Tennique - Tennis Court Booking System Software Requirement Specification

Project Code: TTCBS
Document Code: SRS_v1

Ho Chi Minh, May 2022

RECORD OF CHANGE

*A - Added M - Modified D - Deleted

Effective Date	Changed Items	A* M, D	Change Description	New Version
19/05/2022	Use cases	a	Add multiple use cases	
31/05/2022	Introduction and Overall Description	a	Write project's overview and basic information	
07/06/2022	Non-functional Requirements	a	Write non-functional requirements	
09/06/2022	Use cases	a, m, d	Update use cases	

SIGNATURE PAGE

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1. INTRODUCTION

1.1. Purpose

The goal of this SRS is to explain the functional and nonfunctional requirements for the Tennique Tennis Court Booking System web application release 1.0. It will specify the system's objective and features, as well as its interfaces, what the system will do, the limitations under which it must operate, and how the system will react to external stimuli. This document is designed for use by members of the project team who will implement and test the application's functionality. Unless otherwise noted, all requirements specified here are committed for release 1.0.

1.2. Scope

The Tennique TCBS will be of use to players who are new to tennis but have difficulties finding court locations. This Web application allows players to browse for tennis courts and make a reservation; allows owners to register their courts and manage the reservations. A detailed description is available below. The Tennique TCBS is only available for courts in Ho Chi Minh City.

1.3. Definitions, Acronyms, and Abbreviations

Acronym	Definition
BR	Business Rule
UC	Use Case
AS	Assumption
DE	Dependency
CO	Constraint
USE	Usability
SUP	Supportability
PER	Performance
REL	Reliability
LR	Licensing Requirement
TCBS	Tennis Court Booking System
Tennique	Commercial name for the Web application
Guest	Someone who is outside of the system/does not log into the system.
Player	Users who use the Web application to find courts and/or rent a court.
Owner	Users who use the Web application to rent out and manage their courts

	plus organize the court's reservation
Court	The court where the sport of tennis is played. It is also the entity uploaded by the owners.
Reservation	The player's booked slot for a specific court at a specific time

1.4. References

There are currently no references.

1.5. Overview

1. Project Information
- Project name: Tennique - Tennis Court Booking System in Ho Chi Minh City
- Project code: TCBS
- Group No: 7
- Software type: Web application

2. Project Team

a. Supervisor

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b.Team member

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The rest of the SRS document below are detailed descriptions about functional and nonfunctional requirements, along with the use case diagram and use case details.

2. OVERALL DESCRIPTION

2.1. Product Perspective

The Tennique TCBS is a new software system that replaces the current manual and telephone processes for booking tennis courts. The system is expected to evolve over several releases, ultimately connecting to the Internet booking services for several local courts and to credit and debit card authorization services.

2.2. Product Function

2.2.1 Player function

- **Display tennis courts**: Users can view tennis courts based on their interests. This function includes viewing court lists, searching courts by name, location, rating and price.
- **Book a court**: Users can reserve a court for a specified date time and pay using their preferred payment method.
- **Manage personal profile:** Users can manage their own profile. This function includes viewing, updating personal information and payment methods.
- **View booking history**: After successfully booking a court, players are able to view the detailed information of the booking.
- **Browse various courts**: Get a curated list of courts recommended by our system. Get a suggestion of nearby courts, feature courts and explore different places that users might be interested in.

2.2.2 Owner function

- **Manage reservation**: Owners can view all of the customers' information who has rented the court and manage reservation by allowing anyone to rent the court or not.
- **Rent out a court**: This feature allows you to add, edit the owner's account profile and submit a court profile to the system.
- **Manage courts**: Owners are capable of view, modify, delete their courts with the court management system.

2.2.3 Administrator function

- **Manage Owner Registration**: Administrators are capable of viewing and verifying/rejecting owner registration..
- **Manage user accounts**: Administrators are capable of view, add, edit account information with the account management system.

2.3. User characteristics

Player	Tennique TCBS customers are primarily newcomers to tennis, as well as those looking for a new court, a change of court, or one-time visitors.
Owner	There are about 800 courts in Ho Chi Minh city. These courts' owners can use Tennique TCBS to approach new customers and manage the reservations in an easy way. The owner will also edit the price and details of their court, if any.
Administrator	The administrator is the one who sees over all roles and maintains a sufficient system by managing the court verification requests. There will be

	courts that are eligible for renting out and some that are not appropriately up for approval.

2.4.   *Constraints*

CO-1: The system's design and code will be conformed to the Model View Controller design pattern.

CO-2: The application's front-end shall be developed using Bootstrap 4 framework and JQuery library.

CO-3: All HTML code shall conform to the HTML 5.0 standard.

CO-4: The project's database will be stored on the standard Microsoft SQL Server version 2019 or higher.

2.5.   *Assumption and Dependencies*

AS-1: The owner is expected to keep watch of court reservations at all times.

DE-1: The operation of the TCBS depends on changes being made in the Payroll System to accept payment requests for courts booked with the TCBS.

DE-2: The operation of the TCBS depends on changes being made in the Court Management to update the price and availability of each court as TCBS receives booking requests.

2.6.   *Requirement Subsets*

3. FUNCTIONAL REQUIREMENTS

3.1. Use Cases Diagram
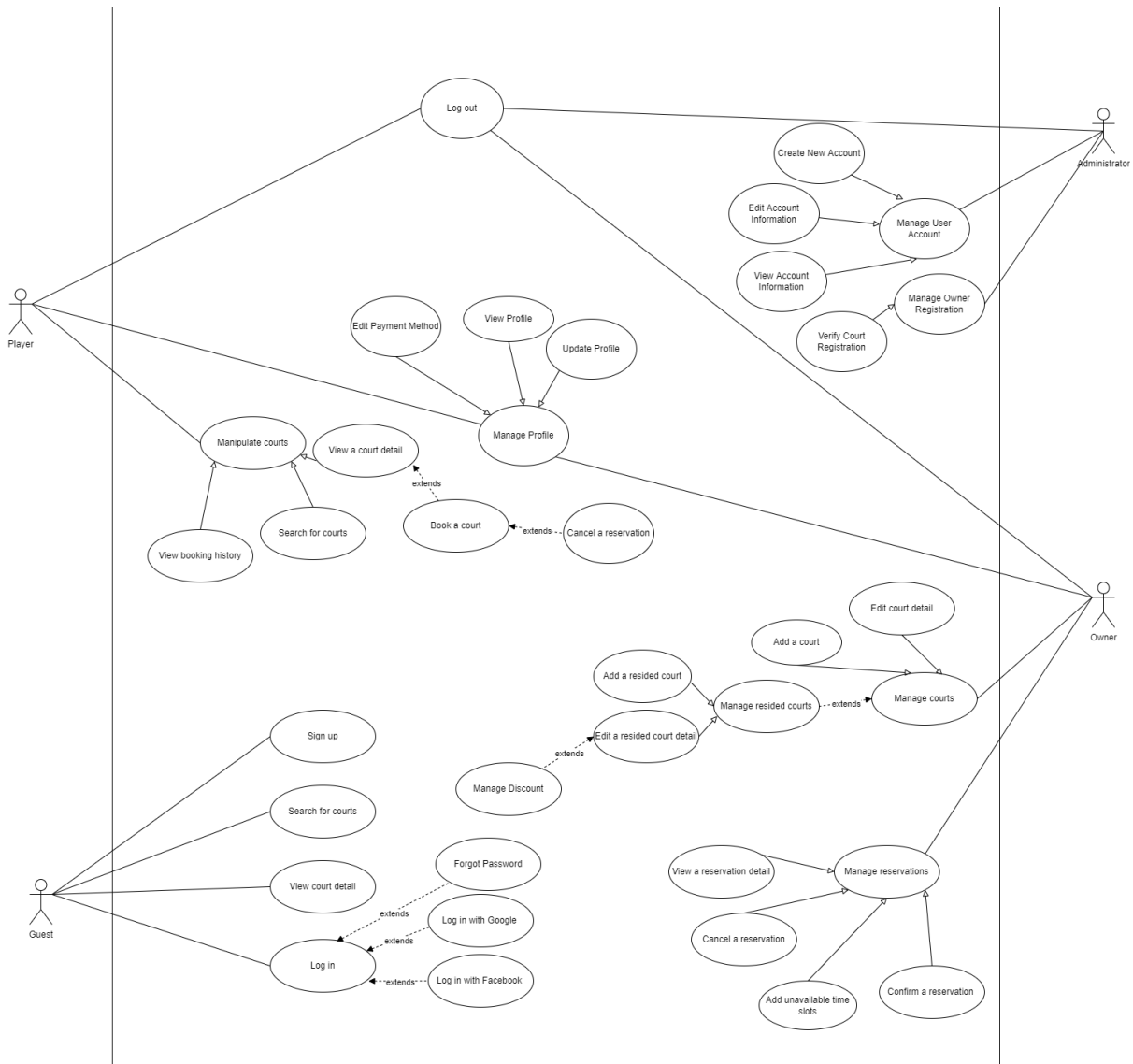
3.2. Sign up

USE CASE-n SPECIFICATION			
Use-case No.	UC001	**Use-case Version**	2.0
Use-case Name	Sign up		

Author	MẫnHG		
Date	16/06/2022	**Priority**	High

Actor:

    Guest

Summary:

    A guest accesses Tennique website to book tennis courts and wants to create an account.

Goal:

    This feature allows guests to sign up for Tennique TCBS.

Triggers

    A guest wants to sign up for Tennique TCBS.

Preconditions:

    N/A

Post Conditions:

    Success: Actor is redirected to the Home screen of the website.

Main Success Scenario:

Actor action	System Response
Actor clicks on the "Login" button on the Home screen.	*System redirects the actor to the Login screen.*
Actor clicks on the "Sign up" button on the Login screen.	*System redirects the actor to the Register screen and displays a registration form for actor to fill in including:* - *First name: text, maxlength 50, required.* - *Last name: text, maxlength 50, required.* - *Password: 8 characters minimum, required.* - *Confirm password: has to be the same as password, required.* - *Phone number: numeric input, Vietnamese phone number format, required.* - *Role: player or owner radio button, required.* - *Agreement: a checkbox with content of "By clicking 'Register' you agree to tennique Terms & Conditions and Privacy Policy", required.* - *Email: local-part@domain format, required.*

Actor completes the register form and clicks on the "Register" button.	System validates [Exception1], [Exception2], [Exception3], [Exception4], [Exception5], [Exception6], [Exception7] and then informs "Register successfully" and redirects the actor to the Home screen if the actor selected to sign up as a player. Otherwise, the actor is redirected to the Owner screen.

Alternative Scenario:

   N/A

Exceptions:

1. **The actor filled in an email that has already been used by another user.**

    System informs the actor that "This email has already been taken!".

2. **The actor filled in a phone number that has already been used by another user.**

    System informs the actor that "This phone number has already been taken!".

3. **The actor did not input their name.**

    System informs the actor that "What's your name?".

4. **The actor did not input passwords or input invalid passwords.**

    System informs the actor that "Enter a combination of at least 8 characters".

5. **The actor did not input their phone number or input an invalid phone number.**

    System informs the actor that "Please enter a Vietnamese phone number".

6. **The actor did not input their email address or input an invalid email address.**

    System informs the actor that "Please enter a valid email address with local@domain format".

7. **The actor did not select to agree with the Terms & Conditions and Privacy Policy.**

    System informs the actor that "You have to agree with our Terms & Conditions and Privacy Policy to continue".

   Relationships:

   N/A

Business Rules:

   BR-01: The actor is obligated to input their phone number and email to verify their account.

   BR-02: The phone number must be in Vietnamese phone number format.

   BR-03: Each phone number is allowed to be registered with only one account.

   BR-04: The actor must retype the password one more time after entering it.

3.3.   Login

USE CASE-n SPECIFICATION

Use-case No.	UC002	Use-case Version	1.0
Use-case Name	Log in		
Author	KhanhTTV		
Date	19/05/2022	**Priority**	High

Actor:

> *Guest*

Summary:

> *A player accesses Tennique website and requests to login.*

Goal:

> *This feature allows users to log in to the Tennique web application.*

Triggers

> *The actor clicks on "Log in" on the Tennique home screen.*

Preconditions:

> *The actor has an existing account in the system.*

Post Conditions:

> *Success: User is directed to the homepage.*

Main Success Scenario:

Actor Action	System Response
User clicks on the "Login" button on the home screen.	*Display a Login screen with the required input field: email and password.* - *Email: the format is local-part@domain, required.* - *Password: 8 characters minimum, required.*
User inputs all the required field and clicks on the "Login" button.	*The system validates that the account existed, then redirects the user to the homepage.*

Alternative Scenario:

> *N/A*

Exceptions:

1. *The user inputs invalid email.*
    -   *The system shows an error message "Invalid email!".*
2. *The user inputs an incorrect password.*
    -   *The system shows an error message "Incorrect password!".*

Relationships:

Extended

Business Rules:

BR-01: User's login session lasts one hour.

3.4. Reset password

USE CASE-n SPECIFICATION				
Use-case No.	UC003	**Use-case Version**	2.0	
Use-case Name	Reset password			
Author	MẫnHG			
Date	16/06/2022	**Priority**	High	

Actor:

Guest

Summary:

A user of the Tennique website has forgotten their password and wants to reset their password.

Goal:

This feature allows Tennique's users to reset their password in case they forgot it.

Triggers

A user wants to reset their password.

Preconditions:

The actor must have a Tennique account.

Post Conditions:

Success: Actor is redirected to the Home screen if their role is player and to the Owner screen if their role is owner.

Main Success Scenario:

Actor clicks on the "Login" button on the Home screen.	System redirects the actor to the Login screen.
Actor clicks on the "Forgot password" button on the Login screen.	System redirects the actor to the Reset Password screen.
Actor enters their email address and clicks continue.	System validates [Exception 1] and [Exception 2] then sends a reset password link to the email address.
Actor accesses the link that the website sends to the email address.	
Actor enters a new password and confirms it.	System validates the [Exception 3] then informs "Password reset successfully" and redirects the actor to the Home screen if their role is player and to the Owner screen if their role is owner.

Alternative Scenario:

> *N/A*

Exceptions:

1. **The actor entered an email that is not registered by Tennique TCBS.**

   > *System informs the actor that "This email did not match any results".*

2. **The actor entered an email that is registered by Tennique TCBS but not theirs.**

   > *The actor won't receive the reset password email.*

3. **The actor entered a different confirmed password from the password.**

   > *System informs the actor that "Passwords do not match".*

Relationships:

> *Extend the use case UC002.*

Business Rules:

> *BR-01: The reset password link expires after one hour.*

> *BR-02: The actor must retype the password one more time after entering it.*

3.5. Login with Google account

USE CASE-n SPECIFICATION

Use-case No.	UC004	**Use-case Version**	1.0
Use-case Name	Log in with Google account		
Author	KhanhTTV		
Date	19/05/2022	**Priority**	Low

Actor:

Guest

Summary:

A guest accesses Tennique website and requests to login with a Google account.

Goal:

This feature allows users to log in to the Tennique web application with a Google account.

Triggers

Actor clicks on "Continue with Google" on the Tennique login screen.

Preconditions:

N/A

Post Conditions:

Success: User is directed to the homepage.

Main Success Scenario:

Actor Action	System Response
User clicks on the "Login" button on the home screen.	
User clicks on "Continue with Google".	*Display a Google account screen for the user to choose their account from.*
User clicks on their account.	*The system validates [Exception1], then redirects the user to the homepage.*

Alternative Scenario:

N/A

Exceptions:

1. *The user inputs invalid Google account*
   - *The system shows an error message "There is an error when you're signing in. Please try again."*

Relationships:

Extended the use case UC002.

Business Rules:

   BR-03: User's login session lasts one hour.

3.6.   Login with Facebook account

USE CASE-n SPECIFICATION

Use-case No.	UC005	Use-case Version	2.0
Use-case Name	Log in with Facebook account		
Author	MẫnHG		
Date	16/06/2022	Priority	Low

Actor:

   Guest

Summary:

   A guest accesses Tennique website and requests to login with a Facebook account.

Goal:

   This feature allows users to log in to the Tennique web application with a Facebook account.

Triggers

   Actor wants to log in with a Facebook account.

Preconditions:

   N/A

Post Conditions:

   Success: Actor is directed to the homepage.

Main Success Scenario:

Actor action	System response

Click on the Login button on the Home screen.	Redirect the actor to the Login screen.
Cicks on the "Continue with Facebook" button on the Login screen.	Redirect the actor to the Facebook Login screen if there aren't any already logged Facebook accounts in the actor's computer.
Log into Facebook account.	Validate [Exception 1].
Click on the "Accept" button to allow the system to collect data.	Inform "Login successfully" and redirect the actor to the Home screen.

Alternative Scenario:

   N/A

Exceptions:

   1. The user inputs an invalid Facebook account
        -   The system shows an error message "There is an error when you're signing in. Please try again."

Relationships:

   Extended the use case UC002.

Business Rules:

   BR-01: User's login session lasts one hour.

   BR-02: The actor must allow the system to collect Facebook account information including: public profile, name, birthday, address, and email address to continue.

3.7.   Log out

USE CASE-n SPECIFICATION			
Use-case No.	UC007	**Use-case Version**	1.0
Use-case Name	Log out		
Author	NguyenPT		
Date	19/05/2022	**Priority**	High
Actor:			

Player, Court Owner, Admin

Summary:

This feature allows users to log out of the Tennis Court Booking System.

Goal:

Logout prevents other users from accessing the system without first validating their credentials.

Triggers

Actor want to log out from the present account

Preconditions:

The actor has already logged in to the system

Post Conditions:

N/A

Main Success Scenario:

Actor Action	System Response
The actor click 'Logout' Button	*System invalidate user login session and redirect user to Home page*

1. *The actor hover their mouse on the account symbol on the top-left corner*

    2. *The actor click on 'Logout' button*

Alternative Scenario:

N/A

Exceptions:

N/A

Relationships:

N/A

Business Rules:

N/A

3.8.   Search for courts

USE CASE-n SPECIFICATION			
Use-case No.	UC007	**Use-case Version**	1.0

Use-case Name	Search for courts		
Author	NguyenPT		
Date	19/05/2022	**Priority**	Medium

Actor:

Player, Guest

Summary:

This feature allows actors to find courts by name, location, price range and rating.

Goal:

To help users quickly identify courts that are suitable for them.

Triggers

The actor clicks on the search box in the navigation bar.

Preconditions:

N/A

Post Conditions:

Success: System show list of courts

Main Success Scenario:

Actor Action	System Response
In the 'Home' page, the actor types keyword in the search bar and click search button	*The system views the result courts list. Each court has following basic information:* - *Court thumbnail image* - *Court name* - *Court rating* - *Court min price* - *Court location (District)*
Actor adds filters to the search result: location, price range and rating. (Optional)	*The system view the result courts list*

Alternative Scenario:

N/A

Exceptions:

1. **There are no court matches with conditions or keywords which actors require.**
- *The system informs 'There are no courts that correspond to your search. Please try adjusting the search parameters'*

Relationships:

N/A
Business Rules:
N/A

3.9.   *View a court detail*

<table>
<tr><td colspan="5">USE CASE-n SPECIFICATION</td></tr>
<tr><td>Use-case No.</td><td>UC008</td><td>Use-case Version</td><td colspan="2">1.0</td></tr>
<tr><td>Use-case Name</td><td colspan="4">View court detail</td></tr>
<tr><td>Author</td><td colspan="4">KetHTN</td></tr>
<tr><td>Date</td><td>19/05/2022</td><td>Priority</td><td colspan="2">Medium</td></tr>
</table>

Actor:

Player, Owner

Summary:

This feature allows actors to view the court in detail by image, host, location, price and rating.

Goal:

To provide specific information about tennis courts to customers.

Triggers

Users want to view the court details.

Preconditions:

The actor has to provide information about their court.

Post Conditions:

Success: The system shows details of that court.

Main Success Scenario:

Actor Action	System Response
In the Home page, the actor clicks on any court they want to know more information.	*System redirects to the Court Detail screen.*

	The system will show all the information required including:
	- All of the information about that court, including: pictures, location, total of ratings and bookings. - Information about the host court, display a green check to verify that account. - Google Maps directs to that address. - Overall rating will display comments of players who played that court before.

Alternative Scenario:

N/A

Exceptions:

System displays "No information".

Relationships:

N/A

Business Rules:

N/A

3.10. Book a court

USE CASE-n SPECIFICATION			
Use-case No.	UC009	**Use-case Version**	1.0
Use-case Name	Book a court		
Author	KhanhTTV		
Date	19/05/2022	**Priority**	High
Actor: *Player* **Summary:**			

This feature allows the actors to book a court.

Goal:

The actors will be able to reserve a time slot for their wanted court.

Triggers

Actor clicks on the "Reserve" button on a Court Detail screen.

Preconditions:

The actor has already logged into the system.

Post Conditions:

Success: System informs "You have booked the court successfully!"

Main Success Scenario:

Actor Action	System Response
The actor browses for courts, then clicks on a court they want to book.	*Display the Court Detail screen.* *The system will show all the information required including:* - *Choose court: a dropdown that shows all the available courts.* - *Book date: a calendar that shows available dates.* - *Book hour: a dropdown that shows all the available time slots.*
Actor clicks on the "Reserve" button.	*System redirected to the "Booking Confirmation" screen.*
Actor selects the payment option.	
Actor clicks on the "Checkout" button.	*The system informs "Your court is booked!", then the actor is redirected to the "Booking Detail" screen.*

Alternative Scenario:

N/A

Exceptions:

1. *The user has not yet logged in when clicking on "Reserve".*
   - *The system will pop up "Log in to Tennique"*
   - *Return to step 4 in the main success scenario.*

Relationships:

N/A

Business Rules:

BR-05: The actor can only book 2 courts in the same location at the same time.

3.11. View booking history

USE CASE-n SPECIFICATION			
Use-case No.	UC010	Use-case Version	1.0
Use-case Name	View booking history		
Author	MãnHG		
Date	19/05/2022	Priority	High

Actor:

   Player

Summary:

   A player who used the Tennique TCBS and successfully booked a court can view his/her booking history.

Goal:

   This feature allows actors to view their booking history.

Triggers

   A player wants to view his/her booking history.

Preconditions:

   Actor has already logged in to the system.

Post Conditions:

   Success: System redirects to the My activities page

Main Success Scenario:

Actor Action	System Response
Actor clicks on the "My activities" button on the Home screen.	System redirects to the "My activities" screen and displays all courts that the player booked and the reservation's detailed information including court name, reservation date, time slot and total price.

Alternative Scenario:

   N/A

Exceptions:

   N/A

Relationships:

   N/A

Business Rules:

   N/A

3.12. View Profile - Owner

USE CASE-n SPECIFICATION			
Use-case No.	UC011	**Use-case Version**	1.0
Use-case Name	View Profile Owner		
Author	KetHTN		
Date	19/05/2022	**Priority**	Medium

Actor:

   Player, Owner

Summary:

   Actor accesses Tennique website and views his/her profile.

Goal:

   This feature allows users to get profile information.

Triggers

   Actor wants to view his/her profile information.

Preconditions:

   Actor has already logged in to the system.

Post Conditions:

   Success: Actor will be redirected to Profile screen of the application.

Main Success Scenario:

Actor Action	System Response
The actor logs into the system.	*The system redirects to the "Account Setting" screen.* *It will show all of the information about that actor:* - *Name, email, phone number, description, email notifications and identity card's photos on both front and back sides.*

Alternative Scenario:

    N/A

Exceptions:

    N/A

Relationships:

    N/A

Business Rules:

    N/A

3.13.   *View Profile - Player*

USE CASE-n SPECIFICATION			
Use-case No.	UC012	**Use-case Version**	1.0
Use-case Name	View Profile Player		
Author	KetHTN		
Date	19/05/2022	**Priority**	Medium
Actor: *Player* **Summary:**			

Actor accesses Tennique website and views his/her profile.

Goal:

This feature allows users to get profile information.

Triggers

Actor wants to view his/her profile information.

Preconditions:

Actor has already logged in to the system.

Post Conditions:

Success: Actor will be redirected to Profile screen of the application.

Main Success Scenario:

Actor Action	System Response
The actor clicks on the "Avatar" on the Home screen.	*The system redirects to the "Account Setting" screen.* *The system will show all the information required including:* - *Name, email, phone number and email notifications.*

Alternative Scenario:

N/A

Exceptions:

N/A

Relationships:

N/A

Business Rules:

N/A

3.14. *Update Profile - Owner*

USE CASE-n SPECIFICATION

Use-case No.	UC013	Use-case Version	1.0
Use-case Name	Update profile		
Author	KetHTN		
Date	19/05/2022	Priority	Medium

Actor:

Owner

Summary:

Actor accesses Tennique website and updates his/her profile.

Goal:

This feature allows the actor to update profile information.

Triggers

Actor wants to update his/her profile information.

Preconditions:

Actor has already logged in to the system

Post Conditions:

Success: New information are updated

Main Success Scenario:

Actor Action	System Response
The actor clicks on the Avatar on the Home screen.	The system redirects to the "Account Setting" screen. The system will show all the information required including: - First name: text, maxlength 50. - Last name: text, maxlength 50. - Phone number: numeric input, Vietnamese phone number format. - Email is optional with the local-part@domain format. - Email notification: a checkbox with content of "New deals", "New bookings", "Booking Status", "Password changes", "Special offers","Newsletter" if the actor agrees to receive email notifications. - Describe you and your court: text, maxlength 200. - Identity card: post your identity card's photos on both front and back sides.

The actor clicks on the "Save changes" button.	System redirects to the "Account Setting" screen, informing "Update information successfully".

Alternative Scenario:

    N/A

Exceptions:

    N/A

Relationships:

    N/A

Business Rules:

    BR-06: The actor cannot update their email and birthday.

    BR-07: The actor can update their own profile, including their avatar, full name, phone number.

    BR-08: When the actor updates their phone number, they must be verified by OTP.

3.15. *Update Profile - Player*

USE CASE-n SPECIFICATION

Use-case No.	UC014	**Use-case Version**	1.0
Use-case Name	Update profile		
Author	KetHTN		
Date	19/05/2022	**Priority**	Medium

Actor:

    Player

Summary:

    Actor accesses Tennique website and updates his/her profile.

Goal:

    This feature allows the actor to update profile information.

Triggers

Actor wants to update his/her profile information.

Preconditions:

Actor has already logged in to the system

Post Conditions:

Success: New information are updated

Main Success Scenario:

Actor Action	System Response
The actor clicks on the "Avatar" on the Home screen.	*The system redirects to the "Account Setting" screen.* *The system will show all the information required including:* - *First name: text, maxlength 50.* - *Last name: text, maxlength 50.* - *Phone number: numeric input, Vietnamese phone number format.* - *Email is optional with the local-part@domain format.* - *Email notification: a checkbox with content of "New deals", "New bookings", "Booking Status", "Password changes", "Special offers","Newsletter" if the actor agrees to receive email notifications.*
The actor clicks on the "Save changes" button.	*System redirects to the "Account Setting" screen, informing "Update information successfully".*

Alternative Scenario:

N/A

Exceptions:

N/A

Relationships:

N/A

Business Rules:

BR-09: The actor cannot update their email and birthday.

BR-10: The actor can update their own profile, including their avatar, full name, phone number.

BR-11: When the actor updates their phone number, they must be verified by OTP.

3.16. Cancel booking - Player

USE CASE-n SPECIFICATION			
Use-case No.	UC015	**Use-case Version**	1.0
Use-case Name	Cancel booking		
Author	KetHTN		
Date	19/05/2022	**Priority**	Medium

Actor:

Player

Summary:

Actor who used the TTCBS and successfully rented a court can cancel his/her booking.

Goal:

This feature allows the actors to cancel their booking at a court.

Triggers

Actor wants to cancel the previous booking.

Preconditions:

Actor has already logged in to the system.

Booking has status "Successful" within a day before the booking date.

Post Conditions:

Success: The system will change status to "Cancel successfully"

Main Success Scenario:

Actor Action	System Response
The actor clicks on the "My activities" on the Home screen.	The system redirects to the "Account " screen.
The actor clicks on the court booking that the actor wants to cancel.	The system shows a booking detail popup.
The actor clicks on the "Cancel booking" button.	The system informs "Cancel successfully".

Alternative Scenario:

N/A

Exceptions:

N/A

Relationships:

N/A

Business Rules:

BR-12: Booking reservation must be canceled by the owner 24 hours before the time of booking date. If time over the date of booking, it will change status to "expired".

BR-13: A player who pays by cash only has 3 times to not fulfill their reservation (book a slot without going) in a month. If more, they will be suspended for 1 month.

3.17. Cancel booking - Owner

USE CASE-n SPECIFICATION			
Use-case No.	UC016	**Use-case Version**	1.0
Use-case Name	Cancel booking		
Author	KetHTN		
Date	19/05/2022	**Priority**	Medium

Actor:

Owner

Summary:

The actor can cancel a player's reservation.

Goal:

This feature allows the actor to cancel a player's reservation.

Triggers

The actor wants to cancel the booking.

Preconditions:

Actor has already logged in to the system.

There is at least one pending reservation.

Post Conditions:

Success: The system informs "Canceled successfully"

Main Success Scenario:

Actor Action	System Response
The actor clicks on the "Customer Reservation" on the Home screen.	*The system redirects to the "Customer Reservation" screen.*
The actor clicks on the reservation they want to cancel.	*The system shows the reservation details*
The actor clicks on the "Cancel" button.	*The system shows pop-up 5 the reasons with 5 radio boxes, including the following reasons:* - *This account has canceled our tennis court booking many times.* - *This account has not been to the tennis court booked in the previous times.* - *We will maintain the tennis court at that time.* - *We won't have staff at that time.* - *Others and textarea beneath to write more detailed reasons.*
The actor clicks on the "Cancel" button.	*The system informs "Canceled successfully"*

Alternative Scenario:

N/A

Exceptions:

N/A

Relationships:

N/A

Business Rules:

BR-14: Booking reservation must be canceled by the owner 24 hours before the time of booking date. If time over the date of booking, it will change status to "expired".

3.18.   Add a court

<table>
<tr><td colspan="4">USE CASE-n SPECIFICATION</td></tr>
<tr><td>Use-case No.</td><td>UC018</td><td>Use-case Version</td><td>1.0</td></tr>
<tr><td>Use-case Name</td><td colspan="3">Add a court</td></tr>
<tr><td>Author</td><td colspan="3">KhanhTTV</td></tr>
<tr><td>Date</td><td>09/06/2022</td><td>Priority</td><td>High</td></tr>
</table>

Actor:

   Owner

Summary:

   Owner who wants to add a court for renting out.

Goal:

   This feature allows the actors to add their court item.

Triggers

   Actor clicks on "Add a court".

Preconditions:

   Actor has already logged in to the system.

Post Conditions:

   Success: The system will inform "Request has been sent."

Main Success Scenario:

Actor Action	System Response
The actor clicks on the "Add a court" on the Owner Home screen.	Show the "Add a court" pop-up. Input all the fields below: - Court Title: maximum length of 30 characters, required. - Describe your court: textarea, 500 characters maximum, optional. - Court contact number: Vietnamese phone number format required.

	- Cancellation policy: 3 options (Flexible, Moderate, Strict). - Street address: 200 characters maximum, required. - Building, floor and unit number: 100 characters maximum, optional. - State / Province: a dropdown with "Ho Chi Minh City" as the only option. - City / District: a dropdown with all the districts in Ho Chi Minh City. - Map Location: the address of the court on the embed map. - Resided court and details: Enter court name, court size, and court price for each slot/hour. - Court photo: a browse button for choosing images. - Choose bank: a list of Vietnamese banks. - Card number: numeric format required, card number format is dependent on each bank. - Name on card: All uppercase, no special characters and Unicode characters. - Business License: a browse button for choosing files.
The actor clicks on the "Confirm" button.	*The system informs "Request sent!". The request has now been sent to the administrator.*

Alternative Scenario:

 N/A

Exceptions:

 N/A

Relationships:

 N/A

Business Rules:

 BR-15: The request to add a court has to be verified by an administrator.

 BR-16: After verifying the request, the owner will be able to start renting out their court.

3.19. Edit a court

USE CASE-n SPECIFICATION

Use-case No.	UC019	Use-case Version	1.0
Use-case Name	Edit a court		
Author	KhanhTTV		
Date	09/06/2022	**Priority**	Medium

Actor:

    Owner

Summary:

    Owner who wants to edit an existing court.

Goal:

    This feature allows the actors to edit their court item.

Triggers

    Actor clicks on "Edit court" on the Court Management screen.

Preconditions:

    Actor has already logged in to the system.

    Actor has already had at least a registered court.

Post Conditions:

    Success: The system will inform "The court's information has been updated."

Main Success Scenario:

Actor Action	System Response
The actor clicks on the "Edit court" on the Owner Home screen.	*Show the "Edit court" pop-up.* *Modify some of the fields below:* - *Court Title: maximum length of 30 characters.* - *Describe your court: textarea, 500 characters maximum.* - *Court contact number: Vietnamese phone number format required.* - *Cancellation policy: 3 options (Flexible, Moderate, Strict).* - *Street address: 200 characters maximum.* - *Building, floor and unit number: 100 characters maximum.*

	- State / Province: a dropdown with "Ho Chi Minh City" as the only option. - City / District: a dropdown with all the districts in Ho Chi Minh City. - Map Location: the address of the court on the embed map. - Resided court and details: Show all resided courts and a View button. When choosing "View", the resided court's information will be shown. There, the actor can change court name, court size, and its price depending on the hour. - Court photo: a browse button for choosing images.
The actor clicks on the "Confirm" button.	The system informs "The court has been modified."

Alternative Scenario:

   N/A

Exceptions:

   N/A

Relationships:

   N/A

Business Rules:

   N/A

3.20. View court discount

USE CASE-n SPECIFICATION			
Use-case No.	UC020	**Use-case Version**	1.0
Use-case Name	View court discount		
Author	NguyenPT		
Date	13/06/2022	**Priority**	Medium

Actor:

   Owner

Summary:

   Owner who wants to view discount of their court

Goal:

   This feature allows the actors to view discounts on a resided court.

Triggers

   Actor clicks on "Manage discount" on the "Modify resided court" screen.

Preconditions:

   Actor has already logged in to the system.

   Actor has already had at least a registered court.

Post Conditions:

   Success: The system will inform "The court's discount information has been updated."

Main Success Scenario:

Actor Action	System Response
The actor clicks on the "Edit court" on the Owner Home screen.	
The actor clicks on the "View" button on one resided court.	*The system show "Modify resided court" screen*

The actor clicks on "Manage Discount" button	*The system displays Discount information for each time slot of that resided court:*
	
	   Time: 1 hour sessions, must be between 5AM and 9PM
	
	   Price: The price of the given time slot(in VNĐ)
	
	   Discount information: Include the discount percentage as well as the discounted price. If the time slot contains a discount offer, show the 'Remove discount' option; otherwise, show the 'Add discount' option.

Alternative Scenario:

   N/A

Exceptions:

   N/A

Relationships:

N/A	

Business Rules:

    BR-17:

3.21.   *Add court discount*

USE CASE-n SPECIFICATION			
Use-case No.	UC022	**Use-case Version**	1.0
Use-case Name	Add court discount		
Author	NguyenPT		
Date	13/06/2022	**Priority**	Medium

Actor:

    Owner

Summary:

    Owner who wants to add a discount to their court

Goal:

    This feature allows the actors to add discounts on a resided court.

Triggers

    Actor clicks on "Add discount" on the "Manage court" screen.

Preconditions:

    Actor has already logged in to the system.

    Actor has already had at least a registered court.

Post Conditions:

    Success: The system will inform "The court's discount information has been updated."

Main Success Scenario:

Actor Action	System Response
The actor clicks on the "Edit court" on the Owner Home screen.	

The actor clicks on the "View" button on one resided court.	The system show "Modify resided court" screen
The actor clicks on "Manage Discount" button	The system displays Discount information for each time slot of that resided court:
The actor clicks on "Add Discount" button	The system displays 'Add discount' popup The system will show all the information required including: - Discounted price: positive integer, lower than original price (in VNĐ) - Discount percentage: minimum of 1%, maximum of 99% - Start day: include two dropdowns which let actor choose the day and time to start the discount - End day: include two dropdowns which let actor choose the day and time to end the discount - Apply to: radio checkbox, include 'this slot' and 'all slot' option
	The system informs "Add discount successfully'

Alternative Scenario:

> N/A

Exceptions:

> N/A

Relationships:

> N/A

Business Rules:

> BR-17: Discounted price and percentage are linked fields. If the user change the discounted price field, the system will immediately replace the percentage, vice versa.

3.22. Remove court discount

USE CASE-n SPECIFICATION

Use-case No.	UC023	Use-case Version	1.0
Use-case Name	Remove court discount		
Author	NguyenPT		
Date	13/06/2022	Priority	Medium

Actor:

    Owner

Summary:

    Owner who wants to add a discount to their court

Goal:

    This feature allows the actors to add discounts on a resided court.

Triggers

    Actor clicks on "Remove discount" on the "Manage discount" screen.

Preconditions:

    Actor has already logged in to the system.

    Actor has already had at least a registered court.

Post Conditions:

    Success: The system will inform "The court's discount information has been updated."

Main Success Scenario:

Actor Action	System Response
The actor clicks on the "Edit court" on the Owner Home screen.	
The actor clicks on the "View" button on one resided court.	*The system show "Modify resided court" screen*
The actor clicks on "Manage Discount" button	*The system displays Discount information for each time slot of that resided court:*
The actor clicks on "Remove" button	*The system displays a confirmation popup that asks, "Do you want to remove this discount?" A radio checkbox is also displayed, with the options 'this slot' and 'all slots'.*
The actor click on "Confirm" button	*The system inform "Remove discount successfully"*

Alternative Scenario:

> *N/A*

Exceptions:

> *N/A*

Relationships:

> *N/A*

Business Rules:

> *BR-17: Discounted price and percentage are linked fields; if the user enters the discounted price field, the system will immediately alter the percentage.*

3.23.   Browse for courts

USE CASE-n SPECIFICATION			
Use-case No.	UC023	**Use-case Version**	1.0
Use-case Name	Browse for courts		
Author	MẫnHG		
Date	09/06/2022	**Priority**	Medium

Actor:

> *Guest, Player*

Summary:

> *A guest or a player wants to view all the courts available on the Tennique website.*

Goal:

> *This feature allows the actors to browse for courts.*

Triggers

> *Actor wants to view all the courts.*

Preconditions:

> *N/A*

Post Conditions:

> *Success: The entire court list is displayed on the screen.*

Main Success Scenario:

Actor Action	System Response
Actor clicks on the Browse button on the Home screen.	*System redirects the actor to the Browse screen.* *System displays all courts available with their detailed information including name, image, minimum price, rating star, location.*

Alternative Scenario:

    N/A

Exceptions:

    N/A

Relationships:

    Extend the use case UC007

Business Rules:

    N/A

3.24.   *View player reservation*

USE CASE-n SPECIFICATION			
Use-case No.	UC024	**Use-case Version**	1.0
Use-case Name	View player reservation		
Author	KhanhTTV		
Date	09/06/2022	**Priority**	High

Actor:

    Owner

Summary:

    Owner who wants to view a player reservation.

Goal:

This feature allows the actors to see details of a reservation.

Triggers

Actor wants to see a specific player reservation.

Preconditions:

Actor has already logged in to the system.

Actor has already had at least a registered court.

Post Conditions:

Success: The system will redirect to the "Reservation Detail" screen

Main Success Scenario:

Actor Action	System Response
The actor clicks on the "Player Reservation" on the Owner Home screen.	*Redirect to the "player Reservation" screen.*
The actor clicks on which reservation they want to see.	*System shows the reservation details.* - *Reservation No: the reservation ID.* - *Location: the court name and address.* - *Booking detail: booking date, customer name, and time.* - *Price details: price, discount and total* - *Payment method: show the payment method and payday.*

Alternative Scenario:

N/A

Exceptions:

N/A

Relationships:

N/A

Business Rules:

N/A

3.25.   Add credit/debit card

USE CASE-n SPECIFICATION

Use-case No.	UC025	Use-case Version	1.0
Use-case Name	Add credit/debit card		
Author	MẫnHG		
Date	9/06/2022	Priority	Medium

Actor:

Player

Summary:

A player who uses Tennique TCBS can add payment methods for easy online checkout.

Goal:

This feature allows players to add payment methods.

Triggers

A player wants to add a payment method to their account.

Preconditions:

The actor must log into the Tennique account.

Post Conditions:

Success: The system informs "Payment method added successfully".

Main Success Scenario:

Actor Action	System Response
Actor clicks on his/her profile picture on the header menu.	*Actor is redirected to the "Account setting" screen.*
Actor clicks on the "Payment method" button on the side navigation menu.	*System redirects to the "Payment method" screen.*
Actor clicks on the "Add new card" button.	*The system will show all the information required including:* - *Card number: numeric input, maxlength 16.* - *Full name: text, maxlength 50.* - *Expiry: the format is MM/YY.* - *Security code: 3 characters.* - *City: text, maxlength 20.* - *Address: text, maxlength 500.*

Actor inputs all required fields and clicks on the Add button on the down right corner.	System validates [Exception1] and then redirects actor to OTP screen.
Actor enters an OTP that is sent to their phone number.	System validates [Exception2] and informs "Payment method added successfully".

Alternative Scenario:

   N/A

Exceptions:

   1. The actor inputted invalid card information.

      1. System informs the actor that "You have inputted invalid information. Please try again".

   2. The actor inputted the wrong OTP.

      1. System informs the actor that "The OTP you inputted is not correct. Please try again".

Relationships:

   N/A

Business Rules:

   BR-19: The OTP expires after 100 seconds after it is issued.

3.26.   *View account list*

USE CASE-n SPECIFICATION			
Use-case No.	UC026	**Use-case Version**	1.0
Use-case Name	View account list		
Author	KetHTN		
Date	9/06/2022	**Priority**	High

Actor:

   Admin

Summary:

   An administrator wants to manage all of the accounts in the system.

Goal:

This feature allows administrators who have logged in to view the system's accounts list.

Triggers

Actor wants to view the system's accounts list.

Preconditions:

Actor has already logged into the system as an administrator.

Post Conditions:

Success: Actor is redirected to view account list in the manage account screen.

Main Success Scenario:

Actor Action	System Response
After the actor logins successfully the system redirects to the "Manage Accounts" screen.	*The system shows all the information about the accounts.* - *Fullname, sex, email, role, status and edit.*

Alternative Scenario:

N/A

Exceptions:

N/A

Relationships:

N/A

Business Rules:

N/A

3.27.   Add a resided court

USE CASE-n SPECIFICATION			
Use-case No.	UC027	**Use-case Version**	1.0
Use-case Name	Add a resided court		
Author	KhanhTTV		
Date	09/06/2022	**Priority**	Medium

Actor:

  Owner

Summary:

  Owner who wants to add a resided court.

Goal:

  This feature allows the actor to add a resided court.

Triggers

  Actor wants to add a resided court to their court.

Preconditions:

  Actor has already logged in to the system.

  Actor has already had at least a registered court.

Post Conditions:

  Success: The system will show the message "New resided court has been added!"

Main Success Scenario:

Actor Action	System Response
The actor clicks on the "Court Management" on the Owner Home screen.	*Redirect to the "Court Management" screen.*
The actor clicks on the "Add a court" button presented on each court.	*System shows the "Add a court" pop-up.* *Input all the fields below:* - *Court Title: maximum length of 30 characters, required.* - *Court Size: text field with maximum 20 characters, optional.* - *Court Price:* - *Input 2 fields: time slot and its price per se.* - *Add Time: a button to append the two above elements.* - *Court Photo: a browse button for choosing images.*
Actor clicks on the "Confirm" button.	*The system shows the message "Resided court added successfully."*

Alternative Scenario:

  N/A

Exceptions:

  N/A

Relationships:

N/A	
Business Rules:	
N/A	

3.28. View owner verification request

USE CASE-n SPECIFICATION			
Use-case No.	UC028	**Use-case Version**	1.0
Use-case Name	View owner verification request		
Author	KhanhTTV		
Date	09/06/2022	**Priority**	High

Actor:

Admin

Summary:

Admin who wants to view an owner verification requests

Goal:

This feature allows the actors to see details of an owner verification.

Triggers

Actor wants to see a specific owner verification request.

Preconditions:

Actor has already logged in to the system.

There are verification requests available.

Post Conditions:

Success: The system will redirect to the "Owner Verification Request" screen

Main Success Scenario:

Actor Action	System Response
The actor clicks on the "Owner Verification" on the Owner Home screen.	*Redirect to the "Owner Verification" screen.*
	System shows the request details.

	- Request No: the request ID. - From: show from whom the request originated. - Email: show the owner's email. - Court Name: show the court name. - Status: show the request status. - View Details: a button that redirects to the "View Owner Verification Request" screen.

Alternative Scenario:

N/A

Exceptions:

N/A

Relationships:

N/A

Business Rules:

N/A

3.29.   *Approve owner verification request*

USE CASE-n SPECIFICATION			
Use-case No.	UC029	**Use-case Version**	1.0
Use-case Name	Approve owner verification request		
Author	KhanhTTV		
Date	09/06/2022	**Priority**	High

Actor:

Administrator

Summary:

Administrator who wants to approve an owner verification requests

Goal:

This feature allows the actors to approve an owner verification.

Triggers

Actor clicks on "Approve" on the "View Owner Verification" screen.

Preconditions:

Actor has already logged in to the system.

There are verification requests available.

Post Conditions:

Success: The system will show the message: "Information Verified!"

Main Success Scenario:

Actor Action	System Response
The actor clicks on the "Owner Verification" on the Owner Home screen.	*Redirect to the "Owner Verification" screen.*
The actor clicks on which request they want to approve.	*System shows the request details.*
The actor clicks on the "Approve" button	*The system redirected to the "Owner Verification" screen.*

Alternative Scenario:

N/A

Exceptions:

N/A

Relationships:

N/A

Business Rules:

BR-20: After reviewing and finding that all the information is valid, the administrator will contact the owner to learn further about the court and introduce them more about the court services.

3.30. Reject owner verification request

USE CASE-n SPECIFICATION			
Use-case No.	UC030	**Use-case Version**	1.0
Use-case Name	Reject owner verification request		

Author	KhanhTTV		
Date	09/06/2022	**Priority**	High

Actor:

    Administrator

Summary:

    Administrator who wants to reject an owner verification requests

Goal:

    This feature allows the actors to reject an owner verification.

Triggers

    Actor clicks on "Reject" on the "View Owner Verification" screen.

Preconditions:

    Actor has already logged in to the system.

    There are verification requests available.

Post Conditions:

    Success: The system will show the message: "Request Denied!"

Main Success Scenario:

Actor Action	System Response
The actor clicks on the "Owner Verification" on the Owner Home screen.	*Redirect to the "Owner Verification" screen.*
The actor clicks on which request they want to approve.	*System shows the request details.*
The actor clicks on the "Reject" button.	*System shows "State the reasons" pop-up, presenting existing options and an "Others" options. Beneath it will be a textarea to input the reasons why the request has been denied.*
The actor clicks on the "Reject" button.	*The system redirected to "Owner Verification" screen.*

Alternative Scenario:

    N/A

Exceptions:

    N/A

Relationships:

N/A

Business Rules:

BR-21: When the administrator rejects the request, the reason must be entered.

3.31. Add an account

USE CASE-n SPECIFICATION			
Use-case No.	UC031	**Use-case Version**	1.0
Use-case Name	Add an account		
Author	KetHTN		
Date	09/06/2022	**Priority**	High

Actor:

Admin

Summary:

Admin who wants to add an account.

Goal:

This feature allows the administrators to add accounts for users.

Triggers

Actor clicks on "Add new account" on the "Account Management" screen.

Preconditions:

Actor has already logged in to the system.

Post Conditions:

Success: The system will show the message: "Add an account successfully!"

Main Success Scenario:

Actor Action	System Response
Actor clicks on "Add new account" on the "Account Management" screen.	*The system will pop up a form to add an account.* *The system will show all the information required including:*

	- *Full name: text, maxlength 100.* - *Password: 8 characters minimum.* - *Confirm password: has to be the same as password.* - *Phone number: numeric input, Vietnamese phone number format.* - *Agreement: a checkbox with content of "By clicking 'Register' you agree to tennique Terms & Conditions and Privacy Policy".* - *Email is optional with the local-part@domain format.* - *Sex: Male or Female* - *Role: player or owner or admin.* - *Status: Active or Inactive.*
The actor clicks on the "Confirm" button.	*The system informs "Add an account successfully"*

Alternative Scenario:

    N/A

Exceptions:

1. *The actor does not fill in information.*
2. *The system informs "Please fill out this field".*

Relationships:

    N/A

Business Rules:

    N/A

3.32. *Review a court*

USE CASE-n SPECIFICATION			
Use-case No.	UC032	**Use-case Version**	1.0
Use-case Name	Review court		
Author	NguyenPT		
Date	09/06/2022	**Priority**	Medium

Actor:

   Player

Summary:

   Player who wants to review a court.

Goal:

   This feature allows a customer to review the court that they have played.

Triggers

   Actor clicks on "Add new account" on the "Account Management" screen.

Preconditions:

   Actor has already logged in to the system.
   Actor has booked and checked in at the court that they want to review.

Post Conditions:

   Success: The system will show the message: "Thanks for your review".

Main Success Scenario:

Actor Action	System Response
Actor clicks on the "My activities" button on the Home screen.	*System redirects to the "My activities" screen.*
Actor clicks on "Review this court" button on one item on the list	*System redirects the actor to the "Review form" screen. The form include two fields:* - *Rate: 5 rating options, 1->5 star, required* - *Write review: maximum 200 characters, optional*
Actor completes the review form and clicks the submit button	*System informs the user "Thanks for your review!".*

Alternative Scenario:

   N/A

Exceptions:

   1.The "Review this court" button is unclickable

   -> For that booking time, the user has reviewed that court once.

Relationships:

   N/A

Business Rules:

   BR-22: A user is only allowed to review a court once per booking.

BR-23: If a user reviews the same court multiple times, the previous review will be removed.

3.33. Change password

<table>
<tr><td colspan="5">USE CASE-n SPECIFICATION</td></tr>
<tr><td>Use-case No.</td><td>UC033</td><td>Use-case Version</td><td colspan="2">1.0</td></tr>
<tr><td>Use-case Name</td><td colspan="4">Change password</td></tr>
<tr><td>Author</td><td colspan="4">KhanhTTV</td></tr>
<tr><td>Date</td><td>9/06/2022</td><td>Priority</td><td colspan="2">Low</td></tr>
</table>

Actor:

Player, Owner, Administrator

Summary:

A user of the Tennique website wants to change their password.

Goal:

This feature allows Tennique's users to change their password.

Triggers

A user wants to change their password.

Preconditions:

The actor must have an existing Tennique account.

Post Conditions:

Success: System shows message "Password changed successfully".

Main Success Scenario:

Actor Action	System Response
Actor clicks on "My Activities" on the header.	System redirects to the "My Activities" screen.
Actor clicks on the "Security" sub-menu.	System redirects to the "Security"" screen. Input all the required fields:

	- *Current Password: hidden, can show with the "show" icon.* - *New Password: hidden, can show with the "show" icon.* - *Confirm New Password: hidden, can show with the "show" icon, has to be the same with "New Password".*
Actor clicks on "Save Changes".	*System informs "Password changed successfully" and redirects the actor to the "Security" screen.*

Alternative Scenario:

>   *N/A*

Exceptions:

>   1. **The actor entered the wrong current password.**
>
>>   1. TTCBS informs the actor that "Your current password is invalid."
>
>   2. **The actor entered a different new password confirmation from the new password.**
>
>>   2. TTCBS informs the actor that "Your new password confirmation does not match."

Relationships:

>   *Extend the use case UC002.*

Business Rules:

>   *N/A*

3.34.   *View booking schedule*

USE CASE-n SPECIFICATION			
Use-case No.	UC034	**Use-case Version**	1.0
Use-case Name	View booking schedule		
Author	NguyenPT		
Date	10/06/2022	**Priority**	Medium
Actor:			

Owner,

Summary:

An owner want to view booking schedule of their court

Goal:

This feature allow owner to see the booking schedule of their court

Triggers

An owner want to view booking schedule of their court

Preconditions:

The user must already have a Tennique owner account and have added at least one approved court.

Post Conditions:

Success: System shows the booking calendar corresponding to the selected court.

Main Success Scenario:

1. *Actor clicks on "Schedule Management" on the navigation tab.*
2. *The actor chooses the court they wish to view the schedule for.*
3. *System displays the timetable on the owner's screen.*

Actor Action	System Response
Actor clicks on "Schedule Management" on the owner screen	*System redirects the user to the Schedule Management page.*
The actor chooses the court they wish to view the schedule for by two dropdown: ● *Court: the options are the courts that actor have registered* ● *Resided court: The options are the resided courts inside the given court*	*System shows the schedule of the court for 7 coming days.* *The slots which are booked are highlighted with its name.* *The unbooked slots are gray and marked "empty".*

Alternative Scenario:

N/A

Exceptions:

1. ***The actor has not added any approved court***

   The system inform user "You have not added any court"

Relationships:

N/A

Business Rules:

N/A

3.35.   *Add a booked slot*

USE CASE-n SPECIFICATION			
Use-case No.	UC035	**Use-case Version**	1.0
Use-case Name	Add a booked slot		
Author	NguyenPT		
Date	10/06/2022	**Priority**	Medium

Actor:

Owner

Summary:

An owner want to add booked slot to their court schedule

Goal:

This feature allow owner to add booked slot to their court schedule

Triggers

An owner want to add booked slot to their court schedule

Preconditions:

The user must already have a Tennique owner account and have added at least one approved court.

Post Conditions:

Success: System shows the booking calendar corresponding to the selected court.

Main Success Scenario:

Actor Action	System Response
Actor clicks on "Schedule Management" on the side navigation tab.	System redirects the actor to the Schedule Management screen.
The actor chooses the court they wish to view the schedule for.	System displays the timetable on the owner's screen.
The actor clicks the "Add a booked slot" button or clicks on an empty slot.	The system shows a form for the actor to complete.

	- *Booking title:text field with maximum 20 characters, required*
	- *Booking time : Dropdown buttons with day and time*
	- *Repeat: Dropdown button with options such as "Daily","Every week on [Sunday], Every 12nd of the month",..*
	- *Notification (Optional)*
	   - *Notification time:Include an integer field with range of [1-100] and a dropdown to choose a time unit.*
	   - *Notification email: To remind the player, email must have the local-part@domain format..*

Actor clicks 'Confirm' button	*System informs 'Booking added successfully'*

Alternative Scenario:

   N/A

Exceptions:

   1. **The actor has not added any approved court**

      The system inform user "You have not added any court"

Relationships:

   N/A

Business Rules:

   N/A

4.   NON-FUNCTIONAL REQUIREMENTS

4.1.   Usability

USE-1:   With an average training duration of 1 hours, 80% players should be able to use all the TCBS features.

USE-2:   With an average training duration of 3 hours, 80% owners should be able to use all the TCBS features.

4.2.   Reliability

REL-1: The court booking system should be available at least 95% of the time between 5:00 AM and 21:00 PM including scheduled maintenance windows.

REL-2: The Mean Time Between Failures should be 2 months

REL-3: Mean Time To Repair should not exceed 24 hours.

4.3.   Performance

PER-1:   The system shall accommodate a total of 400 users and a maximum of 100 concurrent users during the peak usage time window of 3 P.M. to 7:00 P.M. local time, with an estimated average session duration of 10 minutes.

PER-2:   95% of web pages shall download completely within 4 seconds from the time the user requests the page over a 20Mbps or faster Internet connection.

PER-3:   The system shall display confirmation messages to users within an average of 2 seconds and a maximum of 6 seconds after the user submits information to the system.

PER-4:   The transactions shall process and return the output to browsers within 3 seconds or less 99% of the time.

PER-5:   The throughput capacity per hour will be up to 50 TPS-hours in real-time (rounded up to the nearest hour).

4.4.   Supportability

SUP-1:   The coding convention, i.e methods and attributes' naming style, shall follow the Java coding standards.

SUP-2:   The code and architecture metrics shall be tracked in case issues occur and further improvements needed.

SUP-3:   The software will practice the five SOLID principles to make designs overall more comprehensible and maintainable.

4.5. Design Constraints

DS-1: The system must run on multiple operating systems.

DS-2: The system must be implemented in Java Programming Language using MVC model.

DS-3: The system must communicate through TCP/IP.

DS-4: The system shall be developed using Microsoft SQL Server version 2019 or higher to store data.

DS-5: The system must export financial data to a financial data management program (gnucash).

DS-6: The system interface must be written in HTML5 using Bootstrap 4 framework and Jquery library.

4.6. On-line User Documentation and Help System Requirements

HS-1: Help systems must provide solutions for most of the frequent user problems.

HS-2: The web app shall provide specific guidelines to a user for using the tennis court system within the screen.

4.7. Purchased Components

PC-1: Purchase host server www.tennique.com with https://www.hostinger.vn/.

PC-2: Integrate VNPay, Credit card for online payment.

PC-3: Purchase a certificate of business registration.

4.8. Interfaces

User Interfaces

- The average training time for a normal user to become proficient at particular operations is about 15 minutes.
- User interface constraints will adhere to the IBM standards so that the GUI will look the same on Windows and MacOS.
- The system shall require a maximum of 5 seconds for loading and logging into the system.
- The system shall have a free flowing interface to keep the usability of it simple and easy.
- Complex animations and transitions will be considered in the near future.
- The webpages shall permit complete navigation and court item selection by using the keyboard alone, in addition to using mouse and keyboard combinations.
- The UI is responsive on multiple screens, allowing the main content to display without scrolling horizontally.
- The user interface for the software shall be compatible with any browser such as Internet Explorer, Mozilla or Chrome by which user can access to the system.

Hardware Interfaces

- The software will be mainly supported on Windows and MacOS operating systems.
- Since the application must run over the internet, all the hardware that is required to connect to the internet will be the hardware interface for the system. As for e.g. Modem, WAN – LAN, Ethernet Cross-Cable.

Software Interfaces

- The software interface should follow the Model-View-Controller (MVC) model for rendering and modeling data objects.
- The TCBS shall communicate with the online billing system to identify available payment methods , validate the payments and process payment.
- The interface must be able to connect to a database to store XML schema defined using XSD and data streams.
- The web app will be compatible with Google Chrome (version 90.0.4430 or higher), Firefox (version 85 or higher), Internet Explorer (version 10.0.46 or higher), or any other web browser that supports HTML5, CSS3 and JavaScript.

Communications Interfaces

- The communication architecture must follow the client-server model.
- Communication between the client and server must be served over HTTP Secure (HTTPS).
- The client-server communication must be stateless.
- A uniform interface must separate the client roles from the server roles.
- The Port number used will be 9000.

4.9. Licensing Requirements

LR-1: Certificate of business registration number 0313983848 by Department of Planning and Investment of Ho Chi Minh City on 01/06/2022.

4.10. Legal, Copyright, and Other Notices

- The Tennique Logo is owned by Pham Trung Nguyen. Commercial and profitable uses for this image will be prohibited.
- Content on the website will be licensed under the Creative Commons Attribution 4.0 International License.

4.11. Applicable Standards

- The software will adhere to the ISO 5055 Software Quality Standard on four business-critical factors: Security, Reliability, Performance Efficiency, and Maintainability.

5. SUPPORTING INFORMATION

5.1. SWOT Analysis

Strength	Weakness
 ● Members' fair understanding of the tennis court business rules according to interviews with various owners. ● Members present excellent critical thinking, debating skills, and competence. ● Members have expressed great interest in tennis organized by their collective high schools. ● Considerate experience with organizing events and many styles of leadership. ● Use our social circle to improve the media coverage.	 ● Small reputation. ● Dedicated to a few specific purposes. ● Objectives are not too different from other same organizations.
Opportunity	**Threat**
 ● Ho Chi Minh City has a considerable amount of tennis courts, ranging across 19 districts. ● Utilizing the event to get to know more about the life experience of mature tennis players. ● Using the web application to propose efficiency and usefulness to the targeted community. ● Refining the working-in-groups skill of all 5 members. ● Encouraging fellow FPTU students to take part in the games.	 ● Risks may occur while hosting the game outdoors particularly when COVID-19 situation in Sai Gon is still somewhat mild. ● Weather may affect the game (Rain, humid climate, etc).

Appendix 1: SWOT Analysis