

# **Interior Construction Quotation System Software Requirement Specification**

Project Code: FU-HCM-SPRING2024-SWP391-NET1702-05-ICQS Document Code: FU-SPRING2024-SWP391-NET1702-05-ICQS-v1.0

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Ho Chi Minh City, 20/03/2024.

# **RECORD OF CHANGE**

\*A - Added M - Modified D - Deleted

Effective Date	Changed Items	A* M, D	Change Description	New Version
10/01/2024	Initial	Α	Add project overview	1.0
10/01/2024	Define product background and context	A	Define requirements for project	
10/01/2024	Define users' problems	Α	Define requirements for project	
1q/01/2024	Competitive analysis	А	Define requirements for project	
12/01/2024	Business opportunity analysis	А	Define requirements for project	
13/01/2024	Setup source code version control	А	Set up workspace and code space for team	
13/01/2024	Setup common tools and editors	А	Set up workspace and code space for team	
13/01/2024	Setup communication channel	А	Set up workspace and code space for team	
16/01/2024	Setup resources storage workspace	А	Set up workspace and code space for team	
17/01/2024	Write project introduction	А	Write documents for project	
18/01/2024	Write project management plan	А	Write documents for project	
20/01/2024	Write software requirement specification	A	Write documents for project	
10/03/2024	Write final document	Α	Write final documents SRS for project	
21/01/2024	Define screens navigation	А	Define basic components for project	1.0
22/01/2024	Draw wireframes	Α	Define basic components for project	1.0
23/01/2024	Setup design system (font, color)	А	Define basic components for project	1.0
25/01/2024	Design common components	А	Define basic components for project	1.0
8/02/2024	Design authentication pages	А	Define basic components for project	1.0
10/02/2024	Design home pages	А	Design details of main pages	1.0
11/02/2024	Design user pages	А	Design details of main pages	1.0

13/02/2024	Register	А	Add new version functions to system	1.0
15/02/2024	View home page	А	Add new version functions to system	1.0
16/02/2024	Create request	А	Add new version functions to system	1.0
19/02/2024	Update request	А	Add new version functions to system	1.0
23/02/2024	Evaluate quotation	А	Add new version functions to system	1.0
16/02/2024	Create order	А	Add new version functions to system	1.0
19/02/2024	Update order	А	Add new version functions to system	1.0
23/02/2024	View order	А	Add new version functions to system	1.0
27/02/2024	Create account	А	Add new version functions to system	1.0
28/02/2024	Edit account	А	Add new version functions to system	1.0
01/03/2024	Delete account	А	Add new version functions to system	1.0
01/03/2024	Update staff's role	А	Add new version functions to system	1.0
10/03/2024	Login	А	Add new version functions to system	1.0
10/03/2024	Log out	А	Add new version functions to system	1.0
10/03/2024	Update profile	А	Add new version functions to system	1.0
10/03/2024	View profile	А	Add new version functions to system	1.0
13/03/2024	View dashboard	А	Add new version functions to system	1.0
13/03/2024	View account list	А	Add new version functions to system	1.0
13/03/2024	View proposal list	А	Add new version functions to system	1.0
13/03/2024	Evaluate proposal	А	Add new version functions to system	1.0
13/03/2024	Create proposal	А	Add new version functions to system	1.0
14/03/2024	Design user pages	М	Design details of main pages of customer page, staff page, request detail page	2.0
15/03/2024	View home page	М	Add fixed version functions to system	2.0
13/03/2024	Evaluate proposal	М	Add fixed version functions to system	2.0
13/03/2024	Create proposal	М	Add fixed version functions to system	2.0
16/03/2024	Create request	М	Add fixed version functions to system	2.0
17/03/2024	Update request	М	Add fixed version functions to system	2.0
18/03/2024	Evaluate quatation	М	Add fixed version functions to system	2.0
18/03/2024	Update staff's role	D	Add function to Update Account function and delete this function	
01/03/2024	Design user pages	М	Design details of main page : request detail page	3.0
19/02/2024	Update request	М	Add fixed version functions to system	3.0

19/03/2024	Write final document	М	Write final documents SRS for project	
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#### 1 INTRODUCTION

The introduction of the Software Requirements Specification (SRS) provides an overview of the entire SRS with purpose, scope, definitions, acronyms, abbreviations, references, and overview of the SRS. The aim of this document is to gather and analyze and give an in-depth insight of the complete Interior Construction Quotation System by defining the problem statement in detail. Nevertheless, it also concentrates on the capabilities required by customers and their needs while defining high-level product features. The detailed requirements of the Interior Construction Quotation System are provided in this document.

#### 1.1 Purpose

The purpose of this document is to present a detailed description of the Interior Construction Quotation System. It will explain the purpose and features of the system, the interfaces of the system, what the system will do, and the constraints under which it must operate. By leveraging modern technologies, the system aims to address the inherent challenges and complexities associated with the quotation process in the interior and furniture. The ICQS is intended to export, analyze, and manage quotations due to requirements. Optimize communication between customers and employees.

#### 1.2 Scope

The interior construction quotation system is built with the goal of being applicable to all interior construction projects. It would be a more efficient and easier way to have a quoting system that everyone can easily access at their own discretion as compared to the traditional workflow. Working time can be minimized not only by automating many actions but also by a system containing many features for communicating and exchanging preliminary construction quotes before actual implementation.

#### 1.3 Definitions, Acronyms, and Abbreviations

Terms	Definition
Guest	Individuals who would want an interior construction quote but are restricted from using specific features of the system and lack a login account.
Customer	An account holder, a lay person who needs the system to do his task efficiently and effectively.
Staff	An account that receives the request of the customer, edit request, and exchanges with customer to achieve unification and then creates

	the proposal of quotation for manager.
Manager	A person who receives a staff's proposal has the right to approve. Manage the workspace, and product for customer request.
Admin	An account holder has rights to manage other staff accounts and mission to keep the website working correctly.

#### 1.4 References

This web application has been prepared based on discussion with all team members, faculty members and taken information from the following websites.

- LÀ NHÀ: Thiết Kế Thi Công Nôi Thất Tron Gói, Giá Rẻ (lanha.vn)
- SLV Viêt Nam Công ty thiết kế thi công nôi thất tron gói uy tín (slvvietnam.com)
- THÁI CÔNG Interior Design The World of Luxury Interior and Furniture (thaicong.com)

#### 1.5 Overview

The ICQS is envisioned to be a user-friendly and efficient solution for managing the quotation process in interior construction projects. It will incorporate features such as project tracking, quotation generation, document management, and reporting functionalities. The system will adhere to industry standards and best practices to ensure reliability, accuracy, and security.

#### 2 OVERALL DESCRIPTION

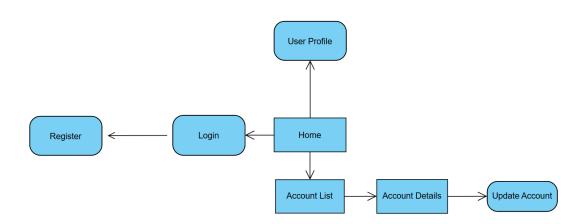
Users understand construction terminology and quotation processes.

A stable internet connection is available for system access. Necessary data on material costs, labor rates, and project specifications is readily accessible.

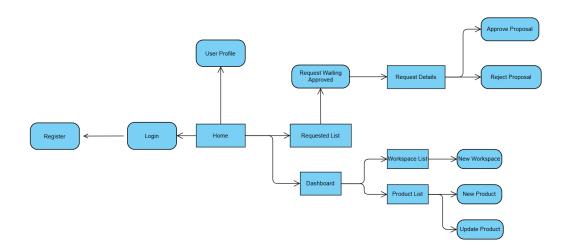
This overall description provides a high-level overview of the CHCQS. The following sections of the SRS will delve into detailed requirements for various functionalities, user interfaces, and technical considerations.

#### 2.1 Screen Flow

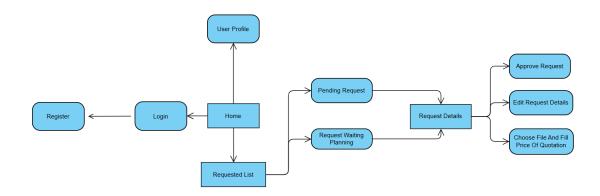
#### **Admin Screen Flow**



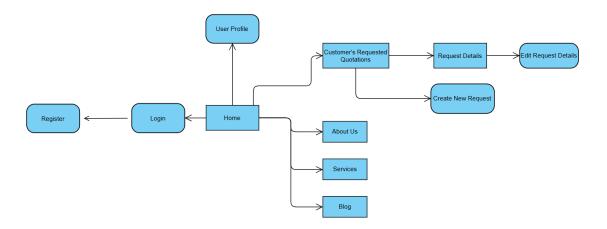
#### **Manager Screen Flow**



## **Staff Screen Flow**

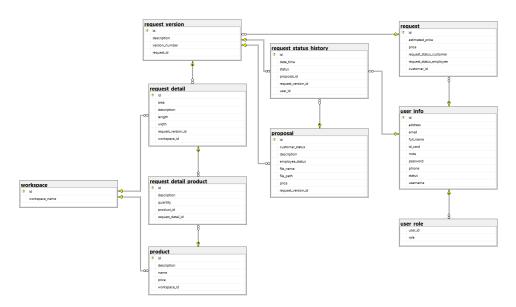


## **Customer Screen Flow**



# 2.2 System High Level Design

## **Database Design**



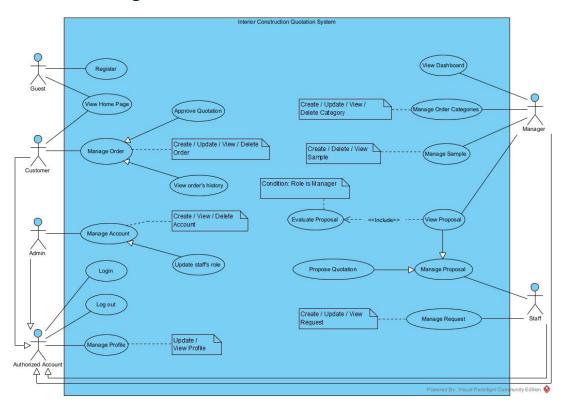
## **Code Packages**

- ✓ onfig
  - > o modelMapper
  - > o security
- > ontroller
- > o exception
- > o filter
- ✓ o model
  - > 💿 dto
  - > o entity
  - > o enums
- > orepository
- > o service
- > o utils

No	Package	Description	
01	config	Package contains configuration for security and model mapper.	
02	controller	Package contains controllers for API endpoints.	
03	exception	Package for handling exceptions.	
04	filter	Package for filter dispatch before logic code.	
05	model	Package contains the entity classes, dtos, enums for mapping.	
06	repository	Package contains intermediate layer to query data.	
07	service	Package contains classes to support some purpose.	
08	utils	Package contains classes to support some purpose which is not the part of action.	

# **3 FUNCTIONAL REQUIREMENTS**

# 3.1 Use Cases Diagram



## 3.2 Business rules

Below are the general business rules for the entire Furniture system. We will also describe specific business rules for each use case below the specifications

ID	Definition	
BR-01	Staff should ensure that all modifications made to the request are accurately reflected before submitting the update.	
BR-02	The notification sent to the user must be a push notification; it can show on the device's screen. If the device is turned off, the message should appear again when the user opens the device.	
BR-03	Each detail on the employee side has only one unique status.	
BR-04	Each detail on the customer side has only one unique status.	
BR-05	Employee account cannot be deleted; only can disable to preserve old data.	
BR-06	Each request detail can only be edited by one staff account at a time.	
BR-07	Each login token only remains valid for 3 hours, after which the actor must log in	

	again.	
BR-08	The system should provide a confirmation email to the customer after successfully creating an order.	
BR-09	The system must ensure that customers can only view their own orders.	
BR-10	The dashboard provides real-time or near-real-time statistical information.	
BR-11	Categories must have unique names to avoid duplication.	
BR-12	In case of account-related issues arising, staff must contact the administrator for resolution.	
BR-13	If a staff member forgets their account credentials, they should also contact the administrator for account recovery or reset.	
BR-14	In case of errors or issues encountered during the update process, staff should review and correct them before submission.	

# 3.3 Use case list

ID	Use case	Actor
UC-01	Register	Guest
UC-02	View home page	Guest, Customer
UC-03	Evaluate quotation	Customer
UC-04	Create order	Customer
UC-05	Update order	Customer
UC-06	View order	Customer
UC-07	Cancel request	Customer
UC-08	View request's history	Customer
UC-09	Create account	Admin
UC-10	Edit account	Admin
UC-11	Delete account	Admin
UC-12	Update staff's role	Admin
UC-13	Login	Staff, Admin, Customer, Manager
UC-14	Log out	Staff, Admin, Customer, Manager
UC-15	Update profile	Staff, Admin, Customer, Manager

UC-16	View profile	Staff, Admin, Customer, Manager
UC-17	View dashboard	Manager
UC-18	Create categories	Manager
UC-19	Update categories	Manager
UC-20	View categories	Manager
UC-21	Delete categories	Manager
UC-22	Create sample	Manager
UC-23	Delete sample	Manager
UC-24	View account list	Admin
UC-25	View proposal list	Manager
UC-26	Evaluate proposal	Manager
UC-27	Create proposal	Staff
UC-28	Create request	Staff
UC-29	Update request	Staff

# 3.4 UC-01: Register

USE CASE-01 Register							
Use-case No.	Use-case No. UC-01 Use-case Version 1.0						
Use-case Name	Use-case Name Register						
Author TungNT							
Date	Feb 3rd, 2024	Priority	High				

Actor: Guest

Summary:

This use case allows actor to register into the system, allowing actor to create new account.

Goal:

The purpose is to provide the actor with the ability to create a new account within the system.

**Triggers:** Actor decide to register or create a new account.

Preconditions: N/A

**Post Conditions:** Systems creates a new account for the actor, and the actor will become a registered user.

Main Success Scenario:

No	Actor's actions	System Responses
1	The actor selects the "Nhận báo giá" button on the system interface.	The system displays a registration form.  Form includes input - lables for:  • Email: accept all email format.  • Username: text input, min-length: 1, max-length: 255, not empty.  • Phone number: 10 degits.  • Button "Đăng kí báo giá".
2	Actor fills all information	System validates each field.  [Alternative 2.1]  [Exception]
3	Actor clicks button "Đăng kí báo giá". [Exception]	System sends an mail to actor email with message:  - Account: actor's mail - Password: actor's phone number  System alerts: "Register successfully,we send your account information to your registered email"  System stores actor's account to database system.

#### Alternative Scenario:

No	Actor's actions	System Responses
2.1	Actor input again information correctly	System shows error message for each incorrect input field until all are correct
3.1	Actor clicks "Đăng kí báo giá" button	System sends an mail to actor email with message:  - Account: actor's mail - Password: actor's phone number  System alerts: "Register successfully,we send your account information to your registered email"  System stores actor's account to database

	system.

## Exceptions:

No	Cause	System Response
2.1	Actor fills incorrect information	System shows error message for each incorrect input field
3.1	Actor clicks "Đăng kí báo giá" button	System alerts: "Đăng kí báo giá thất bại, thông tin bạn nhập chưa đúng, vui lòng nhập lại".  System do not store actor's account to database and do not sends mails.

Relationships:

- UC-13

**Business Rules:** 

- BR-02

# 3.5 UC-02: View Home Page

USE CASE-02 SPECIFICATION						
Use-case No.	Use-case No. UC-02 Use-case Version 1.0					
Use-case Name	Use-case Name View Home Page					
Author TungNT						
Date	Feb 3rd, 2024	Priority	Low			

Actor: Guest and Customer

Summary:

This use case allows actors to view the home page of the system.

Goal:

The purpose is to provide actors with access to the home page, allowing them to explore and

navigate the system.

**Triggers:** Actors decide to access and view the home page.

**Preconditions:** There are no specific preconditions for this use case. **Post Conditions:** The system displays the home page to the actors.

Main Success Scenario:

No	Actor's actions	System Responses
1	The actors access the system.  [Alternative 1]	The system retrieves and displays the home page content and Navbar with 3 navigate button:  - "Giới thiệu" page - "Dịch vụ" page - "Blog"page - "Blog"page - Button "Báo giá".
		The mainBody is some signature picture about project or workspace.
		And Footer contains information: - Company's address - Company's links network of multimedia platforms in the forms of logos

#### Alternative Scenario:

Actor's actions	System Responses	
The actors click Logo or Name of Website area.	The system back to Homepage, retrieves and displays the home page content and Navbar with 3 navigate button:	
	<ul><li> "Giới thiệu" page</li><li> "Dịch vụ" page</li><li> "Blog"page</li></ul>	
	And button "Báo giá".	
	The mainBody is some signature picture about project, workspace.	
	The actors click Logo or Name	

# Exceptions:

No	Cause	System Response
1	The actors access the system.	The system encounters an issue loading the home page content due to a temporary system error.

2	The actor selects the "View Home Page" option.	The system notifies the Guest or Customer about the issue.  The Guest or Customer is redirected to a default page or presented with a relevant error message.
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Relationships: N/A
Business Rules:

# 3.6 UC-03: Evaluate Quotation

USE CASE-03 SPECIFICATION							
Use-case No.	Use-case No. UC-03 Use-case Version 1.0						
Use-case Name	Use-case Name Evaluate Quotation						
Author TungNT							
Date Feb 3rd, 2024 Priority Medium							

**Actor:** Customer

Summary:

This use case allows actor to evaluate quotation provided by the system.

Goal:

The purpose is to enable Customer to review and evaluate quotation for products or services.

**Triggers:** Actor wants to approve a quotation.

**Preconditions:** The quotation must be displayed to actor to view.

**Post Conditions:** Reviewed quotation has new status and system store new status with details in the database.

Main Success Scenario:

No Actor's actions System Responses

1 Actor requests to view a quotation.

[Exception 1.1] System retrieves and displays the quotation for the actor . Form of quotation include:

-Name: "Họ tên" - can not edit

-Email- can not edit

-Phone number: "Số điện thoại" - can not edit

			-Address: "Địa chỉ" - can not edit
			-PDF file of quotation
			-Total Price "Giá chuẩn"
			-Buttons "Chấp nhận" and "Từ chối"
			[Exception 2.1]
	2	Actor view the quotation and evaluate by clicks button "Chấp	System stores new status of quotation and quotation information to database.
		nhận" [Alternative 2.1]	System alerts "Bạn đã xác nhận thành công báo giá, chúng tôi sẽ liên hệ trực tiếp với bạn sau, xin cảm ơn!"

#### Alternative Scenario:

No	Actor's actions	System Responses
2.1	The actor clicks button "Từ chối".	System stores new status of quotation and quotation information to database.
		System alerts "Bạn đã từ chối báo giá thành công, chúng tôi sẽ sớm sửa đổi và cập nhật trên hệ thống, hãy liên tục theo dõi đơn hàng để sớm nhận được cập nhật, xin cảm ơn!"

# Exceptions:

No	Cause	System Response
1.1	Customer is not logged in.	System prompts the customer to log in before proceeding.
2.1	Quotation data cannot be retrieved from the Database.	The system displays an error message and logs the issue for investigation.

# Relationships:

- UC-04

**Business Rules:** 

- BR-04

# 3.7 UC-04: Create Order

USE CASE-04 SPECIFICATION				
Use-case No.	UC-04	Use-case Vers	sion	1.0
Use-case Name	Create order			
Author TungNT				
Date Feb 3rd, 2024 Priority High				

**Actor:** Customer

Summary:

This use case allows actor to create requests for services.

Goal:

The purpose is to allow actor to order new request.

**Triggers:** Actor wants to make a request quotation of products or services.

Preconditions:

- 1. Actor must be logged into the system.
- 2. Actor has selected products or services to order.

Post Conditions:

A new request with details is stored in the database

Main Success Scenario:

No	Actor's actions	System Responses	
1	Actor selects button "Tạo mới yêu cầu" in main customer screen to order new request.	System displays the form of request details:  - Email: accept all email format.  - Username: text input, min-length: 1, max-length: 255, not empty.  - Phone number: 10 degits.  Form of workspace details:  - Select Workspace Options input: "Khu vực" (fetch options from API)  - Lenght: "Chiều dài (m)"- number text input.  - Width: "Chiều rộng (m)" – number text input	

		- Note: "Ghi chú" – text input lable, max length 500.
2	Actor select option for "Khu vực"	System base on workspace option to generate products of each workspace through API and shows product – list:
		- Checkbox select - Name of product - Quantity - Note: "Ghi chú sản phẩm" -text input  System stores the workspace details that actor
3	Actor check the checkbox of product the want to be in the request details and click	System stores the workspace details that actor inputs and checked workspace's producsts to system
	button "Lưu" [Alternative 3.1]	System notifies with message: "Đã lưu vào danh sách báo giá"
4	Actor clicks button "Gửi báo giá"	System notifies with message:"Yêu cầu đã được gửi thành công, chúng tôi sẽ xử lý nhanh nhất có thể".
		System store request details and status to database.

## Alternative Scenario:

No	Actor's actions	System Responses
3.1	The customer decides to add more workspace by clicking button "Thêm khu vực"	The system generate another form of details for actor.  [Main success screnario 2]

# Exceptions:

I	No	Cause	System Response
	1	Customer is not logged in or token time out	System prompts the customer to log in before creating an order.
	2	Error in processing the order due to technical issues.	The system displays an error message and logs the issue for investigation.

#### Relationships:

- UC-13

**Business Rules:** 

- BR-08

#### 3.8 UC-05: Update Order

USE CASE-05 SPECIFICATION				
Use-case No.	UC-05	Use-case Vers	sion	1.0
Use-case Name	Update order			
Author	TungNT			
Date	Feb 3rd, 2024	Priority	Mediu	ım

**Actor:** Customer

Summary:

This use case allows actor to update existing request details placed in the system.

Goal:

The purpose is to provide customer with the ability to make changes to request details.

**Triggers:** Actor wants to modify an existing order.

Preconditions:

- 1. The customer must be logged into the system.
- 2. The customer has at least one existing order.

#### Post Conditions:

- 1. The order details are updated in the system.
- 2. The updated order information is stored in the database.

#### Main Success Scenario:

No	Actor's actions	System Responses
1	Actor selects the order to be updated.	System displays the details of the selected order.
2	Customer makes the necessary modifications.	System allows the customer to edit the order details.
3	Customer confirms the changes.	System updates the order with the modified information.

4	•	System displays the revised total cost to the	
	cost of the order.	customer.	

#### Alternative Scenario:

No	Actor's actions	System Responses
1	Customer decides not to proceed with the update.	System cancels the update process and maintains the original order.
2	System encounters an error during the update.	System displays an error message and logs the issue for investigation.

# Exceptions:

No	Cause	System Response
1	Customer is not logged in.	System prompts the customer to log in before updating the order.
2	The selected order does not exist in the system.	System notifies the customer that the selected order is not found.
3	Error in processing the update due to technical issues.	System displays an error message and logs the issue for investigation.

# Relationships:

- UC-13
- UC-04

## **Business Rules:**

- BR-06

# 3.9 UC-06: View Order

**USE CASE-06 SPECIFICATION** 

Use-case No. UC-01		Use-case Vers	sion	1.0
Use-case Name	View order			
Author	TungNT			
Date	Feb 3rd, 2024	Priority	Mediu	ım

**Actor:** Customer

Summary:

This use case allows customers to view details of their existing orders in the system.

Goal:

The purpose is to provide customers with the ability to access and review information about their orders.

**Triggers:** Actor wants to check the details of a specific order.

Preconditions:

- 1. The actor must be logged into the system.
- 2. The actor has at least one existing order.

Post Conditions: N/A Main Success Scenario:

No	Actor's actions	System Responses
1	Customer selects the order to view.	System displays detailed information about the selected request detail:  - Email - Name - Phone number  Table of requested product list, all fields can not be updated  - Request ID - Workspace - Length - Width - Description - Product name - Quantity
		[Exception 1.1]

Alternative Scenario: N/A

Exceptions:

No	Cause	System Response

1.1 Error in retrieving order details due to technical issues.

The system displays an error message and logs the issue for investigation.

#### Relationships:

- UC-13
- UC-04
- UC-05

#### **Business Rules:**

- BR-09
- BR-10

## 3.10 UC-07: Cancel Request

USE CASE-07 SPECIFICATION				
Use-case No.	UC-07 Use-case Version 1.0			
Use-case Name	Cancel request			
Author	DuyenNTP			
Date	31/01/2024	Priority	High	

Actor: Customer

Summary:

This use case allows the actor to cancel requests when they want.

Goal:

The purpose is that the actor can call off their request.

Triggers:

The actor wants to cancel the request.

Preconditions:

- The actor must be logged in.
- Request detail must exist.

Post Conditions: N/A

Main Success Scenario:

No	Actor's actions	System Responses
1	Actors logged in.	System checks account exist or not? [Exception 1]
2		System shows the homepage.
3	Actor navigates to customer page.	The system shows all options for order and a button cancell request "Dùng báo giá"
4	Actors chose the cancel Request button.	The system shows all the field information:  - Request's ID - Request's Name - Request's Actor - Request's Date Time - Request's Note  System requires the actor to provide reasons to cancel "Send" button
5	Actors fill in the reasons and click on the "Send" button.	The system saves actors' requests.  The system shows the message "Cancel request successfully".

Alternative Scenario: N/A

# Exceptions:

No	Cause	System Response
1	Actor fills in invalid information: account	System informs "Account does not exist".  System request actors logged in again.

# Relationships:

- UC-04

Business Rules:

- BR-01

# 3.11 UC-08: View The Request's History

USE CASE-08 VIEW REQUE	ST'S HISORY		
Use-case No.	UC-08	Use-case Version	1.0

Use-case Name	View the request's history		
Author	uthor DuyenNTP		
Date	31/01/2024	Priority	Medium

Actor: Customer

Summary:

This use case allows the actor to view the request's history when they want.

Goal:

The purpose is that the actor can view the history of their request.

Triggers:

The actor wants to view the request's history.

Preconditions:

- The actor must be logged in.

- Request detail must exist

Post Conditions:N/A

Main Success Scenario:

No	Actor's actions	System Responses
1	Actor logged in.	System checks account exist or not?  [Exception 1]
2		System shows the homepage.
3	Actor navigate to customer page	System shows all option about customer's projects  - Name - Phone number - Address - Details  Button "Xem lại lịch sử"
4	Actors chose the View Request's history "Xem lại lịch sử" button.	System shows all the fields information:  - Historic status - Date time of historic history

Alternative Scenario: N/A

Exceptions:

No	Cause	System Response
1	Actor fills in invalid information: account	System informs "Account does not exist".

	System request actors logged in again.
Relationships	
- UC-0	4
Business Rule	s:

#### 3.12UC-09: Create Account

USE CASE-09 SPECIFICATION				
Use-case No.	UC-09	Use-case Version	1.0	
Use-case Name	Use-case Name Create Account			
Author	TruongNN			
Date	31/01/2024	Priority	High	

Actor: Admin

Summary:

This use case allows the actor to create an account.

Goal:

The purpose is that the actor can manage all accounts.

Triggers:

The actor wants to create an account.

Preconditions:

The actor must be logged in with role staff account

Post Conditions:

System must store new account with role to database and display on "View Account List" page.

Main Success Scenario:

No	Actor's actions	System Responses
1	Actor move to View Account List page	System shows the mainpage.
2	Actors click on the "Thêm tài khoản" button.	<ul> <li>System shows all option about account to fill in. Form includes input - lables for:</li> <li>Email: accept all email format, required, not empty.</li> <li>Username: text input, min-length: 1, max-length: 255, not empty.</li> <li>Phone number: 10 degits, required, not empty.</li> <li>ID card: number text input 9-12 degits</li> <li>Address: text input</li> <li>Password: text input</li> <li>Checkbox for set account's role (Role_Customer, Role_Admin, Role_Manager, Role_Staff)</li> <li>Button "Luru" and "Đóng"</li> </ul>
3	Actors fill in all information and click on the "Luu" button.	System validates information and save new account.
	[Alternative 3.2]	System shows the message "Create the account successfully". [Alternative 3.1]

# Alternative Scenario:

No	Actor's actions	System Response
3.1	Actor fills in invalid information account	System informs "Thông tin bạn nhập không đúng, vui lòng nhập lại".
		System request actors input information again.
3.1	Actor clicks "Đóng" button	System does not save any information or account

Exceptions: N/A	
Relationships:	
Business Rules:	

#### 3.13 UC-10: Edit Account

USE CASE-10 SPECIFICATION				
Use-case No.	UC-10 Use-case Version 1.0			
Use-case Name	Use-case Name Edit Account			
Author TruongNN				
Date	31/01/2024	Priority	Mediu	ım

Actor: Admin

Summary:

This use case allows the actor to view again or edit an staff account information.

Goal:

The purpose is that the actor can view information or edit information about account.

Triggers:

The actor wants to view or edit an account.

Preconditions:

The actor must be logged in with role staff account.

Post Conditions:

System store new information of account if account's information changed.

Main Success Scenario:

No	Actor's actions	System Responses	
1	Actor move to Account List page	System shows List of Account [UC-24]	
2	The actor clicks on the icon edit button.	System shows all information about account. Form includes input - lables, can edit:	
		Email: accept all email format, required, not empty.	

		<ul> <li>Username: text input, min-length: 1, max-length: 255, not empty.</li> <li>Phone number: 10 degits, required, not empty.</li> <li>ID card: number text input 9-12 degits</li> <li>Address: text input</li> <li>Password: text input</li> <li>Checkbox for set account's role (Role_Customer, Role_Admin, Role_Manager, Role_Staff)</li> <li>Button "Luru" and "Đóng"</li> </ul>
		System validates information and save new
3	Actors choose the "Lưu" button.	information.
	[Alternative 3.2]	System shows the message "Chỉnh sửa đã được cập nhật thành công". [Alternative 3.1]

# Alternative Scenario:

No	Cause	System Response
3.1	Actor fills in invalid information account	System informs "Thông tin bạn nhập không đúng vui lòng nhập lại".  System request actors input information again.
3.2	Actor click button "Đóng"	System does not change any informations about account.

Exceptions: N/A

Relationships:

- UC-13 - UC-09

Business Rules:

## 3.14 UC-11: Delete Account

USE CASE-11 SPECIFICATION				
Use-case No. UC-11 Use-case Version 1.0				
Use-case Name Delete Account				

Author	TruongNN		
Date	31/01/2024	Priority	High

Actor: Admin

Summary:

This use case allows the actor to delete an account.

Goal:

The purpose is that the actor can delete accounts.

Triggers:

Actor wants to delete an account.

Preconditions:

The actor must be logged in with role admin account.

Post Conditions:

System stores new status of the account in the database

Main Success Scenario:

No	Actor's actions	System Responses
1	Actor move to Account List page	System shows list of account
2	Actors click on the delete-icon button.	System changes status of account from active to disable and shows message "Hủy kích hoạt tài khoản thành công".
		[Alternative 2.1]
		System stores new status to database.

#### Alternative Scenario:

No	Actor's actions	System Response
2.1	Actor wants to reactivate account by clicking "re-active" button	System changes status of account from disable to active and shows message "Tái kích hoạt tài khoản thành công".  System stores new status to database.

Exceptions: N/A

Relationships:

UC-13 UC-09 Business Rules:

- BR-05

# 3.15UC-12: Update Staff's Role

USE CASE-12 SPECIFICATION					
Use-case No.	UC-12	Use-case Version 1.0			
Use-case Name	UAccount				
Author	DuyenNTP				
Date	31/01/2024	Priority	High		

Actor: Admin

Summary:

This use case allows the actor to update staff's role for lower grades.

Goal:

The purpose is that the actor can update staff's role accounts.

Triggers:

The actor wants to update the staff's role.

Preconditions:

The actor must be logged in.

Post Conditions:

The actor clicks on the "Account".

Main Success Scenario:

No	Actor's actions	System Responses	
1	Actors logged in.	System checks account exist or not? [Exception 1]	
2		System shows the homepage.	
3	Actors click on the "Account" button.	System shows all option about schedule:  - View Accounts - Create Accounts - Delete Accounts - Update staff's role	

4	Actors choose the "Update staff's role" button.	System shows all the fields information:  - Staff's Id - Staff's Name - Staff's Role - Note - "Update" button	
5	Actors change roles and click on the "Update" button.	System update and save accounts.  System shows the message "Update the account successfully".	

Alternative Scenario: N/A

Exceptions:

No	Cause	System Response
1	Actor fills in invalid information: account	System informs "Account does not exist".  System request actors logged in again.

Relationships:

**Business Rules:** 

# 3.16 UC-13: Login

USE CASE-13 SPECIFICATION					
Use-case No.	UC-13	Use-case Version 1.0			
Use-case Name	Login				
Author	HaoNT				
Date	01/02/2024	Priority	High		

Actor: Authenticated User

Summary:

This use case allows the actors to log into the system to access personalized information and functionalities.

Goal:

The purpose is to provide a generic login mechanism for various types of accounts, including Customer, Admin, Manager, and Staff.

**Triggers:** The actors navigates to the login page.

**Preconditions:** The actors has a registered profile in the system.

Post Conditions:

- Success: System redirects actor to home page

- Fail: System informs the message corresponding error code

Main Success Scenario:

No	Actor's actions	System Responses
1	The actor selects tab Login	The system shows a form with these fields:
		- Username: text input, required
		- Password: text input, required
2	User enters their username, password and clicks "Login" button.	The system validates the entered credentials. If correct, redirect to actor's home page.
	button.	[Exception 2.1]

Alternative Scenario: N/A

Exceptions:

No	Cause	System Response
2.1	If the credentials are incorrect.	System shows error message corresponding to the fail constrain.

Relationships: UC-01
Business Rules:
- BR-07

## 3.17UC-14: Logout

USE CASE-14 SPECIFICATION						
Use-case No.	UC-14	Use-case Version	1.0			
Use-case Name	Logout					
Author	HaoNT					

Date	01/02/2024	Priority	Medium
Date	01/02/2021	THOTICY	riculani

Actor: Authenticated User

Summary:

This use case allows the actor to log out of the system, terminating their current session.

Goal:

The purpose is to provide a mechanism for the user to log out of the system securely.

**Triggers:** The user decides to log out.

**Preconditions:** The user is currently logged into the system.

Post Conditions:

- Success: The user successfully logs out, terminating the current session.

- Fail: System informs "Something wrong with system".

Main Success Scenario:

No	Actor's actions	System Responses
1	The Actor clicks on the "Logout" option in the user interface. [Alternative 1.1]	The system terminates the current session. The system redirects the Account to the login page.

#### Alternative Scenario:

No	Actor's actions	System Responses
1.1	Actor stays over 3 hours in the system	Session time out, system alert "Phiên đăng nhập hết hạn, vui lòng đăn nhập lại để tiếp tục truy cập trang web".
		System locks active-screen.

# Exceptions:

No	Cause	System Response
1	System signs out error	System informs "Hệ thống đang gặp sự cố, vui lòng thử lại sau!".

Relationships: UC-13

Business Rules:

- BR-07

# 3.18 UC-15: Update Profile

USE CASE-15 SPECIFICATION							
Use-case No.	UC-15	UC-15 Use-case Version 1.0					
Use-case Name	Update Profile						
Author	HaoNT						
Date	01/02/2024	Priority	Low				

Actor: Authenticated User

Summary:

This use case allows the actor to update their profile information in the system.

Goal:

The purpose is to enable the actor to modify and maintain accurate and up-to-date profile details.

**Triggers:** The actor decides to update their profile information.

**Preconditions:** The actor is currently logged into the system.

**Post Conditions:** The actor successfully updates their profile information.

Main Success Scenario:

No	Actor's actions	System Responses			
1	The actor clicks Edit Profile button.	The system displays the actor's information details.			
2	The actor modifies the desired profile details (e.g., name, email, phone, password, address).	The system validates the updated information:  - Full name: text input, required 1 – 255 characters.  - Email: text input required, regex email format.  - Phone: number input, length required 10.  - Id Card: number input, length 9 – 12.  - Address: text input.			
3	The actor click "Lưu" button.	The system confirms the successful update and displays a success message "Thông tin tài khoản đã được cập nhật".			

Alternative Scenario:

No	Actor's actions	System Responses
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1	The actor selects the option to change the password.	The system prompts the actor to enter the current password and the new password.	
2	The actor provides the required information.	The system validates the entered information.	

# Exceptions:

No	Cause	System Response
1	The username is duplicated.	The system shows messages "Username cannot be duplicated".
2	At least one input field does not match the constraint.	The system shows error messages corresponding to fail constraint.

Relationships: N/A Business Rules:

# 3.19 UC-16: View Profile

USE CASE-16 SPECIFICATION						
Use-case No.	se No. UC-16 Use-case Version 1.0					
Use-case Name	Use-case Name View Profile					
Author HaoNT						
Date 01/02/2024 Priority Meidum						

Actor: Authenticated User

Summary:

This use case allows the actor to view their profile information within the system.

Goal:

The purpose is to provide the actor with access to their personal profile details for review and verification.

**Triggers:** The actor decides to view their profile information.

**Preconditions:** The actor is currently logged into the system.

**Post Conditions:** The actor successfully views their profile information.

Main Success Scenario:

No	Actor's actions	System Responses
1	The actor clicks Profile button.	The system displays the actor's profile information details (e.g. Full Name, Email, Phone, Address, Id Card).

Alternative Scenario: N/A

Exceptions: N/A
Relationships: N/A
Business Rules: N/A

#### 3.20 UC-17: View Dashboard

USE CASE-17 SPECIFICATION						
Use-case No.	UC-17 Use-case Version 1.0					
Use-case Name	View Dashboard					
Author	HaoNT					
Date	01/02/2024 Priority Medium					

Actor: Manager

Summary:

This use case allows the Manager to view a dashboard containing statistical information about the number of quote requests and the waiting time for customer confirmation, ...

Goal:

The purpose is to provide the actor with an overview of key metrics related to quote requests and customer confirmation waiting times, ...

**Triggers:** The manager decides to access the system's dashboard for statistical insights.

**Preconditions:** The manager is currently logged into the system.

**Post Conditions:** The manager successfully views the dashboard with statistical information.

Main Success Scenario:

No	Actor's actions	System Responses
110	/ (CLOT 5 decions	System responses

1	Manager logged into successfully and click Dashboard from side bar.	The system displays a comprehensive dashboard with statistical information.	
		- Number of quote requests received.	
		- average waiting time for customer confirmation.	
		- Additional relevant statistics, such as the status of ongoing projects, if applicable.	

Alternative Scenario: N/A

Exceptions: N/A
Relationships: N/A
Business Rules:
- BR-10

# 3.21 UC-18: Create Categories

USE CASE-18 SPECIFICATION					
Use-case No.	UC-158	Use-case Vers	sion	1.0	
Use-case Name Create Categories					
Author HaoNT					
Date	01/02/2024 Priority High				

**Actor:** Manager

Summary:

This use case allows the Manager to create new categories for construction types, materials, and workspace within the interior construction system.

Goal:

The purpose is to enable the Manager to define and organize categories to facilitate efficient management of construction-related aspects.

**Triggers:** The actor identifies the need to add new categories to the system.

**Preconditions:** The actor is currently logged into the system.

**Post Conditions:** The actor successfully creates new categories for construction types, materials, or workspace.

Main Success Scenario:

No	Actor's actions	System Responses
1	Actor navigates to the "Categories Management" section.	The system presents the existing categories and an option to create new ones.
2	The actor selects the type of category to create (construction type, material, or workspace).	The system validates the entered information.
3	The manager enters the details for the new category (e.g., name, description).	If the information is valid, the system creates a new category.
	[Exception 3.1]	

Alternative Scenario: N/A

# Exceptions:

No	Cause	System Response
3.1	Manager enters invalid information for the new category.	The system displays an error message

Relationships: N/A
Business Rules:
- BR-11

# 3.22 UC-19: Update Categories

USE CASE-19 SPECIFICATION					
Use-case No.	UC-19	Use-case Vers	sion	1.0	
Use-case Name Update Category					
Author TienBH					
Date	01/02/2024 Priority High				

Actor: Manager

Summary:

This use case allows the Manager to update the information related to categories in the interior

construction quotation system, specifically for Workspace, Product, and Material.

# Goal:

The purpose is to empower the Manager to modify and enhance details within the predefined categories (Workspace, Product, Material) to ensure accurate and up-to-date information for construction projects.

### Triggers:

The Manager identifies the need to modify or update information within one of the predefined categories.

#### Preconditions:

- The Manager must be logged into the interior construction quotation system.
- At least one item in each category (Workspace, Product, Material) in the system.

# Post Conditions:

- The selected category (Workspace, Product, or Material) is updated with the new information provided by the Manager.

#### Main Success Scenario:

### Manager updates Workspace

No	Actor's actions	System Responses	
1	The Manager selects "Update Category"	The system displays a list of available categories.  - Workspace  - Product  - Material.	
2	The Manager selects "Update Workspace."	The system displays a list of available Workspaces.	
3	The Manager chooses Workspace to update the name of Workspace.	The system sends a confirmation message "Are you sure you want to update the new name of this Workspace?"	

## Manager updates Production

No	Actor's actions	System Responses
1	The Manager selects "Update Category"	The system displays a list of available categories.  - Workspace  - Product  - Material.
2	The Manager selects "Update Product."	The system displays a list of available Workspace.
3	The Manager selects the specified Workspace.	The system displays a list of available Products.
4	The Manager selects the	The system presents current details information:

	specified Product to update.	<ul><li>Name</li><li>Length</li><li>Width</li><li>Price</li></ul>	
5	The Manager selects the specified Product information.	The system validates and updates the Product with the provided modifications.	

The manager updates Material

No	Actor's actions	System Responses
1	The Manager selects "Update Category"	System displays a list of available categories.  - Workspace  - Product  - Material.
2	The manager selects "Update Material."	The system displays a list of available Workspace
3	The Manager selects the specified Workspace.	The system displays a list of available Products.
4	The Manager selects the specified Product information.	The system displays a list of available materials.
5	The Manager selects the specified Material to update the name of the materials.	The system validates and updates the name of the material with the provided modifications.

Alternative Scenario: N/A

Exceptions: N/A
Relationships:
- UC-20
- UC-18

Business Rules: N/A

# 3.23 UC-20: View Category

USE CASE-20 SPECIFICATI	ON		
Use-case No.	UC-20	Use-case Version	1.0
Use-case Name	View Category		

Author	TienBH		
Date	01/02/2024	Priority	Medium

### Actor: Manager

#### Summary:

This use case allows the Manager to view details of categories in the interior construction quotation system, specifically for Workspace, Product, and Material.

#### Goal:

The purpose is to provide the Manager with the ability to access and review specific information related to predefined categories.

## Triggers:

The Manager identifies the need to review details within predefined categories for decision-making or planning purposes.

#### Preconditions:

- The Manager must be logged into the interior construction quotation system.

#### Post Conditions:

- The Manager gains access to detailed information about the selected category (Workspace, Product, or Material).

#### Main Success Scenario:

### The Manager views Workspace

No	Actor's actions	System Responses		
1	The Manager selects "View Category"	The system displays a list of available categories.  - Workspace  - Product  - Material.		
2	The Manager selects "View Workspace."	The system displays a list of available Workspaces.		

#### The Manager views Production

No	Actor's actions	System Responses
1	The Manager selects "View Category"	The system displays a list of available categories.  - Workspace  - Product  - Material.
2	The Manager selects "View Product."	The system displays a list of available Workspace
3	The Manager selects the specified Workspace.	The system displays a list of available Products.

4 The Manager selects the		The system presents current details information:			
	specified Product to update.	- Name			
		- Length			
		- Width			
		- Price			

# The Manager views Material

No	Actor's actions	System Responses
1	Manager selects "View Category"	System displays a list of available categories.  - Workspace  - Product  - Material.
2	Manager selects "View Material."	The system displays a list of available Workspace
3	Manager selects the specified Workspace.	The system displays a list of available Products.
4	The Manager selects the specified Product information.	The system displays a list of available materials.

Alternative Scenario: N/A

Exceptions: N/A
Relationships:
- UC-19
Business Rules: N/A

# 3.24 UC-21: Delete Category

USE CASE-21 SPECIFICATION						
Use-case No.	Use-case No. UC-21 Use-case Version 1.0					
Use-case Name	Use-case Name Delete Category					
Author TienBH						
Date	e 01/02/2024 Priority High					

Actor: Manager

Summary:

This use case allows the Manager to delete predefined categories in the interior construction quotation system.

#### Goal:

The purpose is to allow the Manager to efficiently remove a category from the system.

## Triggers:

The Manager identifies the need to remove a specific category, which may no longer be applicable or necessary.

#### Preconditions:

- The Manager must be logged into the interior construction quotation system.

#### Post Conditions:

- The specified category (Workspace, Product, or Material) is permanently removed from the system.

# Main Success Scenario:

## The Manager deletes Workspace.

No	Actor's actions	System Responses
1	The Manager selects "Delete Category"	System displays a list of available categories.  - Workspace  - Product  - Material.
2	The Manager selects "Delete Workspace."	The system displays a list of available Workspaces.
3	The Manager chooses Workspace to delete.	The system sends a confirmation message "Are you sure you want to delete this Workspace?"

### The Manager updates Production

	•	
No	Actor's actions	System Responses
1	The Manager selects "Delete Category"	System displays a list of available categories.  - Workspace  - Product  - Material.
2	The Manager selects "Delete Product."	The system displays a list of available Workspace.
3	The Manager selects the specified Workspace.	The system displays a list of available Products.
4	The Manager selects the specified Product to delete.	The system sends a confirmation message "Are you sure you want to delete this Product"

The manager deletes Material.

No	Actor's actions	System Responses		
1	The Manager selects "Delete Category"	The System displays a list of available categories - Workspace - Product - Material.		
2	The manager selects "Delete Material."	The system displays a list of available Workspace		
3	The Manager selects the specified Workspace.	The system displays a list of available Products.		
4	The Manager selects the specified Product information.	The system displays a list of available materials.		
5	The Manager selects the specified Material to delete the name of the materials.	The system sends a confirmation message "Are you sure you want to delete this Material?".		

Alternative Scenario: N/A

Exceptions: N/A
Relationships:
- UC-19
- UC-20
Business Rules: N/A

# 3.25 UC-22: Create Sample

USE CASE-22 SPECIFICATION						
Use-case No.	Use-case No. UC-22 Use-case Version 1.0					
Use-case Name	Use-case Name Create Sample					
Author TienBH						
Date	31/01/2024	Priority	Mediu	ım		

Actor: Manager

Summary:

This use case allows the Manager to create a Sample Request, representing a collection of available interior construction projects in the planning stage but has not yet started.

Goal:

The purpose is to allow the Manager to initiate a Sample Request for interior construction projects.

## Triggers:

The trigger for this use case is the need to plan and organize interior construction projects that are in the initial stages.

#### Preconditions:

- The Manager must be logged into the interior construction quotation system.
- Relevant project details and requirements should be available for inclusion in the Sample Request.

#### **Post Conditions:**

- A new Sample Request is created and stored in the system.
- The Sample Request is associated with the Manager's account.
- Relevant project details and requirements are attached to the Sample Request.

#### Main Success Scenario:

No	Actor's actions	System Responses		
1	The manager selects "Create Sample Request"	The system presents the Sample Request creation form.  - Name - Description - Workspace - Product - Materials - Estimated Cost		
2	The manager fills in project details and requirements in the form.	The system validates the information and creates a new Sample Request.		
3	The manager clicks on the "submit" button.	The system confirms the successful creation of the Sample Request and associates it with the Manager.		

Alternative Scenario: N/A

#### Exceptions:

No	Cause	System Response
1	The manager submits incomplete information in the Sample Request form.	The system prompts the Manager to provide missing information and prevents submission until complete.

### Relationships:

- UC-23

Business Rules: N/A

### 3.26 UC-23: Delete Sample

USE CASE-23 SPECIFICATION							
Use-case No.	Use-case No. UC-23 Use-case Version 1.0						
Use-case Name	Use-case Name Delete Sample						
Author TienBH							
Date	31/01/2024	Priority	Mediu	ım			

Actor: Manager

Summary:

This use case allows the Manager to delete a Sample Request.

Goal:

The purpose is to allow the Manager to efficiently remove a Sample Request from the system.

Triggers:

The Manager decides to discard or remove a Sample Request from the system.

#### Preconditions:

- The Manager must be logged into the interior construction quotation system.
- The interior construction quote system includes at least one sample request project.

### Post Conditions:

- The specified Sample Request is permanently removed from the system.
- Any associated data, such as project details and requirements, is deleted.

#### Main Success Scenario:

No	Actor's actions	System Responses
1	Manager clicks on the "Delete Sample Request" button	System prompts for confirmation.  "Are you sure you want to delete this Sample Request?"
2	Manager clicks on the "Confirm" button.	The system removes the Sample Request

Alternative Scenario: N/A

Exceptions: N/A

Relationships: UC-22

Business Rules: N/A

### 3.27UC-24: View Account List

USE CASE-24 View Account List					
Use-case No. UC-24 Use-case Version 1.0					
Use-case Name	View Account List				
Author	TruongNN				
Date	31/01/2024	Priority	Medium		

**Actor**: Admin

**Summary**: This use case allows the actor to view a list of staff account.

**Goal:** The purpose is that the actor can manage all staff accounts.

**Triggers**: The actor wants to view all staff accounts.

**Preconditions**: The actor must be logged in.

**Post Conditions:** 

The actor can view, update or delete any staff accounts.

Main Success Scenario:

No	Actor's actions	System Responses
1	Actor navigate to account list Page	System fetchs API and displaysto screen:
		+ Button "Thêm tài khoản"
		+ A table of staff accounts with form:
		<ul><li>ID</li><li>Email</li><li>Phone</li><li>Username</li></ul>

- Status - Fullname - Actions with 2 icon-button represent for Delete and Update
[Exception 1.1]

Alternative Scenario: N/A

Exceptions:

No	Cause	System Response
1.1	Actor navigate to account list Page	System shows message: "Hiện chưa có tài khoản nào"
		And button "Thêm tài khoản"

# Relationships:

- UC-10
- UC-11
- UC-12

**Business Rules:** 

# 3.28 UC-25: View Proposal List

USE CASE-25 SPECIFICATION					
Use-case No.	UC-25	Use-case Vers	sion	1.0	
Use-case Name	Use-case Name View Proposal List				
Author	TruongNN				
Date	30/1/2024	Priority	Low		
Actor: Manager					
Summary:					

This use case allows the actor to review proposal request details- proposal of project.

### Goal:

The actor can review list of proposal and making decisions.

### Triggers:

The actor intends to view a proposal details.

#### Preconditions:

- The manager must be logged into the system with valid credentials.
- Proposal must exist.

#### Post Conditions:

Actor can adjust, or reject proposal for request details.

Main Success Scenario:

No	Actor's actions	System Responses	
1	Actor navigates to the proposals section.	System displays a table with list of available proposals.	
	[Exception 1.1]	Each row is a proposal , row includes :	
		- ID	
		- Estimated price	
		- Customer name	
		- Request Status	
		- Button "View" for each proposal.	

Alternative Scenario: N/A

Exceptions:

No	Cause	System Response
1.1	Proposal does not exist	System notifies the actor that the requested proposal is not available.

#### Relationships:

- UC-03
- UC-27

#### **Business Rules:**

# 3.29 UC-26: Evaluate Proposal

USE CASE-26 SPECIFICATION				
Use-case No.	Use-case No. UC-26 Use-case Version 1.0			
Use-case Name	Evaluate Proposal			
Author	TruongNN			
Date	30/1/2024	Priority	High	

**Actor:** Manager

Summary:

This use case allows the actor to evaluate proposal.

Goal:

Actor can review proposals, confirm or reject them based on satisfaction.

Triggers:

Actor views a proposal and decides to approve it.

#### Preconditions:

- Actor must be logged in to the system with role manager account.
- A proposal must exist in the system and must be in a state where approval is required.

#### Post Conditions:

Actor approves or rejects the proposal, and the status of the proposal is updated accordingly. Main Success Scenario:

No	Actor's actions	System Responses
1	Actor navigates to the proposals section.	System displays a list of available proposals.
2	Actor selects a specific proposal to view.	System retrieves and displays the details of the selected proposal.
3	Actor reviews the proposal and evaluates by clicking "Phê duyệt" button [Alternative 3.1]	System stores new status of proposal.  System alerts "Trạng thái cập nhật thành công, bảng báo giá đã được phê duyệt"

#### Alternative Scenario:

No	Actor's actions	System Responses	
----	-----------------	------------------	--

3.1	System stores new status of proposal.
	System alerts "Trạng thái cập nhật thành công, bảng báo giá đã bị từ chối phê duyệt"

# Exceptions:

No	Cause	System Response
1	Proposal does not exist or is not in a state requiring approval	System notifies actor that the proposal cannot be approved at this time.

# Relationships:

- UC-27

# **Business Rules:**

- BR-03

# 3.30 UC-27Create Proposal

USE CASE-27 SPECIFICATION				
Use-case No.	Use-case No. UC-27 Use-case Version 1.0			1.0
Use-case Name	Create Proposal			
Author	TruongNN			
Date	30/1/2024	Priority	High	

**Actor**: Staff Summary:

This use case allows staff create proposal for request details (quotation).

Goal:

The purpose is to provide staff to upload proposal PDF file for request details.

Triggers:

Staff decides to create proposal for request details of a specific project request.

Preconditions:

• Staff must be authenticated and logged into the system.

• Project requests must already exist in the system.

# Post Conditions:

- Staff successfully view the details of the requested project.
- Manager can view and evaluate this proposal details.

### Main Success Scenario:

No	Actor's actions	System Responses
1	Actor logs into the system.	System authenticates staff's credentials.
2	Actor navigates to the proposal Page	System displays a list of existing project details.
3	Actor selects a project's request details to upload proposal PDF file for.	System retrieves and shows form for uploading PDF proposal file. Form include:  - Button "Chọn tệp": for choosing file pdf, file must be in format- ".pdf"  - Button "Tải tệp lên": for loading file to display in system  - File name "Tên bản báo cáo": text input  - Standard price input "Giá sơ bộ" – number text input.
4	Actor clicks button "Chọn tệp"	System shows file dialog for actor to choose PDF file for loading to system
5	Actor choose file and clicks "Open" in file dialog.	System displays file path in system
6	Actor clicks button "Tải tệp lên" [Exception 6.2]	System loads file and shows frame for PDF file to the bottom of page.  [Exception 6.1]
7	Actor fills information for filename and standard price	System validates information
8	Actor clicks button "Lưu"	System stores proposal file to database and shows message: "Hệ thống đã cập nhật bảng báo giá thành công"

Alternative Scenario: N/A

Exceptions:

No	Cause	System Response
6.1		System can not load PDF file, system shows

		error message "Tải file PDF lên không thành công, vui lòng thử lại sau"
6.2	Actor does not click button "Tải tệp lên" and clicks "Lưu" button	System shows error messge "Không có gì để lưu, vui lòng tải tệp lên để lưu"

### Relationships:

- UC-03

**Business Rules:** 

# 3.31 UC-28: Create Request

USE CASE-28 SPECIFICATION				
Use-case No.	UC-28 Use-case Version 1.0			
Use-case Name	Create Request			
Author	TruongNN			
Date	30/1/2024	Priority	Mediu	ım

Actor: Staff

Summary:

This use case allows staff to create a new request details.

Goal:

The purpose is "Enable staff to initiate new requests for projects."

Triggers:

Staff decides to create a new request details for customer.

Preconditions:

- Staff must be authenticated and logged into the system.
- Relevant project details and requirements must be available.

### Post Conditions:

A new request is created and stored in the system for further processing.

Main Success Scenario:

No	Actor's actions	System Responses
1	Staff logs into the system.	System authenticates staff's credentials.
2	Staff navigates to the request creation section.	System displays options for creating a new request.
3	Staff fills in the details of the new request including project scope, requirements, timeline, and contact information.  [Alternative 3.1]	System saves the entered information.
4	Staff submits the new request.	System notifies staff that the request has been successfully submitted.

# Alternative Scenario:

No	Actor's actions	System Responses
3.1	Staff encounters missing information or errors in the request.	System prompts staff to fill in the missing information or correct errors before submission.

# Exceptions:

No	Cause	System Response
1	Staff fails to log in.	System prompts staff to provide valid credentials.
2	Relevant project details are not available.	System alerts staff that necessary information is missing and request creation cannot proceed.
4	Technical error occurs during submission.	System notifies staff of the error and advises on the next steps to resolve it.

# Relationships:

- UC-03
- UC-29

# **Business Rules:**

- BR-12
- BR-13

# 3.32 UC-29: Update Request

USE CASE-29 SPECIFICATION				
Use-case No.	UC-29 Use-case Version 1.0			
Use-case Name	Update Request			
Author	TruongNN			
Date	30/1/2024 Priority Medium			ım

**Actor**: Staff Summary:

This use case allows staff members to update existing requests.

Goal:

The purpose is to enable staff to modify and revise details of already submitted project requests.

Triggers:

Staff decides to update an existing request.

Preconditions:

- Staff must be authenticated and logged into the system.
- The request to be updated must already exist in the system.

#### Post Conditions:

The request is successfully updated with the new information.

Main Success Scenario:

No	Actor's actions	System Responses	
1	Staff logs into the system.	System authenticates staff's credentials.	
2	Staff navigates to the request list section.	System displays list of existing requests for updating.	
3	Staff selects the request to be updated by clicking "View"	System retrieves and displays the details of the selected request with information:  - "Mã báo giá": Request ID – can not edit - "Giá dự kiến" -Price: Can not edit - Email: all email format, required - "Họ tên" – Cusname: text input, required - "Số điện thoại" – Phone number: number text input, 10 degits, required	

		<ul> <li>"Mã căn cước công dân" – ID Card: number text input: 9-14 degits</li> <li>"Địa chỉ" – Address: text input</li> </ul>
		Button "Add new workspace"
		Form of workspace details:  - Workspace select-input "Chọn khu vực"  - Length "Chiều dài (m)": number text input  - Width "Chiều rộng(m)": number text input  - Description "Ghi chú cho khu vực thi công": text input
		A button "Gửi báo giá"
4 Staff modifies the necessary	1	System validates inputs.
	details of the request.	[Exceptions 4.1]
5	Staff selects workspace [Alternative 5.1]	Systems generates workspace's product for each details with customer's selected products in form of checked box, each check box options includes:  - Check box - Name of product "Tên sản phẩm" - Quantity "Số lượng" - Description "Ghi chú cho từng sản phẩm"  Button "Lưu"  [Exception 5.1]
6	Actor chooses new products or edit products and clicks "Lưu" button	System stores new updating workspace details and product details
7	Actor clicks button "Gửi báo giá" [Alternative 7.1]	System stores new updating of customer information, workspace details and product details to database

# Alternative Scenario:

No	Actor's actions	System Responses
5.1	Staff clicks "Add new workspace".	System generate null form of workspace details and product details for actor to create new one.

# Exceptions:

No	Cause	System Response
----	-------	-----------------

	1	Staff fails to log in.	System prompts staff to provide valid credentials.
	4.1	Actor re-inputs information	System alerts "Nhập sai thông tin vui lòng nhập lại" until all fiels are correct
	5.1	Actor does not clicks "Lưu"	System still stores current data of workspace and product details.
	7.1	Actor does not clicks "Gửi báo giá"	System still stores current data of request details containing all informations of customer , workspaces and products

Relationships: UC-28

# Business Rules:

- BR-06

- BR-14

- BR-01

# 4 NON-FUNCTIONAL REQUIREMENTS

This section describes the non-functional requirements of the Furniture system. Some examples are listed as below

## 4.1 Usability

#### Training Time:

- The system should require no more than four hours of training for regular users to become proficient in basic operations.
- Power users should be able to achieve productivity within two hours of training on advanced features and functionalities.

#### Measurable Task Times:

- Common tasks such as creating a new furniture item or generating a quotation should have an average completion time of 5 minutes.
- Complex operations such as customizing furniture designs should not exceed 15 minutes of processing time.

#### Conformance to Standards:

- The system's user interface design and interaction flow should conform to commonly
  accepted usability standards, such as IBM's Common User Access (CUA) standards
  and Microsoft's GUI standards.
- Consistency in terminology, layout, and navigation should be maintained to align with users' familiarity with other software systems.

# 4.2 Reliability

- **Mean Time Between Failures (MTBF):** The system should have a minimum MTBF of 10,000 hours, ensuring prolonged operational uptime.
- **Mean Time To Repair (MTTR):** In the event of a system failure, the MTTR should not exceed 4 hours, minimizing downtime and disruption to operations.

#### 4.3 Performance

- 1. Response Time for a Transaction:
  - Specify the average and maximum response times for system transactions. This includes actions such as submitting a form, loading a page, or processing a request.
  - Example: The average response time for processing a customer order should not exceed 3 seconds, with a maximum response time of 5 seconds.

#### 2. Throughput:

- Define the system's throughput, typically measured in transactions per second (TPS). This indicates the system's capacity to handle concurrent requests efficiently.
- Example: The system should support a throughput of at least 100 transactions per second during peak usage hours.
- 3. Capacity:

- Specify the system's capacity, indicating the maximum number of customers or transactions it can accommodate simultaneously without significant performance degradation.
- Example: The system should be capable of handling a minimum of 1000 concurrent users without experiencing performance issues.

## 4. Degradation Modes:

- Define acceptable modes of operation when the system experiences degradation, such as increased response times or reduced throughput. This ensures that the system remains functional even under suboptimal conditions.
- Example: In the event of high server load, the system should prioritize essential functionalities while temporarily delaying non-critical tasks.

#### 5. Resource Utilization:

- Specify resource utilization metrics such as memory, disk space, and network bandwidth. This helps ensure efficient utilization of system resources and prevents bottlenecks.
- Example: The system should maintain memory usage below 80% capacity and disk space usage below 70% capacity at all times.

# 4.4 Supportability

#### **Coding Convention**

The system must adhere to standardized coding practices, naming conventions, and class libraries of JAVA coding convention <u>codeconventions.pdf</u> (<u>oracle.com</u>).

#### **Maintenance Utilities:**

Development tool: IntelliJ Idea, Visual Studio Code.

Database management system: Microsoft SQL Server.

Version control tool: Git.

# 4.5 Design Constraints

- 1. **Technological Stack**: The website must be built using HTML, CSS, JavaScript, and React for the front-end and back-end development. Additionally, MySQL must be used for database management.
- 2. **Responsive Design**: The website must be responsive and compatible with various devices and screen sizes, including desktops, laptops, tablets, and smartphones.
- 3. **Security Measures**: The system must incorporate appropriate security measures, including encryption protocols, to safeguard sensitive user information and payment transactions.
- 4. **Scalability**: The architecture of the system should be scalable to accommodate potential future expansions and increased user traffic without significant modifications.
- 5. **Regulatory Compliance**: The website must comply with relevant laws and regulations governing online commerce, data protection, and consumer rights in the regions where it operates.
- 6. **Localization**: The system must support localization features to enable the website to be translated into multiple languages to cater to a diverse user base.

- 7. **Browser Compatibility**: The website must be compatible with popular web browsers such as Google Chrome, Mozilla Firefox, Safari, and Microsoft Edge.
- 8. **Accessibility**: The system must adhere to accessibility standards such as Web Content Accessibility Guidelines (WCAG) to ensure that users with disabilities can access and navigate the website effectively.
- 9. **Performance**: The website must be optimized for performance, with fast loading times and minimal latency, to provide users with a seamless browsing experience.
- 10. **Third-Party Integrations**: Any third-party services or APIs integrated into the system must be well-documented and compliant with the design constraints outlined herein.
- 11. **Backup and Recovery**: The system must have robust backup and recovery mechanisms in place to prevent data loss and ensure continuity of service in the event of system failures or disasters.
- 12. **User Interface Guidelines**: The user interface of the website must follow established design guidelines and best practices to enhance usability and user experience.
- 13. **Development Tools**: The development team must use industry-standard development tools and frameworks for building and testing the website to ensure consistency and efficiency in the development process.

## 4.6 On-line User Documentation and Help System Requirements

- 1. **On-line User Documentation**: The system must provide easily accessible and understandable on-line user documentation, including user guides, FAQs, and detailed instructions on the features and functionalities of the website.
- 2. **Help System**: The website must feature an integrated help system, allowing users to access support information instantly from any page on the website. This help system should include fast search capabilities and provide solutions to common issues users may encounter.
- 3. **Help About Notices**: Any help about notices appearing on the website must be arranged and presented clearly and comprehensively to enable users to easily search for and access help information.
- 4. **Support via Email or Live Chat**: The system should offer various means of communication such as email or live chat to allow users to request assistance or support from the website's customer support team.
- 5. **Updating Support Information**: All support information, user documentation, and guides must be regularly updated to reflect changes in the product and ensure that users always have access to the latest and most accurate information.
- 6. **Multi-lingual Support Services**: If the website targets a multi-lingual audience, help system and user documentation should be provided in multiple languages to ensure the broadest possible access and understanding.

# 4.7 Purchased Components

- 1. **Component Description**: Provide a comprehensive list of all purchased components intended for integration into the system. This may include third-party software libraries, frameworks, plugins, or modules.
- 2. **Licensing and Usage Restrictions**: Specify the licensing terms and conditions associated with each purchased component. Detail any restrictions on usage, distribution, modification, or redistribution imposed by the component's license agreement.

- 3. **Compatibility and Interoperability**: Outline the compatibility requirements of the purchased components with the existing system architecture and technologies. Ensure that the components are compatible with the chosen development stack and can seamlessly integrate with other system modules.
- 4. **Interface Standards**: Define any interface standards or protocols that must be adhered to for the integration of purchased components. This includes communication protocols, data formats, and any other specifications necessary for interoperability between system components.
- 5. **Vendor Support and Maintenance**: Specify the level of vendor support available for the purchased components, including provisions for updates, patches, and technical assistance. Ensure that vendor support aligns with the project's long-term maintenance requirements.
- 6. **Risk Mitigation Strategies**: Identify any potential risks associated with the use of purchased components, such as vendor reliability, dependency on proprietary technologies, or lack of long-term support. Develop mitigation strategies to address these risks and minimize their impact on the project's success.

#### 4.8 Interfaces

#### User Interfaces:

The user interface should be intuitive, visually appealing, and responsive across various devices, enhancing user experience and satisfaction. It will consist of the following elements:

- **Homepage:** This will serve as the entry point for users, providing an overview of the services offered and navigation options to different sections of the website.
- **Quotation Form:** A user-friendly form where users can input details about their interior design project, including dimensions, preferred materials, specific requirements, and any additional information.
- **Cost Estimation Display:** After submitting the quotation form, users will be presented with a detailed cost estimation for their project based on the input provided.
- User Account Management: Users will have the option to create accounts, allowing them to save project details, view past quotations, and manage their information.
- **Responsive Design:** The interface will adapt seamlessly to different screen sizes and resolutions, ensuring optimal user experience on desktops, tablets, and smartphones.

#### Hardware Interfaces:

Since the application must run over the internet, all hardware requiring internet connectivity will serve as hardware interfaces for the system. Examples include:

- **Modem:** Provides internet connectivity to the server hosting the application.
- **WAN LAN:** Enables communication between the wide area network (internet) and the local area network (server).
- **Ethernet Cross-Cable:** Facilitates direct connection between devices for network communication.

#### Software Interfaces:

There are no specific software interfaces required for this application as it will be developed as a standalone system. However, it may interact with external components such as:

• **Database Management System:** Interaction with a database management system for storing and retrieving user data and project details.

• **Email Service:** Integration with an email service for sending confirmation emails, updates, and notifications to users.

#### Communications Interfaces:

The application will communicate with users primarily through HTTP protocols over the internet. Additionally, it may utilize email communication for notifications and updates.

## 4.9 Licensing Requirements

This application will be developed and provided as commercial software with a license. Specific licensing requirements and usage restrictions include:

- 1. **Usage License:** Users will be required to accept and comply with the terms and conditions of the usage license before using this application. This includes provisions regarding the use, distribution, and copying of the software.
- 2. **Usage Restrictions:** The software is only to be used for specific personal or commercial purposes. Any unauthorized use or violation of the license terms will be considered a breach and may lead to legal consequences.
- 3. **Warranty and Support:** Users should understand that the license does not include any warranty or support commitments from the provider. Warranty and support may be provided under separate terms and conditions and may require an additional fee.
- 4. **Distribution and Modification:** Any redistribution or modification of the software must be approved in writing by the provider. Legal measures may be taken for violations of this provision.
- 5. **License Termination:** The provider reserves the right to terminate the usage license if users violate the terms and conditions of the license. In such cases, users may be denied access and must cease using the software immediately.

The terms and conditions of the usage license will be clearly displayed to users before they install or use the application, and the use of the application will be considered acceptance of all such terms and conditions.

#### 4.10 Legal, Copyright, and Other Notices

#### **Copyright Notices:**

- LOGO: canva.com

#### 4.11 Applicable Standards

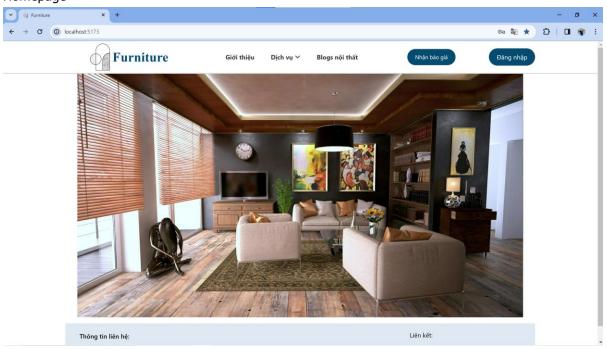
**Industry Standards:** The system must comply with relevant industry standards for usability, interoperability, and data security, ensuring adherence to best practices and regulatory requirements.

# **5 SUPPORTING INFORMATION**

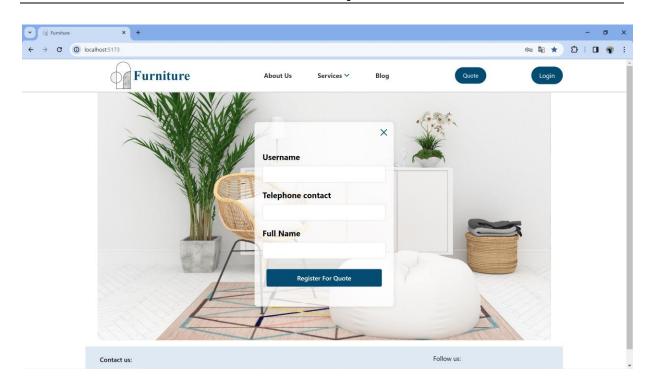
# 5.1 User interface prototypes

#### Guest

# Homepage

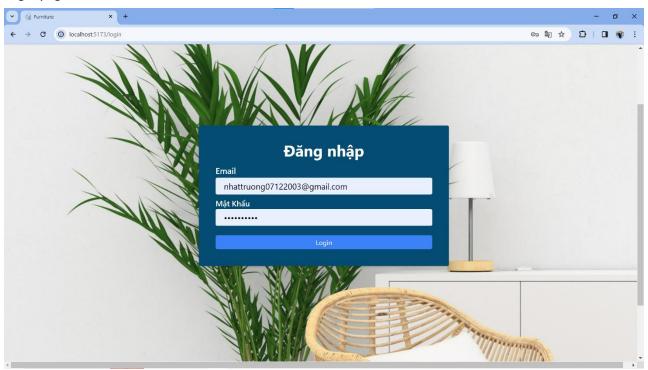


Quotation form to regis

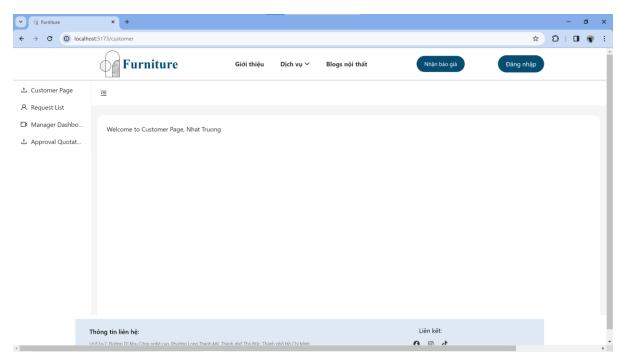


Customer

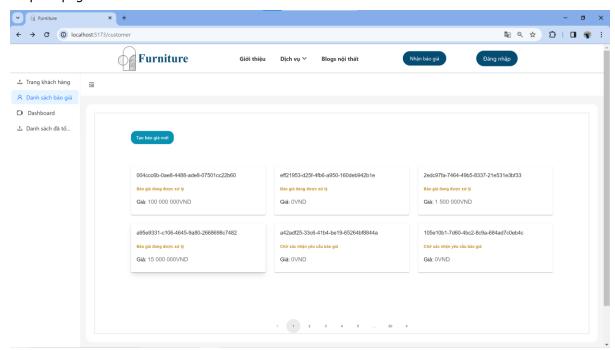
# Login page



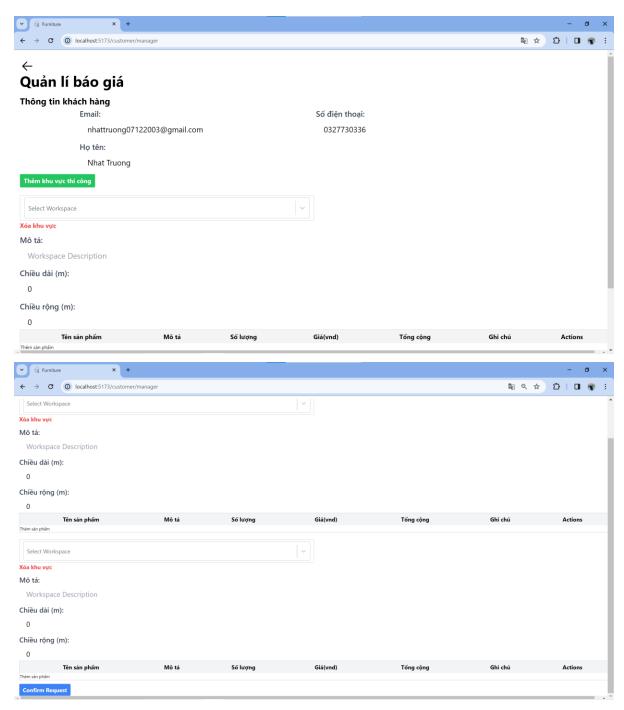
Customer main page



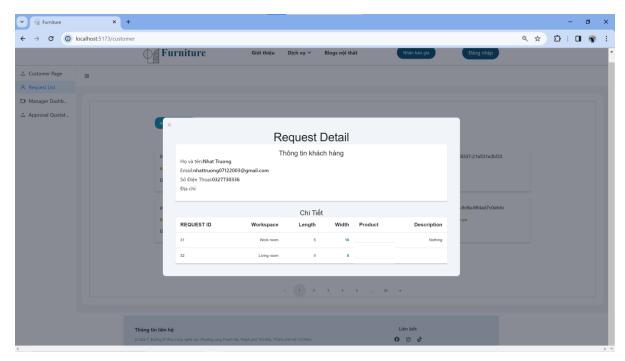
#### Request page



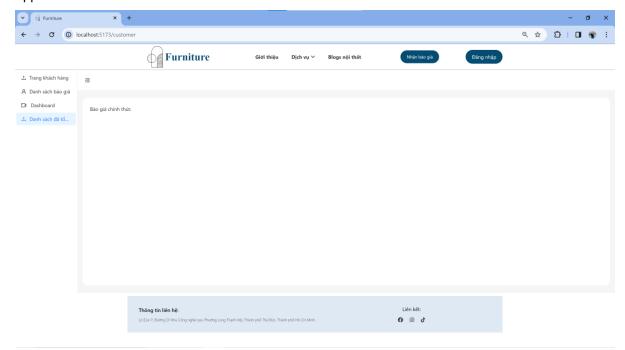
Add new request



Request detail page

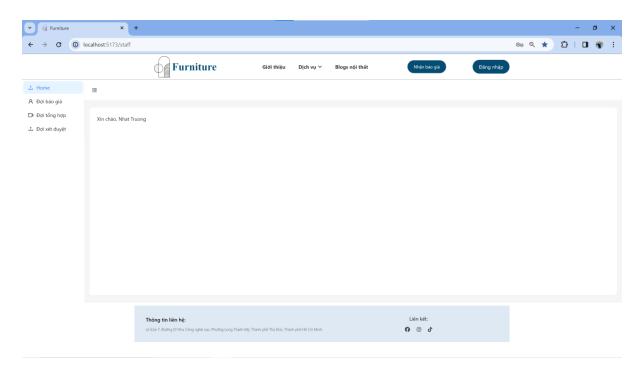


# Approved List

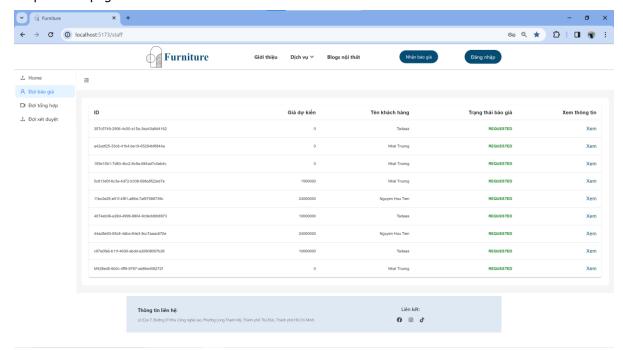


#### **Staff**

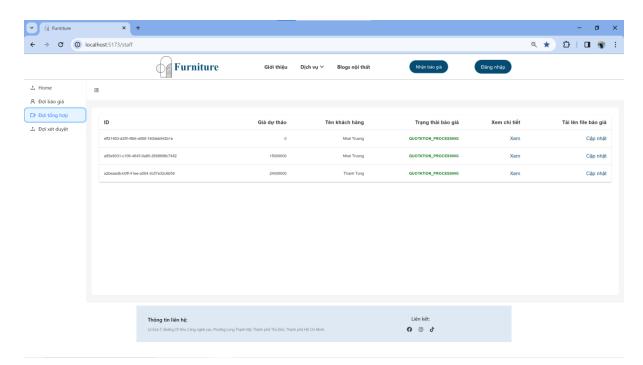
Welcome Staff Page



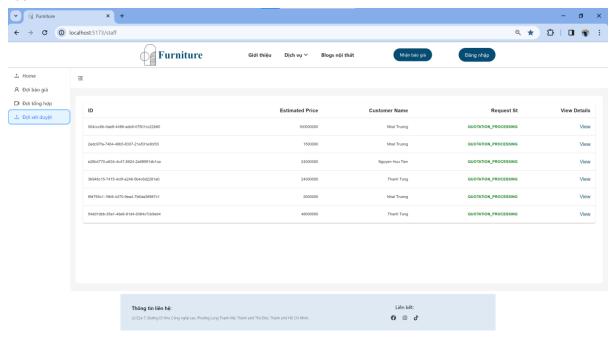
### Request List page



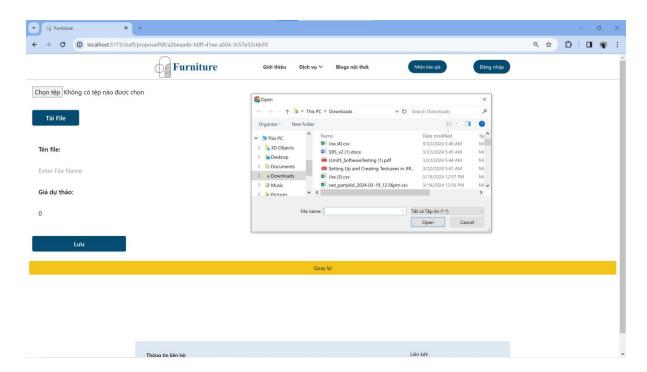
Proposal List

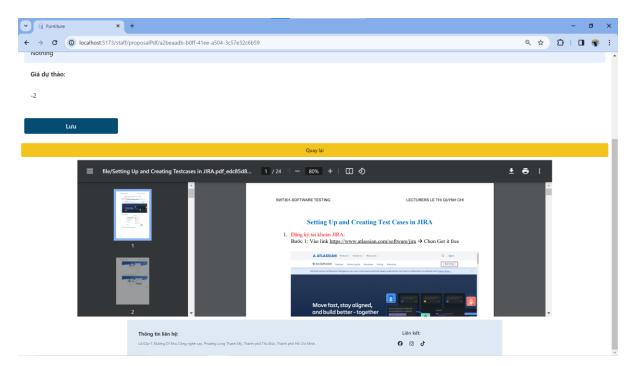


### Approval List



Upload proposal file(\*.pdf file)

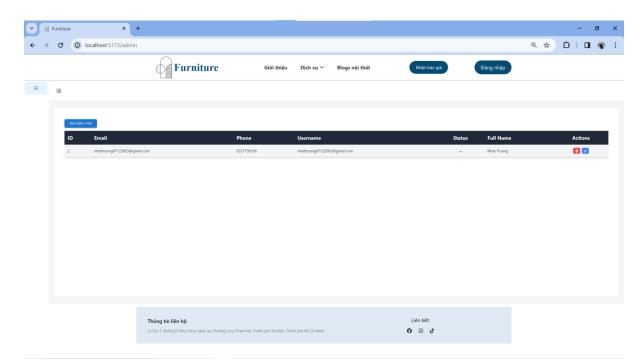




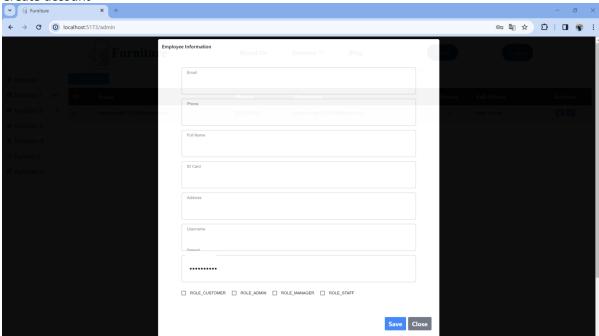
Propose successfully

#### **Admin**

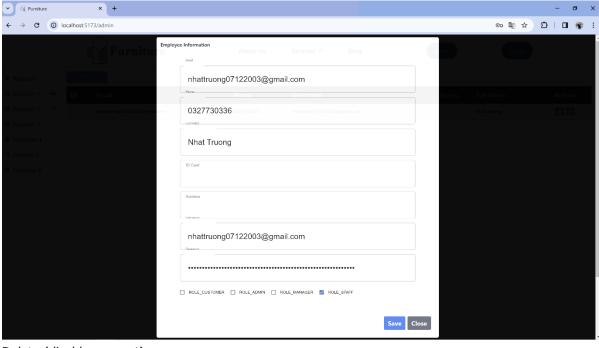
Account list management page



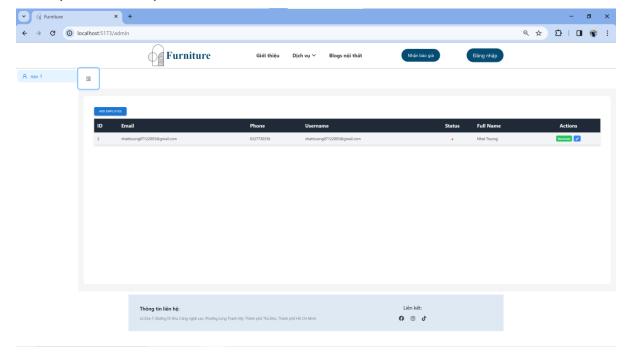
### Create account



Update account

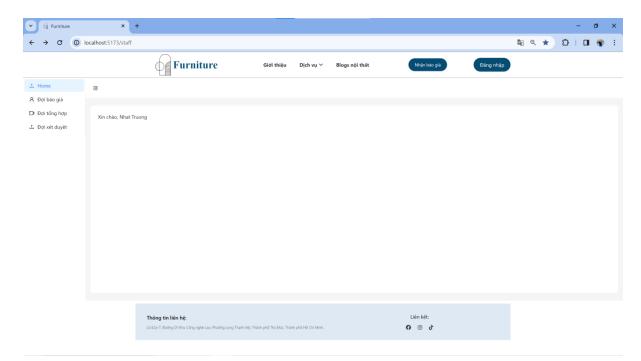


# Delete (disable account)

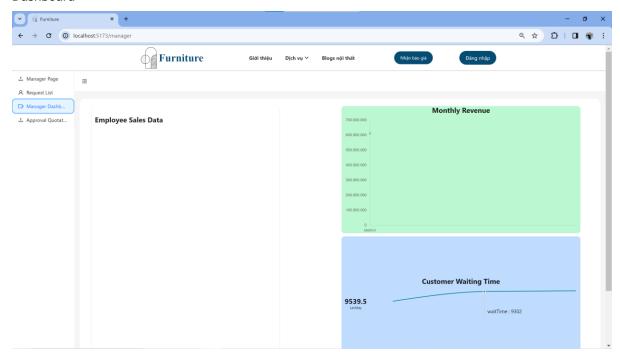


### Manager

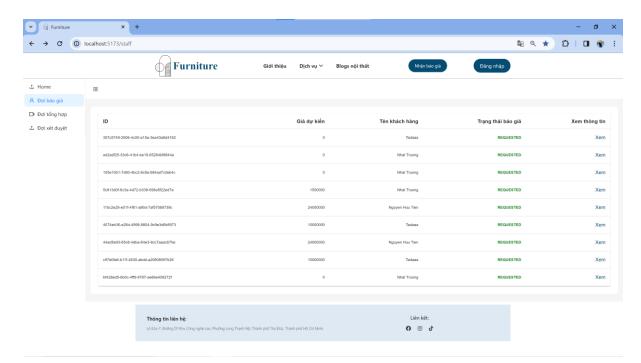
Main manager page



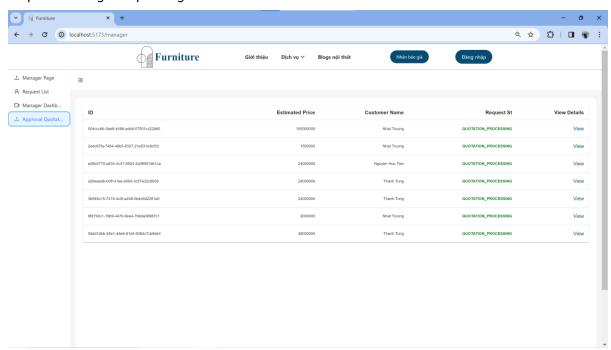
#### Dashboard



Requested List



### Proposal waiting for aprroving list



**Details** 

