



CAPSTONE PROJECT REPORT

Report 3 – Software Requirement Specification

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I. Record of Changes

| Date | A* M, D | In charge | Change Description |
|------------|------------|-----------|-------------------------------------|
| 25/9/2024 | A | AnhND | Add content |
| 1/10/2024 | A | AnhLQH | Add tables, UC diagrams |
| 2/10/2024 | A | NamDD | Add use case detail |
| 3/10/2024 | A | AnhND | Add content |
| 5/10/2024 | A | AnhLQH | Add screens |
| 7/10/2024 | M | AnhLQH | Modify Use case diagrams, |
| 20/10/2024 | A | AnhLQH | Add Screen flows and other contents |
| 22/10/2024 | A | DucLM | Add use cases for users |
| 22/10/2024 | A | DuyPA | Add use cases for quiz |
| 23/10/2024 | A | NamDD | Add use cases for quiz set |
| 24/10/2024 | A | AnhNDH | Add use cases for admin feature |

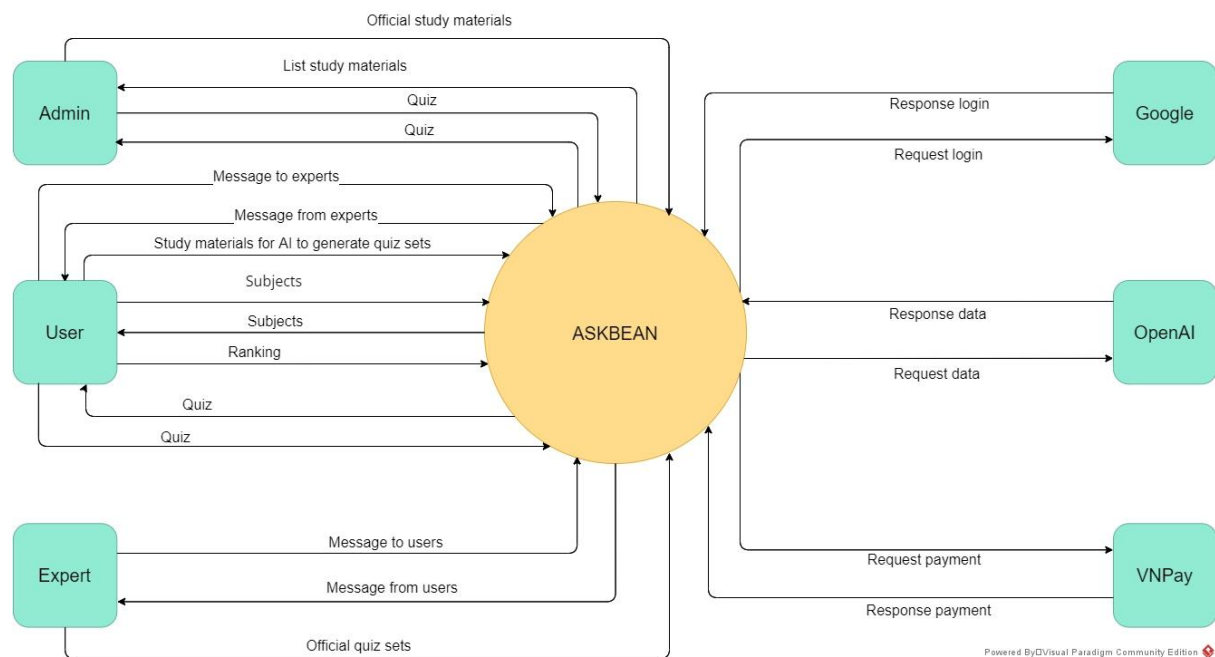
*A - Added M - Modified D - Deleted

II. Software Requirement Specification

1. Overall Requirements

1.1 Context Diagram

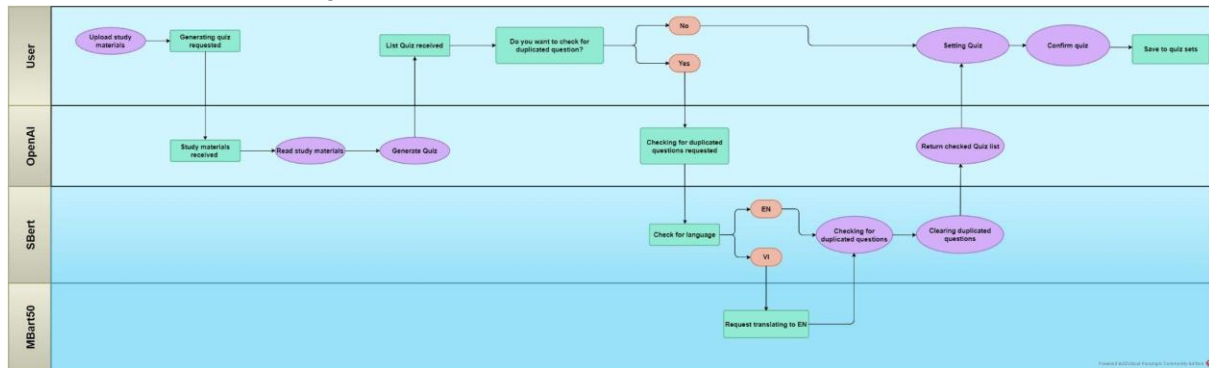
AskBEAN is a digital learning platform designed to offer interactive study experiences using AI, connecting users and experts. Its main feature is to deliver AI-generated quizzes and materials, helping users enhance their study routines. This system aims to improve learning efficiency through AI-generated content, personalized feedback and explanation from experts. It targets a comprehensive learning experience with features for content creation, interaction, and progress tracking. The context diagram below illustrates the website for version 1.0.



AskBEAN context diagram

1.2 Main Workflows

1.2.1 Create Quiz Processing



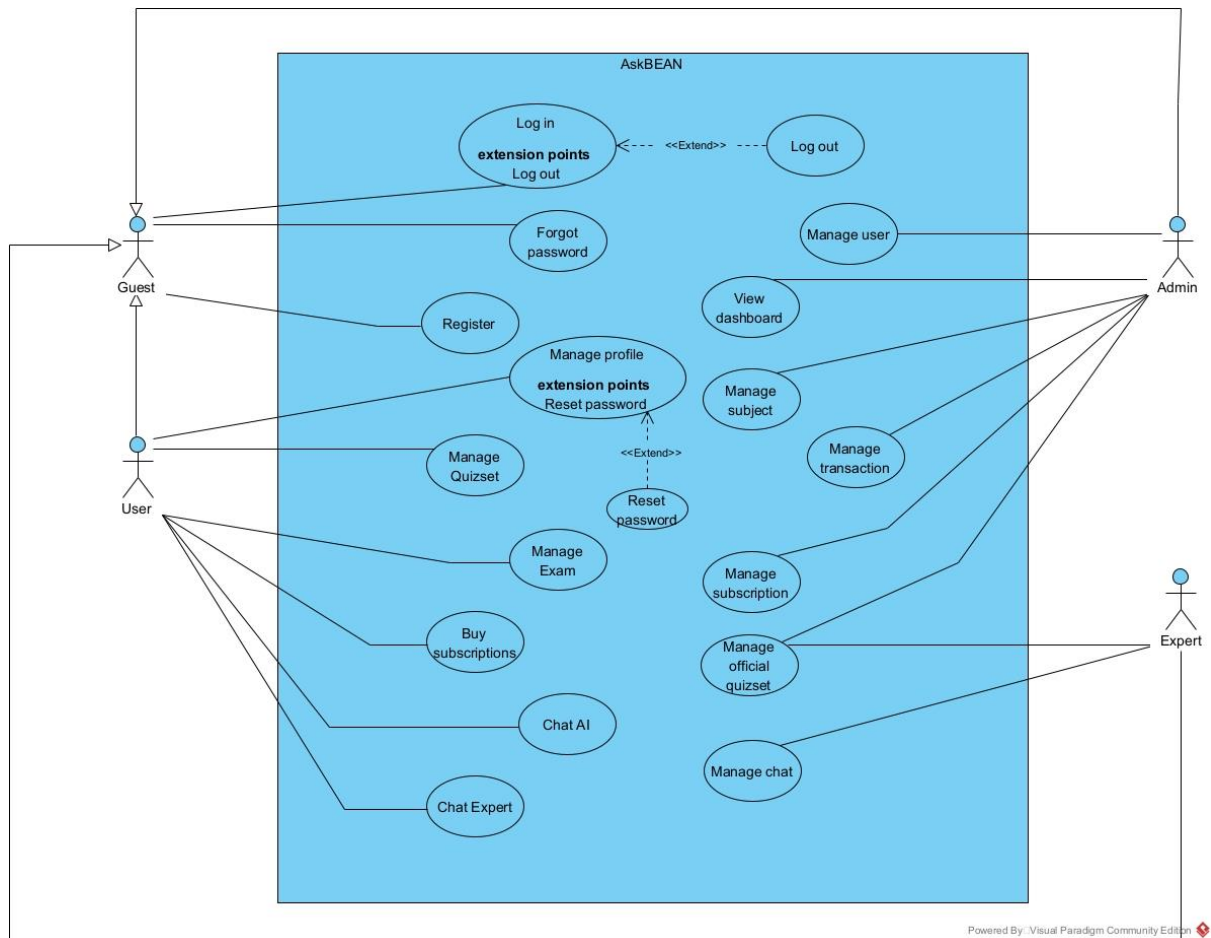
1.3 User Requirements

1.3.1 Actors

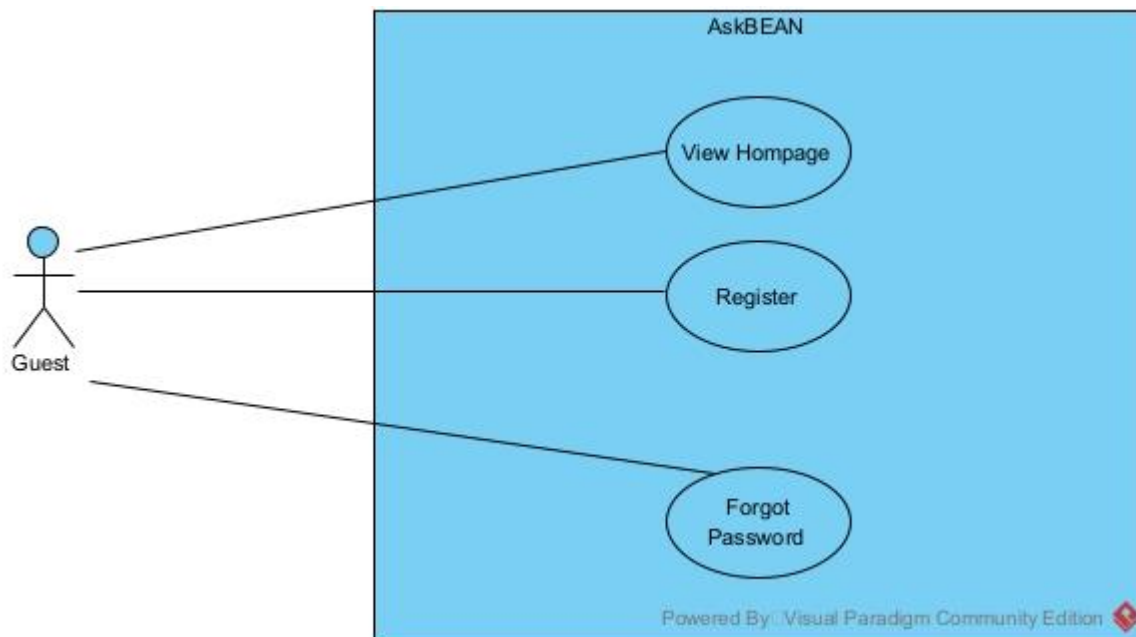
| # | Actor | Description |
|---|---------------|---|
| 1 | Administrator | Manages the platform, handling official quiz creation and official study materials, managing users and seeing the website statistics. |
| 2 | User | The end-users who interact with the platform to generate and manage quizzes, learn and take tests and receive support from experts. |
| 3 | Expert | Interacts with users by responding to their messages and assists them in the learning process. The end-users who interact with the platform to generate and manage quizzes official |
| 4 | Guest | View the homepage of the system and sign up to the system. |
| 5 | VNPay | Provides payment services for transactions |
| 6 | OpenAI | For processing AI related features, such as generating quizzes, providing responses and personal analysis. |

1.3.2 Use Cases

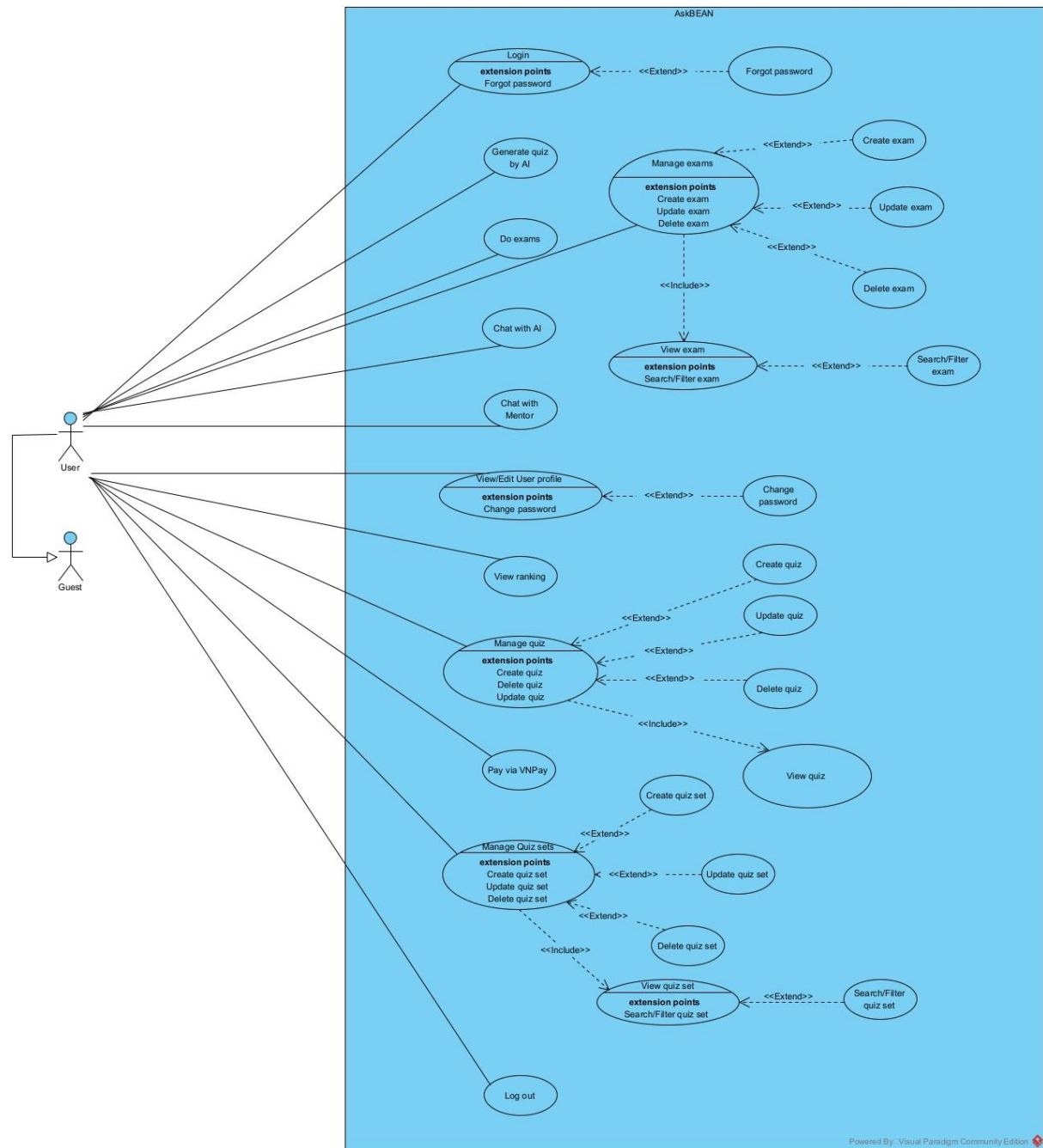
1.3.2.1 Overall UC Diagram



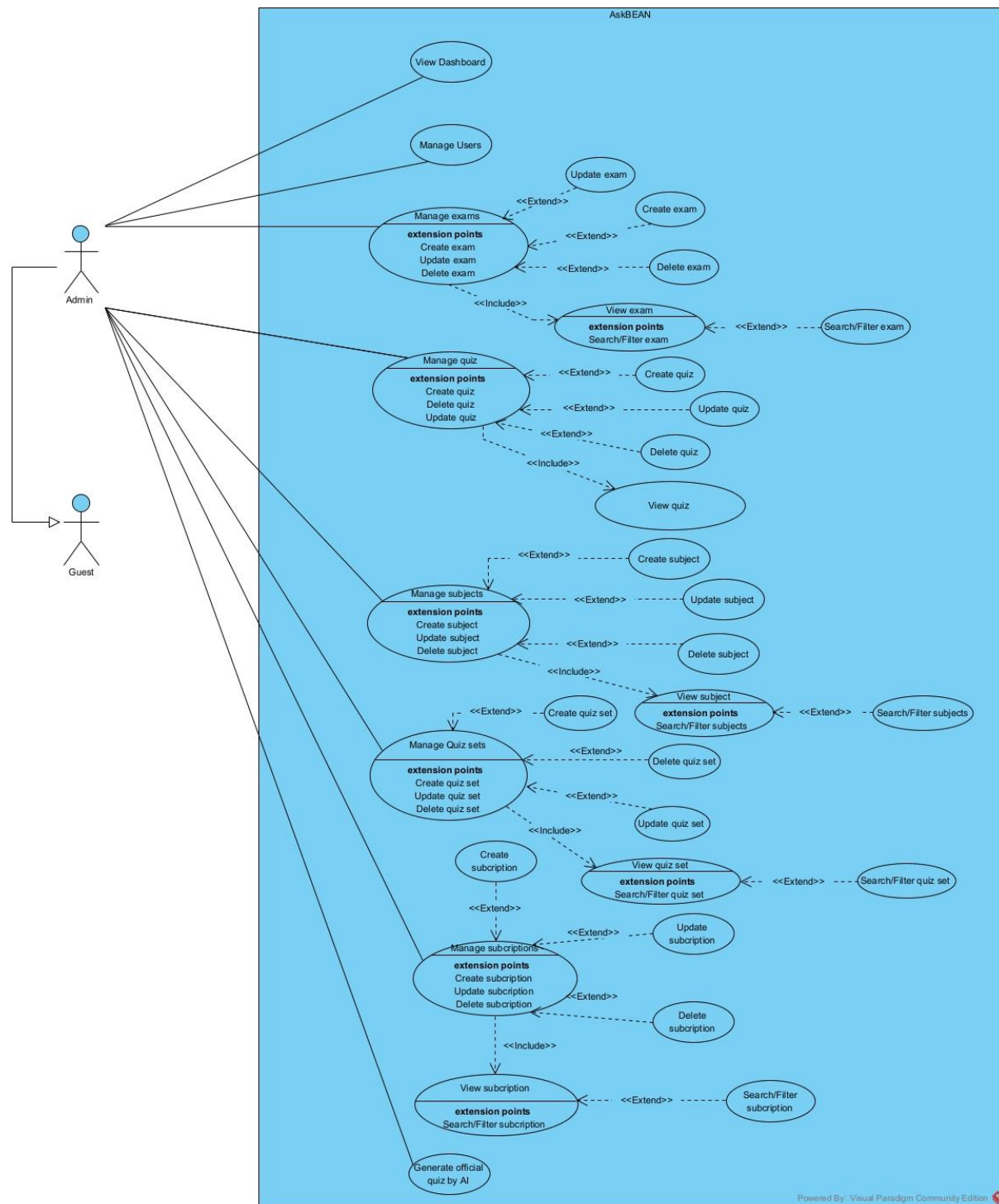
1.3.2.2 UCs for Guest



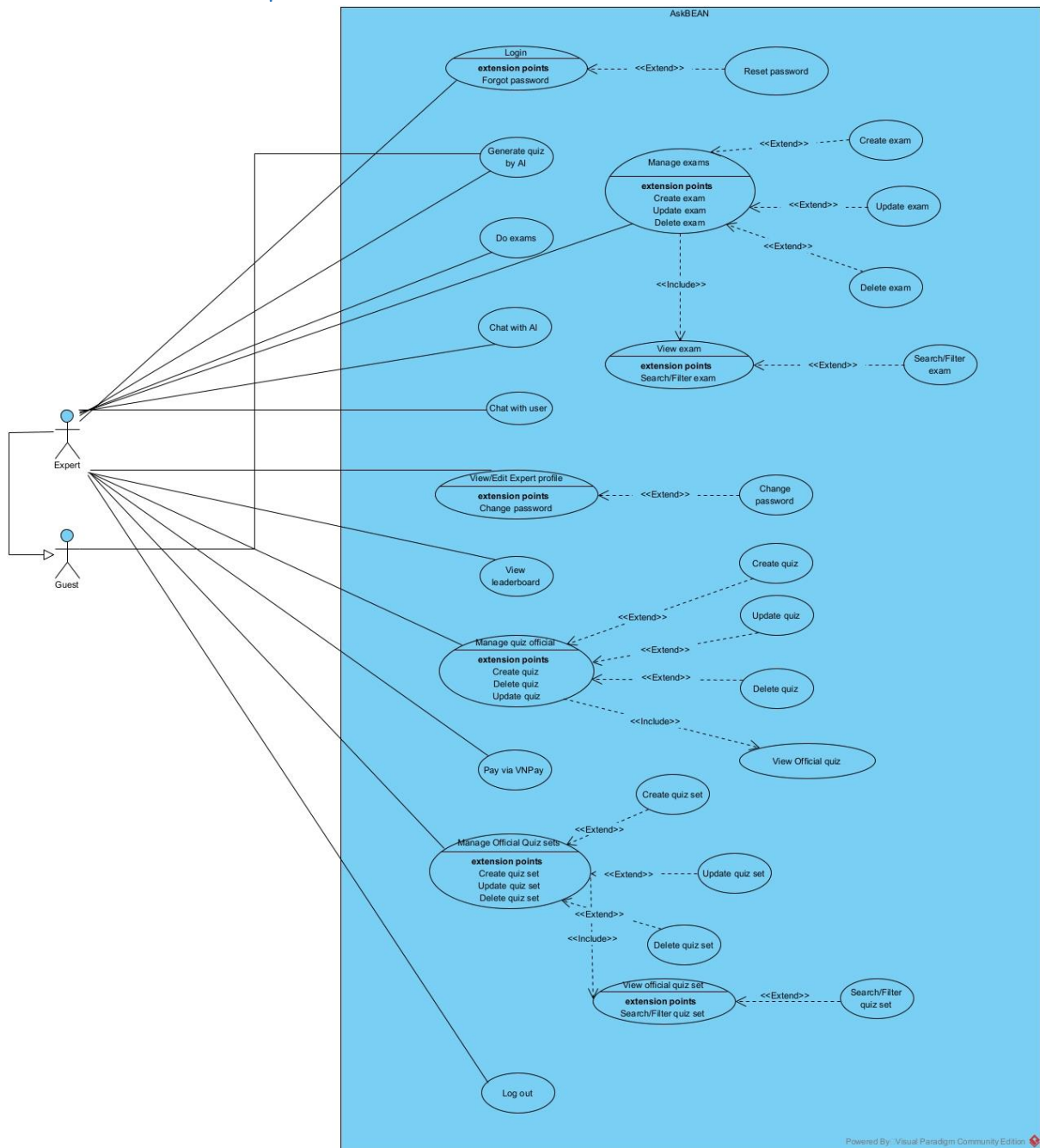
1.3.2.3 UCs for User



1.3.2.4 UCs for Administrator

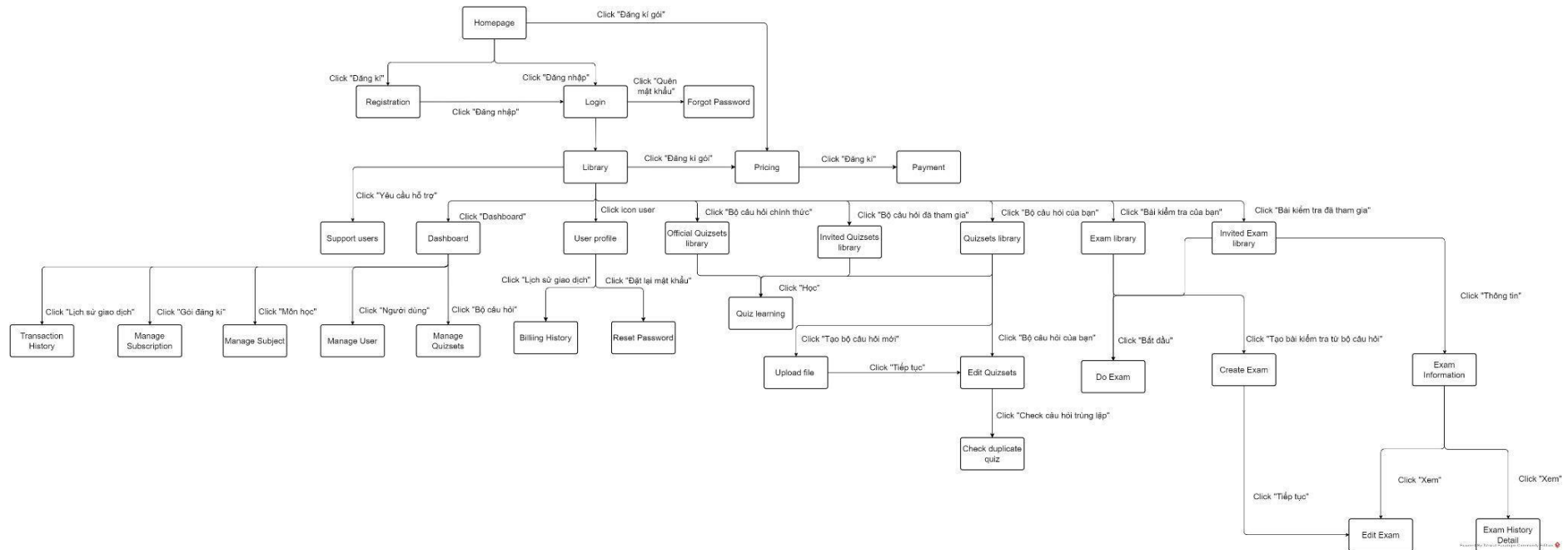


1.3.2.5 UCs for Expert



1.4 System Functionalities

1.4.1 Screens Flow



1.4.2 Screen Authorization

| Screen | Admin | User | Expert | Guest |
|------------------|-------|------|--------|-------|
| Homepage | X | X | X | X |
| Dashboard | | | | |
| Manage User | x | | | |
| Manage Quiz sets | x | | | |

| | | | | |
|-------------------------------|---|---|---|---|
| Manage Subject | x | | | |
| Manage Subscription | x | | | |
| Transaction History | x | | | |
| Login | | | | |
| Login | X | X | X | X |
| Registration | X | X | X | X |
| Reset Password | X | X | X | |
| User Profile | | | | |
| Edit Profile | X | X | X | |
| View Payment History | X | X | X | |
| Reset Password | x | x | x | |
| View learning streak | x | x | x | |
| Exam | | | | |
| Create exam | x | x | x | |
| Do exam | x | x | x | x |
| View Exam library | x | x | x | |
| View exam history/info | x | x | x | |
| Delete exam | x | x | x | |
| Review Exam | x | x | x | |
| Invite Exam | x | x | x | |
| Edit Exam | x | x | x | |
| Quiz | | | | |
| Edit Quiz | x | x | x | |
| Delete Quiz | x | x | x | |
| Add new Quiz | x | x | x | |
| View list Quiz | x | x | x | |
| Quiz Set | | | | |
| Add Quiz to Quiz set (Manual) | x | x | x | |

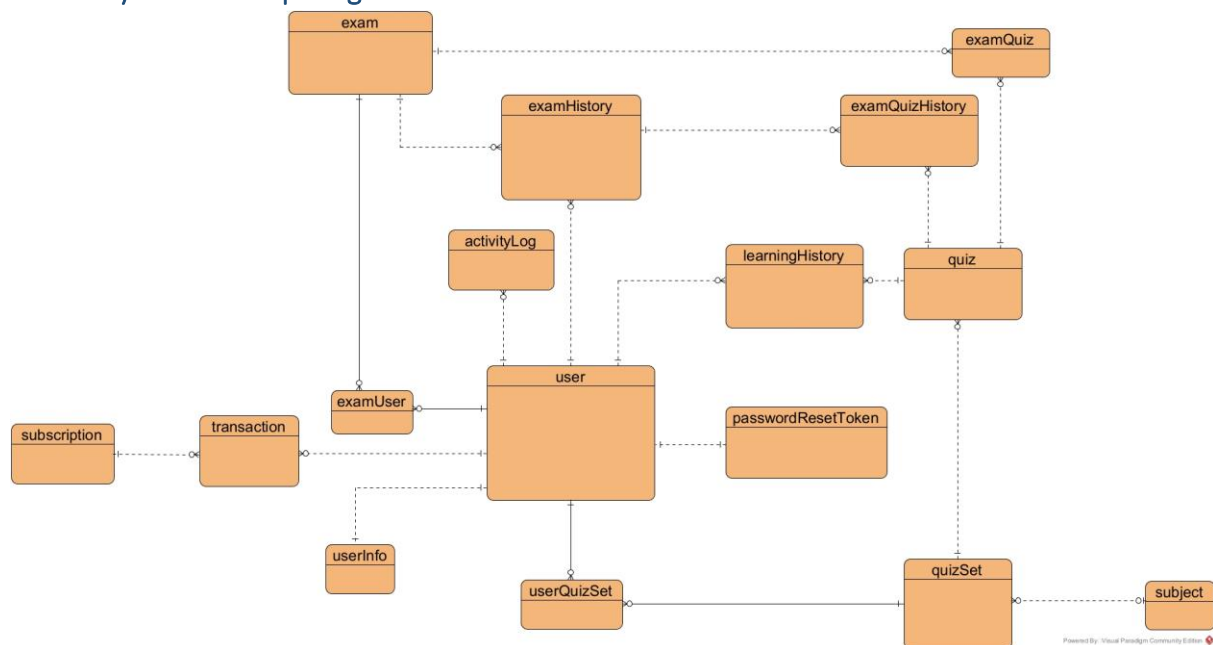
| | | | | |
|------------------------|---|---|---|---|
| View my Quizset | x | x | x | |
| View Official Quiz set | x | x | x | |
| View Quiz set detail | x | x | x | |
| Delete Quizset | x | x | x | |
| Create Quiz set | x | x | x | |
| View invited Quizset | x | x | x | |
| Share QuizSet | x | x | x | |
| Edit QuizSet | x | x | x | |
| Learning | | | | |
| View learning history | x | x | x | |
| Do learning Quiz set | x | x | x | |
| Chat | | x | x | |
| Chat with AI | x | x | x | |
| View Chat history | | x | x | |
| Chat with others users | | x | x | |
| View chat request | | | x | |
| Accept chat request | | | x | |
| Payment | x | x | x | x |
| Subscriptions | x | x | x | x |
| Payment | x | x | x | x |

1.4.3 Non-UI Functions

| # | Feature | System Function | Description |
|---|-------------------|-----------------|--|
| 1 | Payment VNPAY | Process Payment | This function handles the processing of payments when users opt for services that require payment through VNPay API. |
| 2 | AI quiz generator | Generate Quiz | This function use OpenAI API to create quizzes based on specific inputs from user |

| | | | |
|---|----------|------------------|--|
| 3 | Quiz | Delete Quiz | This function allows administrators or users to remove a quiz from the system. |
| 4 | Exam | Delete Exam | This function allows users to remove an exam from the system. |
| 5 | Quiz set | Delete Quiz Set | This function allows users to remove a quiz from the system. |
| 6 | User | Deactive Account | This function allows the admin to deactivate accounts. |
| 7 | Logout | Logout | This function allows user to logout session |

1.5 Entity Relationship Diagram



2. Use Case Specifications

2.1 Subscription

2.1.1 Create new Subscription

| | | | |
|----------------|--|------------------|------|
| Use Case | UC1 - Create new Subscription | | |
| Create by | NamDD | | |
| Primary Actors | Admin | Secondary Actors | None |
| Description | Admin adds a new subscription to the system by filling in the required details (e.g., name, date, amount). | | |
| Trigger | Admin click "Tạo gói" button on top right the subscription table | | |

| | |
|-------------------|--|
| Preconditions | Admin is logged into the system and is on the subject management page. |
| Postconditions | The new subscription is added and appears in the subscription list. |
| Normal Flows | <ol style="list-style-type: none"> 1. Admin clicks "Add Subscription". 2. Admin fills in the subscription details (name, date, amount). 3. Admin clicks "Save". 4. System confirms the addition and displays the new subscription in the list. |
| Alternative Flows | If the input details are invalid (e.g., missing required fields), the system displays an error message and prompts the admin to correct the input |
| Exception | At step 2 If validation data fail <ul style="list-style-type: none"> - Display error message - User input data again |
| Business rule | N/A |

2.1.2 Delete Subscription

| | | | |
|-------------------|--|------------------|------|
| Use Case | UC2 - Delete Subscription | | |
| Create by | NamDD | | |
| Primary Actors | Admin | Secondary Actors | None |
| Description | Admin deletes an existing subscription from the system. | | |
| Trigger | Admin click trash icon button in the table | | |
| Preconditions | Admin is logged into the system and is on the subject management page. | | |
| Postconditions | The selected subscription is deleted and removed from the subscription list. | | |
| Normal Flows | <ol style="list-style-type: none"> 1. Admin clicks the "Delete" icon for a specific subscription. 2. The system prompts the admin for confirmation. 3. Admin confirms deletion. 4. The system deletes the subscription and removes it from the list. | | |
| Alternative Flows | If the admin cancels the deletion, no changes are made and the subscription remains in the system. | | |
| Exception | N/A | | |
| Business rule | N/A | | |

2.1.3 Edit Subscription

| | | | |
|----------------|--|------------------|------|
| Use Case | UC3 - Edit Subscription | | |
| Create by | NamDD | | |
| Primary Actors | Admin | Secondary Actors | None |
| Description | Admin updates the details of an existing subscription in the system. | | |
| Trigger | Admin click pencil icon button in the table | | |
| Preconditions | Admin is logged into the system and is on the subject management page. | | |
| Postconditions | The subscription details are updated and reflected in the subscription list. | | |

| | |
|-------------------|--|
| Normal Flows | <ol style="list-style-type: none"> 1. Admin clicks the "Edit" icon for a specific subscription. 2. Admin modifies the subscription details (name, date, amount). 3. Admin clicks "Save". 4. System confirms the update and displays the modified subscription in the list. |
| Alternative Flows | If no changes are made or invalid data is entered, the system either displays an error or prompts the admin to make valid changes. |
| Exceptions | At step 2 If validation data fail <ul style="list-style-type: none"> - Display error message (MSG01) - User input data again |
| Business rule | N/A |

2.1.4 View Subscription (Admin)

| | | | |
|-------------------|---|------------------|------|
| Use Case | UC4 - View Transaction Admin | | |
| Create by | NamDD | | |
| Primary Actors | Admin | Secondary Actors | None |
| Description | Admin views the subscription list. The list includes subscription ID, price, description, created date and actions with pagination. | | |
| Trigger | Admin click “Gói đăng kí” on sidebar | | |
| Preconditions | Admin is logged into the system and is on the subject management page. | | |
| Postconditions | The system displays a list of subscriptions with pagination and filter/sort options if available. | | |
| Normal Flows | <ol style="list-style-type: none"> 1. Admin navigates to the subscription page. 2. The system retrieves and displays a list of subscriptions, showing details like subscription ID, price, description and created date. 3. Admin can view subscription across multiple pages using pagination.. | | |
| Alternative Flows | If no subscription are found, the system displays a message, "No subscription available." | | |
| Exceptions | N/A | | |
| Business rule | N/A | | |

2.1.5 View Subscription(User)

| | | | |
|----------------|--|------------------|------|
| Use Case | UC5 - View Transaction Admin | | |
| Create by | NamDD | | |
| Primary Actors | User | Secondary Actors | None |
| Description | User views the subscription. The page display subscription | | |
| Trigger | User click “Gói đăng kí” on sidebar | | |

| | |
|-------------------|--|
| Preconditions | User is logged into the system and is on the library management page. |
| Postconditions | The system displays subscriptions |
| Normal Flows | 1. User access to the subscription page. 2. The system retrieves and displays a list of subscriptions, showing details like subscription name, price, description . |
| Alternative Flows | N/A |
| Exceptions | N/A |
| Business rule | N/A |

2.2 User Feature

2.2.1 Login System

| | | | |
|--------------------|---|------------------|------|
| Use Case | UC6 - Login System | | |
| Create by | NamDD | | |
| Primary Actors | Guest | Secondary Actors | None |
| Description | As a user, I want to be able to log into the system so that I can use the system's authenticated features and access my personalized account. | | |
| | | | |
| Trigger | Click "Đăng nhập" button in navbar homepage | | |
| Preconditions | User account has been created & authorized | | |
| Postconditions | <ul style="list-style-type: none"> User logs in the system successfully | | |
| Normal Flows | Login System <ol style="list-style-type: none"> User clicks Login button from the page navbar or accesses an authenticated feature (from a link or type the page URL directly into the address bar) User accesses the User Login screen User types in the login details or choose google login User clicks the Login button System validates the login details System allows user to access System accesses the Home Page | | |
| Alternative Flows: | Google Login <ol style="list-style-type: none"> User clicks Google Login button to login system using Google account System redirects the user to the Google's Login screen User types in the Google account details and chooses to login Google validates user's login information successfully and redirect him/her back to the system Return to step 5 of normal flow. System can't authenticate the user | | |

| | |
|---------------|---|
| | User can't be authenticated & get relevant error message in one of below cases 1. User leaves the Username and/or Password field blank 2. Input Username or Password are incorrect 3. The user has input information again |
| Exceptions | At step 3 If login fail - Display error message(MSG02) - input login information again |
| Business rule | N/A |

2.2.2 View User Profile

| | | | |
|--------------------|---|------------------|------|
| Use Case | UC7 - View User Profile | | |
| Create by | NamDD | | |
| Primary Actors | User | Secondary Actors | None |
| Description | As a user, I want to be able to view my profile in the system, then the system displays my personal information. | | |
| Trigger | Click user icon in navbar | | |
| Preconditions | <ul style="list-style-type: none"> User information is created | | |
| Postconditions | <ul style="list-style-type: none"> User view profile successfully | | |
| Normal Flows | <ol style="list-style-type: none"> Users click user's avatar icon in navbar System validates security token System allow user to access System accesses the user profile page | | |
| Alternative Flows: | N/A | | |
| Exceptions | N/A | | |
| Business rule | N/A | | |

2.2.3 Register

| | | | |
|----------------|---|------------------|------|
| Use Case | UC8 - Register | | |
| Create by | NamDD | | |
| Primary Actors | Guest | Secondary Actors | None |
| Description | As a guest, I want to be able to register account in the system | | |
| Trigger | Guest click "Đăng ký" | | |

| | |
|-------------------|--|
| Preconditions | <ul style="list-style-type: none"> Register email does not exist in the system |
| Postconditions | <ul style="list-style-type: none"> Register account successfully |
| Normal Flows | <ol style="list-style-type: none"> Guest access home page Click the “Đăng ký” button in the navbar System access to register page Input all valid information then click “Đăng ký” button Register successfully then |
| Alternative Flows | Register Unsuccessfully <ol style="list-style-type: none"> Guest leave username, password, email field is blank Register Email already existed Password and Confirm password not matched Input register information again |
| Exceptions | At the step 4 if data validate fail <ul style="list-style-type: none"> Display error message (MSG03,MSG04,MSG05,MSG06,MSG07) Input data again |
| Business rule | BR10 |

2.2.4 Update User Profile

| | | | |
|-------------------|--|------------------|------|
| Use Case | UC9 - Update User Profile | | |
| Create by | NamDD | | |
| Primary Actors | User | Secondary Actors | None |
| Description | As a User, I want to be able to update my personal information | | |
| Trigger | User click “Cập nhật thông tin” | | |
| Preconditions | <ul style="list-style-type: none"> User account has been created | | |
| Postconditions | <ul style="list-style-type: none"> User update profile successfully | | |
| Normal Flows | <ol style="list-style-type: none"> User access profile page Input new information then click “Cập Nhật” button User Profile update successfully | | |
| Alternative Flows | N/A | | |
| Exceptions | N/A | | |
| Business rule | N/A | | |

2.2.5 Forgot Password

| | | | |
|----------------|---|------------------|------|
| Use Case | UC10 - Forgot Password | | |
| Create by | NamDD | | |
| Primary Actors | User | Secondary Actors | None |
| Description | As a User, I want reset my account password when i forgot that | | |
| Trigger | Guest click “Quên mật khẩu” link in login form | | |
| Preconditions | <ul style="list-style-type: none"> User account has been created | | |
| Postconditions | <ul style="list-style-type: none"> User has reset password successfully | | |
| Normal Flows | <ol style="list-style-type: none"> User click “Quên mật khẩu” in login page Access forgot password page that require input email for validation | | |

| | |
|-------------------|--|
| | <ol style="list-style-type: none"> 3. Input email then click “Gửi link” button 4. User check reset link in gmail then click the link 5. Redirect to reset password page 6. Create new password then save |
| Alternative Flows | N/A |
| Exceptions | N/A |
| Business rule | N/A |

2.2.6 Change Password

| | | | |
|-------------------|---|------------------|------|
| Use Case | UC11 - Change Password | | |
| Create by | NamDD | | |
| Primary Actors | User | Secondary Actors | None |
| Description | As a User, I want change password for security problem | | |
| Trigger | User click “Đổi mật khẩu” in profile screen | | |
| Preconditions | <ul style="list-style-type: none"> • User account has been created | | |
| Postconditions | <ul style="list-style-type: none"> • User change password successfully | | |
| Normal Flows | <ol style="list-style-type: none"> 1. User access profile page 2. Click “Đặt lại mật khẩu” button 3. System sends a link to user’s email 4. Users click the link in the email then redirect to change password page 5. Change new password | | |
| Alternative Flows | N/A | | |
| Exceptions | N/A | | |
| Business rule | BR10 | | |

2.2.7 Update User

Refer to 2.1.3

2.2.8 Ban User

Refer to 2.1.3

2.2.9 Search User

| | | | |
|-------------------|--|------------------|------|
| Use Case | UC14 - Search, filter User | | |
| Create by | DuyPA | | |
| Primary Actors | User | Secondary Actors | None |
| Description | As a Admin, I want to find user with a specific criterion, so that I can get user info quickly | | |
| Trigger | Type content in search bar | | |
| Preconditions | The Admin is logged in. | | |
| Postconditions | The system display user that fits the criteria | | |
| Normal Flows | <ol style="list-style-type: none">1. In the user screen, the User selects the Search bar.2. The Admin types the content to search and hit Search.3. The system returns quiz sets that match the search string. | | |
| Alternative Flows | <ul style="list-style-type: none">- If the system found nothing like the Search string, the system notify user No user found- Admin can select from the filter menu user role to filter | | |
| Exception | N/A | | |
| Business rule | N/A | | |

2.2.10 unban User

Refer to 2.1.3

2.2.11 View All User

Refer 2.1.4

2.3. Quiz

2.3.1 Quiz Generator

| | | | |
|----------------|--|------------------|------|
| Use Case | UC15 - Quiz Generator | | |
| Create by | NamDD | | |
| Primary Actors | Admin, User | Secondary Actors | None |
| Description | As a user, I want the system to automatically generate quiz questions using AI based on specific criteria, so that I can quickly create quiz content without manual effort. | | |
| Trigger | | | |
| Preconditions | <ul style="list-style-type: none">• The user is logged in.• The user has the materials for the generator | | |
| Postconditions | The system generates a set of quiz questions, saves them to the database and presents them to the user to edit. | | |
| Normal Flows | <ol style="list-style-type: none">1. The user selects "Generate Quiz" in the Quiz Set2. The user uploads material.3. The system sends read files and sends prompts to OpenAI API.4. The system displays the generated questions to the user for review. | | |

| | |
|-------------------|---|
| Alternative Flows | <ul style="list-style-type: none"> - If the AI fails to generate the quiz, the system shows an error - If the User upload the wrong file format, the system shows a warning |
| Exceptions | At step 2 file > 100MB <ul style="list-style-type: none"> - display error message - upload another file |
| Business rule | N/A |

2.3.2 Create Quiz (User)

| | | | |
|-------------------|---|------------------|------|
| Use Case | UC16 - Create Quiz | | |
| Create by | NamDD | | |
| Primary Actors | User | Secondary Actors | None |
| Description | As a user, I want to manually create questions, so that I can add my own custom question. | | |
| Trigger | Click “Thêm câu hỏi” button | | |
| Preconditions | <ul style="list-style-type: none"> • The user is logged in • The user must have a quiz set | | |
| Postconditions | The user creates a question in the quiz set successfully | | |
| Normal Flows | <ol style="list-style-type: none"> 1. The user selects "Create Quiz." 2. The system prompts the user to input quiz details. 3. The user selects Chapter. 4. The user saves the quiz. 5. The system confirms the quiz is saved. | | |
| Alternative Flows | <ul style="list-style-type: none"> - If the user does not select Chapter option, the system will save default value | | |
| Exceptions | N/A | | |
| Business rule | N/A | | |

2.3.3 Delete Quiz (User)

| | | | |
|----------------|---|------------------|------|
| Use Case | UC17 - Delete Quiz | | |
| Create by | NamDD | | |
| Primary Actors | User | Secondary Actors | None |
| Description | As a user, I want to delete a quiz, so that I can remove any unwanted quiz from my quiz set. | | |
| Trigger | Click trash icon button | | |
| Preconditions | The user is logged in. The user must have a quiz in a quiz set. | | |
| Postconditions | The system set the quiz's isDelete status to True | | |
| Normal Flows | <ol style="list-style-type: none"> 1. In the quiz set, the User click the Delete icon 2. The system notify user to confirm delete 3. The User confirmed 4. The system set isDelete to true and hide the delete question | | |

| | |
|-------------------|-----|
| Alternative Flows | N/A |
| Exception | N/A |
| Business rule | N/A |

2.3.4 Edit Quiz (User)

| | | | |
|-------------------|---|------------------|------|
| Use Case | UC18 - Edit Quiz (User) | | |
| Create by | DuyPA | | |
| Primary Actors | User | Secondary Actors | None |
| Description | As a User, I want to edit a quiz, so that I can change quiz content if there is any defect or false information. | | |
| Trigger | Click “Chỉnh sửa” button in view list quiz | | |
| Preconditions | The user is logged in. The user must have a quiz in a quiz set. | | |
| Postconditions | The quiz changed successfully | | |
| Normal Flows | <ol style="list-style-type: none"> 1. In the quiz set, the User click the Edit icon at the Quiz container 2. The system displays a window with quiz’s data 3. The User enter new data and click Save 4. The system saves new data to database | | |
| Alternative Flows | <ul style="list-style-type: none"> - If the User click cancel, the data remain unchanged - If the User leave the field empty, the system warns the User | | |
| Exception | N/A | | |
| Business rule | N/A | | |

2.3.5 Create Quiz (Admin)

Refer to 2.3.2

2.3.6 Delete Quiz (Admin)

Refer to 2.3.3

2.3.7 Edit Quiz (Admin)

Refer to 2.3.4

2.3.8 Check duplicate quiz

| | | | |
|----------------|--|------------------|------|
| Use Case | - Delete Quiz | | |
| Create by | NamDD | | |
| Primary Actors | User | Secondary Actors | None |
| Description | User can check duplicate quiz after AI generate to improve their quizset | | |
| Trigger | Click trash icon button | | |
| Preconditions | The user is logged in. The user must have a quiz in a quiz set. | | |
| Postconditions | The system display duplicate quiz result | | |

| | |
|-------------------|---|
| Normal Flows | <ol style="list-style-type: none"> 1. In the quiz set, the User click the “Kiểm tra trùng lặp” button 2. The system notify user to confirm delete 3. The User confirmed 4. The system set isDelete to true and hide the delete question |
| Alternative Flows | N/A |
| Exception | N/A |
| Business rule | N/A |

2.3.9 View quiz

Refer to 2.1.4

2.3.10 Regenerate Quiz

Refer Quiz Generator

2.4. Quiz Set

2.4.1 Create Quiz Set (User)

| | | | |
|-------------------|---|------------------|------|
| Use Case | UC25 - Create Quiz Set (User) | | |
| Create by | DuyPA | | |
| Primary Actors | User | Secondary Actors | None |
| Description | As a user, I want to create a new quiz set, so that I can manage a new set of quizzes | | |
| Trigger | Click “+” button in quizset section | | |
| Preconditions | The user must log in. | | |
| Postconditions | The system creates a new quiz set successfully | | |
| Normal Flows | <ol style="list-style-type: none"> 1. The user click create quiz set button 2. The system displays a window for user to enter quiz set name 3. The user enters the name and click Create 4. The system creates a new quiz set and display to the user | | |
| Alternative Flows | If the user does not enter quiz set name, the system warns user | | |
| Exception | N/A | | |
| Business rule | N/A | | |

2.4.2 Delete Quiz Set (User)

| | | | |
|----------------|--|------------------|------|
| Use Case | UC26 - Delete Quiz Set (User) | | |
| Create by | DuyPA | | |
| Primary Actors | User | Secondary Actors | None |
| Description | As a user, I want to delete a quiz, so that I can remove unused quiz set | | |
| Trigger | Click “Xóa” button in quizset page | | |
| Preconditions | The user is logged in. The user must have a quiz set. | | |
| Postconditions | The system set the quiz set’s isDelete status to True | | |
| Normal Flows | <ol style="list-style-type: none"> 1. In the quiz set, the User click the Delete icon 2. The system notify user to confirm delete 3. The User confirmed | | |

| | |
|-------------------|--|
| | 4. The system set isDelete to true and hide the deleted quiz set |
| Alternative Flows | N/A |
| Exception | N/A |
| Business rule | N/A |

2.4.3 Edit Quiz Set (User)

| | | | |
|-------------------|---|------------------|------|
| Use Case | UC27 - Edit Quiz Set (User) | | |
| Create by | DuyPA | | |
| Primary Actors | User | Secondary Actors | None |
| Description | As a User, I want to edit a quiz set, so that I can change quiz content if there is any defect or false information. | | |
| Trigger | Click “Thay đổi thông tin” button in quizset page | | |
| Preconditions | The user is logged in. The user must have a quiz set. | | |
| Postconditions | The quiz set changed successfully | | |
| Normal Flows | <ol style="list-style-type: none"> 1. In the quiz set, the User click the Edit icon 2. The system displays a window with quiz’s data 3. The User enter new data and click Save 4. The system saves new data to database | | |
| Alternative Flows | <ul style="list-style-type: none"> - If the User click cancel, the data remain unchanged - If the User leave the field empty, the system warns the User | | |
| Exception | After step 4, if there is no inputted data, the system alert, ex “Tiêu đề không được bỏ trống” | | |
| Business rule | N/A | | |

2.4.4 Search, filter Quiz Set (User)

| | | | |
|-------------------|---|------------------|------|
| Use Case | UC28 - Search, filter Quiz Set (User) | | |
| Create by | DuyPA | | |
| Primary Actors | User | Secondary Actors | None |
| Description | As a User, I want to find quiz set with a specific criterion, so that I can get quiz set quickly and save time. | | |
| Trigger | Type content in search bar | | |
| Preconditions | The User is logged in. The User must have a quiz set. | | |
| Postconditions | The system display quiz(es) that fits the criteria | | |
| Normal Flows | <ol style="list-style-type: none"> 4. In the quiz set screen, the User select the Search bar. 5. The User type the content to search and hit Search. 6. The system returns quiz sets that match the search string. | | |
| Alternative Flows | <ul style="list-style-type: none"> - If the system found nothing like the Search string, the system notify user No quiz found - User can select from the filter menu Quiz set subject to filter | | |
| Exception | N/A | | |
| Business rule | N/A | | |

2.4.5 Learning Quiz

| | | | |
|-------------------|---|------------------|------|
| Use Case | UC29 - Learning Quiz | | |
| Create by | DuyPA | | |
| Primary Actors | User, Admin | Secondary Actors | None |
| Description | As a User, I want to learn the quizzes in the Quiz set | | |
| Trigger | Click “Học” button in quizset section | | |
| Preconditions | <ul style="list-style-type: none">• User must logged in• User quiz set has been created | | |
| Postconditions | Users get redirect to learning screen | | |
| Normal Flows | <ol style="list-style-type: none">1. User access quiz set page2. The user click “Học” button3. User get redirect to learning page4. Do quiz in learning page and learning successfully | | |
| Alternative Flows | N/A | | |
| Exception | N/A | | |
| Business rule | N/A | | |

2.4.6 View Quiz set

| | | | |
|-------------------|--|------------------|------|
| Use Case | UC30 - Learning Quiz | | |
| Create by | DuyPA | | |
| Primary Actors | User | Secondary Actors | None |
| Description | As a User, I want to view the all the quiz sets in the Library | | |
| Trigger | Click “Xem” button in quiz set section | | |
| Preconditions | <ul style="list-style-type: none">• User must logged in• User quiz set has been created | | |
| Postconditions | Users get redirect to library screen | | |
| Normal Flows | <ol style="list-style-type: none">5. User access quiz set page | | |
| Alternative Flows | N/A | | |
| Exception | N/A | | |
| Business rule | N/A | | |

2.4.6 View Quiz set detail

Refer to 2.1.4

2.4.7 Create Official Quiz set (Admin. Expert)

Refer to 2.5.1

2.4.8 View Official Quiz set detail (Admin. Expert)

Refer to 2.1.4

2.4.9 Edit Official Quiz set detail (Admin. Expert)

Refer to 2.5.2

2.4.10 Delete Official Quiz set detail (Admin. Expert)

Refer to 2.4.2

2.5 Subject

2.5.1 Create new Subject (Admin)

| | | | |
|-------------------|---|------------------|------|
| Use Case | UC36 - Create new Subject (Admin) | | |
| Create by | AnhLQH | | |
| Primary Actors | Admin | Secondary Actors | None |
| Description | As the admin, I want to create a new subject by filling the necessary details | | |
| Trigger | Click “Tạo môn học” button in “Môn học” page in dashboard | | |
| Preconditions | Admin is logged into the system and is on the subject management page. | | |
| Postconditions | The new subject is added to the system and displayed in the subject list. | | |
| Normal Flows | 1. Admin clicks the "Tạo môn học" button. 2. Admin fills in the subject's details. 3. Admin clicks "Lưu". 4. System confirms and adds the subject to the list. | | |
| Alternative Flows | If the input details are invalid (e.g., missing required fields), the system displays an error message and prompts the admin to correct the input. | | |
| Exception | N/A | | |
| Business rule | N/A | | |

2.5.2 Edit Subject (Admin)

| | | | |
|-------------------|---|------------------|------|
| Use Case | UC37 - Edit Subject (Admin) | | |
| Create by | AnhLQH | | |
| Primary Actors | Admin | Secondary Actors | None |
| Description | Admin updates details of an existing subject in the system. | | |
| Trigger | Click edit button in “Môn học” page in dashboard | | |
| Preconditions | Admin is logged into the system and is on the subject management page. | | |
| Postconditions | The subject's details are updated and saved in the system. | | |
| Normal Flows | 1. Admin clicks the "Edit" icon for a specific subject. 2. Admin modifies the subject's details. 3. Admin clicks "Lưu". 4. System confirms the update and reflects it in the subject list. | | |
| Alternative Flows | If no changes are made or invalid data is entered, the system either displays an error or prompts the admin to make valid changes. | | |
| Exception | N/A | | |
| Business rule | N/A | | |

2.5.3 Delete Subject (Admin)

| | | | |
|-------------------|---|------------------|------|
| Use Case | UC38 - Delete Subject (Admin) | | |
| Create by | AnhLQH | | |
| Primary Actors | Admin | Secondary Actors | None |
| Description | Admin deletes an existing subject from the system. | | |
| Trigger | Click delete icon in “Môn học” page in dashboard | | |
| Preconditions | Admin is logged into the system and is on the subject management page. | | |
| Postconditions | The selected subject is deleted from the system and removed from the subject list. | | |
| Normal Flows | <ol style="list-style-type: none">1. Admin clicks the "Delete" icon for a specific subject.2. System prompts the admin for confirmation.3. Admin confirms deletion.4. System deletes the subject and removes it from the list. | | |
| Alternative Flows | If the admin cancels the deletion, no changes are made and the subject remains in the system | | |
| Exception | N/A | | |
| Business rule | N/A | | |

2.5.4 Search/Filter Subject (Admin)

| | | | |
|-------------------|---|------------------|------|
| Use Case | UC39 - Search/Filter Subject (Admin) | | |
| Create by | AnhLQH | | |
| Primary Actors | Admin | Secondary Actors | None |
| Description | Admin searches or filters subjects by entering a keyword (either subject ID or name) in the search box. The system filters the list of subjects to display only those that match the keyword. | | |
| Trigger | Type content in search bar | | |
| Preconditions | Admin is logged into the system and is on the subject management page. | | |
| Postconditions | The system displays a filtered list of subjects based on the search criteria entered by the admin. | | |
| Normal Flows | <ol style="list-style-type: none"> 1. Admin navigates to the subject management page. 2. Admin enters a keyword (subject ID or name) in the search box. 3. The system filters the list to show only the matching subjects. 4. The admin views the filtered results. | | |
| Alternative Flows | <ol style="list-style-type: none"> 1. If no matching subjects are found, the system displays a message, "No subjects found." 2. If the search box is cleared, the system reverts to displaying the full subject list. | | |
| Exception | N/A | | |
| Business rule | N/A | | |

2.5.5 View subjects(Admin)

Refer to 2.1.4

2.6 Exam

2.6.1 Do exam

| | | | |
|----------------|--|------------------|------|
| Use Case | UC41 - Do exam | | |
| Create by | DuyPA | | |
| Primary Actors | User | Secondary Actors | None |
| Description | User selects an available exam and proceeds to take it. The system tracks the user's answers and displays a result page when the exam is submitted | | |
| Trigger | Click “Bắt đầu” button in exam section | | |
| Preconditions | User is logged into the system and is on the exam selection page. | | |
| Postconditions | The system records the user's responses and displays the exam results or a completion message. | | |
| Normal Flows | <ol style="list-style-type: none"> 1. User navigates to the exam selection page. 2. User selects an exam from the list. | | |

| | |
|-------------------|---|
| | 3. The system loads the exam and presents the first question. 4. User selects answers and proceeds through all the questions. 5. User submits the completed exam. 6. The system processes the exam and displays the results or a completion message. |
| Alternative Flows | 1. If the user leaves the exam mid-way, the system auto submits the exam. 2. If an exam is not available, the system displays a message: "No available exams." |
| Exception | N/A |
| Business rule | N/A |

2.6.2 Create Exam (User)

| | | | |
|-------------------|---|------------------|------|
| Use Case | UC42 - Create Exam | | |
| Create by | DuyPA | | |
| Primary Actors | User | Secondary Actors | None |
| Description | User creates a new exam by choosing an available quiz set or entering the exam details and questions. The system processes the data and saves the new exam in the system. | | |
| Trigger | Click "+" button in exam section | | |
| Preconditions | User is logged into the system and is on the exam creation page with the necessary permissions to create an exam. | | |
| Postconditions | The system stores the new exam in the database and confirms the creation with a success message. | | |
| Normal Flows | 1. User navigates to the exam creation page. 2. User chooses an available quiz set or enters the exam details and questions 2. User enters the exam details (e.g., title, description, duration). 3. User adds questions and answers for the exam or use Ai support generate. 4. User reviews and confirms the exam details. 5. The system validates the data and stores the new exam in the database. 6. The system displays a success message confirming the exam creation... | | |
| Alternative Flows | 1. If the user enters invalid data, the system displays a validation error and prompts the user to correct it. 2. If the user cancels the creation process, the system discards the entered data and returns to the previous page. | | |
| Exception | After step 1, If there is no quizset, the system display "Không có dữ liệu" | | |
| Business rule | N/A | | |

2.6.3 Read Exam (User)

| | | | |
|-------------------|--|------------------|------|
| Use Case | UC43 - Read Exam | | |
| Create by | DuyPA | | |
| Primary Actors | User | Secondary Actors | None |
| Description | User views the details of an existing exam, including its title, description, duration, and the list of quizzes. The system retrieves and displays the exam information. | | |
| Trigger | Click “Thông tin” button in exam section | | |
| Preconditions | User is logged into the system and is on the exam management or viewing page with the necessary permissions to view exam details. The exam must already exist in the system. | | |
| Postconditions | The system displays the selected exam’s details and quizzes for the user to review. | | |
| Normal Flows | <ol style="list-style-type: none"> 1. User navigates to the exam management or viewing page. 2. User selects an existing exam from the list. 3. The system retrieves the exam details from the database. 4. The system displays the exam’s title, description, duration, and list of quizzes. 5. User views the exam information. | | |
| Alternative Flows | <ol style="list-style-type: none"> 1. If the selected exam does not exist, the system displays a message: "Exam not found." 2. If there is an error retrieving the exam details, the system displays a message: "Unable to retrieve exam details, please try again later." | | |
| Exception | N/A | | |
| Business rule | N/A | | |

2.6.4 Update Exam (User)

| | | | |
|----------------|---|------------------|------|
| Use Case | UC44 - Update Exam (User) | | |
| Create by | DuyPA | | |
| Primary Actors | User | Secondary Actors | None |
| Description | User updates the details of an existing exam or deletes specific quizzes from the exam. The system processes the changes and updates the exam accordingly. | | |
| Trigger | Click “Tùy chọn” button then click “Chỉnh sửa” in view exam history page | | |
| Preconditions | User is logged into the system and has the necessary permissions to update exam’s details or update, delete quizzes in an existing exam. The exam must already exist in the system. | | |
| Postconditions | The system stores the new exam in the database and confirms the creation with a success message. | | |
| Normal Flows | <ol style="list-style-type: none"> 1. User navigates to the exam management page and selects an existing exam to update. | | |

| | |
|-------------------|--|
| | <p>2. User edits the exam details (e.g., title, description, or duration) or selects quizzes to update.</p> <p>3. User can also select specific quizzes to delete from the exam.</p> <p>4. User reviews and confirms the changes.</p> <p>5. The system validates the data and updates the exam in the database.</p> <p>6. The system displays a success message confirming the update or deletion of quizzes.</p> |
| Alternative Flows | <p>1. If the user enters invalid data during the update process, the system displays a validation error and prompts the user to correct it.</p> <p>2. If the user tries to delete a quiz that is part of a published or completed exam, the system displays a message: "Quiz cannot be deleted, it is already in use."</p> <p>3. If the user cancels the update process, the system discards the changes and returns to the previous page.</p> |
| Exception | N/A |
| Business rule | N/A |

2.6.5 Delete Exam (Soft Delete) (User)

| | | | |
|----------------|--|------------------|------|
| Use Case | UC45 - Delete Exam (Soft Delete) (User) | | |
| Create by | DuyPA | | |
| Primary Actors | User | Secondary Actors | None |
| Description | User performs a soft delete on an existing exam. The system marks the exam as "deleted" without permanently removing it from the database, making it inaccessible but recoverable. | | |
| Trigger | Click 3 dots button then click "Xóa" button in exam section | | |
| Preconditions | User is logged into the system and has the necessary permissions to delete exams. The exam must already exist in the system. | | |
| Postconditions | The system marks the exam as "deleted" (soft delete) and removes it from the list of active exams but keeps it in the database for potential recovery. | | |
| Normal Flows | <p>1. User navigates to the exam management page and selects an exam to delete.</p> <p>2. The system prompts the user to confirm the deletion action.</p> <p>3. User confirms the deletion action.</p> <p>4. The system performs a soft delete by marking the exam as "deleted" in the database without permanently removing it.</p> <p>5. The system removes the exam from the list of active exams and displays a success message.</p> | | |

| | |
|-------------------|---|
| Alternative Flows | <p>1. If the user cancels the deletion, the system returns to the exam management page without making changes.</p> <p>2. If the exam is already marked as "deleted," the system displays a message: "This exam has already been deleted."</p> <p>3. If the system encounters an error during the deletion process, it displays an error message: "Unable to delete exam, please try again later."</p> |
| Exception | N/A |
| Business rule | N/A |

2.6.6 List Exam (Search) (User)

| | | | |
|-------------------|---|------------------|------|
| Use Case | UC46 - List Exam | | |
| Create by | DuyPA | | |
| Primary Actors | User | Secondary Actors | None |
| Description | User searches for exams by entering keywords or filters (e.g., exam title, subject, date). The system filters and displays a list of exams that match the search criteria. | | |
| Trigger | Type in search bar | | |
| Preconditions | User is logged into the system and is on the exam management or listing page. The system contains existing exams that can be searched. | | |
| Postconditions | The system displays a filtered list of exams based on the search criteria entered by the user. | | |
| Normal Flows | <p>1. User navigates to the exam management or listing page.</p> <p>2. User enters a keyword (e.g., exam title, subject) or filter criteria (e.g., date range, status) in the search box.</p> <p>3. The system filters the list of exams to show only those that match the entered criteria.</p> <p>4. User views the filtered list of exams.</p> | | |
| Alternative Flows | <p>1. If no exams match the search criteria, the system displays a message: "No exams found."</p> <p>2. If the search box or filters are cleared, the system reverts to displaying the full list of available exams.</p> | | |
| Exception | N/A | | |
| Business rule | N/A | | |

2.6.7 View Exam History (User)

| | |
|----------|-------------------------------|
| Use Case | UC47-View Exam History |
|----------|-------------------------------|

| | | | |
|-------------------|---|------------------|------|
| Create by | DuyPA | | |
| Primary Actors | User | Secondary Actors | None |
| Description | User views their exam history, which includes past exams taken, scores, and completion dates. The system retrieves and displays a list of all past exams the user has completed | | |
| Trigger | Click “Thông tin” button in exam section | | |
| Preconditions | User is logged into the system and has previously taken one or more exams. | | |
| Postconditions | The system displays the user's exam history, including exam details such as date, score. | | |
| Normal Flows | <ol style="list-style-type: none"> 1. User navigates to the exam history page from the dashboard or user profile. 2. The system retrieves a list of all completed exams from the database. 3. The system displays the list of completed exams, including details like exam title, score, completion date, and status. 4. User reviews the exam history. | | |
| Alternative Flows | <ol style="list-style-type: none"> 1. If there are no completed exams, the system displays a message: "No exam history available." 2. If the system cannot retrieve the exam history, it displays an error message: "Unable to retrieve exam history. Please try again later." | | |
| Exception | N/A | | |
| Business rule | N/A | | |

2.6.8 View Exam Leaderboard (User)

refer to 2.6.

2.7 Chat

2.7.1 Chat with expert

| | | | |
|----------------|--|------------------|--------|
| Use Case | UC49 - Chat with expert | | |
| Create by | DuyPA | | |
| Primary Actors | User | Secondary Actors | expert |
| Description | As a user, I want to chat with a expert in real time, so that I can ask questions and receive guidance instantly. | | |
| Trigger | Click chat button in the quizset list page | | |
| Preconditions | <ul style="list-style-type: none"> • The user is logged in. • The expert must be available for chat | | |
| Postconditions | The chat session is completed, and both the user and expert can view the chat history. Any guidance or advice from the expert is communicated to the user. | | |
| Normal Flows | Chat with expert <ol style="list-style-type: none"> 1. The user navigates to the chat interface. 2. The user selects a expert and initiates a chat. | | |

| | |
|-------------------|--|
| | <p>3. The user types and sends a message.</p> <p>4. The expert receives the message and replies.</p> <p>5. The user and expert continue the conversation until resolved.</p> <p>6. The chat session ends, and the system logs the conversation for future reference.</p> |
| Alternative Flows | If the chat is disconnected due to network issues, the system attempts to reconnect or notify the user of the issue. |
| Exception | N/A |
| Business rule | N/A |

2.7.2 Chat with AI

| | | | |
|-------------------|---|------------------|---------|
| Use Case | UC50 - Chat with AI | | |
| Create by | DuyPA | | |
| Primary Actors | User | Secondary Actors | Open AI |
| Description | The user initiates a conversation with the AI to ask questions, receive assistance, or get information. The AI system processes the input and provides responses in real time. | | |
| Trigger | User click bot icon the bottom right | | |
| Preconditions | The user is logged into the system and has access to the chat interface. The AI system is active and able to process user queries. | | |
| Postconditions | The AI provides a relevant response, and the user continues interacting or terminates the session. | | |
| Normal Flows | <p>1. User navigates to the "Chat with AI" interface.</p> <p>2. User types a question or request into the chat input field.</p> <p>3. The system sends the query to the AI for processing.</p> <p>4. The AI processes the input and generates a response.</p> <p>5. The system displays the AI's response to the user in the chat interface.</p> <p>6. User can either continue the conversation by asking more questions or exit the chat.</p> | | |
| Alternative Flows | <p>1. If the AI cannot process the input, the system displays a message: "Sorry, I didn't understand that. Can you rephrase?"</p> <p>2. If the AI service is down, the system displays an error: "The AI is currently unavailable. Please try again later."</p> <p>3. If the user provides inappropriate or harmful input, the system may trigger a warning: "Please follow the community guidelines."</p> | | |
| Exception | | | |
| Business rule | | | |

2.7.3 Review Error Analysis with AI

| | | | |
|----------------|---|------------------|--|
| Use Case | UC51-Review Error Analysis with AI | | |
| Create by | DuyPA | | |
| Primary Actors | User | Secondary Actors | |

| | |
|-------------------|---|
| Description | As a User, I want review knowledge |
| Trigger | User click “Review kiến thức” button in history exam page |
| Preconditions | <ul style="list-style-type: none"> User has exam history |
| Postconditions | <ul style="list-style-type: none"> User review successfully |
| Normal Flows | <ol style="list-style-type: none"> User access Quiz set page User Click “Review” button OpenAI will check 3 latest exams that user do in that quiz set then create review successfully |
| Alternative Flows | Review Error Fail <ol style="list-style-type: none"> User click “Review” button User don’t have any exam history System display “Bạn không có bài kiểm tra nào để review” |
| Exception | After step 2, the system display “Bạn không có bài kiểm tra nào để review” |
| Business rule | N/A |

2.8 Transaction

2.8.1 Pay via VNPAY

| | | | |
|----------------|--|------------------|-----------------------------|
| Use Case | UC52 - Pay via VNPAY | | |
| Create by | DuyPA | | |
| Primary Actors | User | Secondary Actors | VNPAY Payment Gateway, Bank |
| Description | As a user, I want to pay for the subscription via VNPAY, so that I can complete my purchase securely using my bank or other payment methods supported by VNPAY. | | |
| Trigger | User click “Đăng ký” button in subscription page | | |
| Preconditions | <ul style="list-style-type: none"> The user is logged in. The user must have a valid payment method (e.g., a bank account or credit/debit card) registered with VNPAY. The system must be integrated with the VNPAY payment gateway. | | |
| Postconditions | The payment is successfully processed, and the system confirms the order. The user receives payment confirmation, and the transaction details are logged. | | |
| Normal Flows | Pay via VNPAY <ol style="list-style-type: none"> The user selects a subscription to purchase. The user proceeds to the checkout page. The user selects VNPAY as the payment method. The system redirects the user to the VNPAY payment gateway. The user inputs payment details or selects a bank. | | |

| | |
|-------------------|--|
| | <p>6. VNPAY processes the payment and verifies it with the user's bank.</p> <p>7. Upon successful payment, VNPAY redirects the user back to the system with a payment confirmation.</p> <p>8. The system confirms the order and shows the user a receipt or confirmation message</p> |
| Alternative Flows | <p>Payment Failure</p> <ol style="list-style-type: none"> 1. If the payment is declined (e.g., insufficient funds, incorrect credentials), the VNPAY gateway notifies the user of the failed transaction. 2. The system receives a failed payment response from VNPAY. 3. The system displays an error message to the user (e.g., "Payment failed, please try again or use another method"). 4. The user is given the option to retry the payment by returning to the payment page or selecting another payment method. <p>Session Timeout</p> <ol style="list-style-type: none"> 1. If the user takes too long to complete the payment, the session on the VNPAY gateway expires. 2. The VNPAY gateway notifies the user that the session has timed out. 3. The system receives a timeout response from VNPAY. 4. The system displays a message to the user indicating that the session has expired, asking the user to retry the payment. 5. The user is redirected to the checkout page to start the payment process again. <p>Insufficient Funds</p> <ol style="list-style-type: none"> 1. The user selects their bank and attempts the payment. 2. The bank declines the transaction due to insufficient funds in the user's account. 3. The VNPAY gateway notifies the user of the issue (e.g., "Insufficient funds"). 4. The system receives a failure response from VNPAY and shows an error message. 5. The user is given the option to retry with a different payment method or cancel the order. |
| Exception | If the payment is failed, session timeout or Insufficient Funds, redirect to homepage |
| Business rule | N/A |

2.8.2 Search transaction

Refer to 2.2.9

2.8.3 View all transaction

Refer to 2.1.4

2.8.4 View all transaction(user)

Refer to 2.1.4

2.9. Learning Streak

2.9.1 Learning Streak

| | | | |
|-------------------|---|------------------|--------|
| Use Case | UC56 - Learning Streak | | |
| Create by | DuyPA | | |
| Primary Actors | User | Secondary Actors | System |
| Description | As a user, I want to view my ranking based on test results by month or year, so that I can track my performance compared to other users over specific time periods. | | |
| Trigger | User click user icon | | |
| Preconditions | <ul style="list-style-type: none">• The user is logged in.• The user must have completed at least one test in the system• The system must have stored results for all users and be able to rank users based on test scores. | | |
| Postconditions | The system displays the user's ranking compared to other users for the selected time period (monthly or yearly) | | |
| Normal Flows | Learning Streak 1. The user navigates to the ranking section in the system. 2. The user selects the period they wish to view (e.g., monthly or yearly). 3. The system retrieves the test results for the selected period. 4. The system calculates the rankings based on the users' test scores. 5. The system displays the user's rank in comparison to other users. 6. The user views their ranking and can also view the top-ranked users for that time period. | | |
| Alternative Flows | No Test Results Available 1. If the user selects a time period in which they have not completed any tests, the system displays a message stating "No tests completed during the selected period." 2. The system offers the option for the user to select a different time period or return to the test dashboard. | | |
| Exception | N/A | | |

| | |
|---------------|-----|
| Business rule | N/A |
|---------------|-----|

2.10. Dashboard

2.10.1 Dashboard

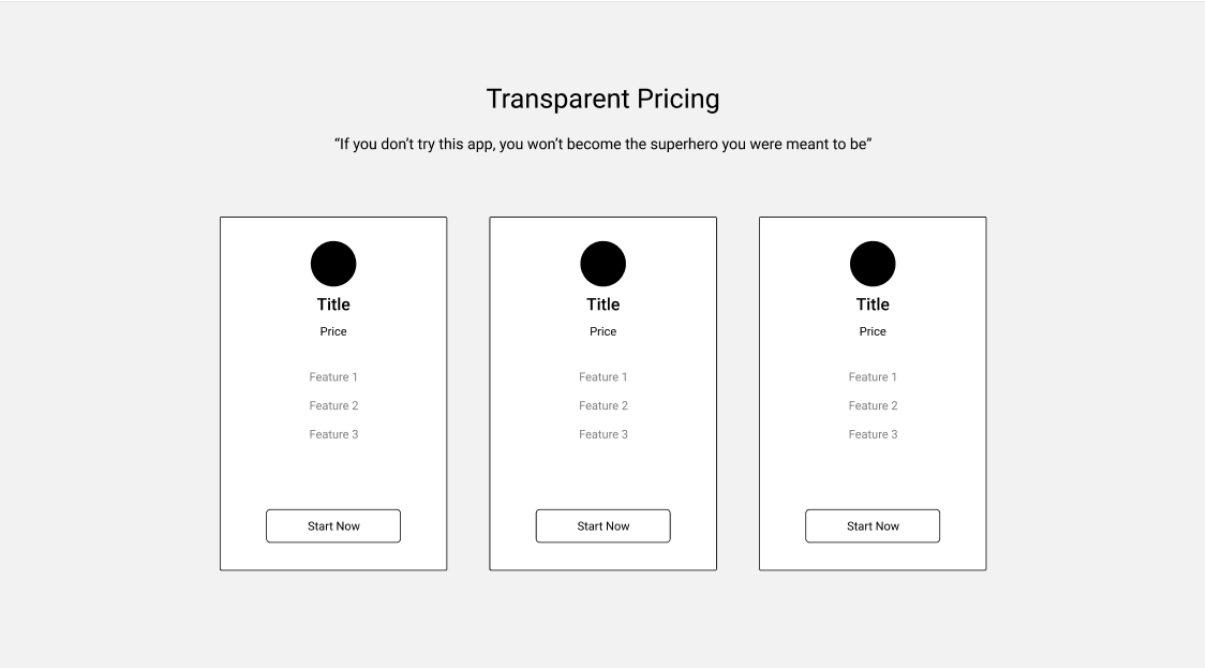
| | | | |
|-------------------|--|------------------|--------|
| Use Case | UC57 - Dashboard | | |
| Create by | AnhND | | |
| Primary Actors | Admin | Secondary Actors | System |
| Description | The user accesses the dashboard to view a summary of key information, such as exams, performance, or other relevant statistics. The system presents this data in a visually organized manner. | | |
| Trigger | | | |
| Preconditions | The user is logged into the system and has the necessary permissions to access the dashboard. | | |
| Postconditions | The system displays the dashboard with updated, relevant information for the user to review. | | |
| Normal Flows | <ol style="list-style-type: none"> 1. User logs into the system. 2. User navigates to the dashboard from the main menu or homepage. 3. The system retrieves relevant data from the database (e.g., exams, performance statistics, activity logs). 4. The system displays the data in the form of charts, tables, or summaries on the dashboard. 5. User reviews the information displayed on the dashboard. | | |
| Alternative Flows | <ol style="list-style-type: none"> 1. If the system cannot retrieve the data, it displays an error message: "Unable to load dashboard data, please try again later." 2. If there is no data available for the user (e.g., no exams), the system displays a message: "No data available." | | |
| Exception | N/A | | |
| Business rule | N/A | | |

3. Functional Requirements

3.1 Subscription

3.1.1 View subscription

This screen allows user to view subscription options.



| # | Field Name | Field Type | Data Type | Description |
|---|------------|------------|-----------|--|
| 1 | Start Now | Button | N/A | user click start now button to register a subscription |

3.1. Create new Subscription

Thêm gói

✕

★ Tên gói

★ Giá (vnd/tháng)

★ Mô tả

Cancel

OK

| # | Field Name | Field Type | Data Type | Description |
|---|-----------------|------------|-----------|--|
| 1 | Tên gói | Text Input | String | Name of the package |
| 2 | Giá (vnd/tháng) | Text Input | Double | Price of the subscription (in Vietnamese đồng per month) |
| 3 | Mô tả | Text Area | String | Description of the subscription |
| 4 | Cancel | Button | N/A | Cancels the current operation |
| 5 | Ok | Button | N/A | Confirms the entered information and saves it |

3.1.3 Delete Subscription

 Bạn có chắc chắn muốn xoá gói này

Không

Có

| # | Field Name | Field Type | Data Type | Description |
|---|------------|------------|-----------|---|
| 1 | Có | Button | N/A | Admin clicks the confirm button to delete the subscription |
| 2 | Không | Button | N/A | Admin clicks the cancel button to dismiss the delete action |

3.1.4 Edit Subscription

Chỉnh sửa thông tin gói



* Tên gói

* Giá (vnd/tháng)

* Mô tả

Cancel

OK

| # | Field Name | Field Type | Data Type | Description |
|---|-----------------|------------|-----------|--|
| 1 | Tên gói | Text Input | String | Name of the package |
| 2 | Giá (vnd/tháng) | Text Input | Double | Price of the subscription (in Vietnamese đồng per month) |
| 3 | Mô tả | Text Area | String | Description of the subscription |
| 4 | Cancel | Button | N/A | Cancels the current operation |
| 5 | Ok | Button | N/A | Confirms the entered information and saves it |

3.1.5 View Subscription admin

Quản lí các gói đăng ký

Tạo gói

| ID | Tên gói | Giá (vnd/tháng) | Mô tả | Ngày tạo | |
|----|---------|-----------------|--------------|-------------------------|-----------------------------------|
| 1 | Free | 100 | Free Test | 11/21/2024, 11:04:49 AM | <div><div></div><div></div></div> |
| 2 | Premium | 100 | Premium Test | 11/21/2024, 11:04:49 AM | <div><div></div><div></div></div> |
| 3 | Student | 100 | Student test | 11/21/2024, 11:04:49 AM | <div><div></div><div></div></div> |

<

1

>

| # | Field Name | Field Type | Data Type | Description |
|---|------------|------------|-----------|--|
| 1 | Edit | Button | N/A | Admin clicks the edit icon button to edit the subscription |
| 2 | Delete | Button | N/A | Admin clicks the delete icon button to delete the subscription |

3.2 User

3.2.1 User Login

This screen allows user to be authenticated to the system screens/functionalities.

| # | Field Name | Field Type | Data Type | Description |
|---|-----------------|------------|-----------|--|
| 1 | username | Text Box | String | user enter username to login |
| 2 | password | Text Box | String | user enter password to login |
| 3 | Log in | Button | N/A | Click to login |
| 4 | Forgot Password | HyperLink | N/A | Click to navigate to change password page |
| 5 | Register | HyperLink | N/A | Click to navigate to change register page |
| 6 | Login by Google | Button | N/A | User click Login by Google button to login by google account |

3.2.2 User Change password or forgot password

This screen allows user to be change password or forgot password

Input Email

email

Submit

Reset Password

password

confirm password

Submit

| # | Field Name | Field Type | Data Type | Description |
|---|------------------|------------|-----------|---|
| 1 | email | Text Box | String | user enter email to reset password |
| 2 | password | Text Box | String | user enter password to create new password |
| 3 | confirm password | Text Box | String | user enter re-password to confirm create new password |
| 4 | Submit | Button | N/A | User click submit to change password |

3.2.3 Register

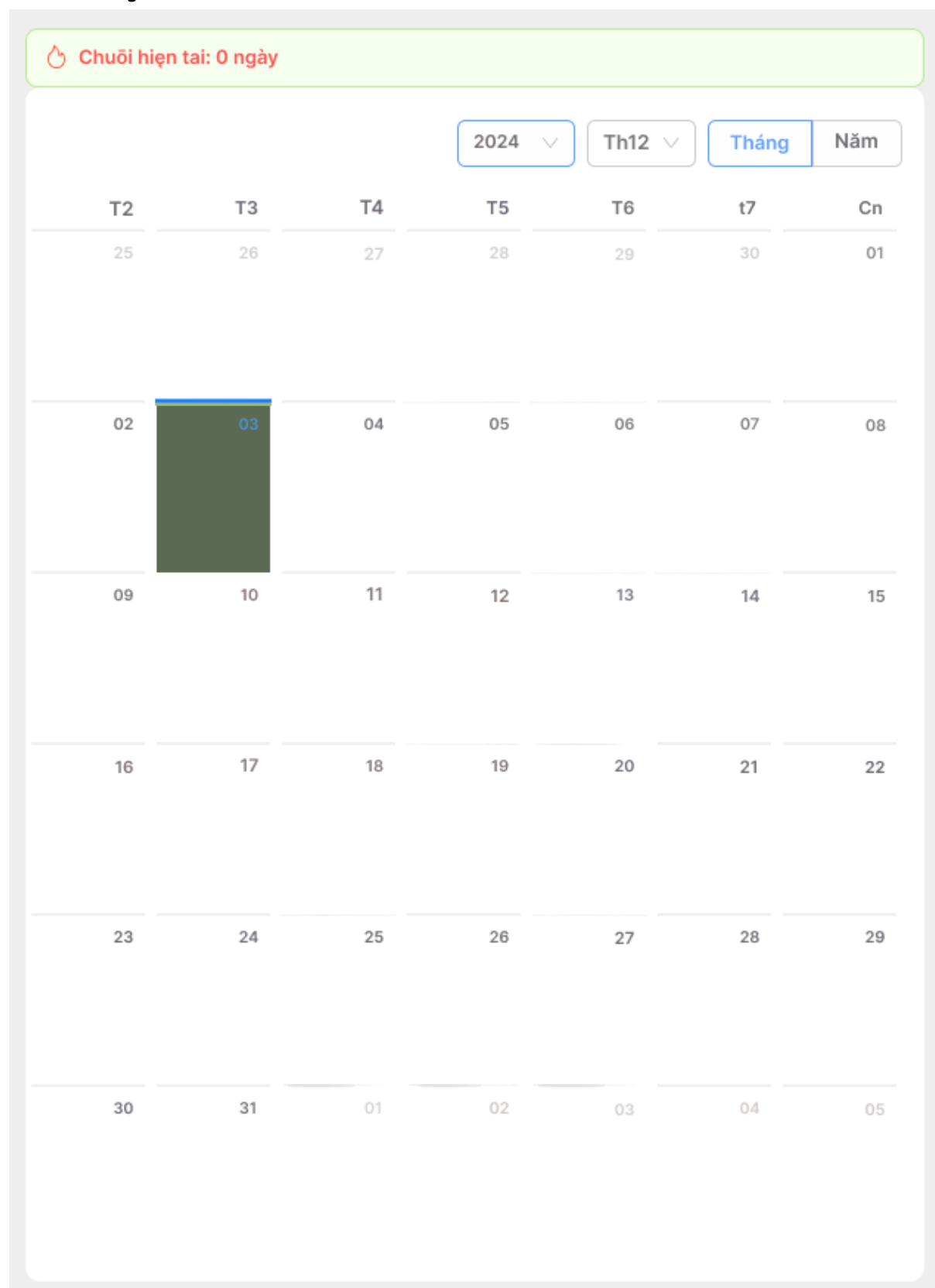
The screen allows guest register account

Register Account

You already have account? [Log in](#)

| # | Field Name | Field Type | Data Type | Description |
|---|------------------|------------|-----------|--|
| 1 | username | Text Box | String | user enter username to register new account |
| 2 | email | Text Box | String | user enter email to register new account |
| 3 | password | Text Box | String | user enter password to register new account |
| 4 | confirm password | Text Box | String | user enter re-password to register new account |
| 5 | create account | Button | N/A | Click the button to create new account |
| 6 | Log in | HyperLink | N/A | Click to login |

3.2.4 Learning Streak Calendar



3.2.5 View user profile or update user

Cài đặt tài khoản

Thông tin người dùng

* Họ

* Tên

Email

Loại tài khoản

Cập nhật thông tin

Đăng ký gói

Đăng ký

Đặt lại mật khẩu

Đặt lại mật khẩu

Lịch sử giao dịch

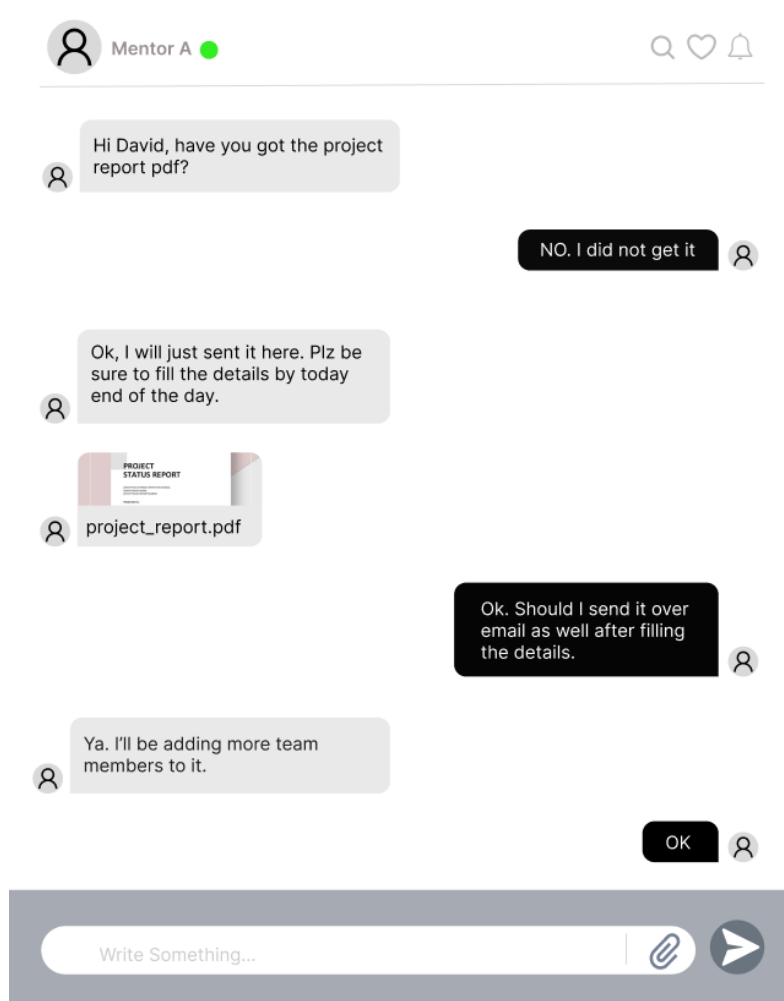
Lịch sử giao dịch

| # | Field Name | Field Type | Data Type | Description |
|---|--------------------|------------|-----------|--|
| 1 | Họ | Input | String | User enters first name to edit profile |
| 2 | Tên | Input | String | User enters last name to edit profile |
| 3 | Email | Input | String | User enters email to edit profile |
| 4 | Loại tài khoản | Dropdown | String | User clicks to choose subscription |
| 5 | Cập nhật thông tin | Button | N/A | User click to change user info |
| 6 | Đăng kí gói | Button | N/A | User click to purchase subscription |
| 7 | Đặt lại mật khẩu | Button | N/A | User click to reset password |
| 8 | Lịch sử giao dịch | Button | N/A | User click to view billing history |

3.3 Chat

3.3.1 Chat with Expert

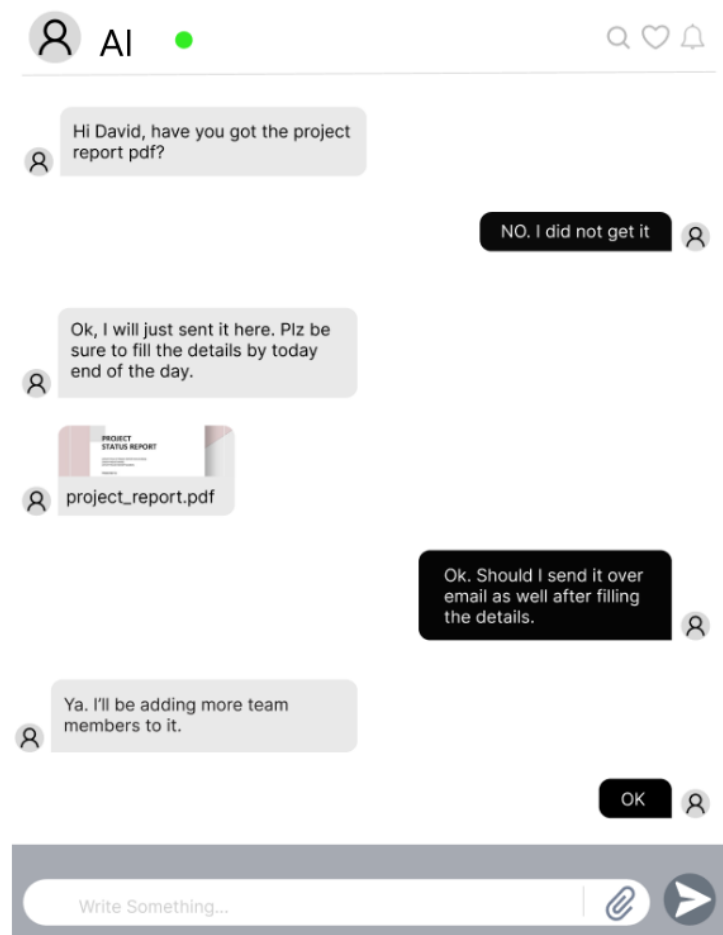
The screen show the chat between user and Expert



| # | Field Name | Field Type | Data Type | Description |
|---|------------|------------|-----------|--|
| 1 | send | Button | N/A | user click send button to send message to expert |
| 2 | input | Text Box | String | user input message's content to ask expert |
| 3 | file | Button | N/A | user input file to ask expert |

3.3.2 Chat with Ai

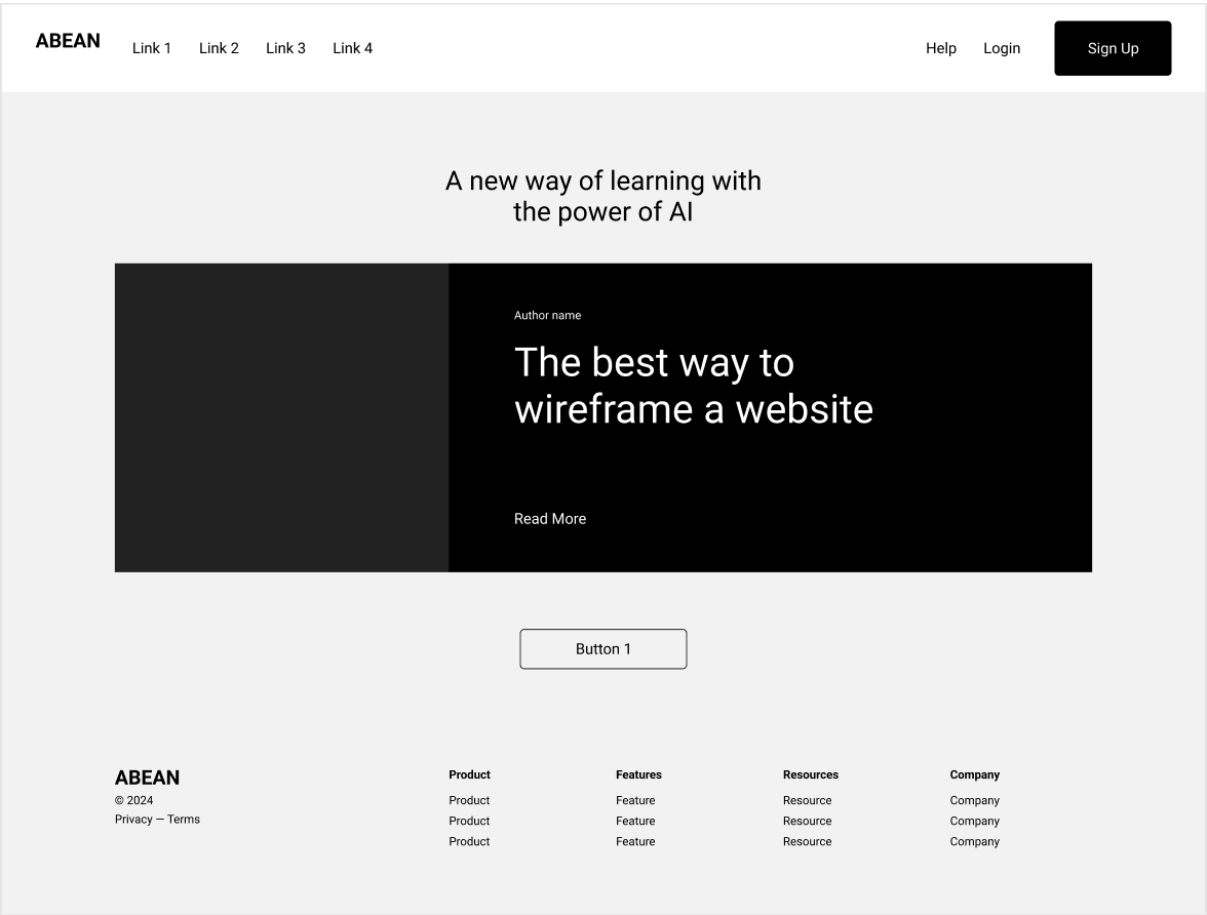
The screen show the chat between user and Ai



| # | Field Name | Field Type | Data Type | Description |
|---|------------|------------|-----------|---|
| 1 | send | Button | N/A | user click send button to send message to Ai Bot |
| 2 | input | Text Box | String | user input message's content to ask AI Bot |
| 3 | add | Button | N/A | user click add button to start asking about new quizset |
| 4 | delete | Button | N/A | user click delete button to delete chat history |

3.4 Homepage

The screen allows guest to view the homepage of the website

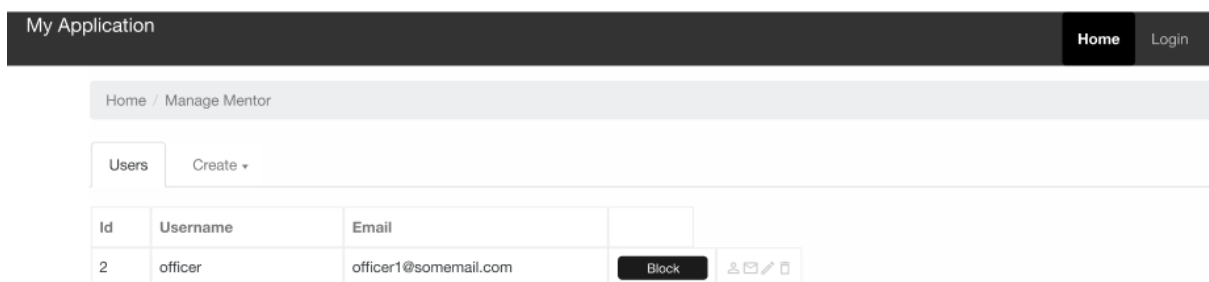


| # | Field Name | Field Type | Data Type | Description |
|---|------------|------------|-----------|--|
| 1 | Login | Button | N/A | user click login button to login into the system |
| 2 | Signup | Button | N/A | user click signup button to register new account |
| 3 | link | HyperLink | N/A | user click links to navigate to pages |

3.5 Expert

3.5.1 Manage expert

The screen allows admin to manage the experts



| # | Field Name | Field Type | Data Type | Description |
|---|------------|------------|-----------|--|
| 1 | Block | Button | N/A | Admin click block button to ban user |
| 2 | Edit | Button | N/A | Admin click edit button to update user's information |
| 3 | Create | Button | N/A | Admin click CREATE button to create new subject, ... |

3.6 Transaction

3.6.1 Pay via VNPAY

This screen allows the users to pay the subscription via VNPAY



Chọn phương thức thanh toán (Test)

Ứng dụng thanh toán hỗ trợ **VNPAYQR**



Thẻ nội địa và tài khoản ngân hàng



Thẻ thanh toán quốc tế



Ví điện tử **VNPAY**



[1900.5555.77](tel:1900.5555.77)



hotrovnpay@vnpay.vn



secure
GlobalSign



3.7 Leaderboard

This screen allows the user to see their ranking in quiz test by month/year

⁽¹⁾Ranking⁽²⁾

Action ▼

 Search...

Filters ▼

Active filter ×

☐ Quick filter

| Rank | Username | Score | Test Set | |
|------|-----------|-------|----------|--|
| 1 | example 1 | 100 | example | |
| 2 | example 2 | 99 | example | |
| 3 | example 3 | 98 | example | |
| 4 | example 4 | 97 | example | |

| # | Field Name | Field Type | Data Type | Description |
|---|--------------|------------|-----------|---|
| 1 | Search | Input | N/A | User input content to search ranking history |
| 2 | Filter | Button | N/A | User click filter checkbox to filter exam history |
| 3 | Quick filter | Button | N/A | User click filter checkbox to quick filter exam history |

3.8 Quiz

3.8.1 Learning Quiz

QUESTION 1/6

Quiz A

☐ Nội dung A

☐ Nội dung A

☐ Nội dung A

☐ Nội dung A

Submit

| # | Field Name | Field Type | Data Type | Description |
|---|------------|------------|-----------|---|
| 1 | Answer | Check box | N/A | User click checkboxes select answer |
| 2 | Submit | Button | N/A | User click submit button to submit quiz |

3.8.2 Quiz generator

Tải tài liệu lên

De tạo ngân hàng câu hỏi

Hủy

Tiếp tục

Keo hoc kích vào đây de ti file (PDF, DOcX, hình nh). Kích thước file phi nhõ hon 100MB.

| # | Field Name | Field Type | Data Type | Description |
|---|------------|------------|-----------|--|
| 1 | Input file | Input | String | User input file to generate new quiz |
| 2 | Submit | Button | N/A | User click submit button to create new quizset |

3.8.3 Create quiz or update

Thông tin:

Tu vung IT JP

Kaiwa - Tiếng Nhật

askbean

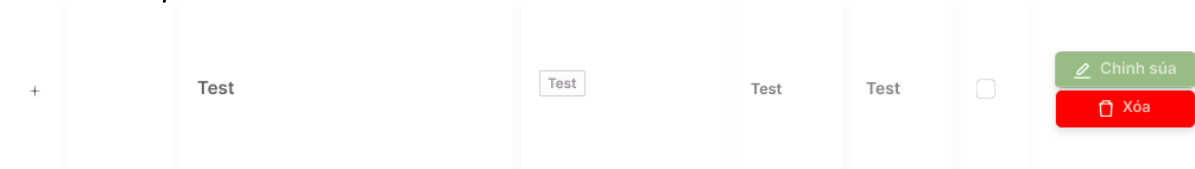
+ Thêm câu hỏi

Thêm câu hỏi thủ công

Thêm câu hỏi tự động

| # | Field Name | Field Type | Data Type | Description |
|---|-----------------------|------------|-----------|---|
| 1 | Thêm câu hỏi | Button | N/A | User clicks to choose the method of creating new quiz |
| 2 | Thêm câu hỏi thủ công | Button | N/A | User clicks to create new quiz |
| 3 | Thêm câu hỏi tự động | Button | N/A | User click to automatically generate new quiz |

3.8.4 Delete quiz



| # | Field Name | Field Type | Data Type | Description |
|---|------------|------------|-----------|----------------------------|
| 1 | Chỉnh sửa | Button | N/A | User clicks to edit quiz |
| 2 | Xóa | Button | N/A | User clicks to delete quiz |

3.8.5 Check duplicate quiz

Kết quả kiểm tra trùng lặp
Vui lòng lựa chọn câu hỏi để xóa
Quay lại
Xóa và lưu vào ngân hàng câu hỏi

Nhóm câu trùng 1

| Select | Câu hỏi | Lựa chọn | Loại câu hỏi | Giải thích |
|--------------------------|---------|---|--------------|--------------|
| <input type="checkbox"/> | 管理者 | <input checked="" type="checkbox"/> True <input type="checkbox"/> False | tf | 管理者(かんりしゃ) à |
| <input type="checkbox"/> | 検討 | <input checked="" type="checkbox"/> True <input type="checkbox"/> False | Fill | 検討(けんとう) |

| # | Field Name | Field Type | Data Type | Description |
|---|----------------------------------|------------|-----------|--|
| 1 | Quay lại | Button | N/A | User clicks to return to edit quiz page |
| 2 | Xóa và lưu vào ngân hàng câu hỏi | Button | N/A | User clicks to delete duplicated quizzes and return to edit quiz |
| 3 | Checkbox | Checkbox | Boolean | User clicks to choose quiz to delete |


3.9 Quiz Set


3.9.1 Quiz set detail

LOGO

[Link 1](#)
[Link 2](#)
[Link 3](#)
[Link 4](#)


Sign Up


Quiz set name 

Total question: 10 

Generate quiz

Add question

Search 

Filter 

QUESTION 1

A. OPTION 1

B. OPTION 2

C. OPTION 3

D. OPTION 4

Edit

Delete

QUESTION 2

A. TRUE

B. FALSE

Edit

Delete

QUESTION 3

Edit

Delete

| # | Field Name | Field Type | Data Type | Description |
|---|------------|------------|-----------|--|
| 1 | Edit | Button | N/A | User click edit button to update quiz's info |

| | | | | |
|----------|---------------|--------|--------|---|
| 2 | Delete | Button | N/A | User click delete button to delete quiz |
| 3 | Generate quiz | Button | N/A | User click generate quiz to navigate to generate quizset page |
| 4 | Add question | Button | N/A | User click add question to add new question |
| 5 | Search | Input | String | User input content to search quiz |
| 6 | Filter | Button | N/A | User click filter to filter quiz |

3.9.2 Create quiz set

Xác nhận bộ thông tin câu hỏi

Tên bộ câu hỏi

Bộ câu hỏi mới

Đây là bộ câu hỏi công khai ?

☐ Công khai

Tạo bộ câu hỏi tự luận

☐ Có

Số câu hỏi muốn tạo

10 câu hỏi

Chọn môn học có sẵn

Môn học của bạn

Tạo môn học mới

Môn học có sẵn

Chọn môn học

Hủy

Lưu

| # | Field Name | Field Type | Data Type | Description |
|---|---|------------|-----------|---|
| 1 | Tên bộ câu hỏi (Question Set Name) | Text Input | String | Name of the question set |
| 2 | Đây là bộ câu hỏi công khai? (Is this question | Checkbox | Boolean | Whether the question set is public or private |

| | | | | |
|----------|---|------------|---------|------------------------------------|
| | set public?) | | | |
| 3 | Tạo bộ câu hỏi tự luận (Create essay questions) | Checkbox | Boolean | Whether to create essay questions |
| 4 | Số câu hỏi muốn tạo (Number of questions to create) | Dropdown | Number | Number of questions to create |
| 5 | Chọn môn học có sẵn (Select existing subject) | Dropdown | String | Select an existing subject |
| 6 | Môn học của bạn (Your subject) | Text Input | String | Create a new subject |
| 7 | Tạo môn học mới (Create new subject) | Button | N/A | Create a new subject |
| 8 | Hủy (Cancel) | Button | N/A | Cancels the current operation |
| 9 | Lưu (Save) | Button | N/A | Saves the question set information |

3.9.3 Update quiz set

Xác nhận bộ thông tin câu hỏi

Tên bộ câu hỏi

Bộ câu hỏi mới

Đây là bộ câu hỏi công khai ?

☐ Công khai

Tạo bộ câu hỏi tự luận

☐ Có

Chọn môn học có sẵn

Môn học của bạn

Tạo môn học mới

Môn học có sẵn

Chon mon hoc

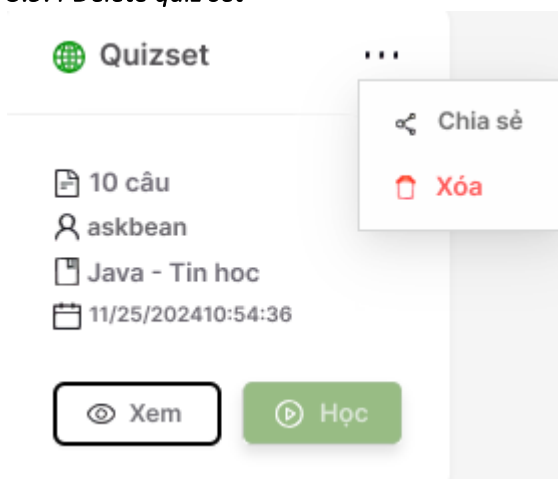
Hủy

Lưu

| # | Field Name | Field Type | Data Type | Description |
|---|--|------------|-----------|---|
| 1 | Tên bộ câu hỏi (Question Set Name) | Text Input | String | Name of the question set |
| 2 | Đây là bộ câu hỏi công khai? (Is this question set public?) | Checkbox | Boolean | Whether the question set is public or private |

| | | | | |
|---|---|------------|---------|------------------------------------|
| 3 | Tạo bộ câu hỏi tự luận (Create essay questions) | Checkbox | Boolean | Whether to create essay questions |
| 4 | Số câu hỏi muốn tạo (Number of questions to create) | Dropdown | Number | Number of questions to create |
| 5 | Chọn môn học có sẵn (Select existing subject) | Dropdown | String | Select an existing subject |
| 6 | Môn học của bạn (Your subject) | Text Input | String | Create a new subject |
| 7 | Tạo môn học mới (Create new subject) | Button | N/A | Create a new subject |
| 8 | Hủy (Cancel) | Button | N/A | Cancels the current operation |
| 9 | Lưu (Save) | Button | N/A | Saves the question set information |

3.9.4 Delete quiz set



| # | Field Name | Field Type | Data Type | Description |
|---|-----------------|------------|-----------|------------------------------|
| 1 | Chia sẻ (Share) | Button | N/A | Shares the quiz set |
| 2 | Xóa (Delete) | Button | N/A | Deletes the quiz set |
| 3 | Xem (View) | Button | N/A | Views the quiz set |
| 4 | Học (Learn) | Button | N/A | Starts learning the quiz set |

3.9.5 Search quizset or exam

Bạn có thể tìm kiếm ngân hàng câu hỏi, bài kiểm tra của bạn ... 🔍

| # | Field Name | Field Type | Data Type | Description |
|---|------------|------------|-----------|----------------------|
| 1 | Search Bar | Text Input | String | Name of the quiz set |

3.9.6 View quiz set

Bộ câu hỏi của bạn

Xem tất cả

Tu vựng IT JP

46 câu

askbean

Kaiwa

1252024 - 11:4257 PM

Xem

Học

Lịch sử lớp 10

5 câu

askbean

Lớp 10

125.2024 - 353:44 PM

Xem

Học

Tiếng anh lớp 10

20 câu

askbean

Lớp 10

1252024 - 245:48 PM

Xem

Học

| # | Field Name | Field Type | Data Type | Description |
|---|-------------|------------|-----------|------------------------------|
| 1 | Xem (View) | Button | N/A | Views the quiz set |
| 2 | Học (Learn) | Button | N/A | Starts learning the quiz set |

3.10. Administrator

3.10.1 View all Users

This screen allows admin to add, update, delete and view status the list of the user.

Show

10

entries

Q

Search...

Table

| ID | User name | First Name | Last Name | Email | Role | Status | Action |
|--------|------------|------------|-----------|----------------|--------|-----------|-------------------------|
| #20462 | Username 1 | Firstname1 | Lastname1 | user@gmail.com | User | Active | <div></div> <div></div> |
| #18933 | Username 2 | Firstname2 | Lastname2 | user@gmail.com | User | Active | <div></div> <div></div> |
| #45169 | Username 3 | Firstname3 | Lastname3 | user@gmail.com | Mentor | Active | <div></div> <div></div> |
| #34304 | Username 4 | Firstname4 | Lastname4 | user@gmail.com | User | Active | <div></div> <div></div> |
| #17188 | Username 5 | Firstname5 | Lastname5 | user@gmail.com | User | Banned | <div></div> <div></div> |
| #73003 | Username 6 | Firstname6 | Lastname6 | user@gmail.com | Mentor | Delivered | <div></div> <div></div> |
| #58825 | Username 7 | Firstname7 | Lastname7 | user@gmail.com | User | Delivered | <div></div> <div></div> |
| #44122 | Username 8 | Firstname8 | Lastname8 | user@gmail.com | Mentor | Delivered | <div></div> <div></div> |
| #89094 | Username 9 | Firstname9 | Lastname9 | user@gmail.com | User | Banned | <div></div> <div></div> |

Previous

1

2

3

Next

| # | Field Name | Field Type | Data Type | Description |
|---|------------|------------|-----------|---|
| 1 | Edit | Button | N/A | Admin click edit button to update quiz's info |
| 2 | Ban | Button | N/A | User click ban button to ban user |
| 3 | Search | Input | String | Admin input content to search user |

3.10.2 Update Users

Chỉnh sửa thông tin người dùng

Ho

Tên

* Email

* Chức năng

▼

* Xác minh

Đã xác minh

▼

Môn học

▼

Subscription

▼

Có giá trị đến

Select date

📅

Lưu

| # | Field Name | Field Type | Data Type | Description |
|---|------------------|------------|-----------|--------------------------------|
| 1 | Họ (Last Name) | Text Input | String | Enter the user's last name |
| 2 | Tên (First Name) | Text Input | String | Enter the user's first name |
| 3 | Email | Text Input | String | Enter the user's email address |

| | | | | |
|---|------------------------------|-------------|---------|--|
| 4 | Chức năng (Role) | Dropdown | String | Select the user's role |
| 5 | Xác minh (Verification) | Dropdown | Boolean | Select whether the user is verified |
| 6 | Môn học (Subject) | Dropdown | String | Select the user's subject |
| 7 | Subscription | Dropdown | String | Select the user's subscription plan |
| 8 | Có giá trị đến (Valid Until) | Date Picker | Date | Select the expiration date of the subscription |
| 9 | Lưu (Save) | Button | N/A | Saves the updated user information |

3.10.3 View Subject

This screen allows admin to add, update, delete and view the list of the subjects.

| <input type="text" value="Search..."/> + Add Subject | | | | |
|---|-----------|--------------|--------|--|
| Subject ID | Subject | Created Date | Action | |
| #20462 | Subject 1 | 13/05/2022 | | |
| #18933 | Subject 2 | 22/05/2022 | | |
| #45169 | Subject 3 | 15/06/2022 | | |
| #34304 | Subject 4 | 06/09/2022 | | |
| #17188 | Subject 5 | 25/09/2022 | | |
| Previous 1 2 3 Next | | | | |

| # | Field Name | Field Type | Data Type | Description |
|---|------------|------------|-----------|--|
| 1 | Edit | Button | N/A | Admin click edit button to update subject's info |
| 2 | Delete | Button | N/A | User click delete button to delete subject |

| | | | | |
|----------|-------------|--------|--------|---|
| 3 | Search | Input | String | Admin input content to search subject |
| 4 | Add Subject | Button | N/A | Admin click add subject button to add new subject |

3.10.4 List Subjects(Search/Filter)

This screen allows admin to search and filter subjects.

| Subject ID | Subject | Created Date |
|------------|-----------|--------------|
| #20462 | Subject 1 | 13/05/2022 |
| #18933 | Subject 2 | 22/05/2022 |
| #45169 | Subject 3 | 15/06/2022 |
| #34304 | Subject 4 | 06/09/2022 |
| #17188 | Subject 5 | 25/09/2022 |

| # | Field Name | Field Type | Data Type | Description |
|----------|------------|------------|-----------|--|
| 1 | Search | Input | String | Admin input content to search subjects |

3.10.5 Create or update

This is screen allows admin to add, update, delete and view the list of the subscriptions.

Thêm môn học



* Tên môn học: Tiếng Việt

* Tên học phần: Lớp 1

Lưu

| # | Field Name | Field Type | Data Type | Description |
|---|--------------------------------|------------|-----------|---|
| 1 | Tên môn học (Subject Name) | Input | String | Name of the subject |
| 2 | Tên học phần (Section Name) | Input | String | Name of the section within the subject |
| 3 | Lưu (Save) | Button | N/A | Saves the new subject and section |

| Show | 10 | entries | Search... | + Add Subscription |
|-----------------|---------------|------------|------------|--------------------|
| Subscription ID | Name | Date | Amount | Action |
| #20462 | Subscription1 | 13/05/2022 | \$4.95 | |
| #18933 | Subscription2 | 22/05/2022 | \$8.95 | |
| #45169 | Subscription3 | 15/06/2022 | \$1,149.95 | |
| #34304 | Subscription4 | 06/09/2022 | \$899.95 | |
| #17188 | Subscription5 | 25/09/2022 | \$22.95 | |
| Previous | 1 | 2 | 3 | Next |

| # | Field Name | Field Type | Data Type | Description |
|---|------------------|------------|-----------|---|
| 1 | Edit | Button | N/A | Admin click edit button to update subscription's info |
| 2 | Delete | Button | N/A | User click delete button to delete subscription |
| 3 | Search | Input | String | Admin input content to search subscription |
| 4 | Add Subscription | Button | N/A | Admin click add subscription button to add new subscription |

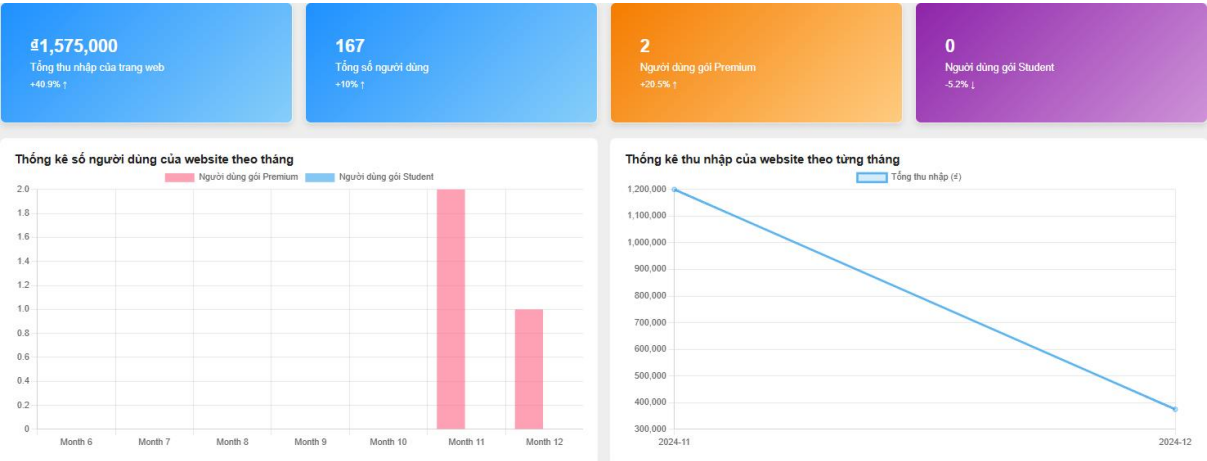
3.10.6 View transaction history

This screen allows admin to view the list of the transactions.

| Transaction ID | User ID | User Name | Date | Amount | Payment Mode | Status |
|----------------|---------|----------------|------------|------------|---------------|------------|
| #20462 | #13213 | Matt Dickerson | 13/05/2022 | \$4.95 | Transfer Bank | Delivered |
| #18933 | #32131 | Wiktorja | 22/05/2022 | \$8.95 | Transfer Bank | Delivered |
| #45169 | #13231 | Trixie Byrd | 15/06/2022 | \$1,149.95 | Transfer Bank | Processing |
| #34304 | #76574 | Brad Mason | 06/09/2022 | \$899.95 | Transfer Bank | Processing |
| #17188 | #64546 | Sanderson | 25/09/2022 | \$22.95 | Transfer Bank | Canceled |
| #73003 | #31312 | Jun Redfern | 04/10/2022 | \$54.95 | Transfer Bank | Delivered |
| #58825 | #43242 | Miriam Kidd | 17/10/2022 | \$174.95 | Transfer Bank | Delivered |
| #44122 | #13213 | Dominic | 24/10/2022 | \$249.95 | Transfer Bank | Delivered |
| #89094 | #65463 | Shanice | 01/11/2022 | \$899.95 | Transfer Bank | Canceled |
| #85252 | #42422 | Poppy-Rose | 22/11/2022 | \$6.948 | Transfer Bank | Processing |

Previous 1 2 3 Next

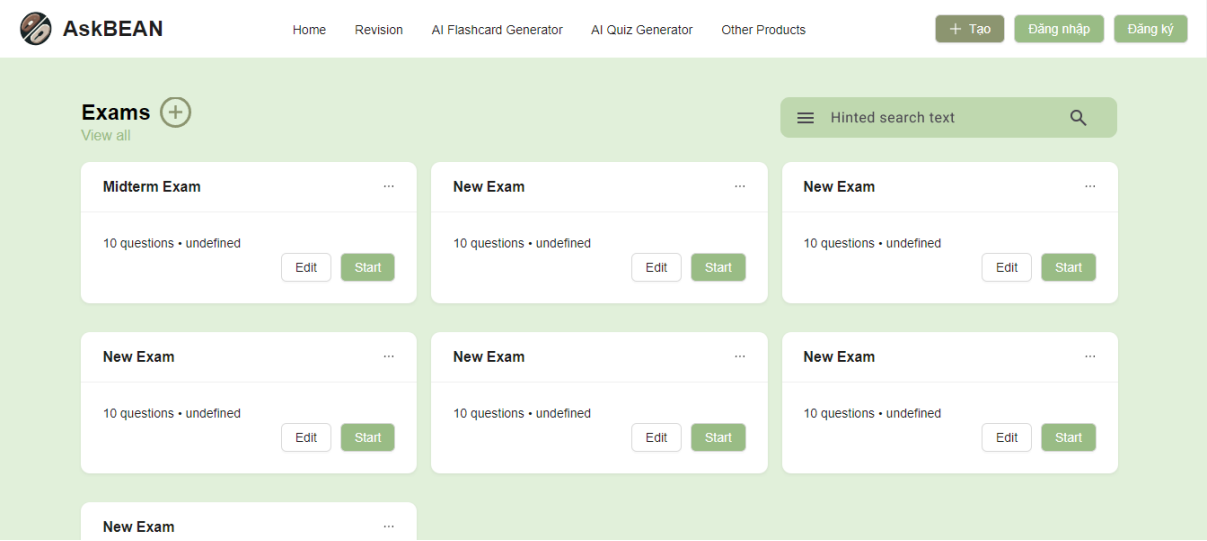
3.10.7 Dashboard



3.11 Exam

3.11.1 List exams

This screen allows users to view their exams list, search filter, edit and delete exams.

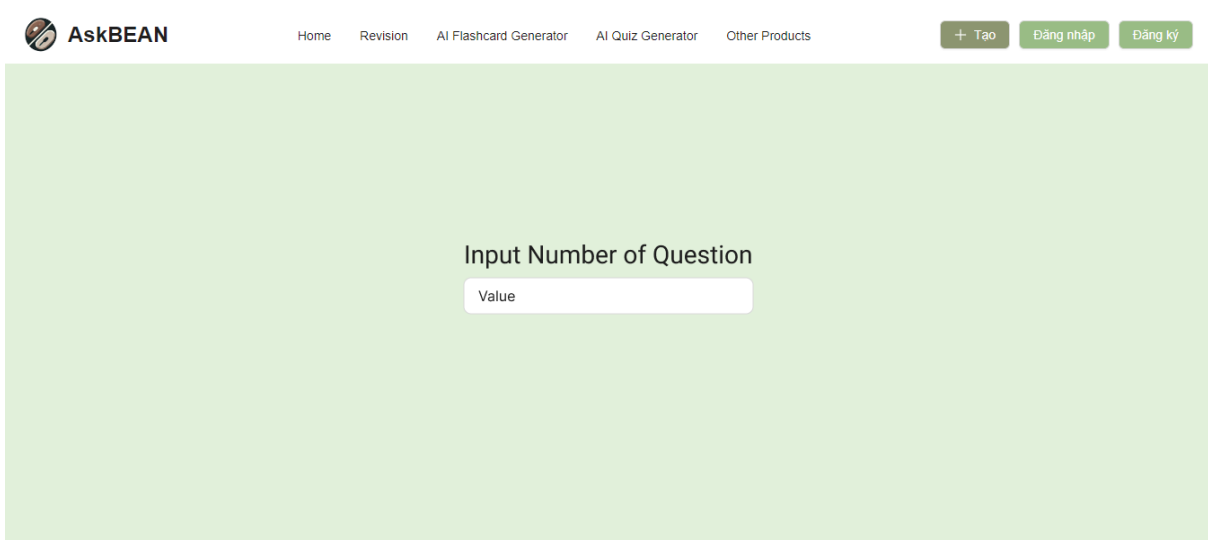


| # | Field Name | Field Type | Data Type | Description |
|---|------------|------------|-----------|--|
| 1 | Edit | Button | N/A | User click edit button to update exam’s info |
| 2 | Start | Button | N/A | User click start button to learn quiz |
| 3 | Search | Input | String | User input content to search |

| | | | | |
|---|----------|--------|-----|---|
| | | | | Exam |
| 4 | Add Exam | Button | N/A | User click add Exambutton to add new Exam |

3.11.2 Input number of question in exam

This screen allows users to input the number of quizzes in the exam.



| # | Field Name | Field Type | Data Type | Description |
|---|-----------------|------------|-----------|-------------------------------|
| 1 | Add number quiz | Input | Number | User input number of question |

3.11.3 Input number of question in chapter

This screen allows users to input the number of quizzes in the chapter for the exam.

Total: 10

Chapter 1 - 0 +

Chapter 2 - 0 +

Chapter 3 - 0 +

Chapter 4 - 0 +

Cancel

Save

| # | Field Name | Field Type | Data Type | Description |
|---|----------------------|------------|-----------|---|
| 1 | Increase number quiz | Button | N/A | User click increase button to increase number of quizzes in the chapter |
| 2 | Decrease number quiz | Button | N/A | User click decrease button to decrease number of quizzes in the chapter |
| 3 | Cancel | Button | N/A | User click cancel to cancel the process |
| 4 | Save | Button | N/A | User click save to update quiz number in the chapter |

3.11.4 Do exam

This screen allows users to do exams.

4:43

Nộp bài

Số câu hỏi: 5 câu hỏi

1

2

3

4

5

Đã trả lời

Đang cân nhắc

Chưa trả lời

0%

Quiz

QUESTION 1/5

What is the chemical symbol for water?

☐ H2O

☐ O2

☐ CO2

☐ NaCl

Previous

Next

| # | Field Name | Field Type | Data Type | Description |
|---|---------------|------------|-----------|--|
| 1 | Select answer | Check Box | N/A | User click check box to select answer |
| 2 | Next quiz | Button | N/A | User click next to navigate to next question |
| 3 | Previous quiz | Button | N/A | User click previous to navigate to previous question |
| 4 | Submit | Button | N/A | User click save to submit exam |

3.11.5 View Exam History

This screen allows users to view exam history.

Thông tin:

Bài kiểm tra đã được hoàn thành

Tùy chọn

Bắt đầu

Xem người dùng đã làm bài

Ngày giờ làm bài

Điểm

Hành động

11/27/2024
3:46:24AM

2/7 (29%)

Xem

Review kiến thức

| # | Field Name | Field Type | Data Type | Description |
|---|---|------------|-----------|---|
| 1 | Xem người dùng đã làm bài (View user submissions) | Button | N/A | Opens a list of users who have taken the test |
| 2 | Xem (View) | Button | N/A | Views the details of the test |
| 3 | Review kiến thức (Review knowledge) | Button | N/A | Directs the user to review relevant topics |
| 4 | Tùy chọn | Dropdown | N/A | Accesses additional options |
| 5 | Bắt đầu | Button | N/A | Starts a new exam |

3.11.6 Create exam

1

Bước 1

Lựa chọn bộ câu hỏi

2

Bước 2

Tạo bài kiểm tra

3

Bước 3

Hoàn thành

Lựa chọn ngân hàng câu hỏi

Hủy

Tiếp tục

| Ngân hàng câu hỏi | Môn học | Loại | Quyền sở hữu | Tổng số câu |
|--|------------|-------------|--------------|-------------|
| <input type="radio"/> Tu vựng IT JP | Tiếng nhật | Trắc nghiệm | Của bạn | 46 |
| <input type="radio"/> Lịch sử lớp 10 THPT - Chính thức | Lịch sử | Trắc nghiệm | Của bạn | 5 |

| # | Field Name | Field Type | Data Type | Description |
|---|---------------------|------------|-----------|---|
| 1 | Checkbox | Check Box | Boolean | User click check box to select quiz set |
| 2 | Hủy (Cancel) | Button | N/A | Cancels the current operation |
| 3 | Tiếp tục (Continue) | Button | N/A | Proceeds to the next step |

3.11.7 Read exam

Tiêu đề bài kiểm tra

Tieng Viet Exam

Tùy chọn ▾

Thông tin đã được lưu ngay lúc này

| Câu hỏi | Lựa chọn | Loại câu hỏi | Giải thích | Hành động |
|--|--|--------------|--|----------------|
| Những thơ ca dao về quê hương thường mang theo yếu tố biểu cảm gì? | <div>Khó hiểu</div> <div>Tình cảm yêu quê</div> <div>Không rõ nội dung</div> <div>Chỉ diễn tả hình ảnh</div> | Một đáp án | Thơ ca dao về quê hương thường gợi tình cảm yêu quê hương, đất nước. | <div>Xóa</div> |

| # | Field Name | Field Type | Data Type | Description |
|---|--------------------|------------|-----------|-------------------|
| 1 | Xóa(Delete) | Button | N/A | Delete the quiz |
| 2 | Tùy chọn (Setting) | Dropdown | N/A | Select operations |

4. Non-Functional Requirements

4.1 External Interfaces

- The AskBean system must be compatible with commonly used web browsers (Chrome, Firefox, Safari) and work seamlessly across both desktop and mobile devices.
- The system must integrate with external AI services (such as the SBERT and mBART-50 models) to provide natural language processing for quiz generation.
- It must also be able to interact with external databases for storing and retrieving user study materials and quiz results.

4.2 Quality Attributes

4.2.1 Usability

- The interface should allow new users to become proficient with the platform within 10 minutes, offering a user-friendly dashboard and tutorial for first-time users.
- The system should conform to standard usability principles, such as intuitive navigation and accessibility standards (e.g., WCAG 2.1 for accessibility).
- Task completion, such as quiz generation or review feedback, should not exceed 2-3 clicks from the dashboard.

4.2.2 Performance

- Quiz generation based on user inputs should not exceed 2 seconds under normal load conditions (up to 500 users).
- The system should handle up to 1000 concurrent users without performance degradation, including quiz creation, feedback generation, and chatbot interaction.
- The chatbot response time for user queries should not exceed 1 second.
- The system must support a throughput of at least 200 transactions (quiz generation, feedback requests) per second during peak times.
- Resource usage (CPU, memory, etc.) must be optimized to ensure efficient performance even during high traffic.

5. Requirement Appendix

5.1 Business Rules

| ID | Rule Definition |
|-------|--|
| BR-01 | Quizzes must be generated within 5 minutes of the user inputting their study materials. |
| BR-02 | Users can upload a maximum of 100MB of study material at a time. |
| BR-03 | The platform will only support text-based and image-based materials for quiz generation (no video or audio). |
| BR-04 | Users must have an active account to save progress or access personalized feedback |
| BR-05 | Quizzes must be completed within a single session; partial progress on a quiz cannot be saved. |
| BR-06 | Personalized feedback will be provided within 5 seconds after the completion of an exam. |
| BR-07 | User password must be encrypted using Bcrypt encryption. |
| BR-08 | Only authenticated users can access the AI-generated quizzes and feedback features. |
| BR-09 | Pre-purchased users can attempt the same quiz a maximum of 2 times before being required to upload new study material. |
| BR-10 | User and Password length must be in 6 to 32 |

5.2 System Messages

| # | Message code | Message Type | Context | Content |
|---|--------------|---------------|-------------------------------|--|
| 1 | MSG01 | Toast message | Admin enters empty name for | Subscription name is empty |
| 2 | MSG02 | Toast message | User fail login to the system | “Tài khoản hoặc mật khẩu của bạn không đúng” |
| 3 | MSG03 | Toast message | Register username error | Username không hợp lệ |

| | | | | |
|----|-------|------------------------|---|---|
| 4 | MSG04 | Toast message | Register email error | Email không hợp lệ |
| 5 | MSG05 | In red, under text box | Password not match | Mật khẩu và Nhập lại mật khẩu không khớp |
| 6 | MSG06 | Toast message | Username existed | Username đã tồn tại |
| 7 | MSG07 | Toast message | Email existed | Email đã tồn tại |
| 8 | MSG08 | Toast message | User account has been successfully created | Welcome! Your account has been created successfully. |
| 9 | MSG09 | Toast message | Progress tracking data updated successfully | Your progress has been updated successfully. |
| 10 | MSG10 | Toast message | User successfully changes their password | Your password has been changed successfully. |
| 11 | MSG11 | Toast message | AI feedback temporarily unavailable | AI feedback is temporarily unavailable. Please try again later. |