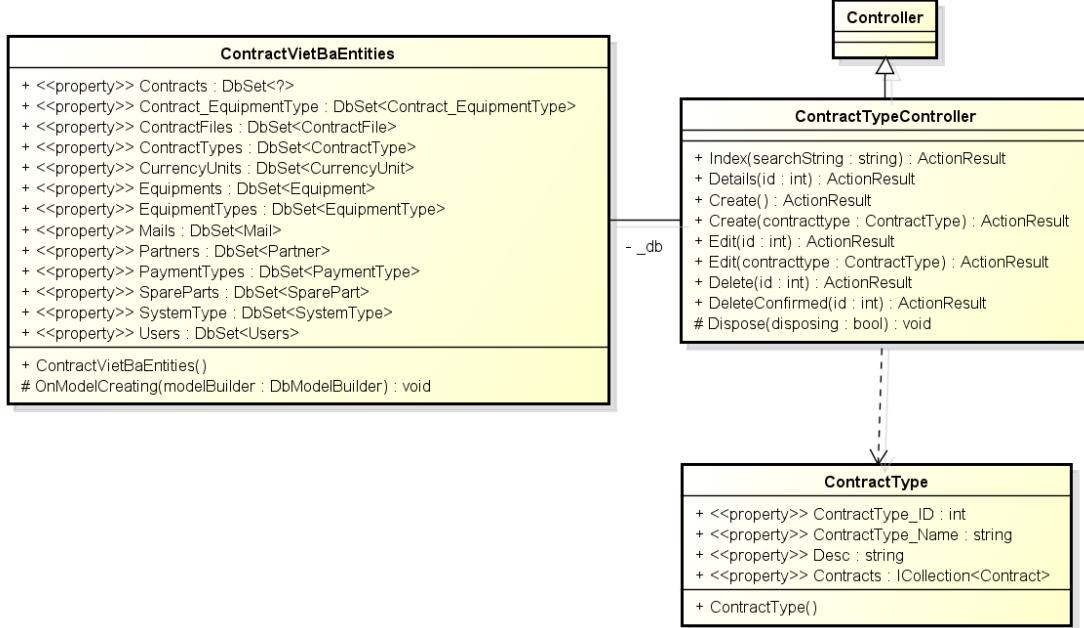


Figure 4-35: Contract Type Management Class Diagram

2.4.2 Class Description

2.4.2.1 ContractTypeController

Class	ContractTypeController
Description	Contains declare and constructor for all ContractTypeController's attributes.
Base Class	Controller
Constructor	N/A
Prototype	N/A
Source File	ContractTypeController.cs
Namespace	ContractManagement.Controllers
Attributes	N/A
Methods	

Name	Input	Output	Description
Index	currentPaymentType ,Description	ViewResult	Display PaymentType with conditions
Details	Id	ActionResult	Display details page
LoadData		Void	Load common data into page
Create		ActionResult	Display create new page
Create	Contract, list, files	ActionResult	Add new paymenttype to database
Edit		ActionResult	Display edit paymentType page
Edit	Contract, list	ActionResult	Edit and save PaymentType to database
DeleteConfirmed	Id	ActionResult	Delete PaymentType from database

2.4.3 UC004-01: Search Contract Type

2.4.3.1 Screen Design

The screenshot shows the 'Contract Management System' interface. At the top, there's a navigation bar with a logo, the system name, and user information ('Xin chào Nguyễn Thành Bình Đăng xuất'). Below the navigation is a search bar labeled 'Danh Sách loại hợp đồng' (List of Contract Types) with fields for 'Tên loại hợp đồng:' (Contract Type Name:) and 'Tìm kiếm' (Search). A 'Tạo mới' (Create New) button is also present. The main content area displays a table with columns 'Loại Hợp Đồng' (Contract Type), 'Mô Tả' (Description), and actions 'Sửa | Chi Tiết | Xóa' (Edit | Details | Delete). Two rows are visible: 'Mua bán' (Purchase) and 'Hợp tác' (Cooperation). At the bottom, there are links for 'Hợp Đồng', 'Đối Tác', and 'Thiết bị', along with a copyright notice: 'Copyright © 2014 Viet Ba Medical Equipment Company Limited. All rights reserved.'

Figure 4-36: Search Contract Type Screen

No	Object Name	Object Name in English	Type	Required	Length	Description

1	Tên loại hợp đồng	Contract Type Name	Textbox	N	50	User can search with contract type name
2	Tìm kiếm	Search	Button	N	N/A	User click on search button to get contract type they want.
3	Tạo mới	Create	Link	N	N/A	Redirect to create new contract type screen
4	Loại hợp đồng	Contract Type Name	Label	N	N/A	Name of contract type
5	Mô tả	Description	Label	N	N/A	Description of contract type
6	Sửa	Edit	Link	N	N/A	Redirect to edit contract type screen
7	Chi tiết	Detail	Link	N	N/A	Redirect to detail contract type screen
8	Xóa	Delete	Link	N	N/A	Pop-up window ask whether user confirm to delete contract type.

Table 4-15: Fields on search contract type screen

2.4.3.2 Sequence Diagram

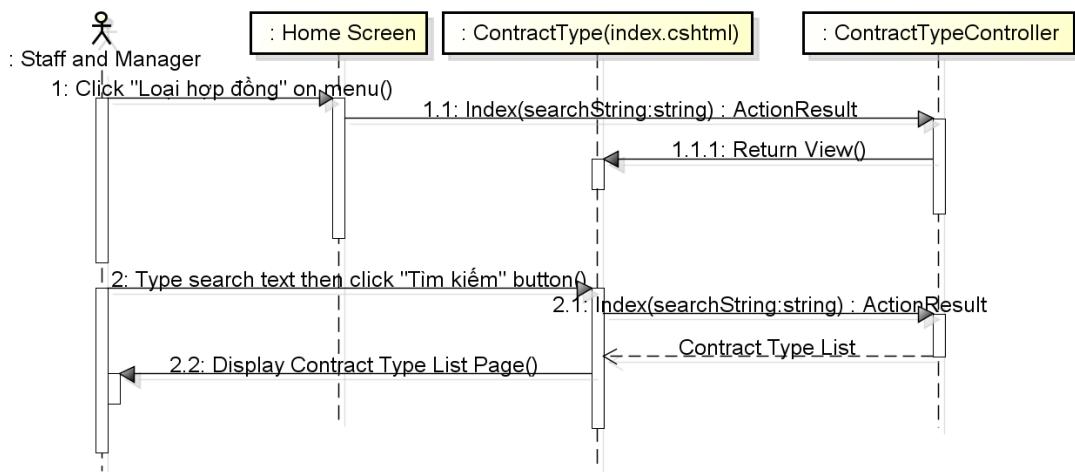


Figure 4-37: Search Contract Type Sequence Diagram

2.4.4 UC004-02: Create Contract Type

2.4.4.1 Screen Design

Figure 4-38: Create Contract Type Screen

No	Object Name	Object Name in English	Type	Required	Length	Description
1	Loại hợp đồng	Payment Type	Textbox	Y	50	User input contract type
2	Mô tả	Description	Text Area	Y	N/A	User input description
3	Lưu	Save	Button	Y	N/A	User save contract type to database
4	Quay trở lại danh sách	Back	Button	N	N/A	Redirect to payment type list.

Table 4-16: Fields on create contract type screen

2.4.4.2 Sequence Diagram

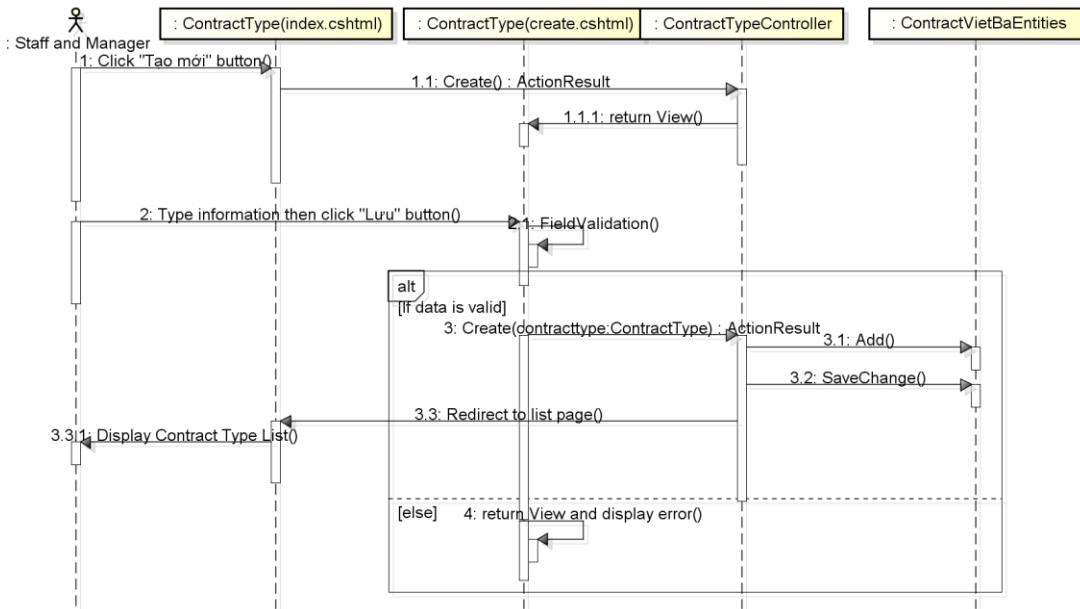


Figure 4-39: Create Contract Type Sequence Diagram

2.4.5 UC004-03: Edit Contract Type

2.4.5.1 Screen Design

The screenshot shows the 'Edit Contract Type' screen of the Contract Management System. At the top, there's a navigation bar with links for Hợp đồng, Đối tác, Thiết bị, Báo cáo, and Tài khoản. A greeting 'Xin chào Nguyễn Thành Bình' and a 'Đăng xuất' link are also present. The main content area has a title 'Sửa Thông Tin Loại Hợp Đồng'. It contains two input fields: 'Loại Hợp Đồng (*)' with the value 'Mua bán' and 'Mô Tả' with a large text area below it. Below the fields are two buttons: 'Lưu' (Save) and 'Quay lại' (Back). At the bottom, there's a footer with links for Hợp đồng, Đối tác, Thiết bị, and the copyright notice 'Copyright © 2014 Viet Ba Medical Equipment Company Limited. All rights reserved.'

Figure 4-40: Edit Contract Type Screen

No	Object Name	Object Name in English	Type	Required	Length	Description
1	Loại hợp đồng	Contract Type	Textbox	Y	50	User modify contract type
2	Mô tả	Description	Text Area	Y	N/A	User modify description

3	Lưu	Save	Button	Y	N/A	User save contract type to database
4	Quay trở lại danh sách	Back	Button	N	N/A	Redirect to payment type list.

Table 4-17: Fields on edit contract type screen

2.4.5.2 Sequence Diagram

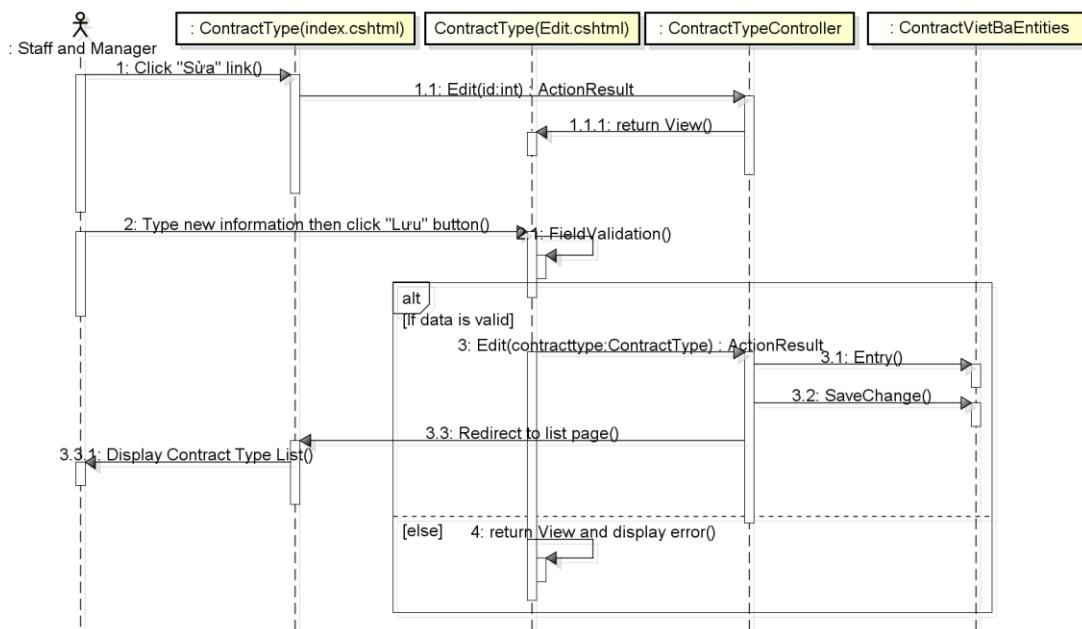


Figure 4-41: Edit Contract Type Sequence Diagram

2.4.6 UC004-04: Delete Contract Type

2.4.6.1 Screen Design

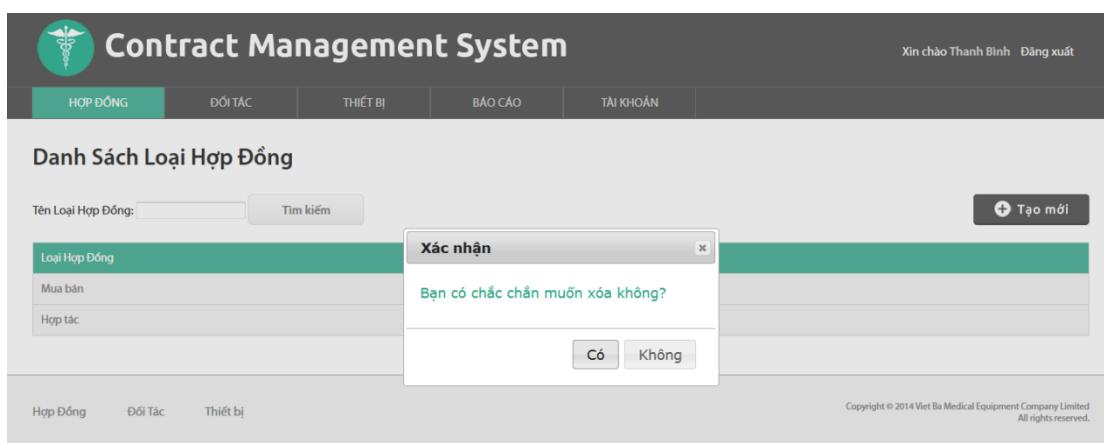
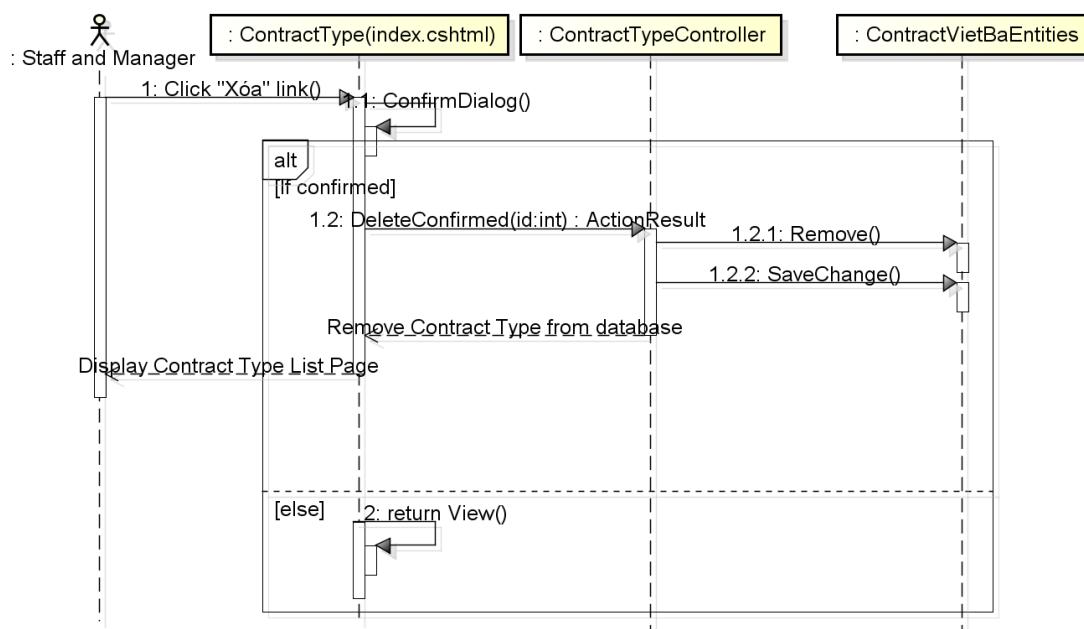


Figure 4-42: Delete Contract Type

No	Object Name	Object Name in English	Type	Required	Length	Description
1	Bạn có chắc chắn muốn xóa không	Are you sure to delete	Label	N	N/A	Ask whether user want to delete
2	Có	Yes	Button	N	N/A	User sure to delete
3	Không	No	Button	N	N/A	User do not want to delete

Table 4-18: Fields on delete contract type screen

2.4.6.2 Sequence Diagram

**Figure 4-43: Delete Contract Type Sequence Diagram**

2.4.7 UC004-05: Display Contract Type Detail

2.4.7.1 Screen Design

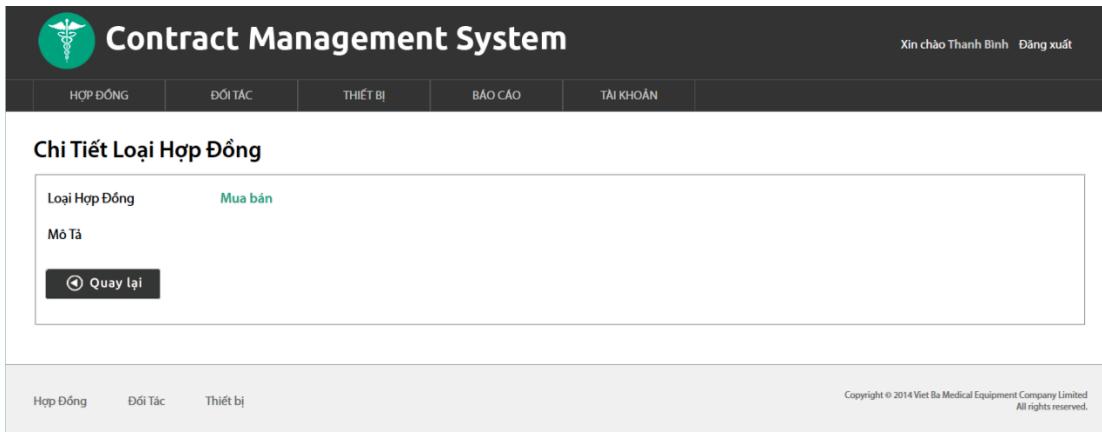


Figure 4-44: Display contract type detail screen

No	Object Name	Object Name in English	Type	Required	Length	Description
1	Loại hợp đồng	Contract Type	Label	Y	N/A	Payment Type name
2	Mô tả	Description	Label	Y	N/A	Description of contract type
3	Quay lại	Back	Label	Y	N/A	Redirect to contract type list

Table 4-19: Fields on contract type detail screen

2.4.7.2 Sequence Diagram

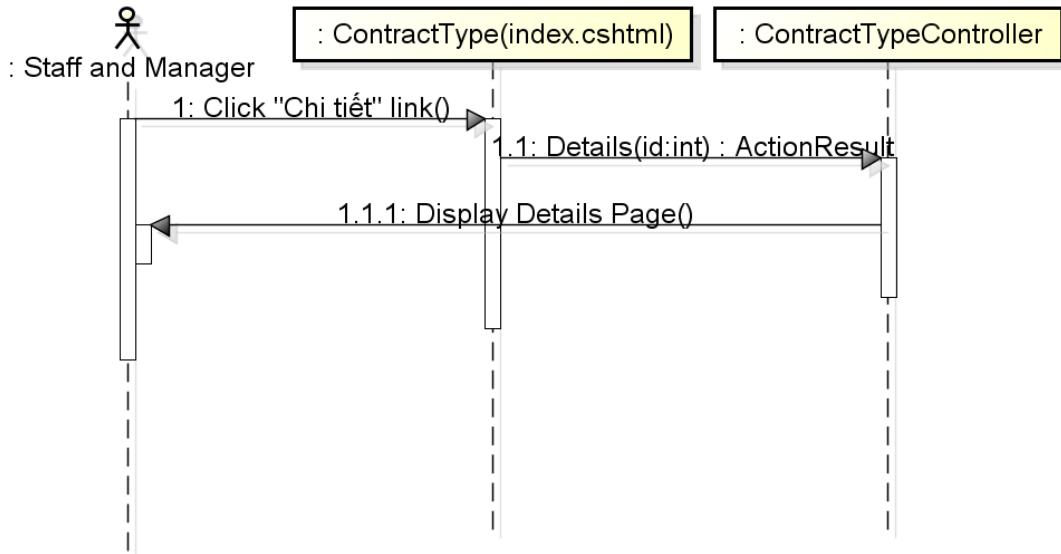


Figure 4-45: Display Contract Type Detail Sequence Diagram

2.5 UC005- Currency Unit Management

2.5.1 Class Diagram

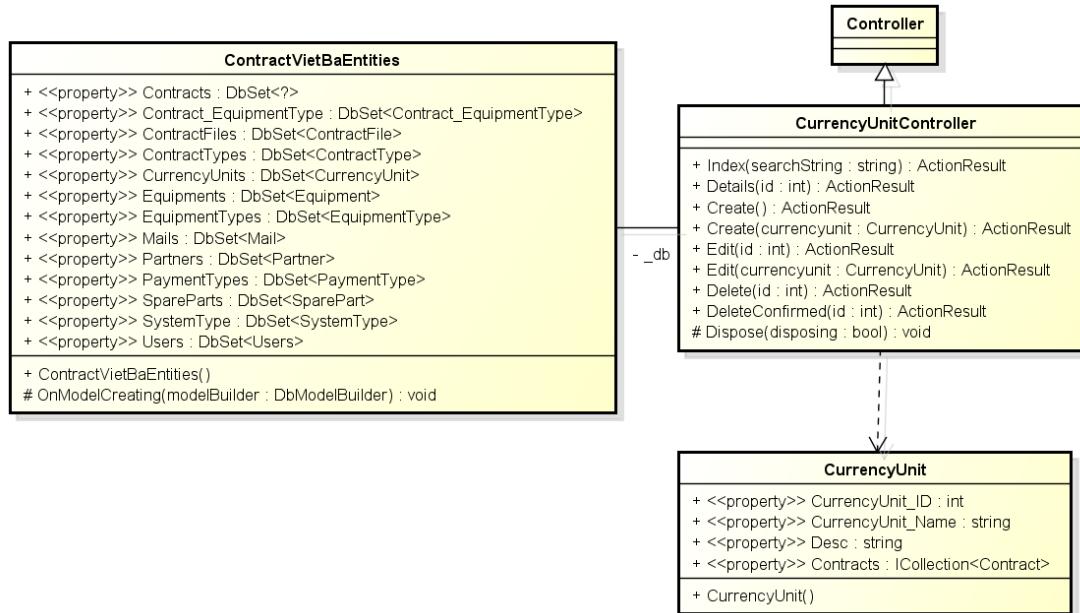


Figure 4-46: Currency Unit Management Class Diagram

2.5.2 Class Description

2.5.2.1 CurrencyUnitController

Class	CurrencyUnitController		
Description	Contains declare and constructor for all CurrencyUnitController's attributes.		
Base Class	Controller		
Constructor	N/A		
Prototype	N/A		
Source File	CurrencyUnitController.cs		
Namespace	ContractManagement.Controllers		
Attributes	N/A		
Methods			
Name	Input	Output	Description
Index	currentCurrency Unit,Description	ViewResult	DisplayCurrencyUnit with conditions
Details	Id	ActionResult	Display details page
LoadData		Void	Load common data into page
Create		ActionResult	Display create new page
Create	Contract, list, files	ActionResult	Add new CurrencyUnit to database
Edit		ActionResult	Display edit contract page
Edit	Contract, list	ActionResult	Edit and save CurrencyUnit to database
DeleteConfirmed	Id	ActionResult	Delete CurrencyUnit from database

2.5.3 UC005-01: Search Currency Unit

2.5.3.1 Screen Design

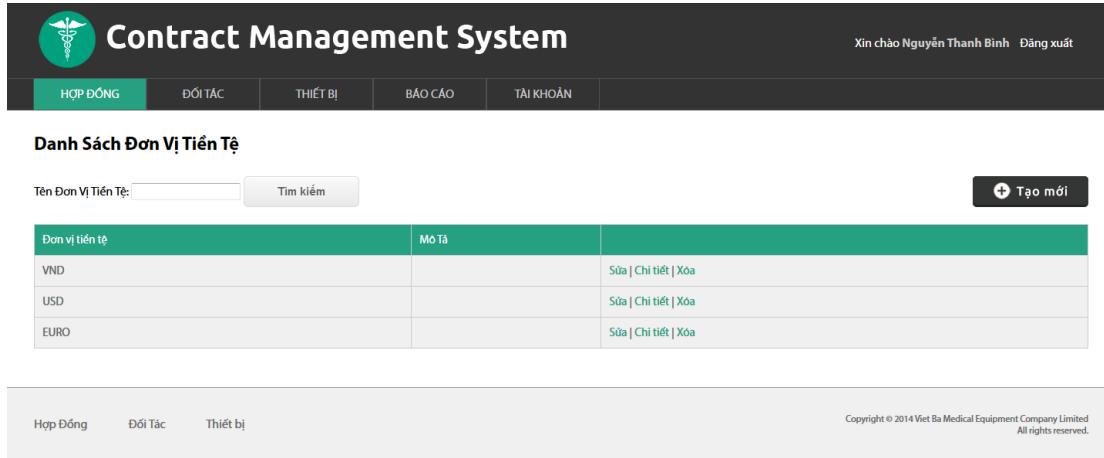


Figure 4-47: Search Currency Unit Screen

No	Object Name	Object Name in English	Type	Required	Length	Description
1	Tên đơn vị tiền tệ	Currency Unit Name	Textbox	N	N/A	User can search with currency unit name
2	Tìm kiếm	Search	Button	N	N/A	User click on search button to get currency unit they want.
3	Tạo mới	Create	Link	N	N/A	Redirect to create new currency unit screen
4	Đơn vị tiền tệ	Currency Unit Name	Label	N	N/A	Name of currency unit
5	Mô tả	Description	Label	N	N/A	Description of currency unit
6	Sửa	Edit	Link	N	N/A	Redirect to edit currency unit screen
7	Chi tiết	Detail	Link	N	N/A	Redirect to detail currency unit screen

8	Xóa	Delete	Link	N	N/A	Pop-up window ask whether user confirm to delete currency unit.
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Table 4-20: Fields on search currency unit screen

2.5.3.2 Sequence Diagram

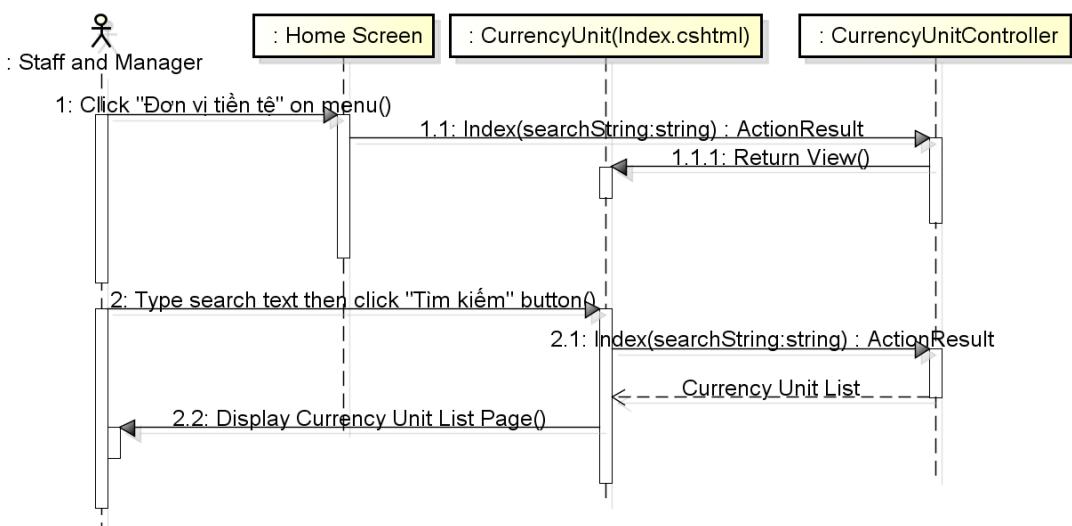


Figure 4-48: Search Currency Unit Sequence Diagram

2.5.4 UC005-02: Create Currency Unit

2.5.4.1 Screen Design

The screenshot shows the 'Thêm mới Đơn Vị Tiền Tệ' (Add New Currency Unit) form. It features two input fields: 'Đơn vị tiền tệ (*)' and 'Mô Tả'. Below the fields are two buttons: 'Lưu' (Save) and 'Quay lại' (Back). At the bottom of the page, there are navigation links for 'Hợp đồng', 'Đối tác', 'Thiết bị', and 'Báo cáo', along with a copyright notice: 'Copyright © 2014 Viet Ba Medical Equipment Company Limited. All rights reserved.'

Figure 4-49: Create Currency Unit Screen

No	Object Name	Object Name in English	Type	Required	Length	Description
1	Đơn vị tính	Currency Unit	Textbox	Y	50	User input currency unit
2	Mô tả	Description	Text Area	Y	N/A	User input description
3	Lưu	Save	Button	Y	N/A	User save currency unit to database
4	Quay trở lại danh sách	Back	Button	N	N/A	Redirect to currency unit list.

Table 4-21: Fields on create currency unit screen

2.5.4.2 Sequence Diagram

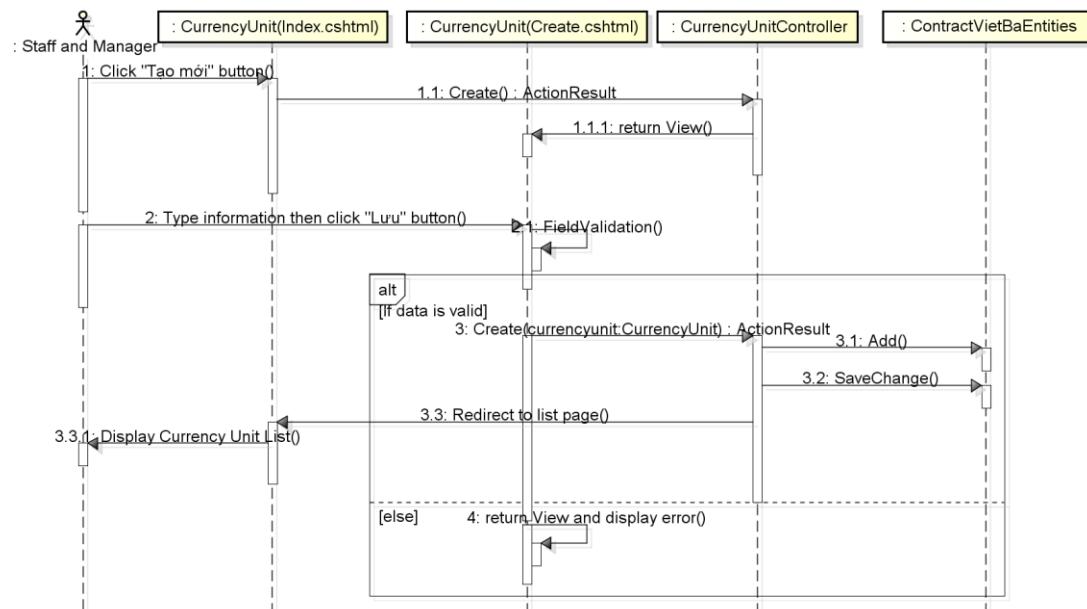


Figure 4-50: Create Currency Unit Sequence Diagram

2.5.5 UC005-03: Edit Currency Unit

2.5.5.1 Screen Design

Figure 4-51: Edit Currency Unit Screen

No	Object Name	Object Name in English	Type	Required	Length	Description
1	Đơn vị tính	Currency Unit	Textbox	Y	50	User modify currency unit
2	Mô tả	Description	Text Area	Y	N/A	User modify description
3	Lưu	Save	Button	Y	N/A	User save currency unit to database
4	Quay trở lại danh sách	Back	Button	N	N/A	Redirect to currency unit list.

Table 4-22: Fields on edit currency unit screen

2.5.5.2 Sequence Diagram

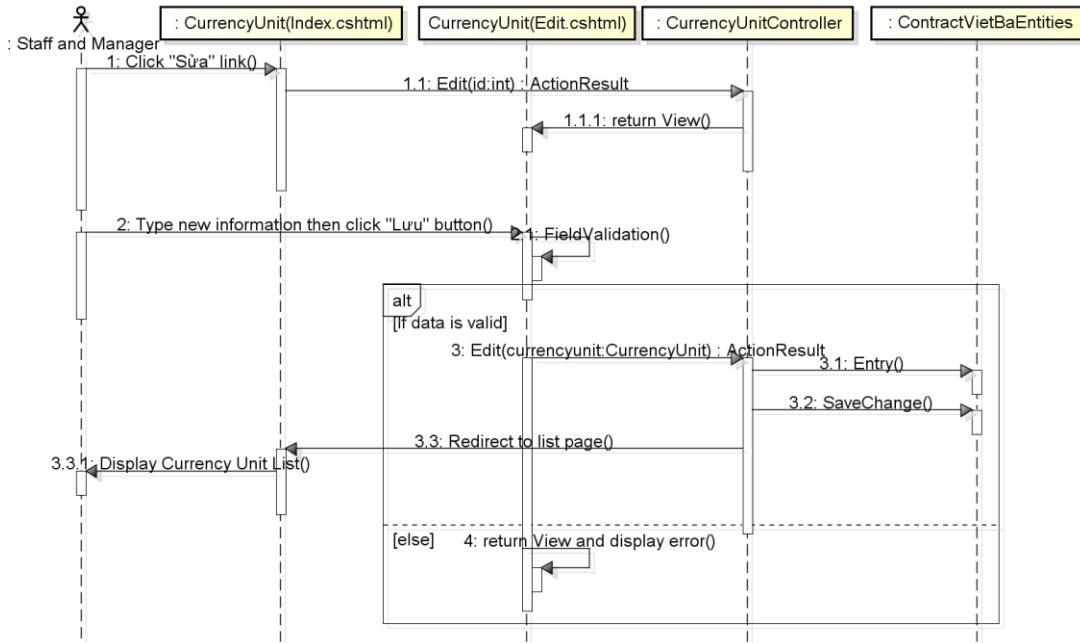


Figure 4-52: Edit Currency Unit Sequence Diagram

2.5.6 UC005-04: Delete Currency Unit

2.5.6.1 Screen Design

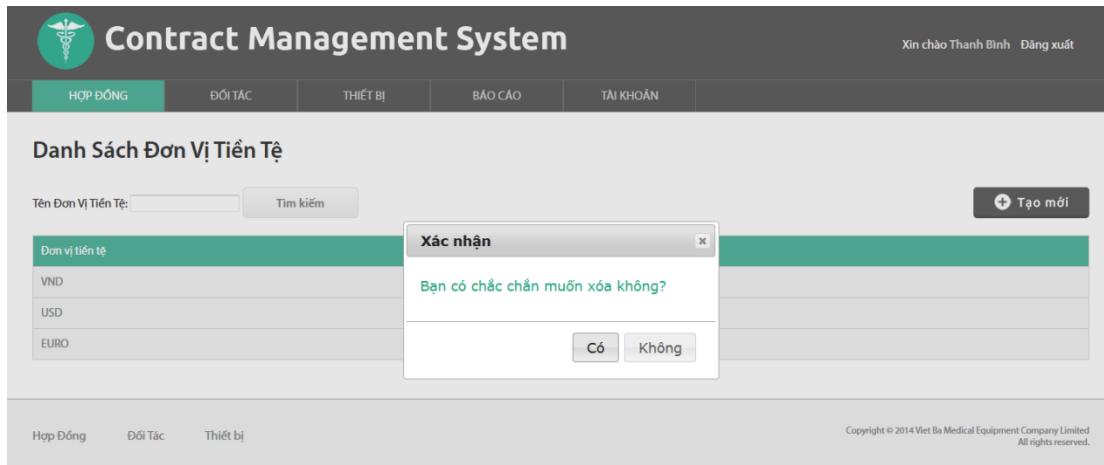


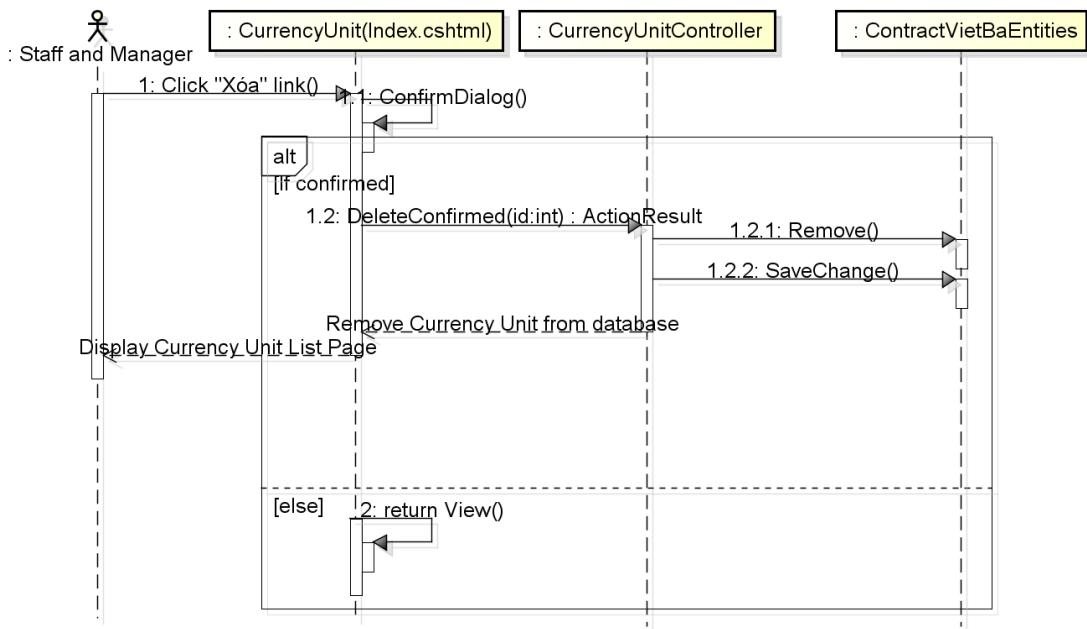
Figure 4-53: Delete Currency Unit

No	Object Name	Object Name in English	Type	Required	Length	Description
1	Bạn có chắc chắn muốn xóa không	Are you sure to delete	Label	N	N/A	Ask whether user want to delete

2	Có	Yes	Button	N	N/A	User sure to delete
3	Không	No	Button	N	N/A	User do not want to delete

Table 4-23: Fields on delete currency unit screen

2.5.6.2 Sequence Diagram

**Figure 4-54: Delete Currency Unit Sequence Diagram**

2.5.7 UC005-05: Display Currency Unit Detail

2.5.7.1 Screen Design

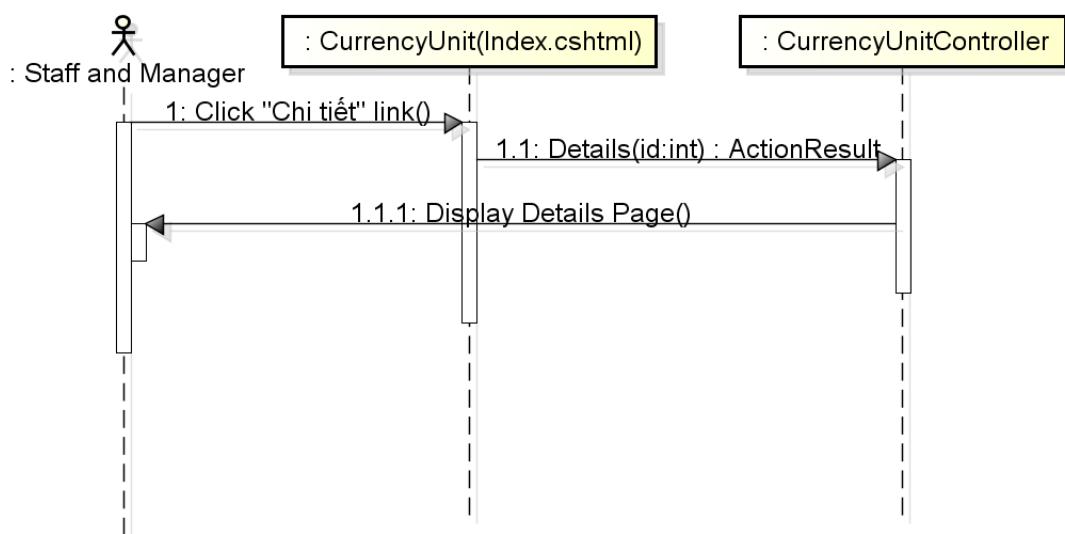
The screenshot shows the 'Contract Management System' interface. At the top, there's a navigation bar with links for HỢP ĐỒNG, ĐỐI TÁC, THIẾT BỊ, BÁO CÁO, and TÀI KHOẢN. On the right, there are welcome messages ('Xin chào Nguyễn Thành Bình') and a log-out link ('Đăng xuất'). The main content area is titled 'Chi Tiết Đơn Vị Tiền Tệ' (Currency Unit Detail). It displays a single currency unit record: 'Đơn vị tiền tệ' (Currency Unit) is 'VND'. Below this, there's a 'Mô Tả' (Description) section which is currently empty. A 'Quay lại' (Back) button is visible at the bottom of this section. At the very bottom of the page, there are footer links for Hợp Đồng, Đối Tác, Thiết bị, and a copyright notice: 'Copyright © 2014 Viet Ba Medical Equipment Company Limited. All rights reserved.'

Figure 4-55: Display currency unit detail screen

No	Object Name	Object Name in English	Type	Required	Length	Description
1	Đơn vị tính	Currency Unit	Label	Y	N/A	Currency unit name
2	Mô tả	Description	Label	Y	N/A	Description of currency unit
3	Quay lại	Back	Label	Y	N/A	Redirect to currency unit list

Table 4-24: Fields on currency unit detail screen

2.5.7.2 Sequence Diagram

**Figure 4-56: Display Currency Unit Sequence Diagram**

2.6 UC006- Partner Management

2.6.1 Class Diagram

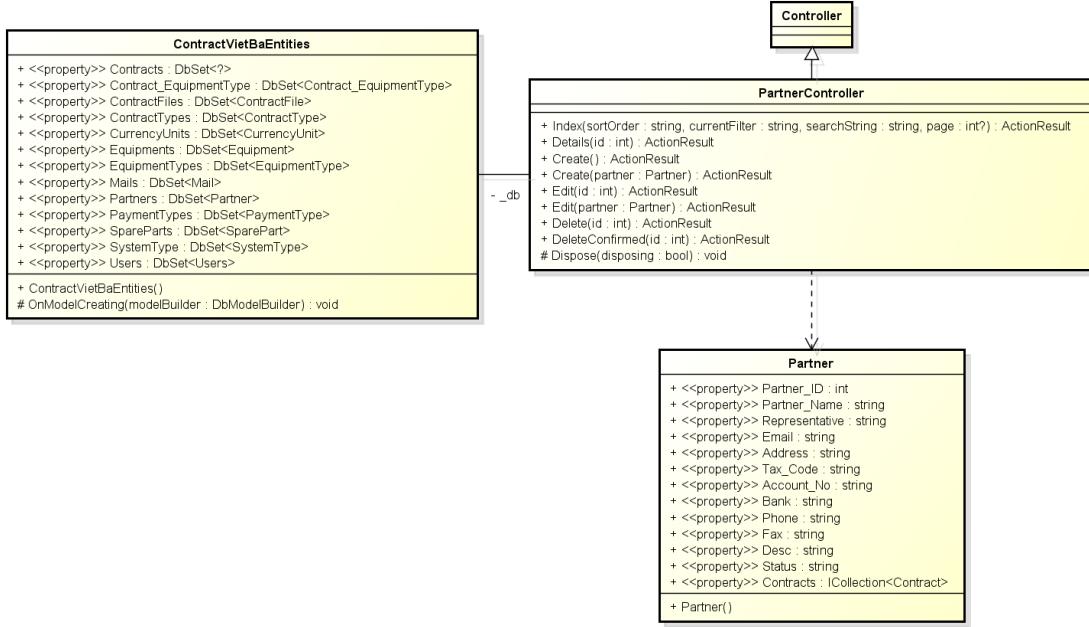


Figure 4-57: Partner Management Class Diagram

2.6.2 Class Description

2.6.2.1 PartnerController

Class	PartnerController		
Description	Contains declare and constructor for all PartnerController's attributes.		
Base Class	Controller		
Constructor	N/A		
Prototype	N/A		
Source File	PartnerController.cs		
Namespace	ContractManagement.Controllers		
Attributes	N/A		
Methods			
Name	Input	Output	Description

Index	sortOrder, currentFilter, searchString, page	ActionResult	Display index page
Details	id	ActionResult	Display details page
Create		ActionResult	Display create page
Create	partner	ActionResult	Save created partner
Edit	id	ActionResult	Display edit page
Edit	partner	ActionResult	Save edited partner
DeleteConfirmed	id	ActionResult	Confirm deleting partner

2.6.3 UC006-01: Search Partner

2.6.3.1 Screen Design

Tên Đối Tác	Đại Diện	Địa Chỉ	Ngân Hàng	Số Điện Thoại	Fax	Hợp Đồng	
BỆNH VIỆN BỆNH NHỆT ĐỐI TRUNG UƯƠNG	Nguyễn Văn Kinh	Số 78, Đường Giải Phóng, H. Gia Lâm, TP Hà Nội	Kho bạc Nhà nước quận Hoàng Mai	(84-4).35763491	(84-4).35764305	- testt - 123234 - 323243434343 - dssds - sadad - test123	Sửa Chi Tiết Xóa
Bệnh viện ĐK Mỹ Lộc	a	Khương Đình, Q. Đống Đa, TP Hà Nội					Sửa Chi Tiết Xóa
Bệnh viện K		Khương Đình, H. Gia Lâm, TP Hà Nội			- u		Sửa Chi Tiết Xóa
Bệnh viện Mắt TW		Khương Đình, H. Gia Lâm, TP Hà Nội			- 123		Sửa Chi Tiết Xóa
Bệnh viện Nội tiết TW		Khương Đình, H. Gia Lâm, TP Hà Nội			- uq		Sửa Chi Tiết Xóa

Figure 4-58: Search Partner Screen

No	Object Name	Object Name in English	Type	Required	Length	Description
1	Tên đối tác	Partner Name	Textbox	N	50	User enters to search for partner

2	Tìm kiếm	Search	Button	N	N/A	User click to search
3	Số đối tác hiển thị	Number of partners to display	Dropdown list	N	N/A	User choose number of partners to display
4	Trang	Paging	Link	N	N/A	User can choose page to display
5	Tạo mới	Create	Button	N	N/A	Redirect to create new partner screen
6	Tên đối tác	Partner Name	Label	N	N/A	Name of partner
7	Đại diện	Representative	Label	N	N/A	Representative of partner
8	Địa chỉ	Address	Label	N	N/A	Address of partner
9	Ngân hàng	Bank	Label	N	N/A	Bank of partner
10	Số điện thoại	Telephone	Label	N	N/A	Telephone of partner
11	Fax	Fax	Label	N	N/A	Fax of partner
12	Hợp đồng	Contract	Label	N	N/A	Contracts which partner signed
13	Sửa	Edit	Link	N	N/A	Redirect to edit partner screen
14	Chi tiết	Details	Link	N	N/A	Redirect to display spare part detail screen
15	Xóa	Delete	Link	N	N/A	Pop-up window ask whether user confirm to delete partner.

Table 4-25: Fields on search partner screen

2.6.3.2 Sequence Diagram

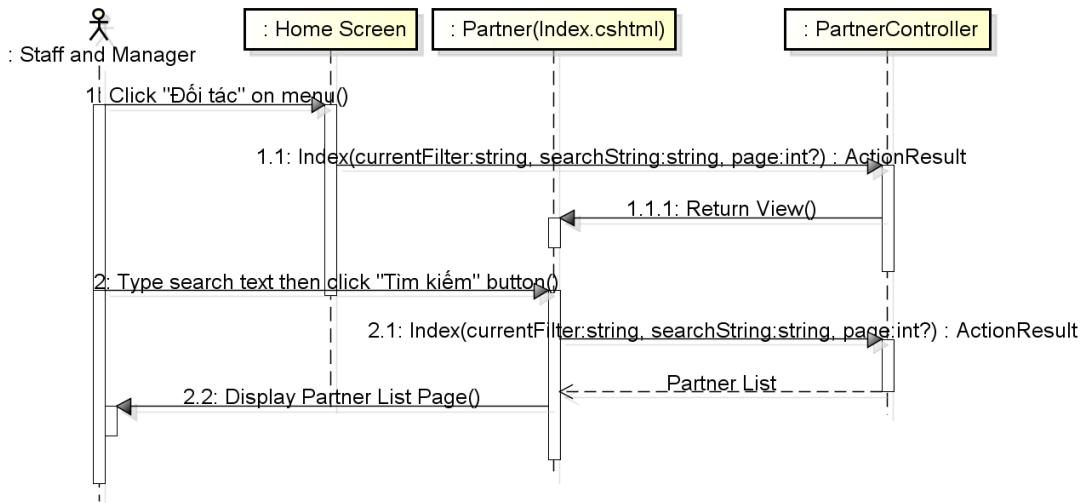


Figure 4-59: Search Partner Sequence Diagram

2.6.4 UC006-02: Create Partner

2.6.4.1 Screen Design

The screenshot shows the 'Thêm Mới Đối Tác' (Add New Partner) form. The form fields include:

- Tên Đối Tác (*)
- Email (*)
- Tỉnh/Thành phố (*)
- Địa Chỉ (*)
- Số tài khoản
- Số Điện Thoại
- Mô Tả
- Mã Số Thuế
- Đại Diện
- Quận
- Ngân Hàng
- Fax

At the bottom are two buttons: 'Lưu' (Save) and 'Quay lại' (Back).

Figure 4-60: Create Partner Screen

No	Object Name	Object Name in English	Type	Required	Length	Description
1	Tên đối tác	Partner Name	Textbox	Y	50	User enters full name of partner

2	Mã số thuế	Tax code	Textbox	N	50	User enters tax code
3	Email	Email	Textbox	Y	50	User enters email of partner
4	Đại diện	Agent	Textbox	N	50	User enters full name of partner's agent
5	Tỉnh/Thành phố	Country	Dropdown list	Y	N/A	User enters country of partner
6	Quận	District	Dropdown list	N	N/A	User enters district of partner
7	Địa chỉ	Address	Textbox	Y	50	User enters address of partner
8	Ngân hàng	Bank	Textbox	N	50	User enters bank name
9	Số tài khoản	Account number	Textbox	N	50	User enters account
10	Số điện thoại	Telephone number	Textbox	N	50	User enters telephone number
11	Fax	Fax	Textbox	N	50	User enters fax
12	Mô tả	Description	Textbox	N	Max	User enters further information
13	Lưu	Save	Button	N	N/A	User saves changed information
14	Quay lại	Back	Button	N	N/A	User cancels creating new partner

Table 4-26: Fields on create partner screen

2.6.4.2 Sequence Diagram

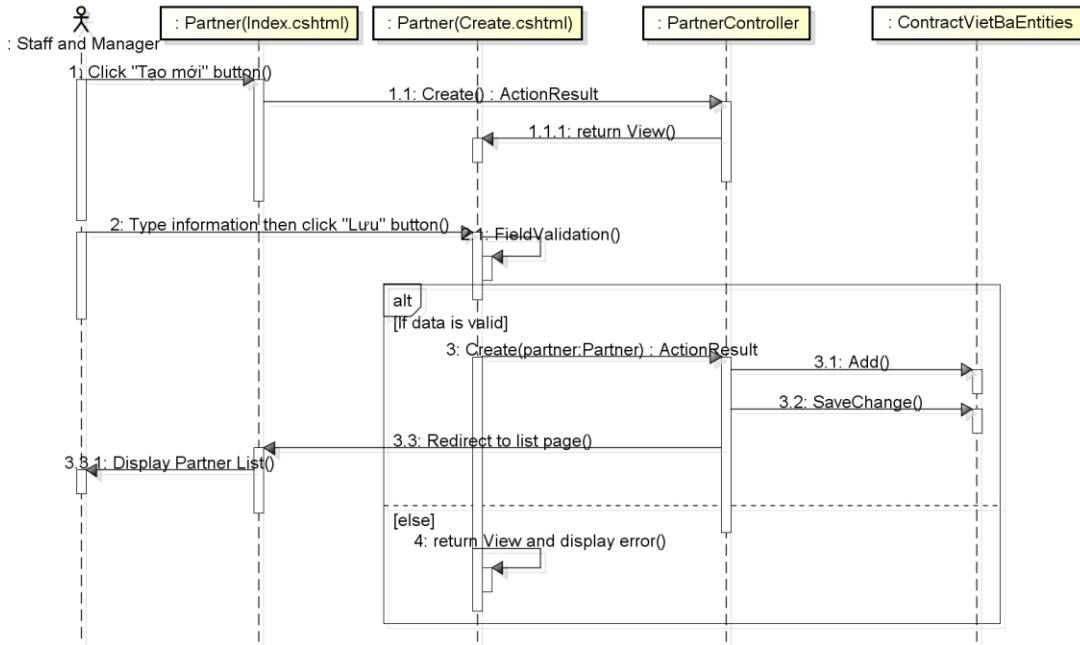


Figure 4-61: Create Partner Sequence Diagram

2.6.5 UC006-03: Edit Partner

2.6.5.1 Screen Design

Tên Đối Tác (*)	BỆNH VIỆN BỆNH NHIỆT ĐỐI TRUNG ƯƠ	Mã Số Thuế	0100123456
Email (*)	a@gmail.com	Đại Diện	Nguyễn Văn Kính
Tỉnh/Thành phố (*)	TP Hà Nội	Quận	Q. Đống Đa
Địa Chỉ(*)	Số 78, Đường Giải Phóng	Ngân Hàng	Kho bạc Nhà nước quận Hoàng Mai
Số tài khoản	3712	Fax	(84-4).35764305
Số Điện Thoại	(84-4).35763491		
Mô Tả			
<input type="button" value="Lưu"/> <input type="button" value="Quay lại"/>			

Figure 4-62: Edit Partner Screen

No	Object Name	Object Name in English	Type	Required	Length	Description
----	-------------	------------------------	------	----------	--------	-------------

1	Tên đối tác	Partner Name	Textbox	Y	50	User enters full name of partner
2	Mã số thuế	Tax code	Textbox	N	50	User enters tax code
3	Email	Email	Textbox	Y	50	User enters email of partner
4	Đại diện	Agent	Textbox	N	50	User enters full name of partner's agent
5	Tỉnh/Thành phố	Country	Dropdown list	Y	N/A	User enters country of partner
6	Quận	District	Dropdown list	N	N/A	User enters district of partner
7	Địa chỉ	Address	Textbox	Y	50	User enters address of partner
8	Ngân hàng	Bank	Textbox	N	50	User enters bank name
9	Số tài khoản	Account number	Textbox	N	50	User enters account
10	Số điện thoại	Telephone number	Textbox	N	50	User enters telephone number
11	Fax	Fax	Textbox	N	50	User enters fax
12	Mô tả	Description	Textbox	N	Max	User enters further information
13	Lưu	Save	Button	N	N/A	User saves changed information
14	Quay lại	Back	Button	N	N/A	User cancels creating new partner

Table 4-27: Fields on edit partner screen

2.6.5.2 Sequence Diagram

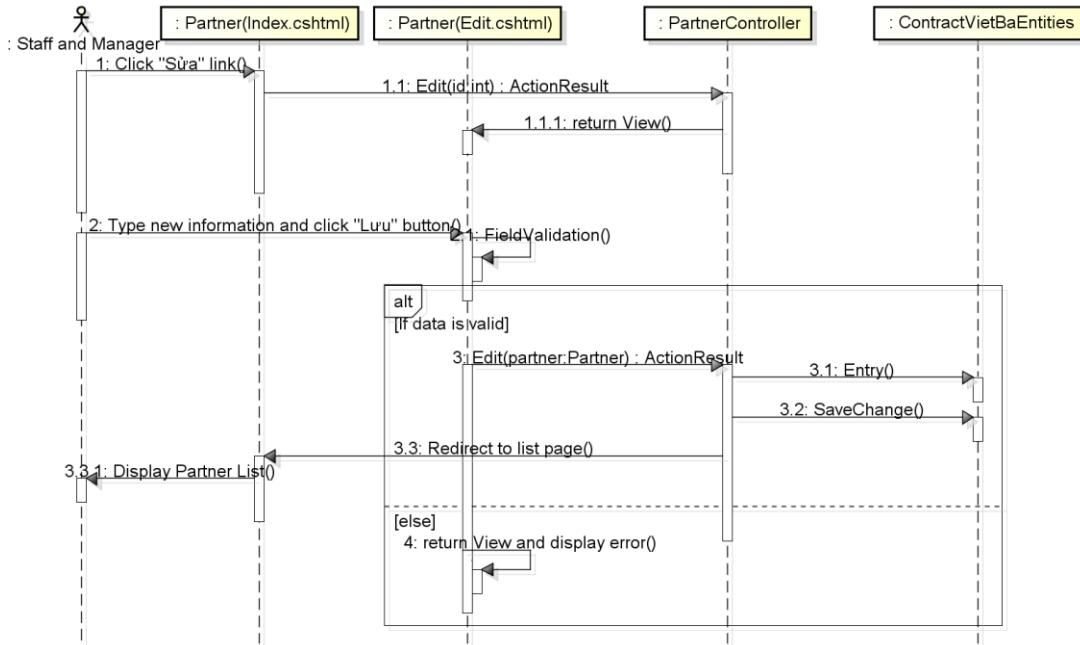


Figure 4-63: Edit Partner Sequence Diagram

2.6.6 UC006-04: Delete Partner

2.6.6.1 Screen Design

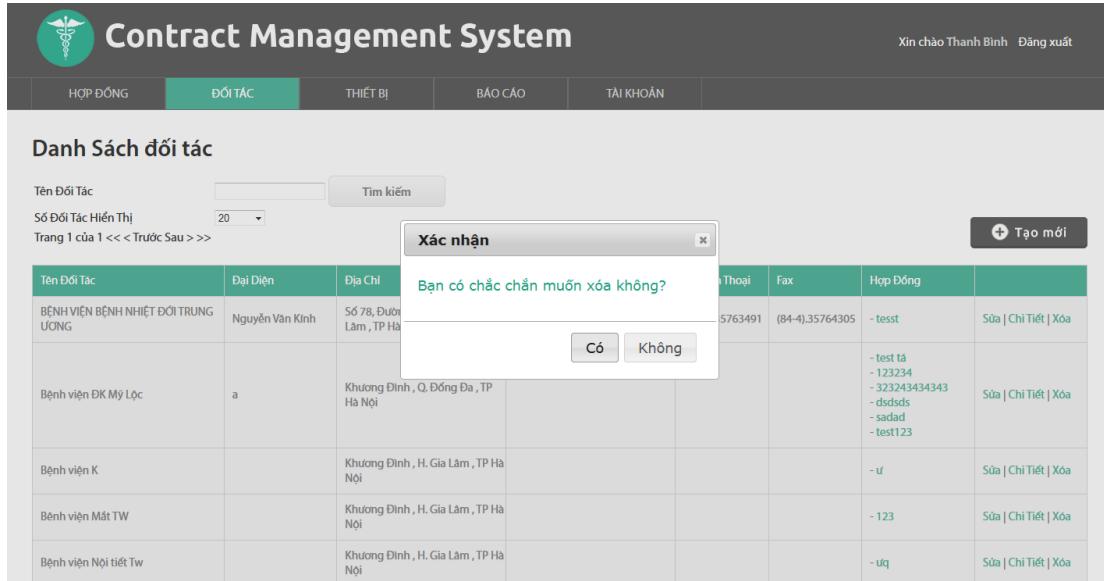


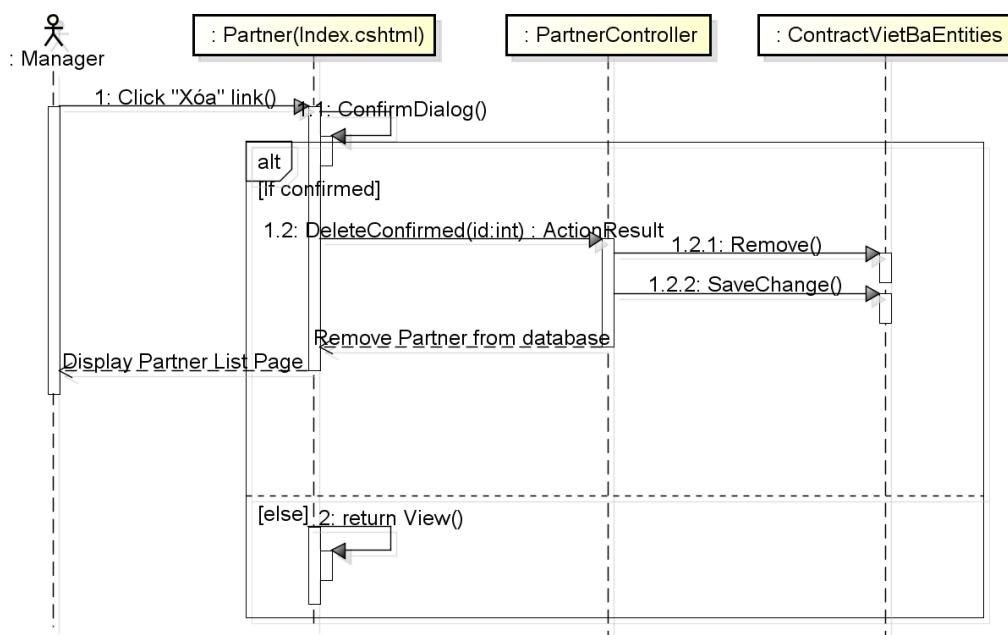
Figure 4-64: Delete Partner

No	Object Name	Object Name in English	Type	Required	Length	Description
----	-------------	------------------------	------	----------	--------	-------------

1	Bạn có chắc chắn muốn xóa không?	Are you sure to delete	Label	N	N/A	Ask whether user want to delete
2	Có	Yes	Button	N	N/A	User sure to delete
3	Không	No	Button	N	N/A	User do not want to delete

Table 4-28: Fields on delete partner screen

2.6.6.2 Sequence Diagram

**Figure 4-65: Delete Partner Sequence Diagram**

2.6.7 UC006-05: Display Partner Detail

2.6.7.1 Screen Design

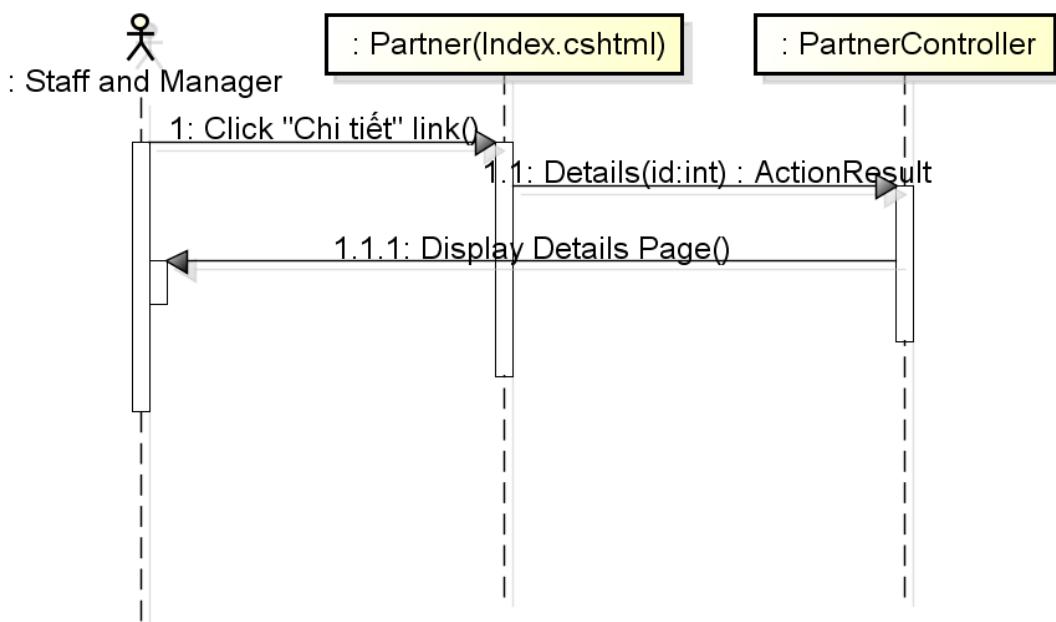
Figure 4-66: Display partner detail screen

No	Object Name	Object Name in English	Type	Required	Length	Description
1	Tên đối tác	Partner Name	Label	Y	50	Display full name of partner
2	Đại diện	Agent	Label	N	50	Display full name of partner's agent
3	Địa chỉ	Address	Label	N	50	Display address of partner
4	Mã số thuế	Tax code	Label	N	50	Display tax code
5	Số tài khoản	Account number	Label	N	50	Display account
6	Ngân hàng	Bank	Label	N	50	Display bank name
7	Số điện thoại	Telephone number	Label	N	50	Display telephone number
8	Fax	Fax	Label	N	50	Display fax
9	Mô tả	Description	Label	N	Max	Display further information

10	Quay lại	Back	Button	N	N/A	User cancels details view
----	----------	------	--------	---	-----	---------------------------

Table 4-29: Fields on partner detail screen

2.6.7.2 Sequence Diagram

**Figure 4-67: Display Partner Sequence Diagram**

2.7 UC007- Equipment Management

2.7.1 Class Diagram

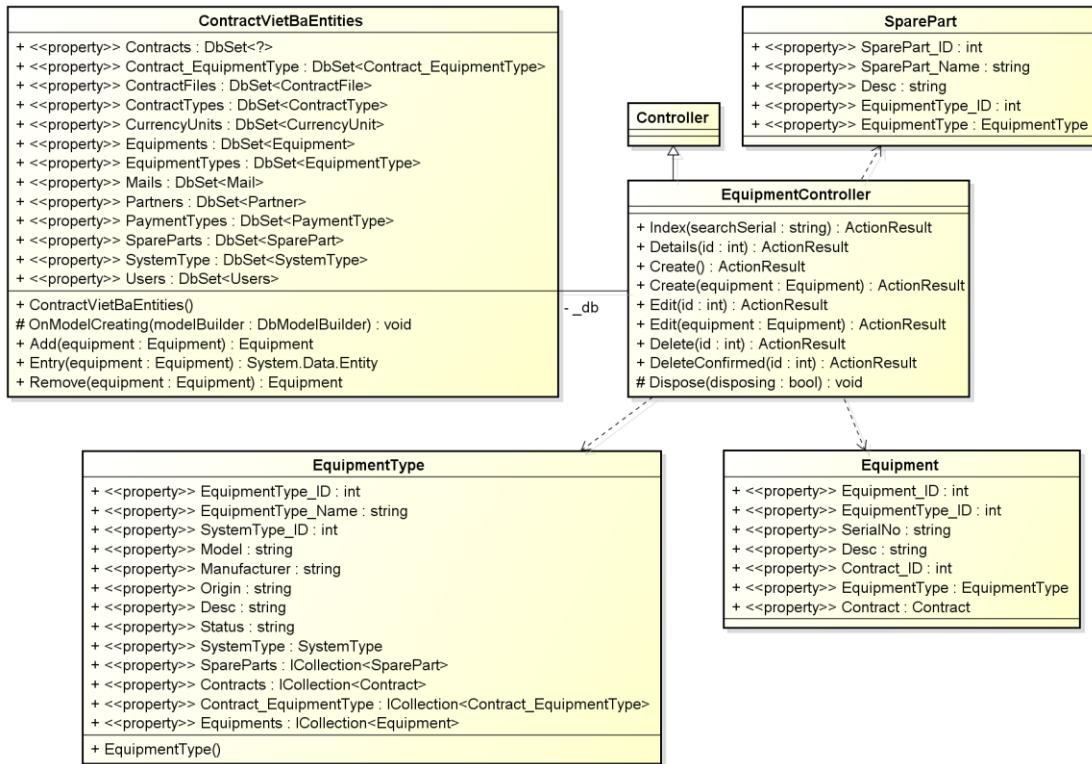


Figure 4-68: Equipment Management Class Diagram

2.7.2 Class Description

2.7.2.1 EquipmentController

Class	EquipmentController
Description	Contains declare and constructor for all EquipmentController's attributes.
Base Class	Controller
Constructor	N/A
Prototype	N/A
Source File	EquipmentController.cs
Namespace	ContractManagement.Controllers
Attributes	N/A

Methods			
Name	Input	Output	Description
Index	currentName, searchName, searchModel, searchSerial, currentModel, currentSerial	ActionResult	Display index page
Details	id	ActionResult	Display details page
LoadData		void	Load common data
Create		ActionResult	Display create page
Create	equipment	ActionResult	Save created equipment
Edit	id	ActionResult	Display edit page
Edit	equipment	ActionResult	Save edited equipment
DeleteConfirmed	id	ActionResult	Confirm deleting equipment

2.7.3 UC007-01: Search Equipment

2.7.3.1 Screen Design

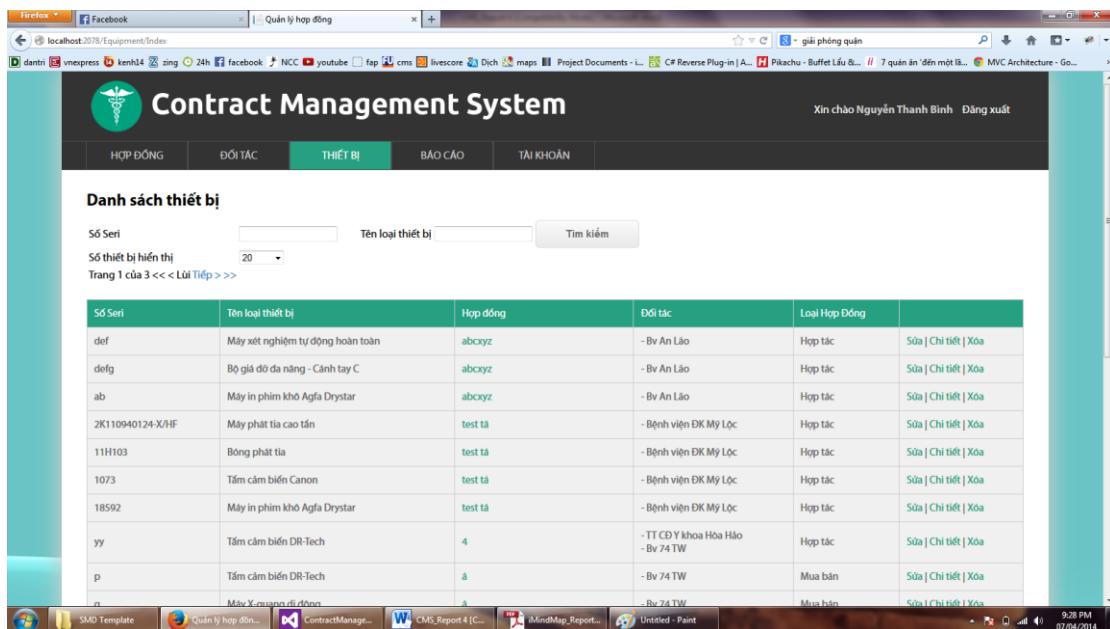
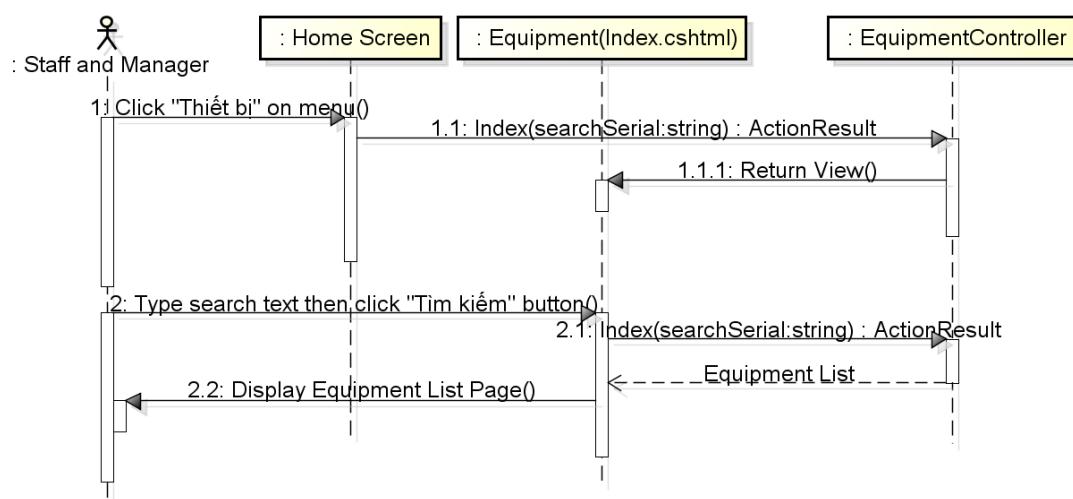


Figure 4-69: Search Equipment Screen

No	Object Name	Object Name in English	Type	Required	Length	Description
1	Số Seri	Serial Number	Textbox	N	50	Search equipment type by its serial number
2	Tên loại thiết bị	Equipment Type Name	Textbox	N	50	Search equipment type by its equipment type name
3	Tìm kiếm	Search	Button	N	N/A	Click to start searching equipment type by its attributes
3	Số thiết bị hiển thị	Number of equipment to display	Dropdown list	N	N/A	User choose number of equipment to display
4	Trang	Paging	Link	N	N/A	User can choose page to display
4	Số Seri	Serial Number	Label	N	N/A	Serial Number of equipment
5	Tên loại thiết bị	Equipment Type Name	Label	N	N/A	Equipment Type Name of equipment
7	Hợp đồng	Contract	Label	N	N/A	Contract which equipment belongs to
8	Đối tác	Partner	Label	N	N/A	Partner who order equipment
9	Loại hợp đồng	Contract Type	Label	N	N/A	Type of contract which equipment belongs to
10	Sửa	Edit	Link	N	N/A	Click to move to edit specific

						equipment screen
11	Chi tiết	Detail	Link	N	N/A	Click to move to specific equipment type detail screen
12	Xóa	Delete	Link	N	N/A	Click to delete specific equipment type

Table 4-30: Fields on search equipment screen**2.7.3.2 Sequence Diagram****Figure 4-70: Search Equipment Sequence Diagram**

2.7.4 UC007-02: Create Equipment

2.7.4.1 Screen Design

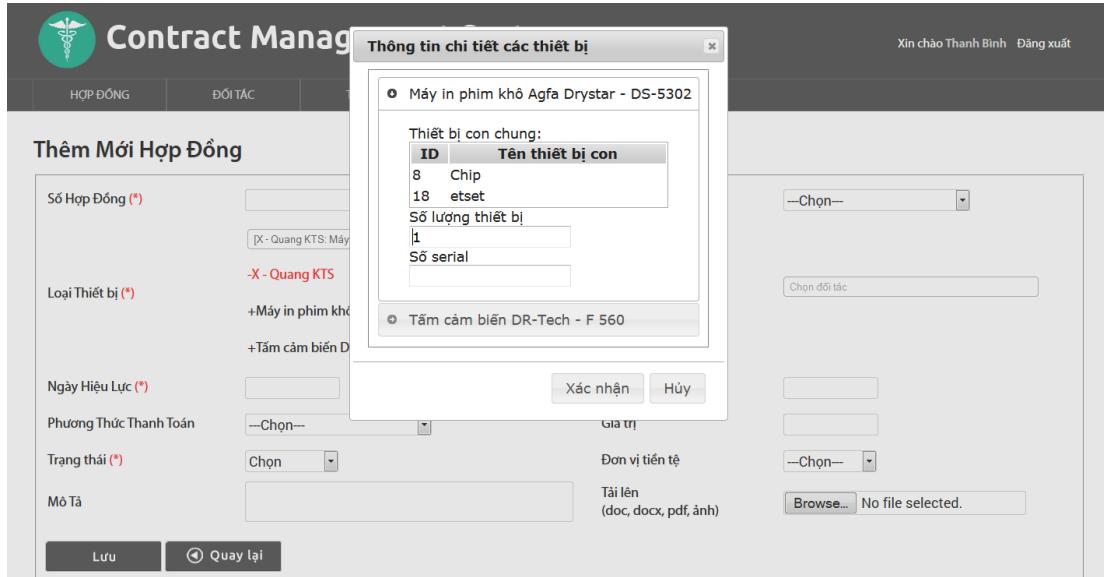


Figure 4-71: Create Equipment Screen

No	Object Name	Object Name in English	Type	Required	Length	Description
1	ID	ID of common spare part	Label	N	N/A	ID of common spare part
2	Tên thiết bị con	Spare part name	Label	N	N/A	Name of common spare part
3	Số lượng	Quantity	Textbox	Y	1	Quantity of equipment of each equipment type
4	Số Serial	Serial	Textbox	N	50	Serial of each equipment
7	Xác nhận	Confirm	Button	N	N/A	Confirm to add these equipment to contract
9	Hủy	Cancel	Button	N	N/A	Close dialog

Table 4-31: Fields on create equipment screen

2.7.4.2 Sequence Diagram

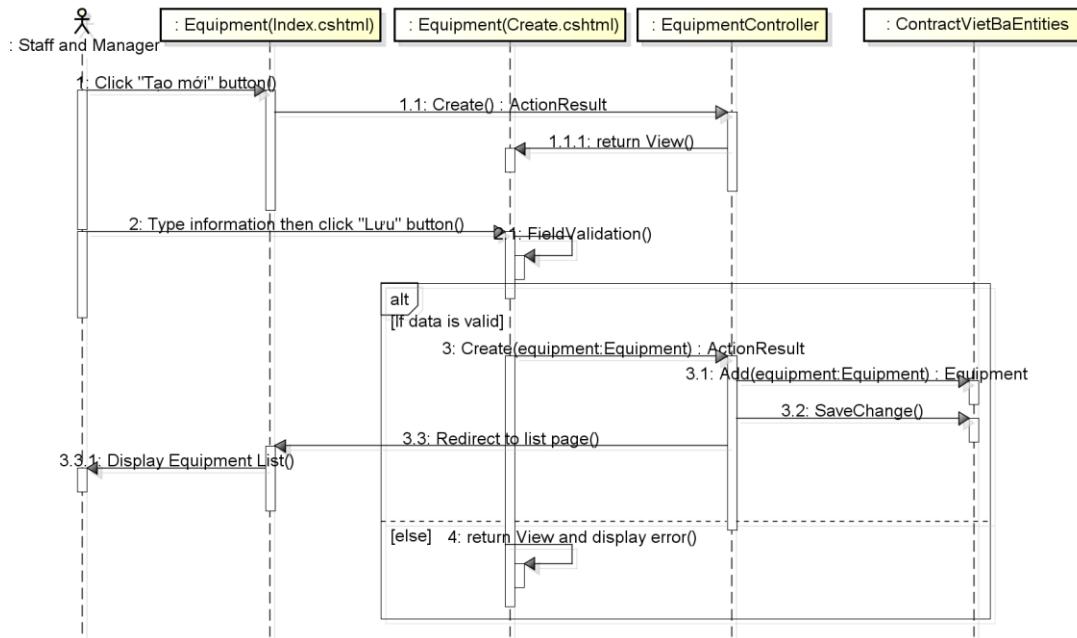


Figure 4-72: Create Equipment Sequence Diagram

2.7.5 UC007-03: Edit Equipment

2.7.5.1 Screen Design

The screenshot shows the 'Sửa Thông Tin Thiết Bị' (Edit Equipment Information) screen. At the top, there's a navigation bar with links for Hợp đồng, Đối tác, Thiết bị, Báo cáo, and Tài khoản. The main area contains fields for 'Số Seri (*)' (Serial Number) with value '2K110940124-X/HF', 'Tên loại thiết bị (*)' (Type) with value 'Máy phát tia cao tần', and a 'Mô Tả' (Description) text area. Below these are two buttons: 'Lưu' (Save) and 'Quay lại' (Back). At the bottom, there are links for Hợp Đồng, Đối Tác, and Thiết bị, along with a copyright notice: 'Copyright © 2014 Viet Ba Medical Equipment Company Limited. All rights reserved.'

Figure 4-73: Edit Equipment Screen

No	Object Name	Object Name in English	Type	Required	Length	Description
----	-------------	------------------------	------	----------	--------	-------------

1	Tên Thiết Bị	Equipment Name	Textbox	Y	50	Input of equipment 's name
2	Tên loại thiết bị	Equipment Type Name	Dropdown list	Y	N/A	Input of equipment type's name
3	Mô tả	Description	Textbox	N	MAX	Input of equipment type's description
4	Lưu	Save	Button	Y	N/A	Click to save edited equipment type
5	Quay lại	Back	Button	N	N/A	Click to back to equipment type index page

Table 4-32: Fields on edit equipment screen

2.7.5.2 Sequence Diagram

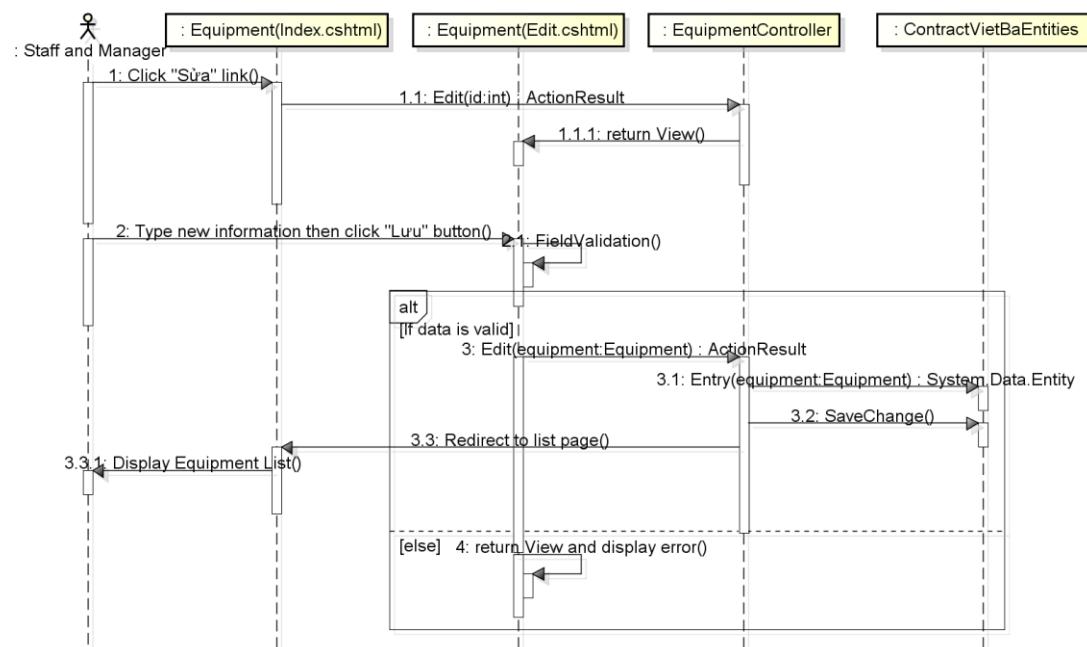


Figure 4-74: Edit Equipment Sequence Diagram

2.7.6 UC007-04: Delete Equipment

2.7.6.1 Screen Design

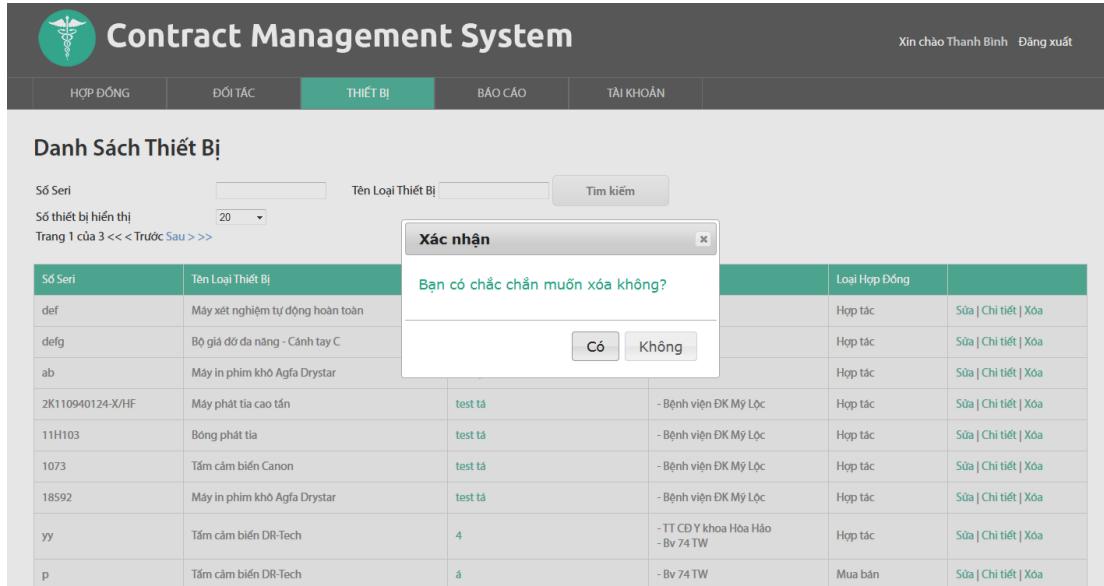


Figure 4-75: Delete Equipment

No	Object Name	Object Name in English	Type	Required	Length	Description
1	Bạn có chắc chắn muốn xóa không	Are you sure to delete	Label	N	N/A	Ask whether user want to delete
2	Có	Yes	Button	N	N/A	User sure to delete
3	Không	No	Button	N	N/A	User do not want to delete

Table 4-33: Fields on equipment screen

2.7.6.2 Sequence Diagram

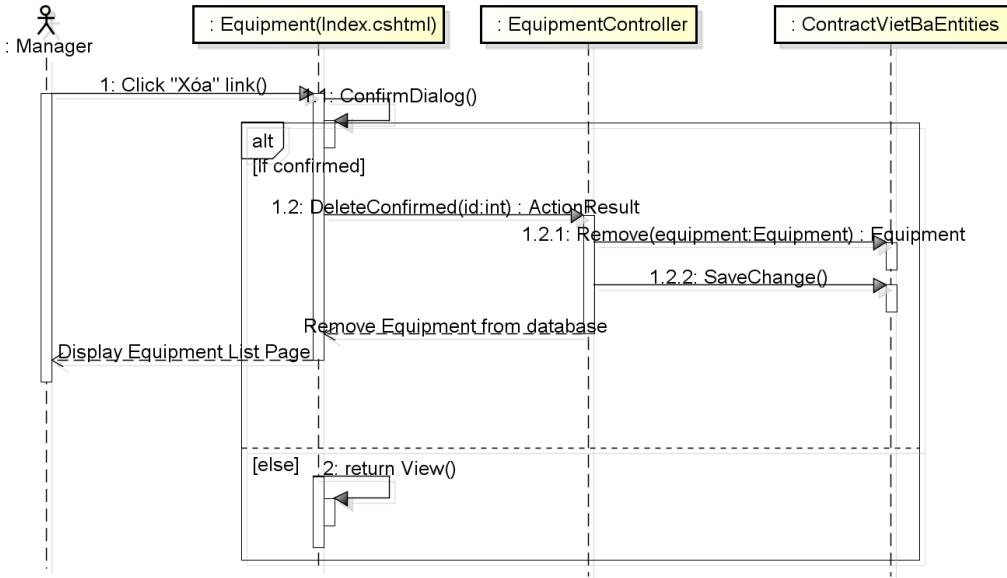


Figure 4-76: Delete Equipment Sequence Diagram

2.7.7 UC007-05: Display Equipment Detail

2.7.7.1 Screen Design

The screenshot shows the 'Contract Management System' interface. The top navigation bar includes links for HỢP ĐỒNG, ĐỐI TÁC, THIẾT BỊ, BÁO CÁO, and TÀI KHOẢN. The user 'Xin chào Nguyễn Thành Bình' is logged in, with a 'Đăng xuất' option. The main content area is titled 'Chi Tiết Thiết Bị'. It displays details for a 'Máy in phim khô Agfa Drystar' (Model DS-5302, produced by Agfa). A table shows child equipment: 'Chip' is listed as 'Tốt' (Good) with a note to replace it. A history section indicates a replacement was made on 19/03/2014 at 12:00:00 AM. A 'Quay lại' (Back) button is at the bottom. The footer contains links for Hợp đồng, Đối tác, Thiết bị, and the copyright notice 'Copyright © 2014 Viet Ba Medical Equipment Company Limited. All rights reserved.'

Figure 4-77: Display equipment detail screen

No	Object Name	Object Name in English	Type	Required	Length	Description
1	Tên Loại Thiết Bị	Equipment Type Name	Textbox	N	N/A	Display full name of

						equipment type
2	Số Seri	Serial	Label	N	N/A	Display full serial number
3	Thể hê/Model	Model	Label	N	N/A	Display full model of equipment
4	Xuất xứ	Origin	Label	N	N/A	Display full origin
5	Hãng sản xuất	Manufacturer	Label	N	N/A	Display full name of manufacturer
6	Mô tả	Description	Label	N	N/A	Display full description
7	Tên thiết bị con	Spare part name	Label	N	N/A	Name of spare part of equipment
8	Tình trạng	Spare part status	Label	N	N/A	Status of spare part of equipment
9	Lịch sử thay thế	Substitution history	Label	N	N/A	Substitution history of spare part of equipment
10	Thay thế	Substitute	Link	N	N/A	Substitute the spare part
11	Sửa chữa	Repair	Link	N	N/A	Repair the spare part
12	Quay lại	Back	Button	N	N/A	Click to back to equipment index page

Table 4-34: Fields on equipment detail screen

2.7.7.2 Sequence Diagram

2.7.7.2.1 Detail equipment

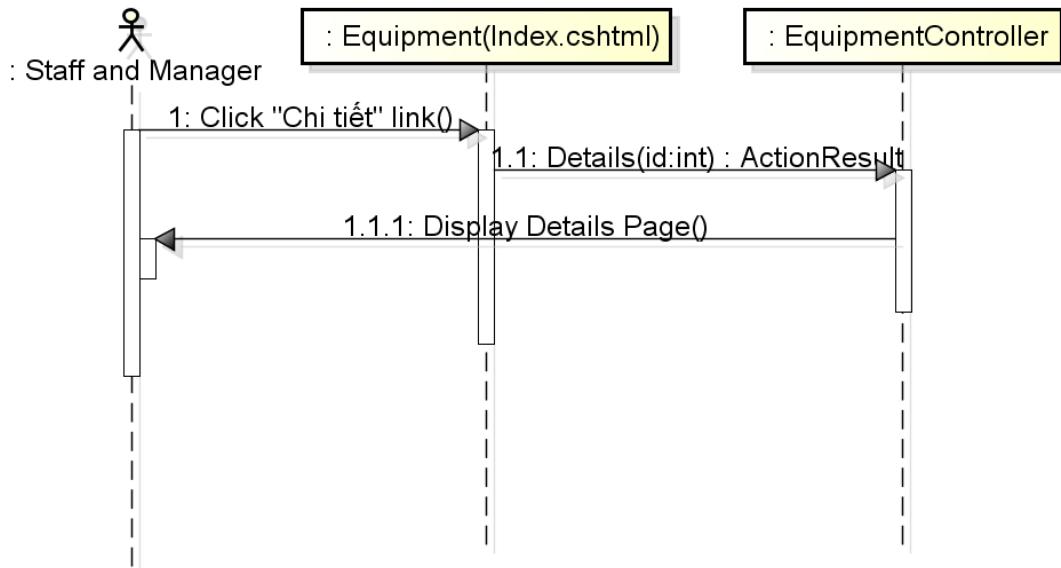
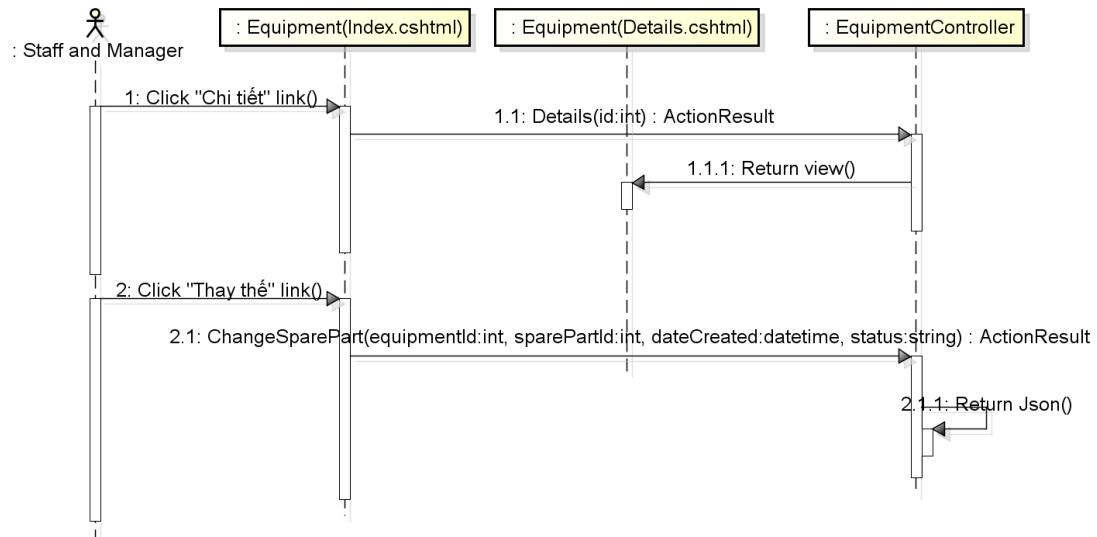
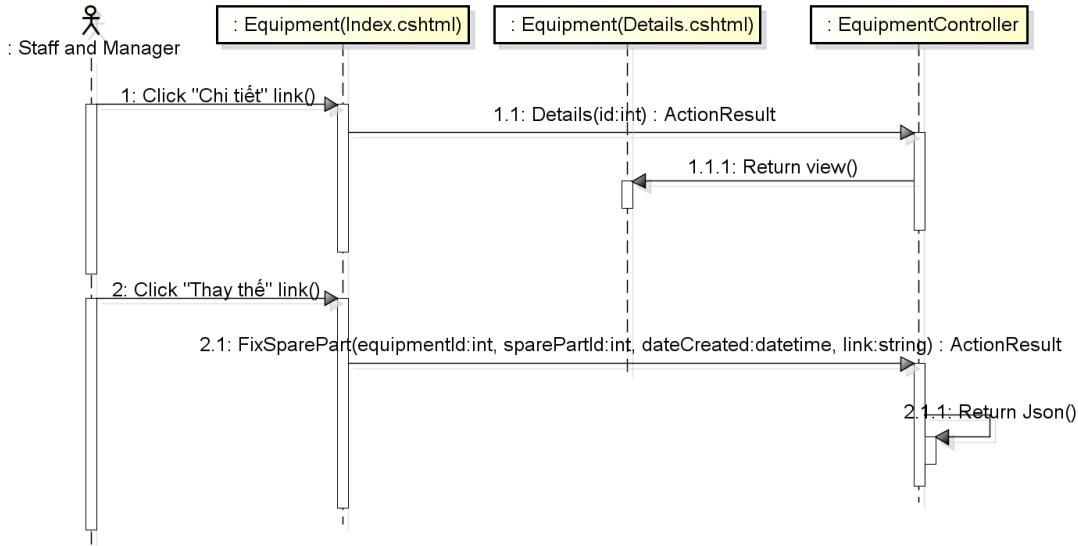


Figure 4-78: Display Equipment Sequence Diagram

2.7.7.2.2 Substitute spare part



2.7.7.2.3 Fix spare part



2.8 UC008- Equipment Type Management

2.8.1 Class Diagram

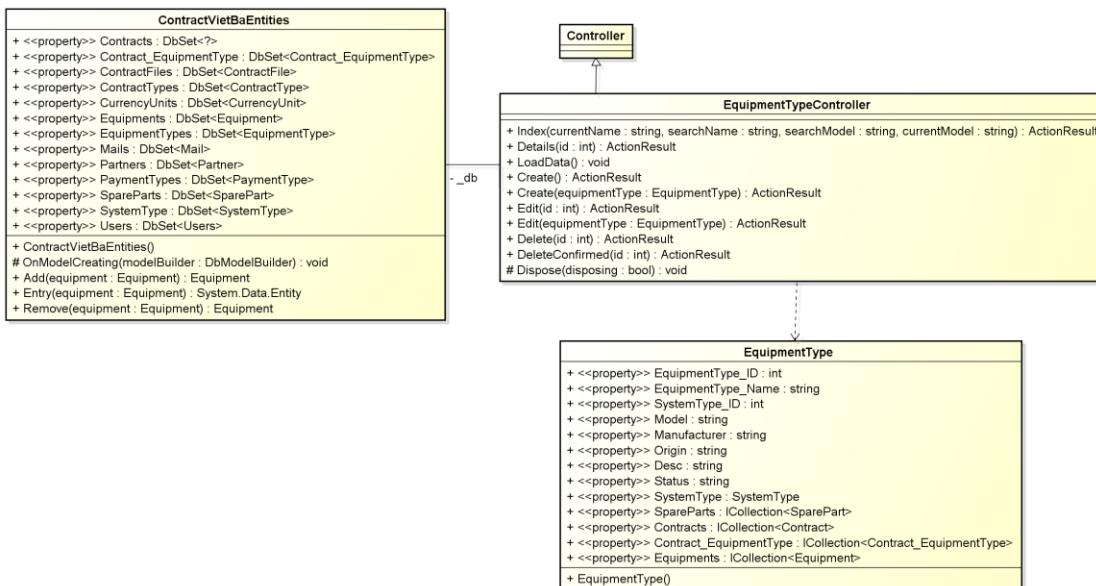


Figure 4-79: Equipment Type Management Class Diagram

2.8.2 Class Description

2.8.2.1 EquipmentTypeController

Class	EquipmentTypeController
-------	-------------------------

Description	Contains declare and constructor for all EquipmentTypeController's attributes.		
Base Class	Controller		
Constructor	N/A		
Prototype	N/A		
Source File	EquipmentTypeController.cs		
Namespace	ContractManagement.Controllers		
Attributes	N/A		
Methods			
Name	Input	Output	Description
Index	currentName, searchName, searchModel, searchSerial, currentModel, currentSerial	ActionResult	Display index page
Details	id	ActionResult	Display details page
LoadData		void	Load common data
Create		ActionResult	Display create page
Create	equipment	ActionResult	Save created equipment
Edit	id	ActionResult	Display edit page
Edit	equipment	ActionResult	Save edited equipment
DeleteConfirmed	id	ActionResult	Confirm deleting equipment

2.8.3 UC008-01: Search Equipment Type

2.8.3.1 Screen Design

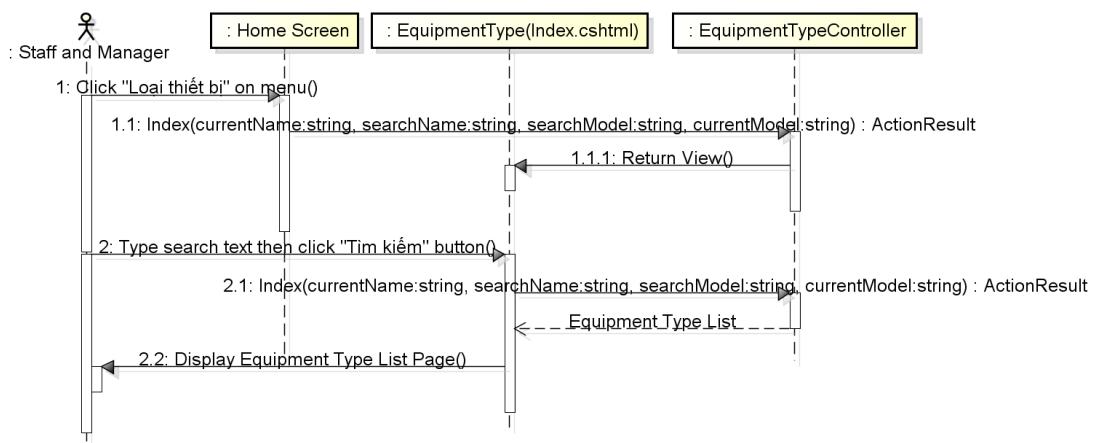
Figure 4-80: Search Equipment type Screen

No	Object Name	Object Name in English	Type	Required	Length	Description
1	Tên Loại Thiết Bị	Equipment Type Name	Textbox	N	50	Search equipment type by its name
2	Model	Model	Textbox	N	50	Search equipment type by its model
3	Tìm kiếm	Search	Button	N	N/A	Click to start searching equipment type by its attributes
4	Số loại thiết bị hiển thị	Number of equipment type to display	Dropdown list	N	N/A	User choose number of equipment type to display
5	Trang	Paging	Link	N	N/A	User can choose page to display
6	Tạo mới	Create New	Button	N	N/A	Click to move to create new equipment type screen

7	Tên loại thiết bị	Equipment Type Name	Label	N	N/A	Name of equipment type
8	Hệ thống	System Type Name	Label	N	N/A	System Type of equipment type
9	Model	Model	Label	N	N/A	Model of equipment type
10	Xuất xứ	Origin	Label	N	N/A	Origin of equipment type
11	Hãng sản xuất	Manufacturer	Label	N	N/A	Manufacturer of equipment type
12	Sửa	Edit	Link	N	N/A	Click to move to edit specific equipment screen
13	Chi tiết	Detail	Link	N	N/A	Click to move to specific equipment type detail screen
14	Xóa	Delete	Link	N	N/A	Click to delete specific equipment type

Table 4-35: Fields on search equipment type screen

2.8.3.2 Sequence Diagram

**Figure 4-81: Search Equipment Type Sequence Diagram**

2.8.4 UC008-02: Create Equipment Type

2.8.4.1 Screen Design

The screenshot shows the 'Contract Management System' interface. At the top, there is a navigation bar with icons for Hợp đồng (Contract), Đối tác (Partners), Thiết bị (Equipment), Báo cáo (Report), and Tài khoản (Account). On the right, there is a welcome message 'Xin chào Thanh Bình Đăng xuất' (Hello Thanh Binh Logout). Below the navigation bar, the main content area has a title 'Thêm Mới Loại Thiết Bị' (Create New Equipment Type). The form contains the following fields:

- Tên Loại Thiết Bị (*)
- Tên Hệ Thống (*)
- Thể Hệ/Model (*)
- Hãng Sản Xuất
- Xuất Xứ
- Mô Tả

At the bottom of the form are two buttons: 'Lưu' (Save) and 'Quay lại' (Back).

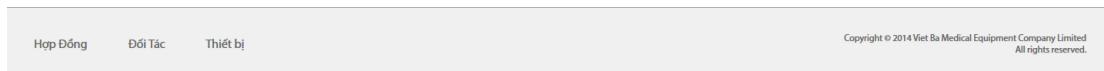


Figure 4-82: Create Equipment Type Screen

No	Object Name	Object Name in English	Type	Required	Length	Description
1	Tên Thiết Bị	Equipment Type Name	Textbox	Y		Input of equipment type name
2	Tên hệ thống	System Type Name	Dropdown list	Y		Input of system type name of equipment type
3	Thể hệ/Model	Model	Textbox	Y		Input of equipment type's model
4	Hãng sản xuất	Manufacturer	Textbox	N		Input of equipment type's manufacturer
5	Xuất xứ	Origin	Textbox	N		Input of equipment type's origin
6	Mô tả	Description	Textbox	N		Input of equipment type's description

7	Lưu	Save	Button	Y	N/A	Click to create new equipment
8	Quay lại	Back	Button	N	N/A	Click to back to equipment index page

Table 4-36: Fields on create equipment type screen

2.8.4.2 Sequence Diagram

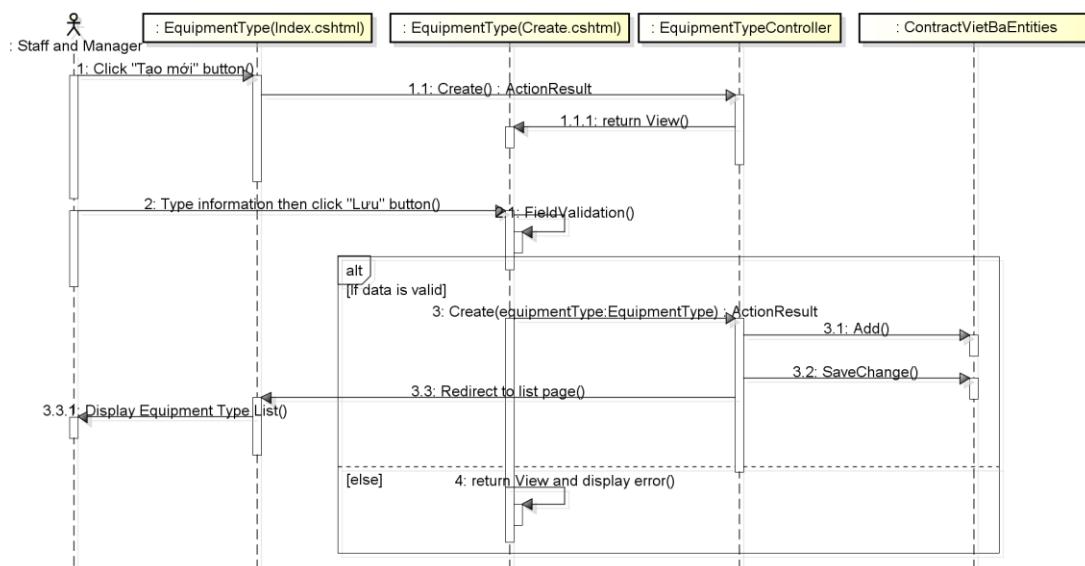


Figure 4-83: Create Equipment Type Sequence Diagram

2.8.5 UC008-03: Edit Equipment Type

2.8.5.1 Screen Design

The screenshot shows the 'Contract Management System' interface. At the top, there is a navigation bar with icons for medical equipment and links to 'HỢP ĐỒNG', 'ĐỐI TÁC', 'THIẾT BỊ', 'BÁO CÁO', and 'TÀI KHOẢN'. On the right, there are links for 'Xin chào Thanh Bình' and 'Đăng xuất'. Below the navigation bar, the title 'Sửa Thông Tin Loại Thiết Bị' is displayed. The main form contains fields for editing equipment type information:

- Tên Loại Thiết Bị (*) : Bó giá đỡ đa năng - Cánh tay C
- Tên Hệ Thống (*) : X - Quang KTS
- Thể Hộ/Model (*) : CAS - PLUS
- Hàng Sản Xuất : Việt Ba
- Xuất Xứ : Việt Nam
- Mô Tả :

At the bottom of the form are two buttons: 'Lưu' (Save) and 'Quay lại' (Back). At the very bottom of the page, there is a footer with links to 'Hợp Đồng', 'Đối Tác', 'Thiết bị', and copyright information: 'Copyright © 2014 Viet Ba Medical Equipment Company Limited. All rights reserved.'

Figure 4-84: Edit Equipment Type Screen

No	Object Name	Object Name in English	Type	Required	Length	Description
1	Tên Loại Thiết Bị	Equipment Type Name	Textbox	Y		Input of equipment type's name
2	Tên hệ thống	System Type Name	Dropdown list	Y		Input of system type's name of equipment
3	Model	Model	Textbox	Y		Input of equipment type's model
4	Hãng sản xuất	Manufacturer	Textbox	N		Input of equipment type's manufacturer
5	Xuất xứ	Origin	Textbox	N		Input of equipment type's origin
6	Mô tả	Description	Textbox	N		Input of equipment type's description
7	Lưu	Save	Button	Y	N/A	Click to save edited equipment type
8	Quay lại	Back	Button	N	N/A	Click to back to equipment type index page

Table 4-37: Fields on edit equipment type screen

2.8.5.2 Sequence Diagram

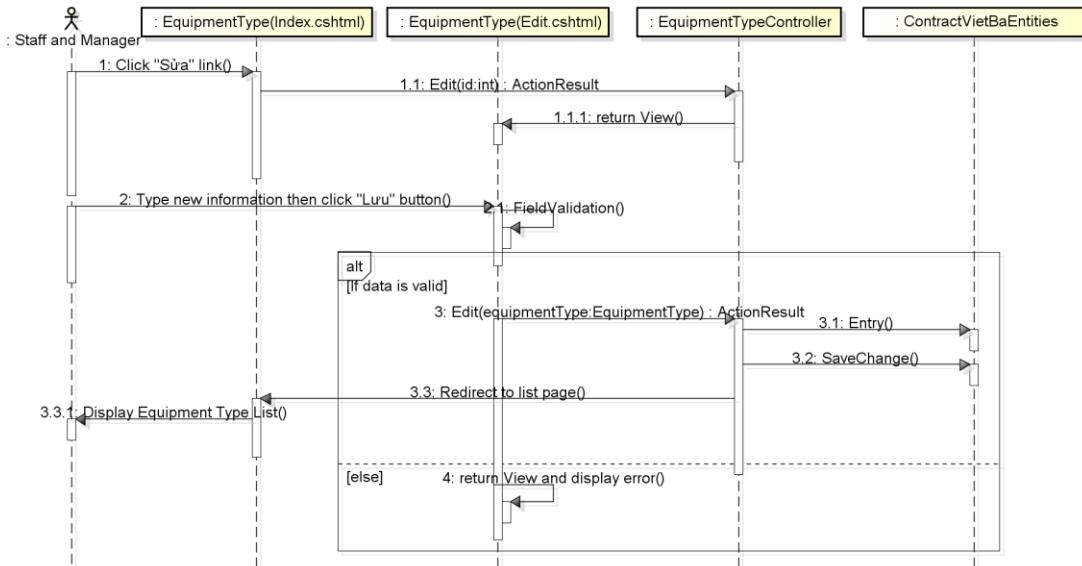


Figure 4-85: Edit Equipment Type Sequence Diagram

2.8.6 UC008-04: Delete Equipment Type

2.8.6.1 Screen Design

The screenshot shows the 'Danh Sách Loại Thiết Bị' (List of Equipment Types) page. A modal dialog titled 'Xác nhận' (Confirm) is displayed, asking 'Bạn có chắc chắn muốn xóa không?' (Are you sure you want to delete?). The dialog has 'Có' (Yes) and 'Không' (No) buttons. The main table lists various equipment types with columns for Name, System, Manufacturer, and Actions (Sửa | Chi tiết | Xóa).

Tên Loại Thiết Bị	Hệ thống	Hãng Sản Xuất
Bàn chụp tư thế nằm	X - Quang	DR-GEM
Bộ giá đỡ da nẵng - Cảnh tay C	X - Quang	Việt Ba
Bóng phát tia	X - Quang	Toshiba
Bóng X-Quang	X - Quang KTS	DR-GEM
Giá đựng tấm tư thế chụp đứng	X - Quang KTS	DR-GEM
Lưới lọc tia X	X - Quang KTS	Nhật bản
Máy in phim khô Agfa Drystar	X - Quang KTS	Agfa
Máy in phim khô Agfa Drystar	X - Quang KTS	Agfa
Máy khí máu	Xét nghiệm	Medica

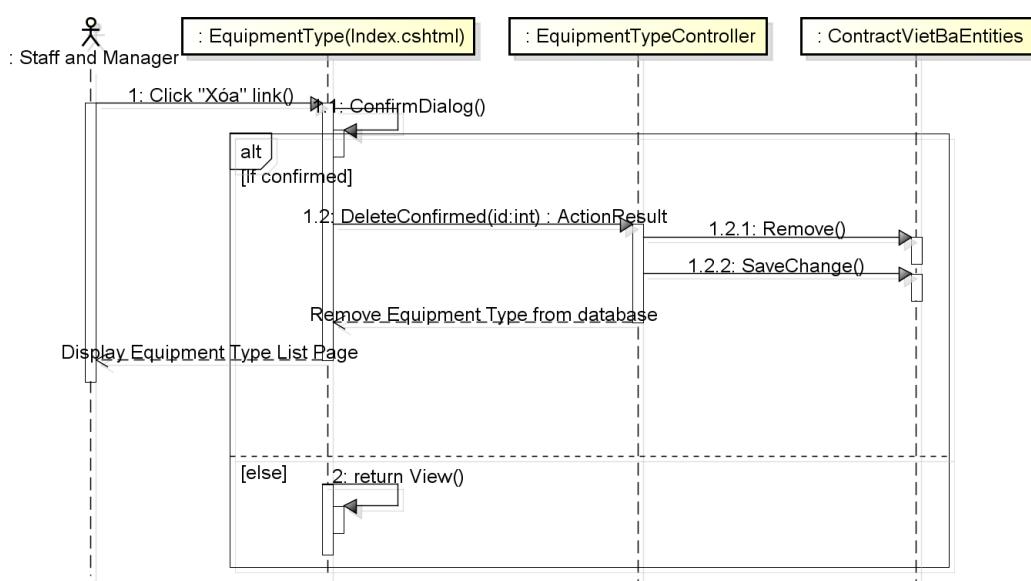
Figure 4-86: Delete Equipment Type

No	Object Name	Object Name in English	Type	Required	Length	Description
----	-------------	------------------------	------	----------	--------	-------------

1	Bạn có chắc chắn muốn xóa không	Are you sure to delete	Label	N	N/A	Ask whether user want to delete
2	Có	Yes	Button	N	N/A	User sure to delete
3	Không	No	Button	N	N/A	User do not want to delete

Table 4-38: Fields on equipment type screen

2.8.6.2 Sequence Diagram

**Figure 4-87: Delete Equipment Type Sequence Diagram**

2.8.7 UC008-05: Display Equipment Type Detail

2.8.7.1 Screen Design

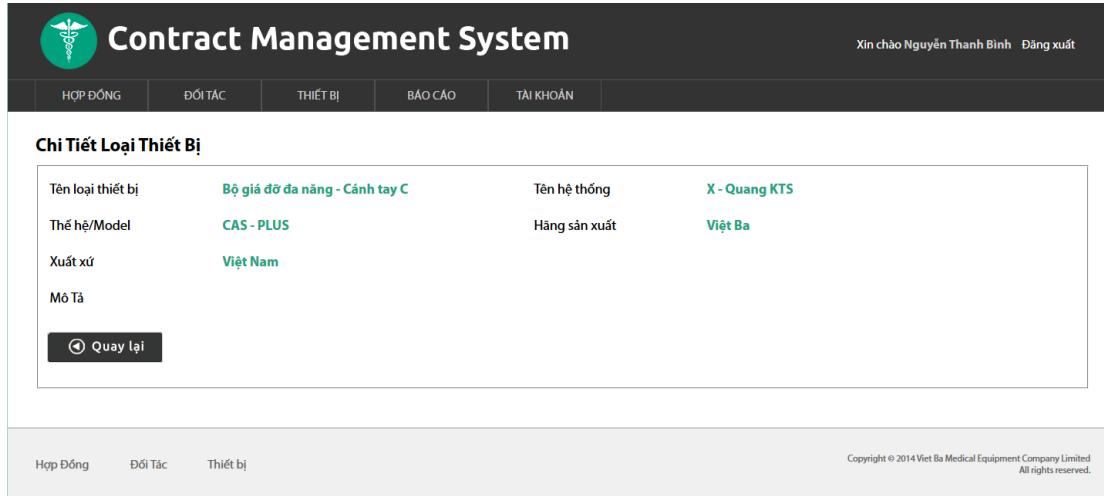


Figure 4-88: Display equipment type detail screen

No	Object Name	Object Name in English	Type	Required	Length	Description
1	Tên Loại Thiết Bị	Equipment Type Name	Textbox	Y		Display full name of equipment type
2	Tên hệ thống	System Type Name	Dropdown list	Y		Display full name of system type
3	Model	Model	Textbox	Y		Display full model
4	Hãng sản xuất	Manufacturer	Textbox	N		Display full name of manufacturer
5	Xuất xứ	Origin	Textbox	N		Display full origin
6	Mô tả	Description	Textbox	N		Display full description
7	Quay lại	Back	Button	N	N/A	Click to back to equipment index page

Table 4-39: Fields on equipment type detail screen

2.8.7.2 Sequence Diagram

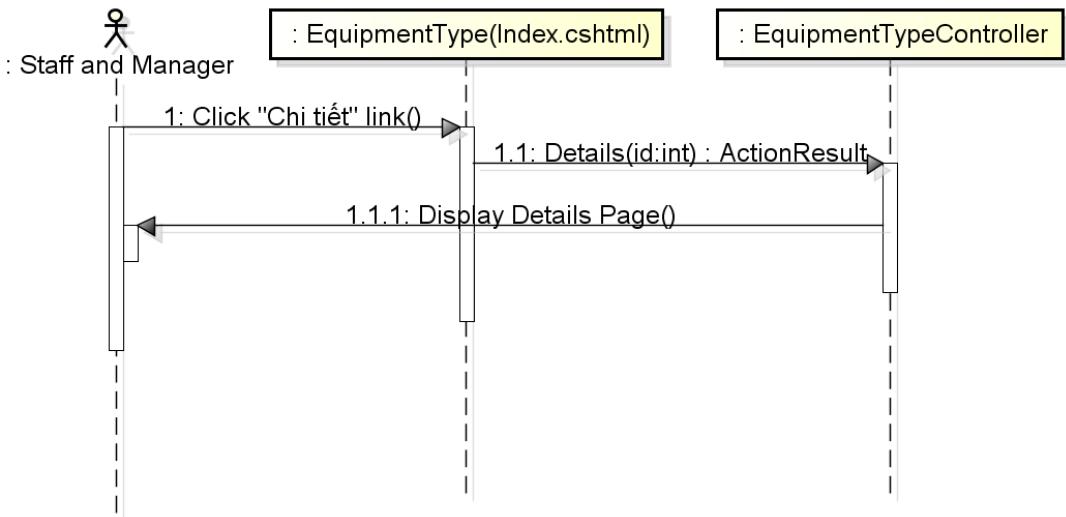


Figure 4-89: Display Equipment Type Sequence Diagram

2.9 UC008- Spare Part Management

2.9.1 Class Diagram

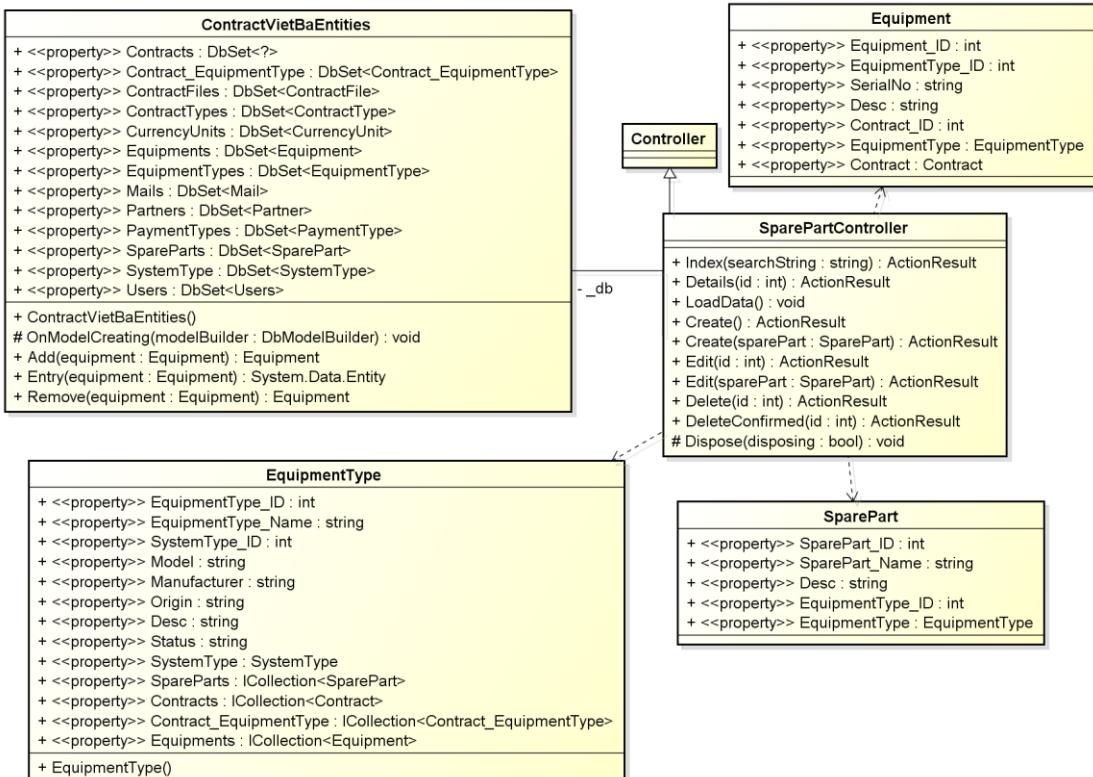


Figure 4-90: Spare Part Management Class Diagram

2.9.2 Class Description

2.9.2.1 SparePartController

Class	SparePartController		
Description	Contains declare and constructor for all SparePartController's attributes.		
Base Class	Controller		
Constructor	N/A		
Prototype	N/A		
Source File	SparePartController.cs		
Namespace	ContractManagement.Controllers		
Attributes	N/A		
Methods			
Name	Input	Output	Description
Index		ActionResult	Display index page
Details	id	ActionResult	Display details page
LoadData		void	Load common data
Create		ActionResult	Display create page
Create	sparePart	ActionResult	Save created spare part
Edit	id	ActionResult	Display edit page
Edit	sparePart	ActionResult	Save edited spare part
DeleteConfirmed	id	ActionResult	Confirm deleting spare part

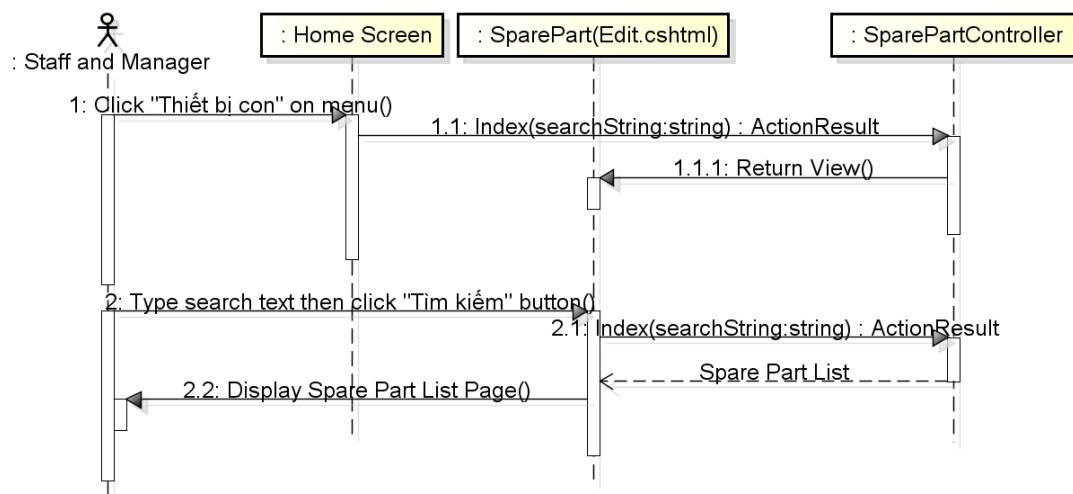
2.9.3 UC009-01: Search Spare Part

2.9.3.1 Screen Design

Figure 4-91: Search Spare Part Screen

No	Object Name	Object Name in English	Type	Required	Length	Description
1	Tên thiết bị con	Spare part Name	Textbox	N	50	User can search with spare part name
2	Đặc biệt của Seri	Special Spare Part of which Serial	Textbox	N	50	User can search with special spare part of which serial
3	Tìm kiếm	Search	Button	N	N/A	User click on search button to get spare part they want.
4	Tạo mới	Create	Button	N	N/A	Redirect to create new spare part screen
5	Thiết bị con	Spare Part Name	Label	N	N/A	Name of spare part
6	Thiết bị chính	Equipment Type Name	Label	N	N/A	Equipment type of spare part
7	Đặc biệt của Seri	Special Spare Part of which Serial	Label	N	N/A	Special Spare Part of which Serial

8	Sửa	Edit	Link	N	N/A	Redirect to edit spare part screen
9	Chi tiết	Details	Link	N	N/A	Redirect to display spare part detail screen
10	Xóa	Delete	Link	N	N/A	Pop-up window ask whether user confirm to delete spare part.

Table 4-40: Fields on search spare part screen**2.9.3.2 Sequence Diagram****Figure 4-92: Search Spare Part Sequence Diagram**

2.9.4 UC009-02: Create Spare Part

2.9.4.1 Screen Design

Figure 4-93: Create Spare Part Screen

No	Object Name	Object Name in English	Type	Required	Length	Description
1	Tên thiết bị con	Spare Part Name	Textbox	Y	50	User enters name of spare part
2	Tên thiết bị chính	Equipment Name	Dropdown list	Y	N/A	User choose equipment name
3	Đặc biệt	Special	Checkbox	N	N/A	Special spare part of specific equipment
4	Seri	Serial	Dropdown list	N	N/A	Serial of equipment which special spare part belongs to
5	Mô tả	Description	Text Area	N	MAX	User input description
6	Lưu	Save	Button	Y	N/A	Click to create new spare part

7	Quay lại	Back	Button	N	N/A	Click to back to spare part index page
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Table 4-41: Fields on create spare part screen

2.9.4.2 Sequence Diagram

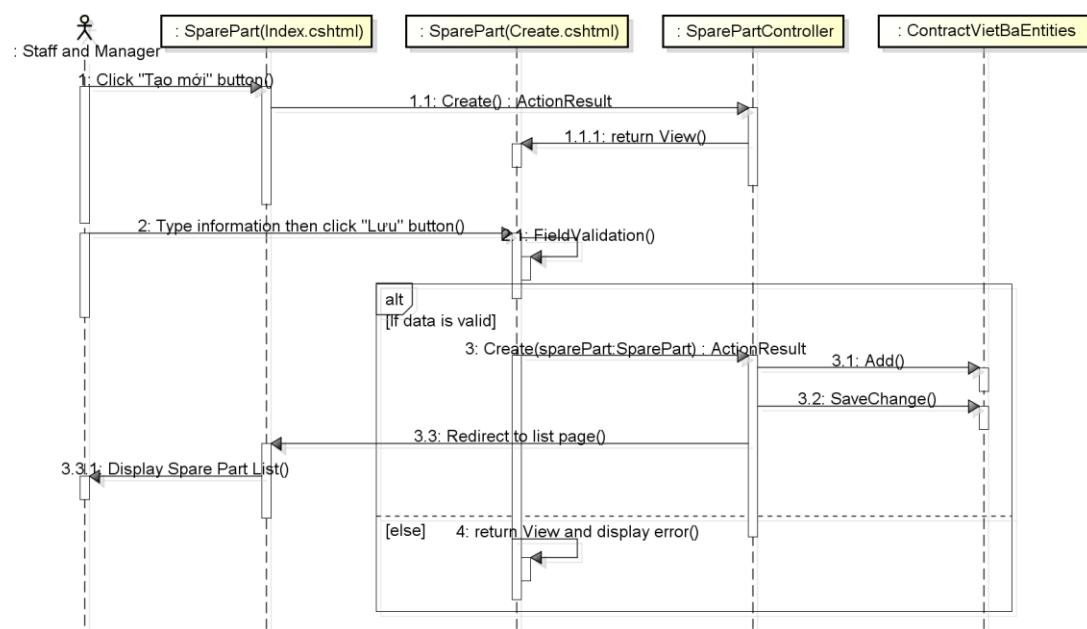


Figure 4-94: Create Spare Part Sequence Diagram

2.9.5 UC009-03: Edit Spare Part

2.9.5.1 Screen Design



Contract Management System

Xin chào Nguyễn Thành Bình Đăng xuất

- [HỢP ĐỒNG](#)
- [ĐỐI TÁC](#)
- [THIẾT BỊ](#)
- [BÁO CÁO](#)
- [TÀI KHOẢN](#)

Sửa Thông Tin Thiết Bị Con

Thiết bị con (*)	<input type="text" value="sdes"/>
Thiết bị chính (*)	Máy xét nghiệm tự động hoàn toàn
Đặc biệt của Seri	def
Mô Tả	<input type="text"/>

[Lưu](#)
[!\[\]\(3f489b42179a901349bca1c102bc9ff8_img.jpg\) Quay lại](#)

Figure 4-95: Edit Spare Part Screen

No	Object Name	Object Name in English	Type	Required	Length	Description
1	Thiết bị con	Spare Part Name	Textbox	Y	50	User edits name of spare part
2	Thiết bị chính	Main equipment Name	Label	N	N/A	Main equipment of spare part
3	Đặc biệt của Seri	Special of Serial	Label	N	N/A	Serial of equipment that special spare part belongs to
4	Mô tả	Description	Text Area	N	MAX	User input sdescription
5	Lưu	Save	Button	Y	N/A	Click to create new spare part
6	Quay lại	Back	Button	N	N/A	Click to back to spare part index page

Table 4-42: Fields on edit spare part screen

2.9.5.2 Sequence Diagram

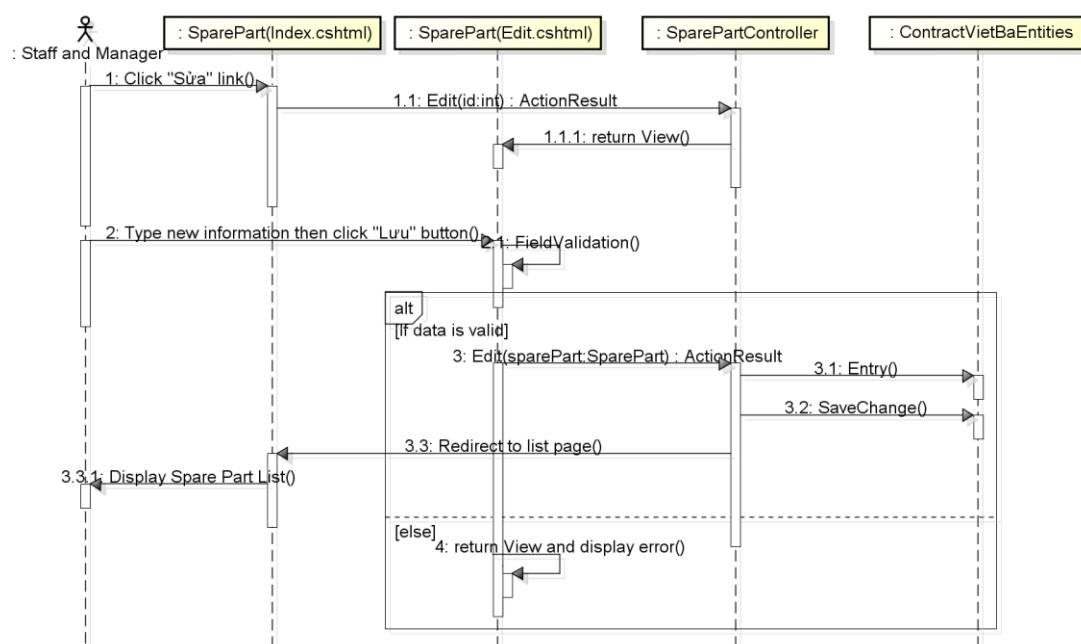


Figure 4-96: Edit Spare Part Sequence Diagram

2.9.6 UC009-04: Delete Spare Part

2.9.6.1 Screen Design

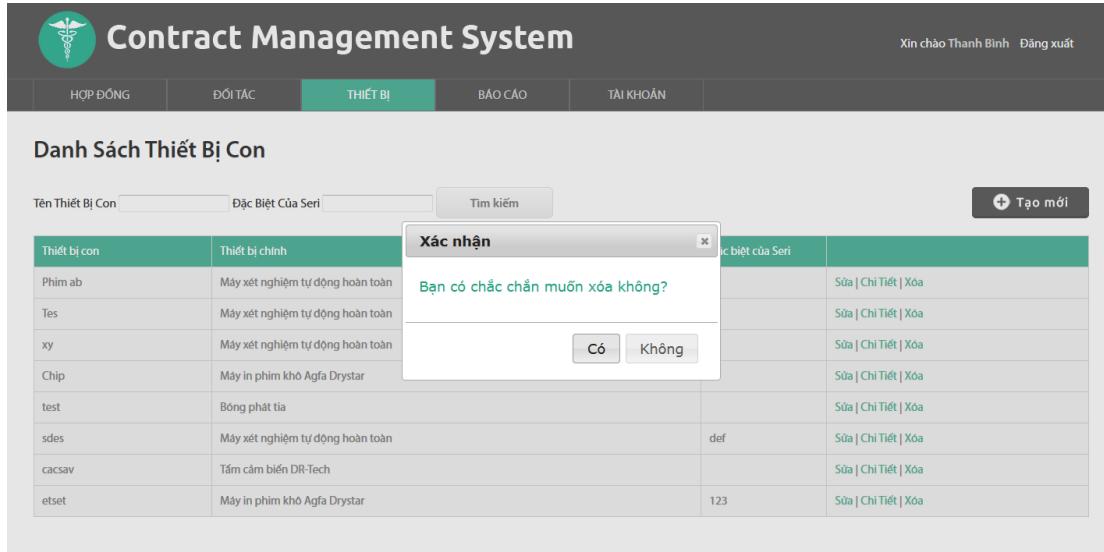


Figure 4-97: Delete Spare Part

No	Object Name	Object Name in English	Type	Required	Length	Description
1	Bạn có chắc chắn muốn xóa không	Are you sure to delete	Label	N	N/A	Ask whether user want to delete
2	Có	Yes	Button	N	N/A	User sure to delete
3	Không	No	Button	N	N/A	User do not want to delete

Table 4-43: Fields on delete spare part screen

2.9.6.2 Sequence Diagram

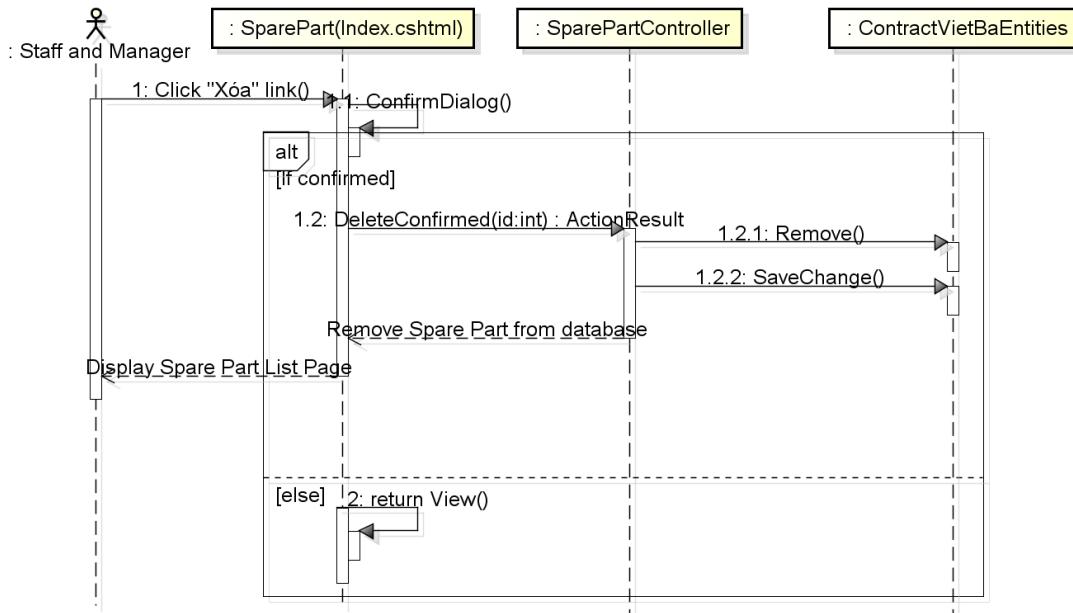


Figure 4-98: Delete Spare Part Sequence Diagram

2.9.7 UC009-05: Display Spare Part Detail

2.9.7.1 Screen Design

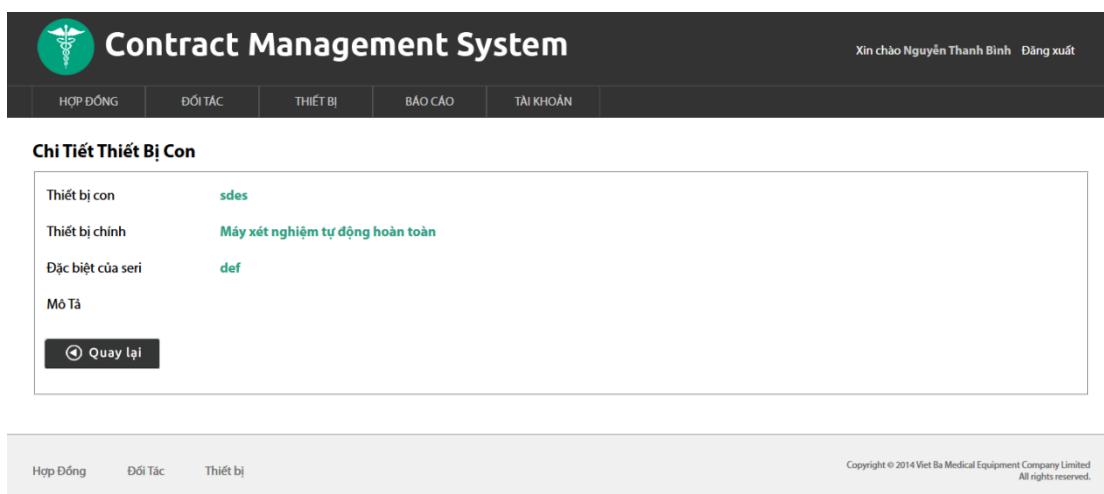
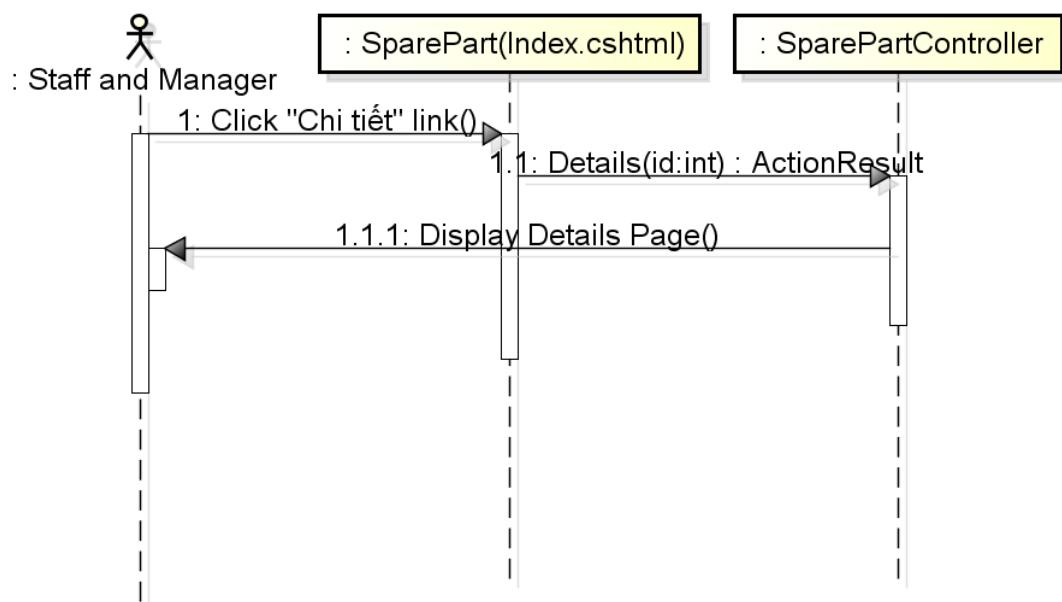


Figure 4-99: Display spare part detail screen

No	Object Name	Object Name in English	Type	Required	Length	Description
1	Thiết bị con	Spare Part Name	Label	N	N/A	Name of spare part
2	Thiết bị chính	Main equipment	Label	N	N/A	Name of main equipment of

		Name				spare part
3	Đặc biệt của Seri	Special of Serial	Label	N	N/A	Serial of equipment that special spare part belongs to
4	Mô tả	Description	Label	N	MAX	Description of spare part
5	Quay lại	Back	Button	N	N/A	Click to back to spare part index page

Table 4-44: Fields on display spare part detail screen**2.9.7.2 Sequence Diagram****Figure 4-100: Display Spare Part Sequence Diagram**

2.10 UC009- System Type Management

2.10.1 Class Diagram

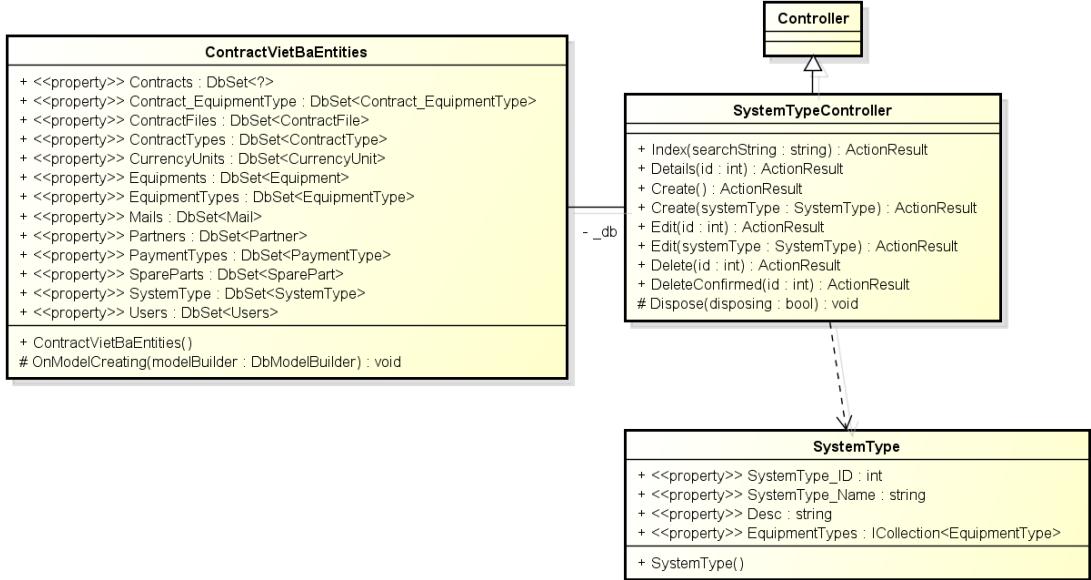


Figure 4-101: System Type Management Class Diagram

2.10.2 Class Description

2.10.2.1 SystemTypeController

Class	SystemTypeController		
Description	Contains declare and constructor for all SystemTypeController's attributes.		
Base Class	Controller		
Constructor	N/A		
Prototype	N/A		
Source File	SystemTypeController.cs		
Namespace	ContractManagement.Controllers		
Attributes	N/A		
Methods			
Name	Input	Output	Description

Index		ActionResult	Display index page
Details	id	ActionResult	Display details page
Create		ActionResult	Display create page
Create	systemType	ActionResult	Save created system type
Edit	id	ActionResult	Display edit page
Edit	systemType	ActionResult	Save edited system type
DeleteConfirmed	id	ActionResult	Confirm deleting system type

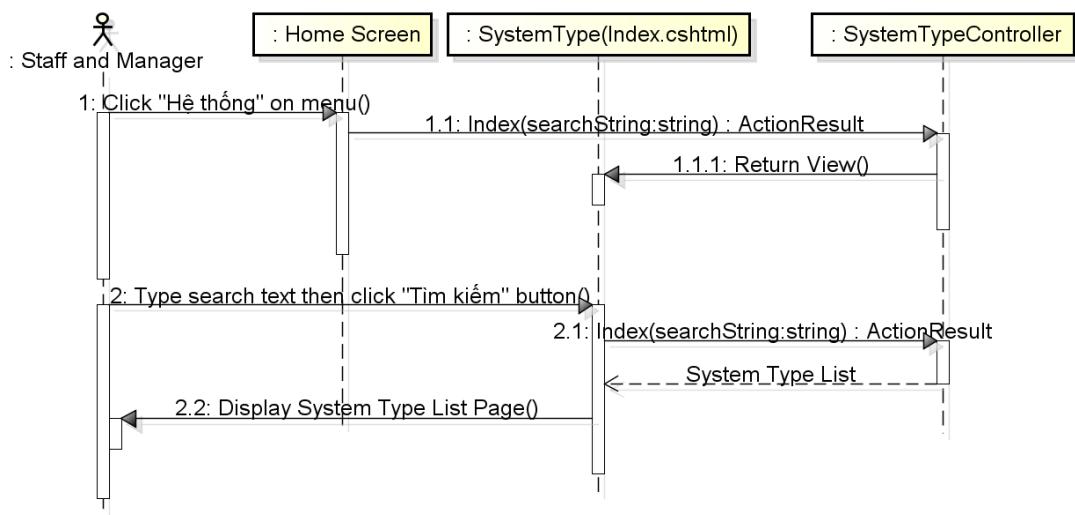
2.10.3 UC010-01: Search System Type

2.10.3.1 Screen Design

Figure 4-102: Search System Type Screen

No	Object Name	Object Name in English	Type	Required	Length	Description
1	Tên hệ thống	System Type Name	Textbox	N	N/A	User can search with system type name
2	Tìm kiếm	Search	Button	N	N/A	User click on search button to get system type they want.
3	Tạo mới	Create	Link	N	N/A	Redirect to create new system type screen

4	Hệ thống	System Type Name	Label	N	N/A	Name of system type
5	Mô tả	Description	Label	N	N/A	Description of system type
6	Sửa	Edit	Link	N	N/A	Redirect to edit system type screen
7	Chi tiết	Detail	Link	N	N/A	Redirect to detail system type screen
8	Xóa	Delete	Link	N	N/A	Pop-up window ask whether user confirm to delete system type.

Table 4-45: Fields on search system type screen**2.10.3.2 Sequence Diagram****Figure 4-103: Search System Type Sequence Diagram**

2.10.4 UC010-02: Create System Type

2.10.4.1 Screen Design

The screenshot shows the 'Contract Management System' interface. At the top, there is a navigation bar with links: HỢP ĐỒNG, ĐỐI TÁC, THIẾT BỊ, BẢO CÁO, and TÀI KHOẢN. On the right side of the header, there is a greeting 'Xin chào Nguyễn Thành Bình Đăng xuất'. Below the header, the main content area has a title 'Thêm Mới Hệ Thống'. It contains two input fields: 'Tên hệ thống (*)' and 'Mô Tả'. At the bottom, there are two buttons: 'Lưu' (Save) and 'Quay lại' (Back).

Figure 4-104: Create System Type Screen

No	Object Name	Object Name in English	Type	Required	Length	Description
1	Tên hệ thống	System Type	Textbox	Y	50	User input system type
2	Mô tả	Description	Text Area	N	N/A	User input description
3	Lưu	Save	Button	N	N/A	User save system type to database
4	Quay trở lại danh sách	Back	Button	N	N/A	Redirect to system type list.

Table 4-46: Fields on create system type screen

2.10.4.2 Sequence Diagram

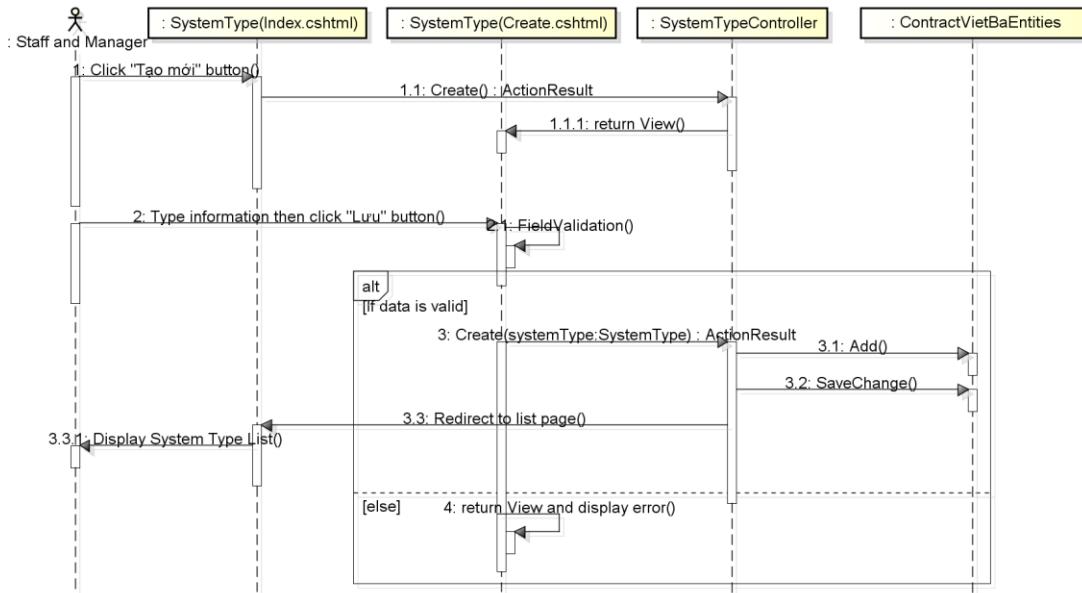


Figure 4-105: Create System Type Sequence Diagram

2.10.5 UC010-03: Edit System Type

2.10.5.1 Screen Design

The screenshot shows the 'Edit System Type' screen of the Contract Management System. At the top, there's a navigation bar with links for Hợp đồng, Đối tác, Thiết bị, Báo cáo, and Tài khoản. The main title is 'Contract Management System' with a logo. Below the title, a sub-header says 'Sửa Thông Tin Hệ Thống'. The form contains fields for 'Tên hệ thống (*)' (X - Quang KTS) and 'Mô Tả' (empty). There are two buttons at the bottom: 'Lưu' (Save) and 'Quay lại' (Back).

Figure 4-106: Edit System Type Screen

No	Object Name	Object Name in English	Type	Required	Length	Description
1	Tên hệ thống	System Type	Textbox	Y	50	User modify system type
2	Mô tả	Description	Text Area	N	N/A	User modify description

3	Lưu	Save	Button	N	N/A	User save system type to database
4	Quay trở lại danh sách	Back	Button	N	N/A	Redirect to system type list.

Table 4-47: Fields on edit system type screen

2.10.5.2 Sequence Diagram

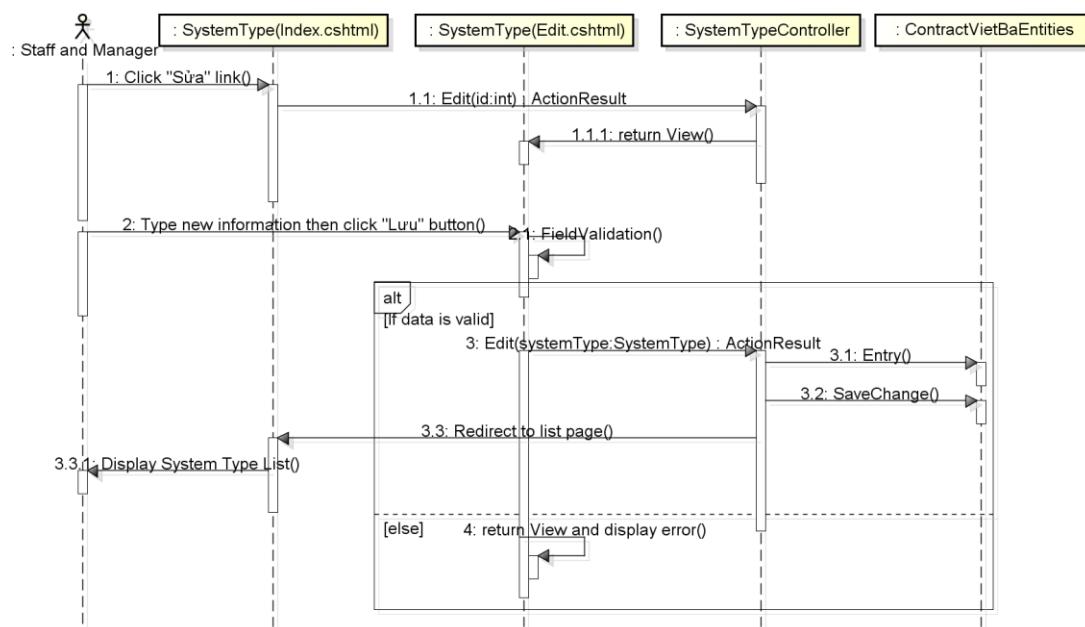


Figure 4-107: Edit System Type Sequence Diagram

2.10.6 UC010-04: Delete System Type

2.10.6.1 Screen Design

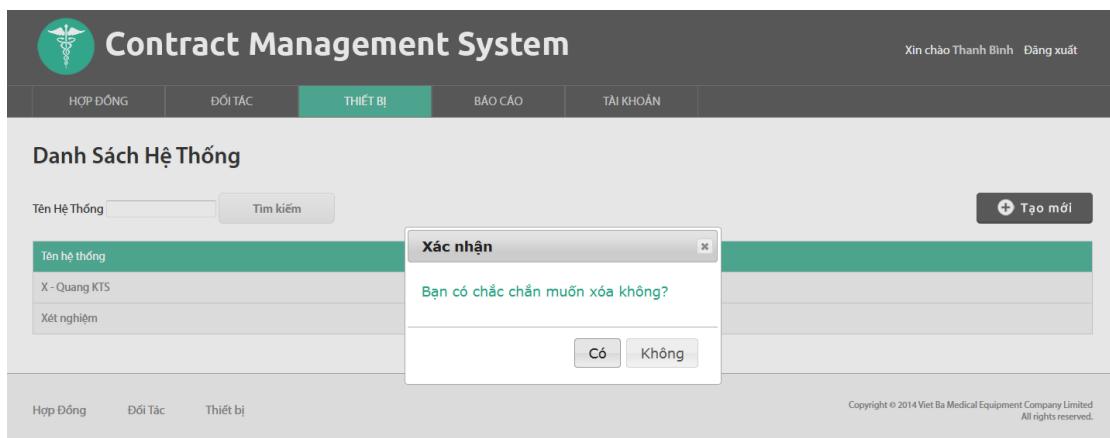
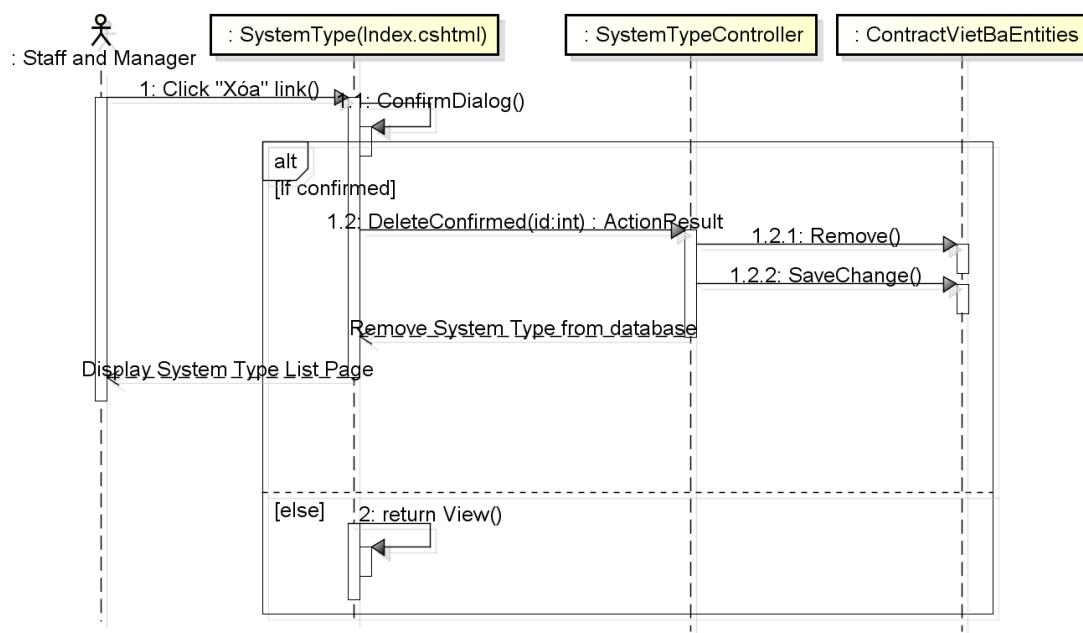


Figure 4-108: Delete System Type

No	Object Name	Object Name in English	Type	Required	Length	Description
1	Bạn có chắc chắn muốn xóa không	Are you sure to delete	Label	N	N/A	Ask whether user want to delete
2	Có	Yes	Button	N	N/A	User sure to delete
3	Không	No	Button	N	N/A	User do not want to delete

Table 4-48: Fields on delete system type screen**2.10.6.2 Sequence Diagram****Figure 4-109: Delete System Type Sequence Diagram**

2.10.7 UC010-05: Display System Type Detail

2.10.7.1 Screen Design

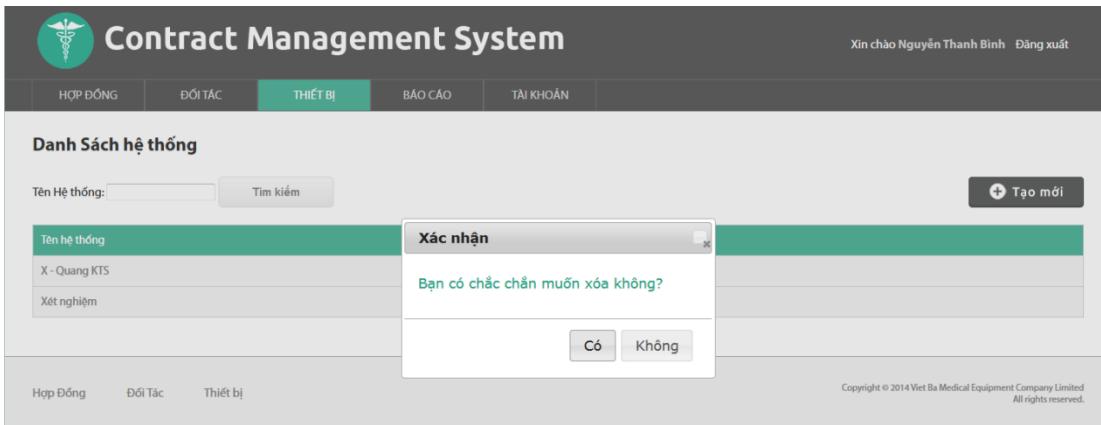


Figure 4-110: Display system type detail screen

No	Object Name	Object Name in English	Type	Required	Length	Description
1	Tên hệ thống	System Type	Label	Y	N/A	System type name
2	Mô tả	Description	Label	Y	N/A	Description of system type
3	Quay lại	Back	Label	Y	N/A	Redirect to system type list

Table 4-49: Fields on display system type detail screen

2.10.7.2 Sequence Diagram

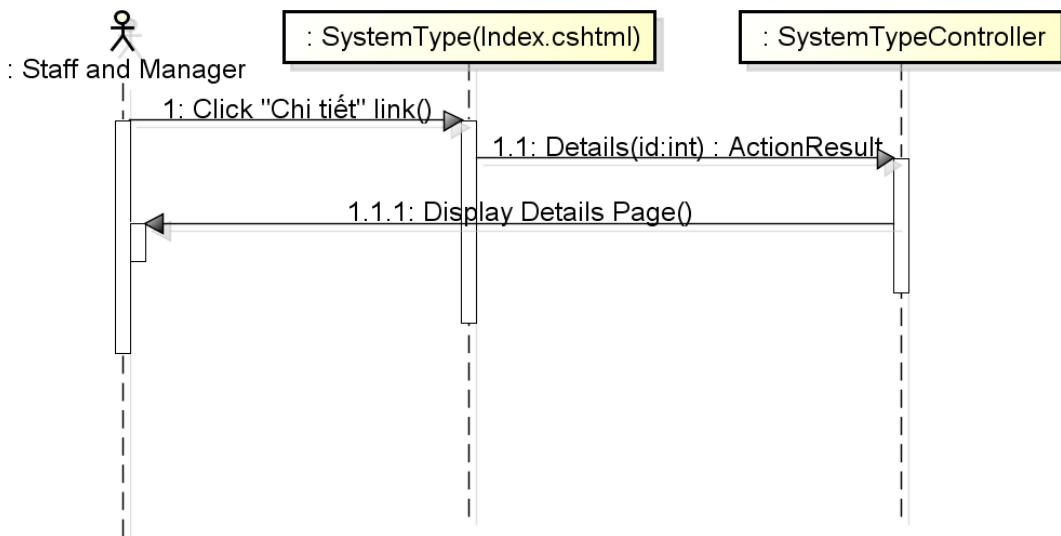
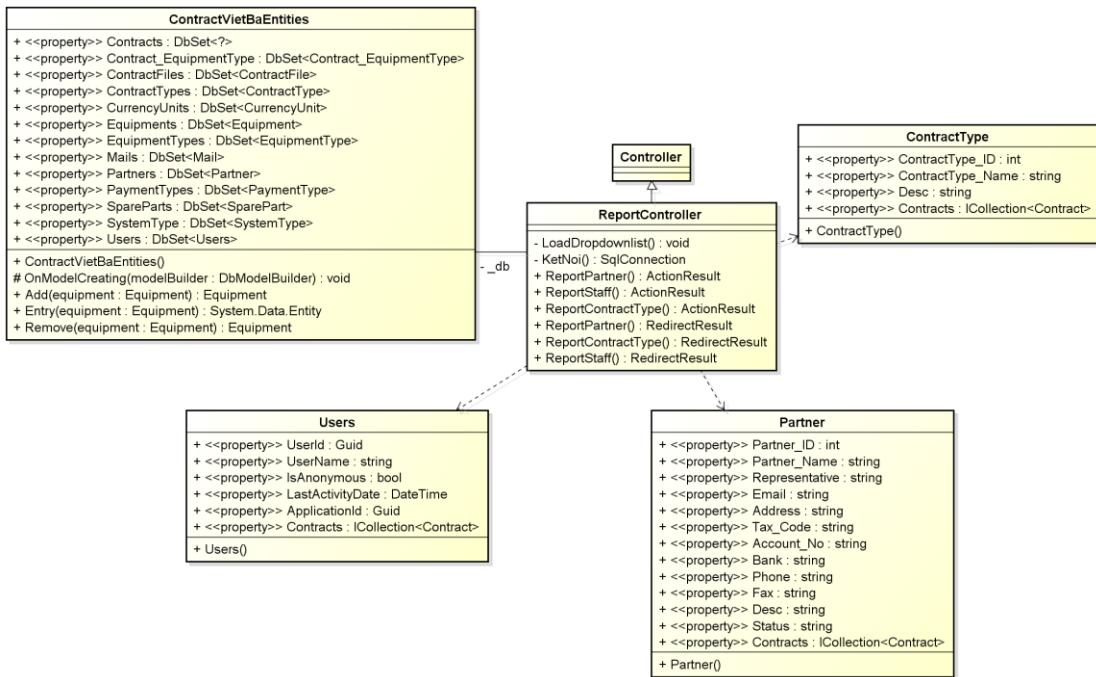


Figure 4-111: Display System Type Sequence Diagram

2.11 UC011- Report Management

2.11.1 Class Diagram

**Figure 4-112: Report Management Class Diagram**

2.11.2 Class Description

2.11.2.1 ReportController

Class	ReportController
Description	Contains declare and constructor for all ReportController's attributes.
Base Class	Controller
Constructor	N/A
Prototype	N/A
Source File	ReportController.cs
Namespace	ContractManagement.Controllers
Attributes	N/A

Methods			
Name	Input	Output	Description
ReportPartner		ActionResult	Display report partner page
ReportPartner		RedirectResult	Display report partner page in new tab
ReportUser		ActionResult	Display report user page
ReportUser		RedirectResult	Display report user result page in new tab
ReportContract Type		ActionResult	Display report contract type page
ReportContract Type		RedirectResult	Display report contract type result page in new tab

.....

2.11.3 UC011-01: Report on Partner

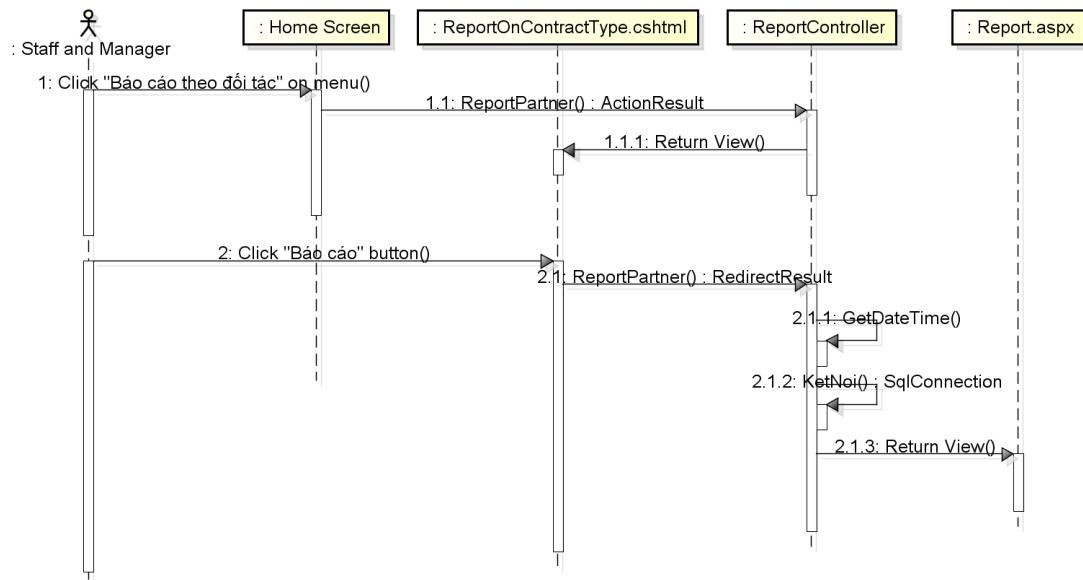
2.11.3.1 Screen Design

The screenshot shows the 'Contract Management System' interface. At the top, there's a dark header with the system name and a 'Xin chào Nguyễn Thành Bình Đăng xuất' (Hello Nguyễn Thành Bình Log out) message. Below the header is a navigation bar with links: Hợp đồng, Đối tác, Thiết bị, **BÁO CÁO** (highlighted in green), and Tài khoản. The main content area is titled 'Báo cáo theo đối tác'. It contains a form with three input fields: 'Ngày Hiệu Lực' (Start Date), 'Ngày Kết Thúc' (End Date), and 'Đối tác' (Partner). There's also a dropdown menu labeled 'Chọn--'. Below the form is a large 'Báo cáo' button. At the bottom of the page, there are links for 'Hợp Đồng', 'Đối Tác', 'Thiết bị', and copyright information: 'Copyright © 2014 Viet Ba Medical Equipment Company Limited. All rights reserved.'

Figure 4-113: Report on Partner Screen

No	Object Name	Object Name in English	Type	Required	Length	Description
1	Ngày hiệu lực	Start date	Textbox	N	50	Enter start date

2	Đến ngày	Till date	Textbox	N	50	Enter end of start date
3	Ngày kết thúc	Expired date	Textbox	N	50	Enter expired date
4	Đến ngày	Till date	Textbox	N	50	Enter end of expired date
5	Đối tác	Partner name	Dropdown list	N	N/A	Choose partner name
6	Báo cáo	Report	Button	N	N/A	Click to create report

Table 4-50: Fields on Report on Partner screen**2.11.3.2 Sequence Diagram****Figure 4-114: Report on Partner Sequence Diagram**

2.11.4 UC011-02: Report on Staff

2.11.4.1 Screen Design

Báo cáo theo người hỗ trợ

Ngày Hiệu Lực Đến Ngày
 Ngày Kết Thúc Đến Ngày
 Người hỗ trợ

Báo cáo

Hợp Đồng Đối Tác Thiết bị Copyright © 2014 Viet Ba Medical Equipment Company Limited All rights reserved.

Figure 4-115: Report on Staff Screen

No	Object Name	Object Name in English	Type	Required	Length	Description
1	Ngày hiệu lực	Start date	Textbox	N	50	Enter start date
2	Đến ngày	Till date	Textbox	N	50	Enter end of start date
3	Ngày kết thúc	Expired date	Textbox	N	50	Enter expired date
4	Đến ngày	Till date	Textbox	N	50	Enter end of expired date
5	Người hỗ trợ	User name	Dropdown list	N	N/A	Choose user name
6	Báo cáo	Report	Button	N	N/A	Click to create report

Table 4-51: Fields on Report on Staff screen

2.11.4.2 Sequence Diagram

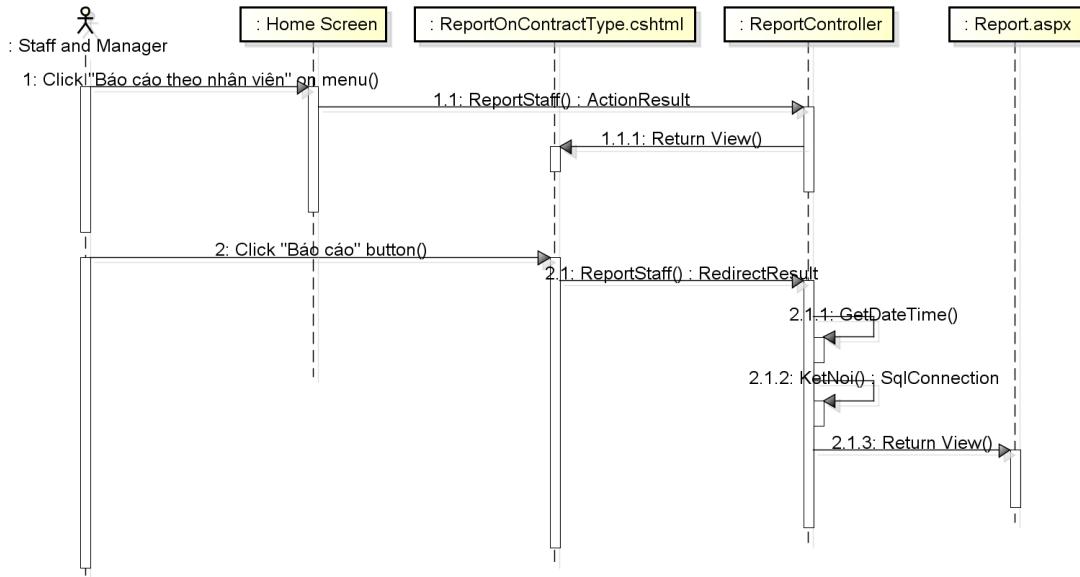


Figure 4-116: Report on Staff Sequence Diagram

2.11.5 UC011-03: Report on Contract Type

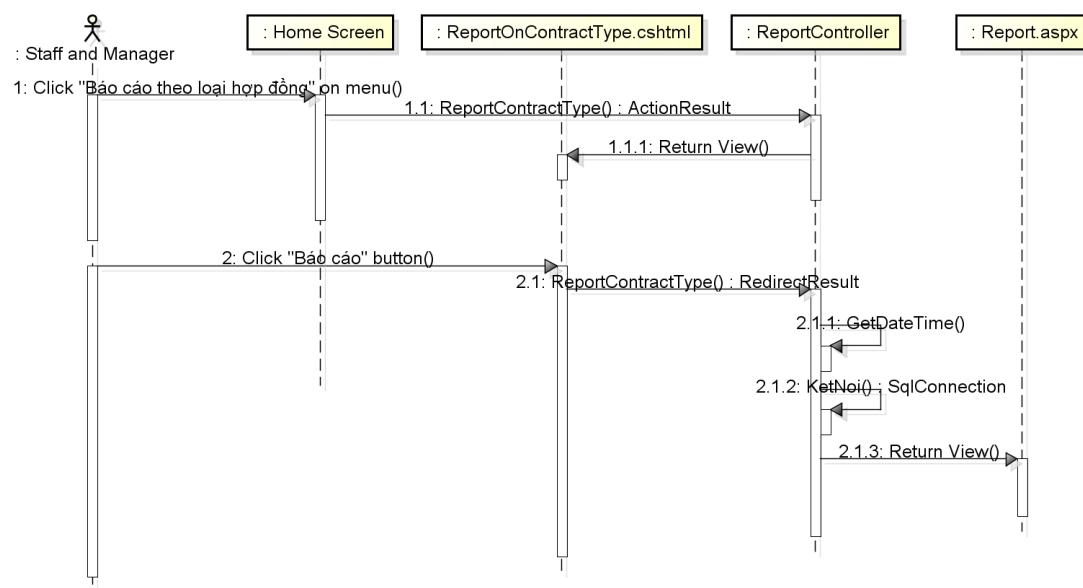
2.11.5.1 Screen Design

The screenshot shows the 'Contract Management System' interface. The top navigation bar includes links for Hợp đồng, Đối tác, Thiết bị, Báo cáo (highlighted in green), and Tài khoản. The main content area is titled 'Báo cáo theo loại hợp đồng'. It contains three input fields: Ngày Hiệu Lực (Start Date), Ngày Kết Thúc (End Date), and Loại Hợp Đồng (Contract Type). A dropdown menu labeled 'Chọn...' is shown for the contract type. A large 'Báo cáo' button is at the bottom. The footer contains links for Hợp đồng, Đối Tác, Thiết bị, and a copyright notice: Copyright © 2014 Viet Ba Medical Equipment Company Limited. All rights reserved.

Figure 4-117: Report on Contract Type Screen

No	Object Name	Object Name in English	Type	Required	Length	Description
1	Ngày hiệu lực	Start date	Textbox	N	50	Enter start date

2	Đến ngày	Till date	Textbox	N	50	Enter end of start date
3	Ngày kết thúc	Expired date	Textbox	N	50	Enter expired date
4	Đến ngày	Till date	Textbox	N	50	Enter end of expired date
5	Loại hợp đồng	Contract Type Name	Dropdown list	N	N/A	Choose contract type name
6	Báo cáo	Report	Button	N	N/A	Click to create report

Table 4-52: Fields on Report on Contract Type screen**2.11.5.2 Sequence Diagram****Figure 4-118: Report on Contract Type Sequence Diagram**

2.12 UC012- Account Management

2.12.1 Class Diagram

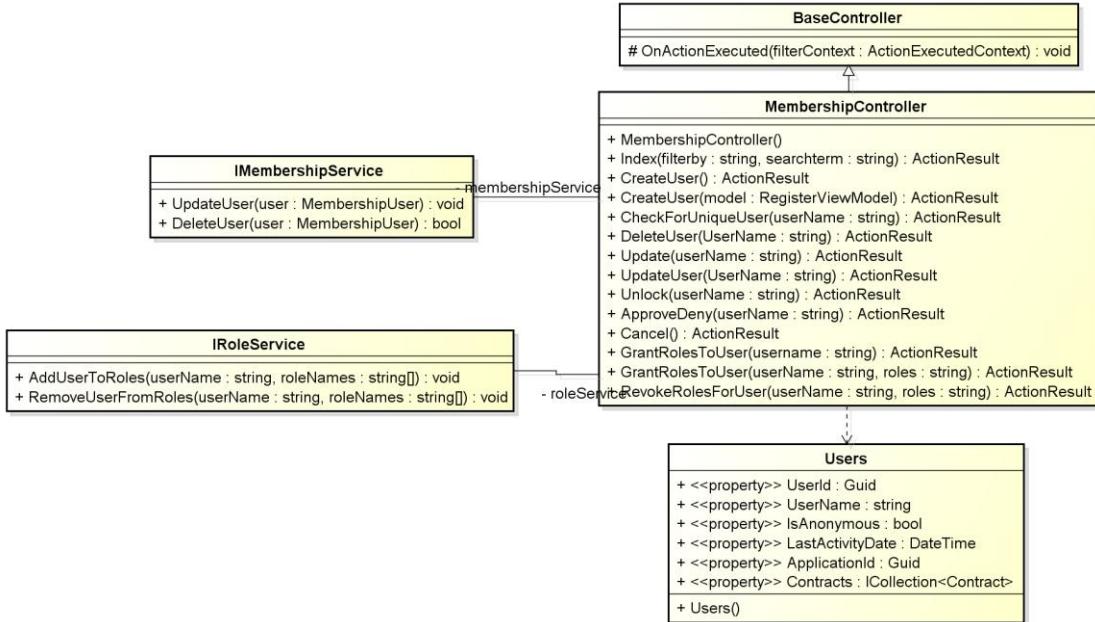


Figure 4-119: Account Management Class Diagram

2.12.2 Class Description

2.12.2.1 MembershipController

Class	MembershipController
Description	Contains declare and constructor for all MembershipController's attributes.
Base Class	BaseController
Constructor	N/A
Prototype	N/A
Source File	MembershipController.cs
Namespace	ContractManagement.Controllers
Attributes	N/A
Methods	

Name	Input	Output	Description
Index	filterby, searchterm	ActionResult	Display index page
CreateUser		ActionResult	Display create user page
CreateUser	model	ActionResult	Save created user
CheckForUniqueUser	userName	ActionResult	Check for unique user
DeleteUser	userName	ActionResult	Delete user
Update	userName	ActionResult	Display update page
UpdateUser	userName	ActionResult	Save updated user
Cancel		ActionResult	Cancel saving
GrantRolesToUser	userName	ActionResult	Display grant roles page
GrantRolesToUser	userName, roles	ActionResult	Confirm granting roles to user
RevokeRolesToUser	userName, roles	ActionResult	Revoke user's roles

2.12.3 UC012-01: Search User

2.12.3.1 Screen Design

Tên người dùng	Email	Hoạt động cuối cùng
11	bop_x111	13/03/2014 10:09 AM
a	a@gmail.com	04/03/2014 12:11 PM
a@gmail.com	a@gmail.com	03/04/2014 12:10 AM
admin	binhnse02353@fpt.edu.vn	11/03/2014 11:49 PM
b	a@gmail.com	13/03/2014 9:35 AM
binhnse02353@fpt.edu.vn	binhnse02353@fpt.edu.vn	15/03/2014 1:37 PM
bop_x1	Nguyễn Thành Bình	07/04/2014 8:54 PM
ductmse02140@fpt.edu.vn	Trần Minh Đức	03/04/2014 11:19 PM
test2	test@gmail.com	03/03/2014 9:56 PM

Figure 4-120: Search User Screen

No	Object Name	Object Name in English	Type	Required	Length	Description
1	Bắt đầu với	Starts with	Textbox	N	50	User can search with username or email
2	Tìm kiếm	Search	Button	N	N/A	User click on search button to get system type they want.
3	Tạo mới	Create	Link	N	N/A	Redirect to create new user screen
4	Sửa	Edit	Link	N	N/A	Redirect to edit user screen
5	Chi tiết	Detail	Link	N	N/A	Redirect to detail user screen
6	Xóa	Delete	Link	N	N/A	Pop-up window ask whether manager confirm to delete user.

Table 4-53: Fields on search user screen

2.12.3.2 Sequence Diagram

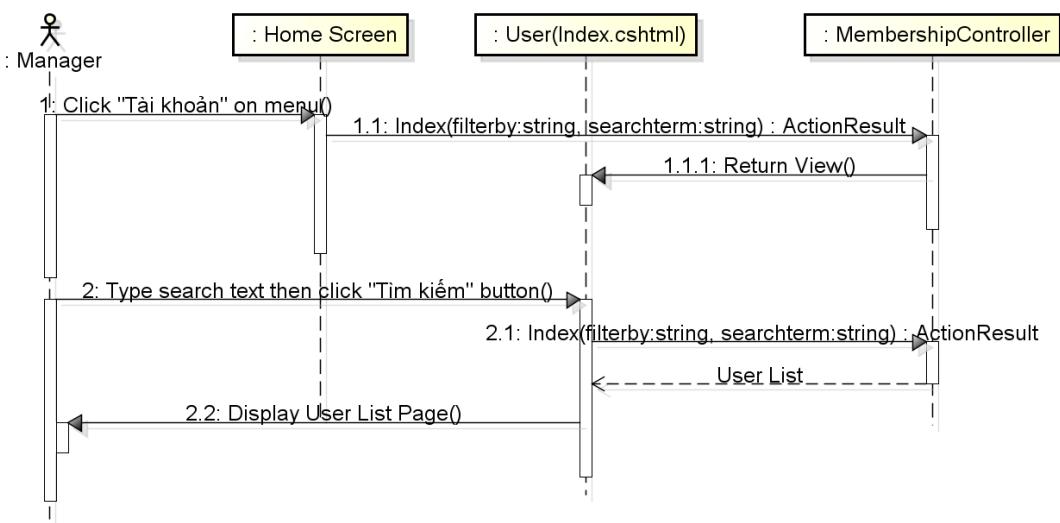


Figure 4-121: Search User Sequence Diagram

2.12.4 UC012-02: Create User

2.12.4.1 Screen Design

Xin chào bop_x1
Đăng xuất

Tạo người dùng mới

Tên người dùng(*)
Email(*)
Mật khẩu(*)
Xác nhận mật khẩu(*)

Lưu Quay lại

Figure 4-122: Create User Screen

No	Object Name	Object Name in English	Type	Required	Length	Description
1	Tên người dùng	User Name	Textbox	Y	50	User input user name
2	Email	Email	Textbox	Y	50	User input email
3	Mật khẩu	Password	Textbox	Y	50	User input password
4	Xác nhận	Confirm Password	Texbox	Y	50	User input confirmed password
5	Lưu	Save	Button	Y	N/A	User save user to database
6	Quay trở lại danh sách	Back	Button	N	N/A	Redirect to user list.

Table 4-54: Fields on create user screen

2.12.4.2 Sequence Diagram

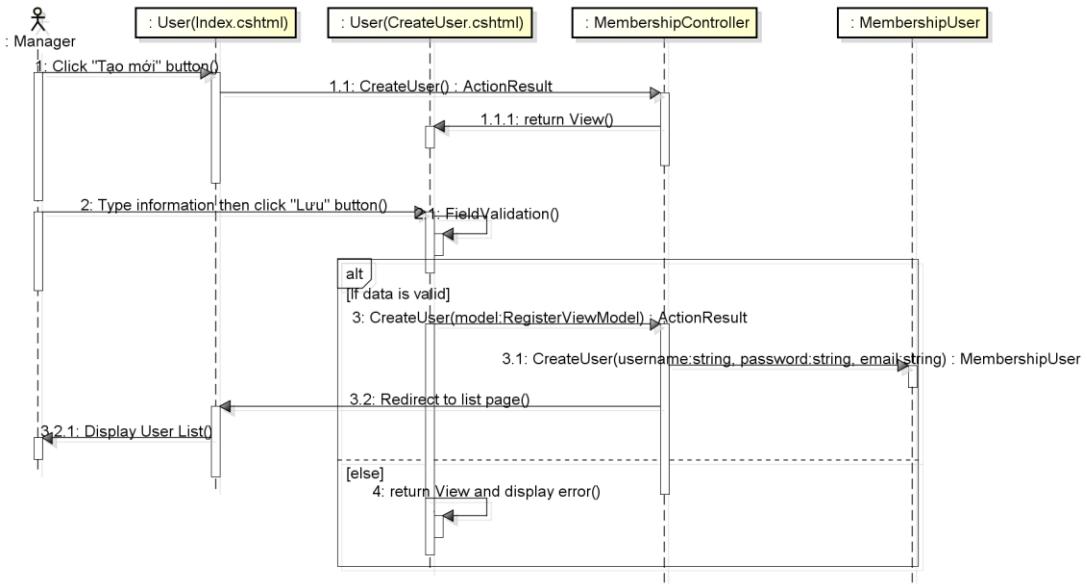


Figure 4-123: Create User Sequence Diagram

2.12.5 UC012-03: Edit/Delete/Details User

2.12.5.1 Screen Design

The screenshot shows the 'Contract Management System' interface. The top navigation bar includes links for HỢP ĐỒNG, ĐỐI TÁC, THIẾT BỊ, BÁO CÁO, and TÀI KHOẢN. The right side of the header shows 'Xin chào Thanh Bình Đăng xuất'. The main content area is titled 'Thông tin người dùng' (User Information). It displays user details: Email đăng nhập (ductmse02140@fpt.edu.vn), Tên đầy đủ (Trần Minh Đức), Mô tả (empty input field), Xác nhận (Đã xác nhận - Bỏ xác nhận), Online (Off-line), Hoạt động cuối cùng (09/04/2014 10:22:15 PM), Đăng nhập gần nhất (09/04/2014 10:22:15 PM), and Đổi mật khẩu gần nhất (07/04/2014 12:41:49 PM). Below this is a section for 'Quyền của Trần Minh Đức (Sửa)' (Permissions of Trần Minh Đức (Edit)) with a 'Partner' checkbox. At the bottom are three buttons: Lưu (Save), Xóa (Delete), and Quay lại (Back).

Figure 4-124: Edit/Delete/Details User Screen

No	Object Name	Object Name in English	Type	Required	Length	Description
----	-------------	------------------------	------	----------	--------	-------------

1	Tên người dùng	User Name	Label	N	N/A	Display full name of user
2	Email	Email	Textbox	N	50	User modify email
3	Mô tả	Description	Text Area	N	N/A	User modify description
4	Online	Online	Label	N	N/A	Display online status of user
5	Hoạt động cuối cùng	Last Activity	Label	N	N/A	Display last activity date of user
6	Đăng nhập gần nhất	Last login	Label	N	N/A	Display last login date of user
7	Đổi mật khẩu gần nhất	Last password changed	Label	N	N/A	Display last password changed date of user
8	Sửa	Edit	Link	N	N/A	Redirect to grant roles to user page
9	Quyền	Role	Area	N	N/A	List of roles of user
10	Quay lại	Back	Button	N	N/A	Redirect to user list page
11	Xóa	Delete	Button	N	N/A	Delete user from database
12	Lưu	Save	Button	N	N/A	Save edited information to database

Table 4-55: Fields on edit/delete/details user screen

2.12.5.2 Sequence Diagram

2.12.5.2.1 Detail User

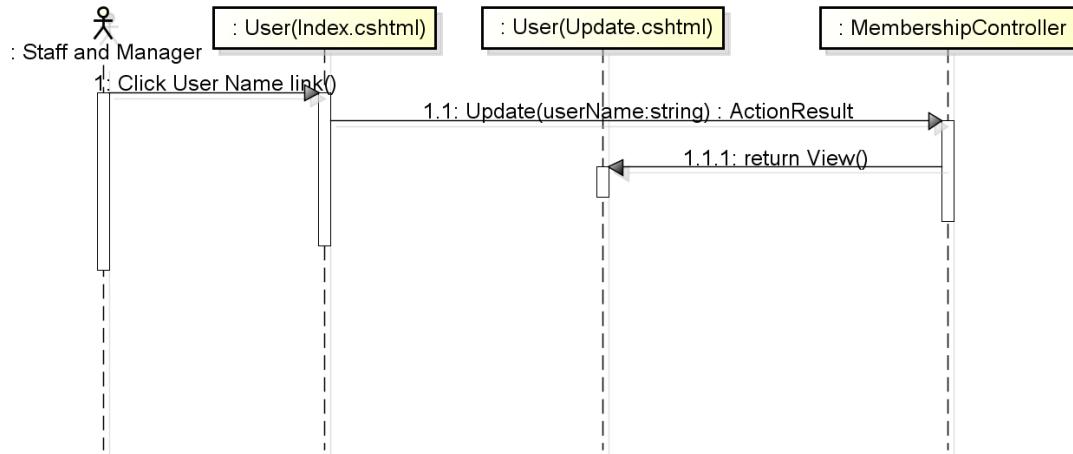


Figure 4-125: Detail User Sequence Diagram

2.12.5.2.2 Edit User

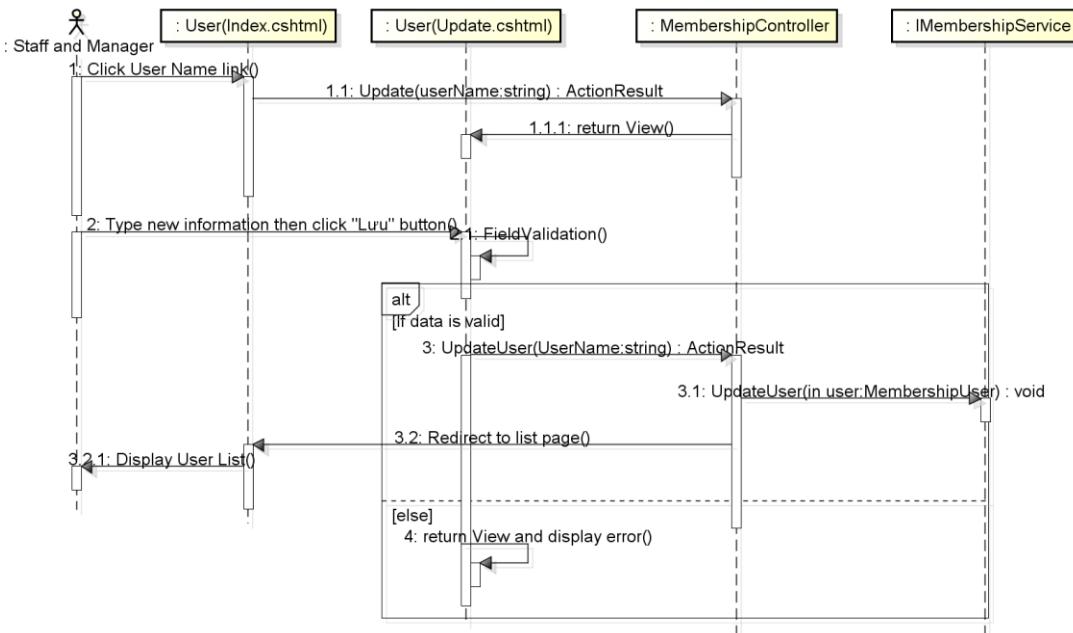


Figure 4-126: Edit User Sequence Diagram

2.12.5.2.3 Delete User

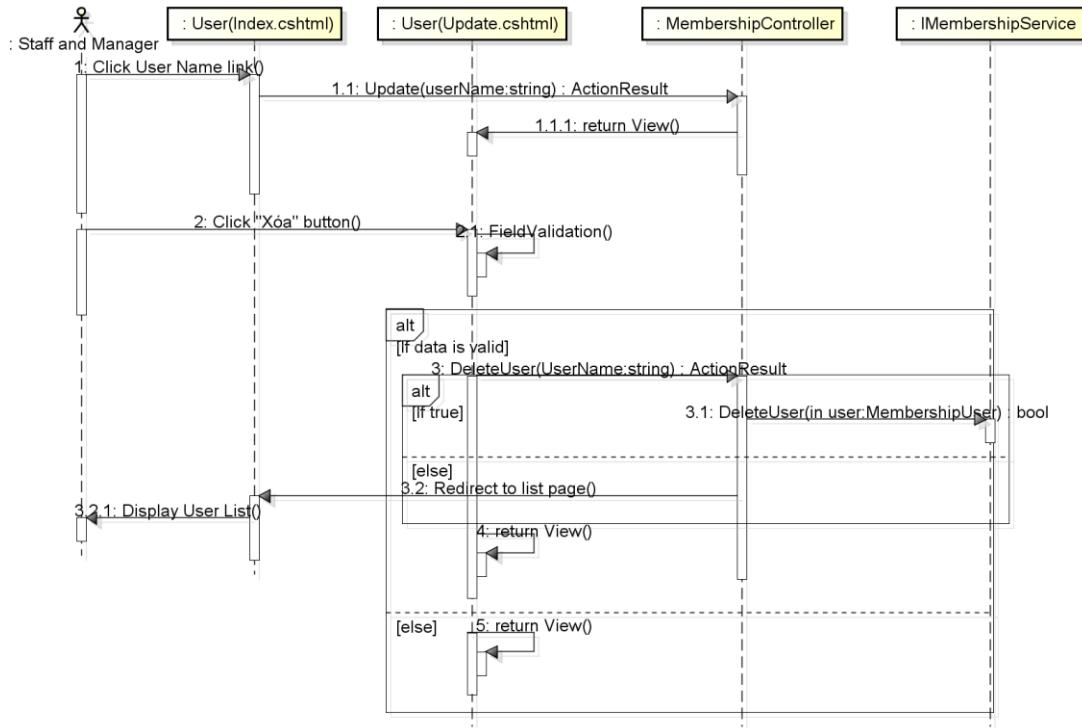


Figure 4-127: Delete User Sequence Diagram

2.12.6 UC012-04: Grant/Revoke Roles

2.12.6.1 Screen Design

Cấp quyền cho người dùng

Chọn nút "Cấp" hoặc "Thu hồi" để thực hiện lệnh
Cấp quyền bắt kí dưới đây cho: Trần Minh Đức

Quyền sẵn sàng	Quyền đã cấp
Manager Staff	Partner

Cấp → <-- **Thu hồi**

Quay lại

Hợp Đồng Đối Tác Thiết bị Copyright © 2014 Viet Ba Medical Equipment Company Limited
All rights reserved.

Figure 4-128: Grant/Revoke Roles

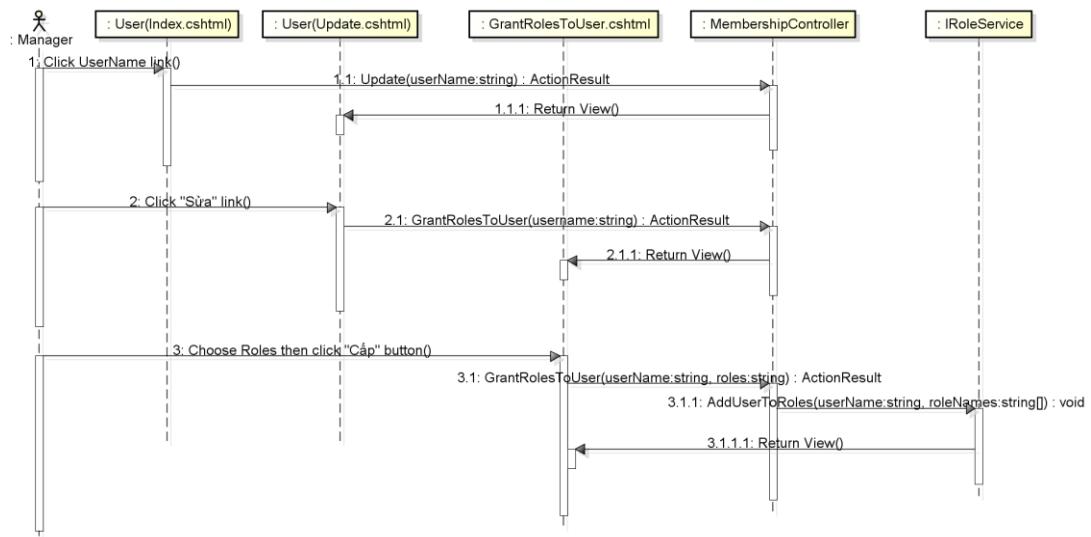
No	Object Name	Object Name in English	Type	Required	Length	Description
1	Quyền sẵn sàng	Available Roles	Listbox	N	N/A	List of available roles

2	Quyền đã cấp	Granted Roles	Listbox	N	N/A	List of granted roles
3	Cấp	Grant	Button	N	N/A	Grant roles to user
4	Thu hồi	Revoke	Button	N	N/A	Revoke roles from user

Table 4-56: Fields on grant/revoke screen

2.12.6.2 Sequence Diagram

2.12.6.2.1 Grant Roles to Users

**Figure 4-129: Grant Roles to Users**

2.12.6.2.2 Revoke Roles from Users

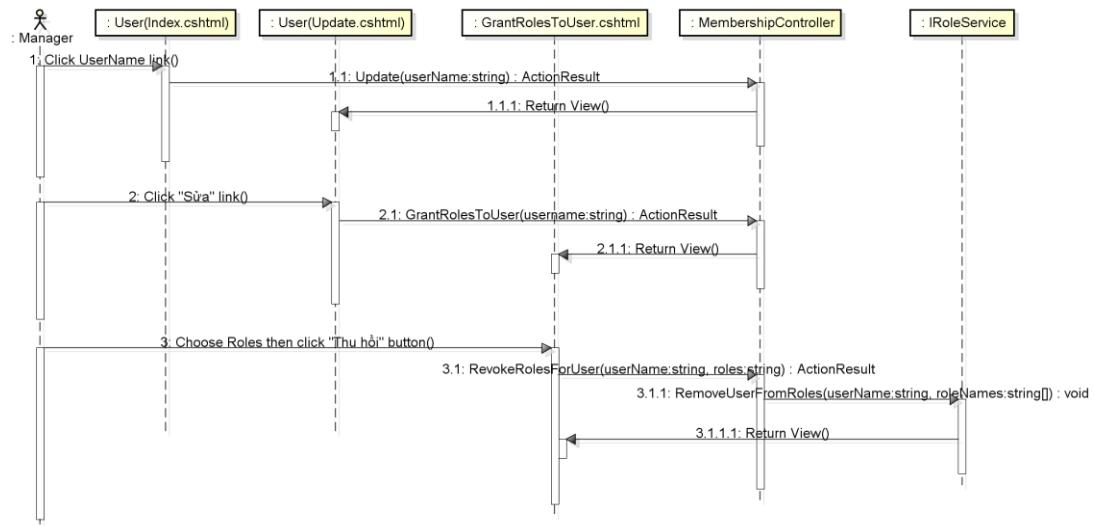


Figure 4-130: Revoke Roles from Users

3 DATABASE DESIGN

3.1 Database design

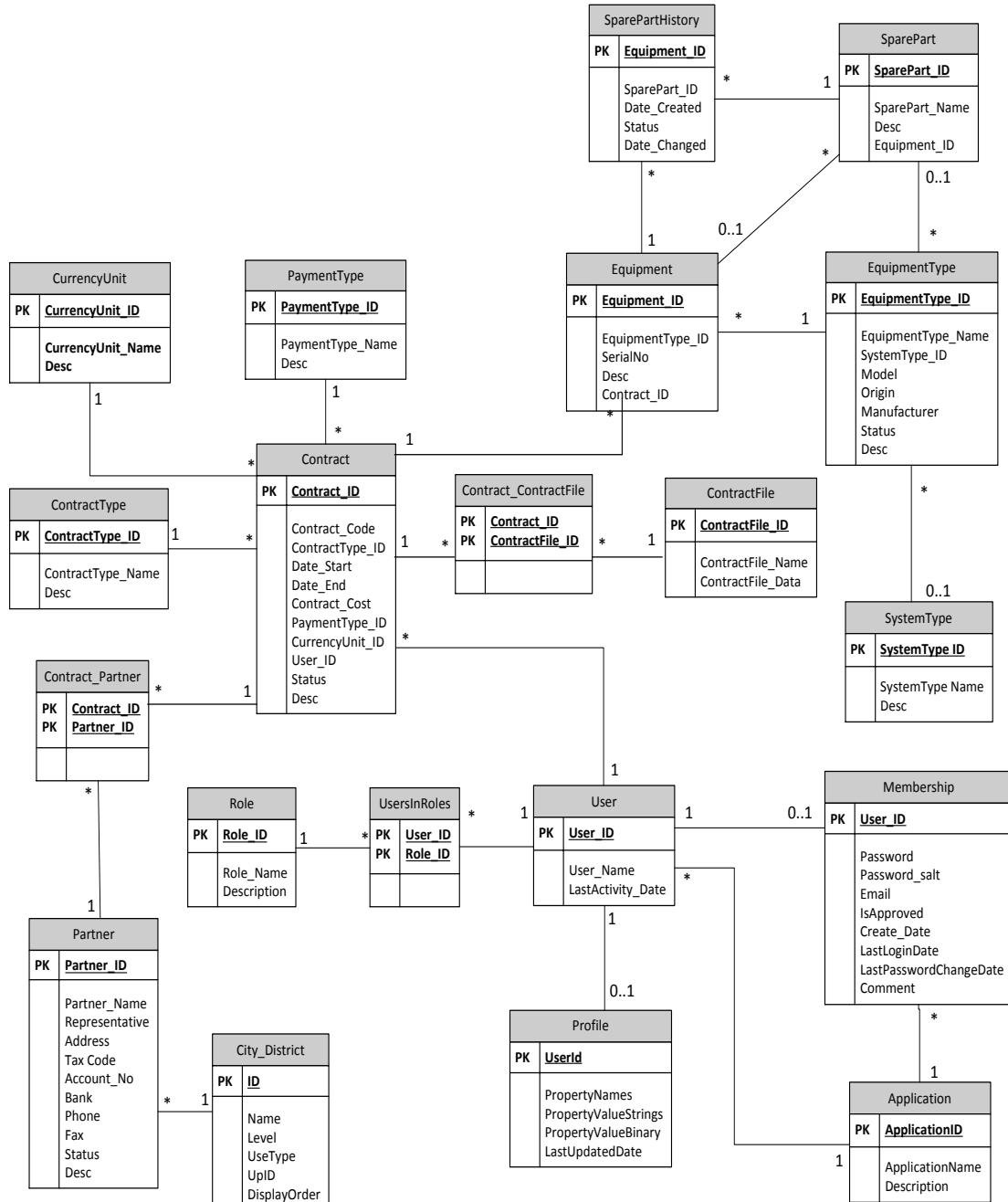


Figure 4-129: Entity Relationship Diagram

3.2 Table Descriptions

3.2.1 Table Contract

No	Attribute	Type	Constraints	Description
1	Contract_ID	Int	Primary key, Not Null	The primary key auto generated
2	Contract_Code	NVARCHAR(50)	Not Null	Code of Contract
3	ContractType_ID	int	Foreign key , Not Null	ID of ContractType
4	Date_Start	DateTime	Not Null	Start Date
5	Date_End	DateTime	Not Null	End Date
6	Contract_Cost	Decimal(18,0)	Null	Cost of Contract
7	PaymentType_ID	int	Foreign key , Null	ID of PaymentType
8	CurrencyUnit_ID	Int	Foreign key , Null	ID of CurrencyUnit
9	Desc	NVARCHAR(max)	Null	Description
10	Status	NVARCHAR(50)	Not Null	Status of Contract

3.2.2 Table Partner

No	Attribute	Type	Constraints	Description
1	Partner_ID	Int	Primary key, Not Null	The primary key auto generated
2	Partner_Name	NVARCHAR(50)	Not Null	Name of Partner
3	Representative	NVARCHAR(50)	Null	Name of Representative
4	Address	NVARCHAR(50)	Null	Address of partner
5	Tax_Code	NVARCHAR(50)	Null	Tax code of partner
6	Account_No	NVARCHAR(50)	Null	Account number of partner's bank
7	Bank	NVARCHAR(50)	Null	Bank of partner
8	Phone	NVARCHAR(50)	Null	Phone of

				partner
9	Fax	NVARCHAR(50)	Null	Fax of partner
10	Desc	NVARCHAR(max)	Null	Description
11	Status	NVARCHAR(50)	Null	Status of partner

3.2.3 Table Equipment

No	Attribute	Type	Constraints	Description
1	Equipment_ID	Int	Primary key, Not Null	The primary key auto generated
2	Equipment_Name	NVARCHAR(50)	Not Null	Name of Equipment
3	SystemType_ID	Int	Foreign key, Not Null	ID of SystemType
4	Model	NVARCHAR(50)	Not Null	Model of equipment
5	SerialNo	NVARCHAR(50)	Not Null	Serial number of equipment
6	Origin	NVARCHAR(50)	Null	Origin of equipment
7	Manufacturer	NVARCHAR(50)	Null	Manufacturer of equipment
10	Desc	NVARCHAR(max)	Null	Description
11	Status	NVARCHAR(50)	Null	Status of equipment

3.2.4 Table Contract_Equipment

No	Attribute	Type	Constraints	Description
1	Contract_ID	int	Foreign key, Not Null	ID of contract
2	Equipment_ID	int	Foreign key, Not Null	ID of equipment
3	ContractEquipment_ID	int	Primary key, Not Null	The primary key auto generated
4	Equipment_Count	int	Not Null	Number of equipment

3.2.5 Table Contract_Partner

No	Attribute	Type	Constraints	Description

1	Contract_ID	int	Primary key, Foreign key, Not Null	ID of contract
2	Partner_ID	int	Primary key, Foreign key, Not Null	ID of partner

3.2.6 Table Contract_ContractFile

No	Attribute	Type	Constraints	Description
1	Contract_ID	int	Primary key, Foreign key, Not Null	ID of contract
2	ContractFile_ID	int	Primary key, Foreign key, Not Null	ID of contract file

3.2.7 Table Contract Type

No	Attribute	Type	Constraints	Description
1	ContractType_ID	Int	Primary key, Not Null	The primary key auto generated
2	ContractType_Name	NVARCHAR(50)	Not Null	Name of ContractType
3	Desc	NVARCHAR(max)	Null	Description

3.2.8 Table Contract File

No	Attribute	Type	Constraints	Description
1	ContractFile_ID	Int	Primary key, Not Null	The primary key auto generated
2	ContractFile_Name	NVARCHAR(50)	Not Null	Name of ContractFile
3	ContractFile_Data	image	Not Null	Data of ContractFile

3.2.9 Table Payment Type

No	Attribute	Type	Constraints	Description
1	PaymentType_ID	Int	Primary key, Not Null	The primary key auto generated
2	PaymentType_Name	NVARCHAR(50)	Not Null	Name of Payment Type
3	Desc	NVARCHAR(max)	Null	Description

3.2.10 Table Currency Unit

No	Attribute	Type	Constraints	Description
1	CurrencyUnit_ID	Int	Primary key, Not Null	The primary key auto generated
2	CurrencyUnit_Name	NVARCHAR(50)	Not Null	Name of CurrencyUnit
3	Desc	NVARCHAR(max)	Null	Description

3.2.11 Table Spare Part

No	Attribute	Type	Constraints	Description
1	SparePart_ID	Int	Primary key, Not Null	The primary key auto generated
2	SparePart_Name	NVARCHAR(50)	Not Null	Name of SparePart
3	Desc	NVARCHAR(max)	Null	Description
4	Equipment_ID	Int	Foreign key, Not Null	ID of main equipment

3.2.12 Table System Type

No	Attribute	Type	Constraints	Description
1	SystemType_ID	Int	Primary key, Not Null	The primary key auto generated
2	SystemType_Name	NVARCHAR(50)	Not Null	Name of SystemType
3	Desc	NVARCHAR(max)	Null	Description

3.2.13 Table Users

No	Attribute	Type	Constraints	Description
1	UserId	uniqueidentifier	Primary key, Not Null	ID of User
2	UserName	NVARCHAR(50)	Not Null	User Name
3	LastActivity_Date	DateTime	Not Null	Date of last activity

3.2.14 Table Membership

No	Attribute	Type	Constraints	Description
1	UserId	uniqueidentifier	Primary key, Not Null	ID of user
2	Password	NVARCHAR(128)	Not Null	Password of user
3	Password_salt	NVARCHAR(128)	Not Null	Password salt
4	Email	Nvarchar(256)	Null	Email of User
5	IsApproved	bit	Not Null	User approved or not
6	LastLoginDate	DateTime	Not Null	Date of last login
7	LastPasswordChangeDate	DateTime	Not Null	Date of last password changed
8	Comment	Nvarchar(256)	Null	Comment

3.2.15 Table Roles

No	Attribute	Type	Constraints	Description
1	RoleId	uniqueidentifier	Primary key, Not Null	ID of role
2	RoleName	NVARCHAR(50)	Not Null	Name of role
3	Description	NVARCHAR(50)	Null	Description

3.2.16 Table UsersInRoles

No	Attribute	Type	Constraints	Description
1	UserId	uniqueidentifier	Primary key, Not Null	ID of user
2	RoleId	uniqueidentifier	Primary key, Not Null	ID of role