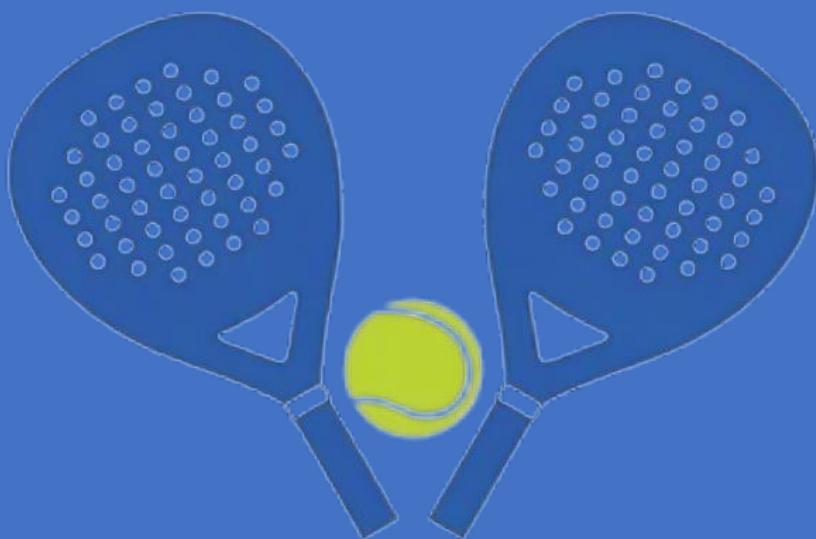


# PADELUP

SWE PROJECT DOCUMENTATION  
GROUP 54



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## 1. Preface

This document presents the full system analysis, design, and specifications for the PadelUp website — a web app designed to simplify padel court booking, player matchmaking, tournament management, marketplace and much more features. PadelUp aims to digitalize the padel experience by connecting players, clubs, and events through a well-designed online platform. The documentation will be used as the main reference throughout the development phase to make sure that the final product aligns with the agreed-upon objectives and specifications.

## 2. Introduction

Padel has become one of the fastest-growing sports, but players often face challenges finding available courts, organizing matches, and overall issues. Hence, we developed this easy-to-use project in hopes of easing the padel community's faced problems. PadelUp focuses on user registration and authentication, booking court venues, offering tournament details and participation. Moreover, we offer more features like training with coaches, a marketplace and hopefully AI-based game IQ analytics.

## 3. Similar Systems

There exist some websites that are very similar to PadelUp such as:

Playtomic: <https://playtomic.com/>

Padel Finder(app): <https://padelfinder.web.app/>

Pro Padel Egypt: <https://propadeleg.skedda.com>

These are all websites that Padel players in Egypt use on a daily basis, but as Padel players ourselves we found that none of them cover all the needs padel players require. Almost all of them provide court booking and matchmaking which is good but not enough. They don't provide a trusted Padel Marketplace where players can buy and sell padel goods. Some of them also don't have the feature of joining tournaments while none of them provide AI based Padel Skill levels and the option to book paddle sessions with certified Padel coaches

## 4. PadelUp Stakeholders

Like each and every software, understanding who are the stakeholders is very important, since they influence the system's requirements, design, and functionality. Our main stakeholders are:

### 4.1 Players (End Users)

Like each and every system, the end users are the first and one of the most important stakeholders. In our case, end users are padel players. We aim to make them use our platform on a daily basis to complete all their padel needs, such as: book padel courts, join tournaments, find matches, improve their skills through the PadellQ system, and buy padel gear from the market place

- Roles and responsibilities
- Create and manage their personal accounts.
- Browse and book available courts in their preferred location.
- Participate in tournaments, matches, and training session.
- Buy and sell sports equipment through the integrated marketplace
- View booking history, match performance, and PadellQ level progression.
  
- Goals and expectations
- A seamless, responsive, and easy-to-use interface.
- Accurate and up-to-date court availability.
- Secure and fast booking process.
- Accurate data on match history and PadellQ statistics.

## 4.2 Venue administrators

Venue administrators manage the padel courts registered on PadelUp. Each administrator manages his venues and his courts. Each administrator can perform all sorts of CRUD operations on his courts such as adding new courts, removing courts (Renovations case), update booking price and delete venues.

- Roles and responsibilities
- Add, update or remove courts and their details
- Set booking prices
- Receive new booking notifications and manage them
- Monitor players on court and force bans on bad behavior
  
- Goals and expectations
- Admins need simple and efficient dashboards
- Real-time updates of court availability
- Real-time notifications upon court bookings or court cancelations

## 4.3 System Administrators

System administrators are responsible for maintaining the technical integrity, security, and reliability of PadelUp.

- Roles and responsibilities
- Manage the database, maintain the server and the good working flow of the platform
- Provide technical support for users and admins in case of issues
- Handle bug reports, performance optimization, and version updates.
  
- Goals and expectations
- Secure and stable system with minimal to non-existent crashes
- Good error handling

## 4.4 Coaches

Coaches are part of the PadelUp team, they offer professional training sessions to players who seek skill development and performance improvement.

- Roles and responsibilities
  - Manage training schedules and pricing.
  - Accept or decline session requests from players.
  - Provide feedback and evaluations that influence PadelIQ scores.
  
- Goals and expectations
  - A reliable system for managing schedules and payments.
  - Provide fair level feedbacks after sessions
  - Easy communication with players

## 4.5 Tournament Organizers

They are responsible for creating and managing competitive padel events through PadelUp. They ensure tournaments run smoothly, attract players, and follow fair and transparent rules.

- Roles and responsibilities
  - Create and manage tournaments, set their rules, set entry fees and prize money
  - Approve or reject players entrance to tournaments based on their level
  - Record match results and upload them to the platform
  - Coordinate with venue admins to ensure court availability during the tournaments
  - Communicate with all players before and during the tournament
  
- Goals and expectations
  - An easy-to-use tournament management interface.
  - Accurate players data

## 4.6 Sponsors, promoters and business partners

Sponsors and partners collaborate with PadelUp to promote events, brands, and tournaments.

- Roles and responsibilities
- Collaborate with PadelUp for advertising and sponsorships.
- Offer exclusive discounts or events for PadelUp users to encourage interactivity and encourage more players to register on the platform.
  
- Goals and expectations
- They expect that their partnership or sponsorship with us will bring them new customers and will increase their brand visibility.
- Access to players data and events

## 4.7 Summary of stakeholders:

Stakeholder	Description
Players (End Users)	Primary users who book courts, join matches and tournaments, train with coaches, and use the marketplace.
Venue Administrators	Manage padel venues and courts, handle bookings, pricing, and player regulations.
System Administrators	Maintain platform functionality, security, database integrity, and provide technical support.
Coaches	Offer training sessions, manage schedules, and contribute to players' skill evaluations.
Tournament Organizers	Create and manage tournaments, approve participants, and record match outcomes.
Sponsors & Business Partners	Collaborate on events and promotions to enhance visibility and attract users.

## 5. Glossary

TERM	DEFINITION
<b>Padel</b>	A racket sport similar to a mix of tennis and squash. It is primarily played in doubles on an enclosed court that uses surrounding walls as part of the game.
<b>Skill Level</b>	A rating assigned to a user indicating their skills, playing ability and level. This helps in forming balanced matches.
<b>PadelIQ</b>	The name of the AI we developed in PadelUp to automate the assignment of players skill levels. It controls when a player level goes up or down based on multiple factors.
<b>Marketplace</b>	It functions as a digital marketplace that allows the users to buy/sell their padel gear like rackets, clothing and accessories.
<b>Venue</b>	A physical location or club that hosts one or more padel courts.
<b>Court</b>	A single, individual padel playing field located within a venue.
<b>Match Making</b>	A feature that allows a user who has booked a court to invite other users to join their session. This helps players find partners and fill available spots in a game.
<b>PadelUp dashboard</b>	A user's personal homepage after logging in. It provides a central overview of their upcoming bookings, past activity, and profile management options.
<b>Court Cancellation Policy</b>	A set of rules defined by each venue that outlines the conditions and any potential fees for canceling a confirmed booking. The system automatically applies these rules.

## 6. Functional User Requirements (Natural Language)

1. Each User **shall** have their own account and be able to log in using their email and password.
2. Users **should** be able to edit their profiles.
3. User **should** be able to delete their accounts at any time.
4. Users **should** be able to recover their accounts in case they forgot their passwords
5. Users **should** be able to view their history, including past bookings, past matches, and past tournament results.
6. The UI design **should** be “Sporty” and consistent with the theme of padel with colors that represent the sport. It should also be easy to navigate ,understand and mobile-friendly.
7. Users **shall** be able to book any padel court they want if it is available.
8. Users **should** be able to search for available padel courts near them by area.
9. Players **shall** receive email confirmations for court bookings, specifying their booked slots and booking number.
10. Admins **shall** receive email notifications whenever new bookings occur.
11. Admins **should** be able to contact users that booked on of his courts.
12. Admins **shall** be able to add or remove courts and set or modify booking fares at any time.
13. Admins **should** have the ability to ban specific players from booking their courts.
14. Users **shall** be able to join available tournaments that match their skill level.
15. Players **should** be able to view their PadelIQ skill level and track how it has changed over time
16. Users **shall** be able to find active matches near them that match their skill level and join those matches.
17. Users **shall** be able to list padel goods for sale and purchase items from other players or sellers through the marketplace.
18. Users **shall** be able to book training sessions certified padel coaches.
19. Users **should** be able to search for available coaches by area of expertise and book training sessions with them.
20. Users **should** be able to rate coaches and leave reviews after the session.

## 7. Functional System Requirements (Natural / Structures Language)

User Requirement	System Requirement(s)
User Requirement 1	<p>1. The system <b>shall</b> implement a <b>secure authentication</b> technique using <b>password hashing</b> to avoid data stealing.</p> <p>2. System <b>shall store all information entered by the user</b> during signup in the database.</p>
User Requirement 2	<p>3. System <b>should</b> allow users to <b>update all their personal information</b> by fetching the old ones from the database and replacing them with the new ones.</p> <p>4. Each user is uniquely identified by his email, so the system <b>shall not permit email changing</b> in the (Update Profile) section.</p>
User Requirement 3	<p>5. System <b>shall</b> allow users to <b>delete their accounts</b> and remove all their information from the database upon deletion.</p> <p>7. System <b>should warn users before deletion</b> that if they choose to delete their account their action cannot be undone and that they will permanently lose their account.</p>
User Requirement 4	<p>8. System <b>shall</b> allow user to <b>recover their account password</b> if they forgot it only by a <b>secure link</b> sent to them via the email associated to their account.</p>
User Requirement 5	<p>9. System <b>shall store each and every major activity</b> the user completes through PadelUp in the <b>database</b>. These activities include: past bookings, past matches, and past tournament results.</p> <p>10. System <b>should</b> be able to <b>retrieve a user's past activity</b> from the database and display them when needed.</p>
User Requirement 6	<p>11. The system's UI <b>should</b> be <b>responsive and mobile-friendly</b> since most of the app users will access it from their mobile phones.</p>
User Requirement 7	<p>12. System <b>shall</b> provide <b>real-time court availability</b> updated <b>regularly</b> to avoid double bookings.</p> <p>18. The system <b>shall</b> not allow two players to book the same court.</p>
User Requirement 8	<p>13. System <b>should</b> <b>store locations for the court venues</b> to display them by area when users filter venues by the area which is closest to them.</p>

User Requirement 9	15. Upon court reservations, the system <b>should</b> automatically send a confirmation to both the user who completed the booking and the admin of the venue; the confirmation email should have a unique booking ID, name, date and time.
User Requirement 10	15. Upon court reservations, the system <b>should</b> automatically send a confirmation to both the user who completed the booking and the admin of the venue; the confirmation email should have a unique booking ID, name, date and time.
User Requirement 11	6. System <b>should</b> display error messages upon failed operations (Failed Signup, Signing, Court booking, etc....).
User Requirement 12	14. System <b>should</b> have an admin dashboard where admins can complete CRUD operations for their venues.
User Requirement 13	17. System <b>shall</b> not allow banned players to book the courts where they are banned.
User Requirement 14	16. The system <b>shall</b> not allow unregistered users to complete any sort of activities on PadelUp such as (bookings, join tournaments, buy or sell on the marketplace, etc....).
User Requirement 15	20. System <b>shall</b> assign a skill level to each player using the PadelIQ AI. 21. The Players' skill levels shall be controlled by the PadelIQ AI system, which adjusts levels based on win rate, opponent feedback, coach evaluations, and tournament results.
User Requirement 16	22. For matchmaking, system <b>shall</b> not allow players with different skill levels to play together to avoid one-sided or unfair matches.
User Requirement 17	23. System <b>shall</b> add new items listed by user to the marketplace database and display them to other users.  24. System <b>shall</b> auto remove sold marketplace items
User Requirement 18	25. System <b>should</b> provide communication between players and coaches to simplify the training sessions booking procedure
User Requirement 19	26. System <b>should</b> classify coaches by their area of expertise and the area where they live
User Requirement 20	27. System <b>should</b> take reviews from players after coaching sessions

## 8. Non-Functional Requirements

### 8.1 Non-Functional requirements

Category	Requirement
Performance	The system shall load main pages (Landing, Booking, Login) within 5 seconds under normal Wi-Fi conditions.
Reliability	The website shall operate without crashes or major errors during a 2-hour demo session.
Usability	New users shall be able to register, book a court, and view their profile without prior training or assistance.
Responsiveness	The interface shall adapt correctly to both desktop and mobile screen sizes.
Security	Passwords shall be stored using hashing. All data exchange shall use HTTPS.
Data Integrity	User information (e.g. match results, bookings) shall not be lost or corrupted during normal operations.
Accessibility	Buttons, forms, and menus shall be clearly labelled and navigable by keyboard.
Maintainability	Code shall be organized in modules/components to allow future updates without major refactoring.

## 8.2 Non-functional Organisational Requirements

Category	Requirement
Development Process	The team shall follow a structured approach with weekly progress meetings and daily updates.
Documentation	A requirements document/plan shall be submitted according to course guidelines.
Coding Standards	The project shall follow consistent naming conventions and be written in PHP files with HTML, CSS, and JavaScript.
Version Control	All code shall be managed in a GitHub repository with clear commit messages.
Testing	Basic functional testing shall be performed before submission.
Team Collaboration	All members shall contribute through assigned roles and maintain communication via on-ground meetings or discord.

## 8.3 Non-functional External Requirements

Category	Requirement
Legal Compliance	The system shall comply with known ethical principles for handling user data, especially names and contact details.
Third-Party Services	The system may integrate with Google Maps API for locating padel courts and email/SMS API for notifications.
Data Hosting	The website shall use a secure database (XAMPP) hosted on servers compliant with university standards.
Browser Compatibility	The website shall function correctly on the latest versions of Chrome, Firefox, and Edge.

## 9. Prototype of all forms / pages

The following pages were fully implemented as prototypes:

- **Home Page:** Overview of features and quick links.
- **About Us:** Simple page that introduces PadelUp and its mission
- **Login / Signup:** User authentication pages.
- **Coach Finder:** Page with a number of padel coaches so players can book training sessions
- **Venues:** page for padel venues so players can choose the venues closest to them
- **Court Booking:** Calendar with available slots for courts that user can book.
- **Admin Panel:** Manage courts, users, and reports.
- **Matchmaking:** List of matches that have missing players so other players can join
- **Marketplace:** Page full of padel goods for sale
- **PadelIQ:** Dashboard showing statistics, match history and Padel skill level
- **Tournaments:** Page for tournaments that are classified by area and level

## 10. Scenarios

### → Scenario 1 – Booking a Court

- **Initial assumption:**

Yehia is registered on PadelUp and has an active account. He is logged into the system. The database already contains a list of available venues and their court schedules.

- **Normal Flow:**

Yehia is with three of his friends in New Cairo and they decide to play padel. He logs into his PadelUp account and searches for padel venues in New Cairo. He selects one venue and proceeds to the court reservation page. The system displays available time slots.

Yehia selects “Court 2” for Saturday at 5:00 PM.

The system confirms the reservation and automatically sends Yehia a confirmation email.

- **What can go wrong:**

- The selected time slot becomes unavailable before confirmation — the system should alert Yehia that the court he chooses is now booked so he can choose another available slot.
- Network or server issues prevent the booking confirmation — the system should notify Yehia and save the request as pending.

- **Other activities:**

- The booking is recorded in the database and the court’s availability schedule is updated automatically.

- **System state upon completion:**

Yehia’s booking is confirmed. A confirmation email is sent to his registered address, and the reservation appears under his “My Bookings” section.

## → Scenario 2 – Matchmaking

- **Initial assumption:**

Yehia is registered on PadelUp and has an active account. The system database already contains profiles of active players, their locations, and skill levels.

- **Normal flow:**

Yehia is feeling bored at home and wants to play padel, but all his friends are busy. He logs into his PadelUp account and selects the matchmaking feature. He filters matches by location (New Cairo) and skill level (Intermediate). The system displays a list of open matches that need one more player. Yehia finds a nearby match, sends a request to join, and waits for approval. The other players accept his request, confirming his participation. Yehia now has a match scheduled with new players.

- **What can go wrong:**

- No available matches meet Yehia's filters — the system should suggest nearby areas or allow Yehia to create a new match.
- The host cancels the match before confirmation — the system should notify Yehia and offer alternatives.

- **Other activities:**

- The system updates the match record in the database to include Yehia as a participant.
- Notifications are sent to all players confirming the new lineup.
- After the match completion, players enter the match results. Match results are saved in the database and exported to PadellIQ to affect each player padel skill level based on their win and loss rates

- **System state upon completion:**

Yehia is successfully added to the match. The updated match details appear in his "My Matches" section, and a confirmation notification is sent.

## → Scenario 3 – Marketplace Purchase and Sell

- **Initial assumption:**

Yehia has an active PadelUp account and is logged in. PadelUp has a functional Marketplace for padel goods. It contains product listings, user profiles, and payment integration for marketplace transactions.

- **Normal flow:**

Yehia wants to sell his old racket and buy a new one.

He navigates to the marketplace section and selects the option to “List an Item.”

He enters the racket’s details — brand, condition, and price — and uploads a photo. The system confirms the listing and publishes it.

Next, Yehia browses the marketplace to find a new racket.

He filters items by price and brand, finds one he likes, adds it to his cart, and checks out using his preferred payment method.

- **What can go wrong:**

- Payment fails during checkout — the system alerts Yehia and allows him to retry.
- The item is sold before Yehia completes checkout — the system notifies him and removes it from the cart.
- Incomplete item details — the system prompts Yehia to fill all required fields before listing.

- **Other activities:**

- The database updates with Yehia’s new listing.
- Transaction details are logged for both buyer and seller.

- **System state upon completion:**

Yehia’s old racket is listed for sale, and his new purchase is confirmed. Both transactions appear in his “My Marketplace” section.

## → Scenario 4 – Joining a Tournament

- **Initial assumption:**

Yehia and Omar both have registered PadelUp accounts and are logged in. The system contains a list of upcoming tournaments with details for each one. Each tournament has a specific date, location, and required level to enter tournament. Each one also has a prize money and a entry free.

- **Normal flow:**

Yehia and Omar feel that their padel skills have improved and want to test themselves in a tournament.

Yehia logs into his account and navigates to the “Tournaments” page.

He filters tournaments by skill level and date.

He finds that MIU is hosting a padel tournament in five days that suits their level.

Yehia enters both his and Omar’s names into the registration form.

The system confirms their registration and displays them in the tournament player list.

- **What can go wrong:**

- The tournament reaches maximum capacity before confirmation — the system notifies Yehia and offers to join the waitlist.
- Incorrect player level selected — the system should prompt for verification or adjust based on profiles.

- **Other activities:**

- A tournament registration record is created in the database.
- Both players receive confirmation emails with tournament details.

- **System state upon completion:**

Yehia and Omar are successfully registered for the tournament. The event appears in their “My Tournaments” section.

## → Scenario 5 – Coach Finder

- **Initial assumption:**

Yehia and Omar have PadelUp accounts and are logged in. The system has a database of registered coaches with their areas of specialization, ratings, and availability.

- **Normal flow:**

After losing their first tournament match, Yehia and Omar decide to improve their padel techniques.

They open the Coach Finder page and filter coaches by specialization — in this case, attacking techniques.

The system displays a list of available coaches that match the filter.

They review profiles and select Coach Mohamed Ahmed.

They book a session with him for the following week.

The system confirms the session and sends a notification to both the players and the coach.

- **What can go wrong:**

- The selected coach becomes unavailable (He become sick) — the user should get an email notification that his coach canceled the session.  
PadelUp should suggest an alternative coach and the user gets to choose if he accepts him or not
- Payment or booking confirmation fails — the system notifies users and allows retry.

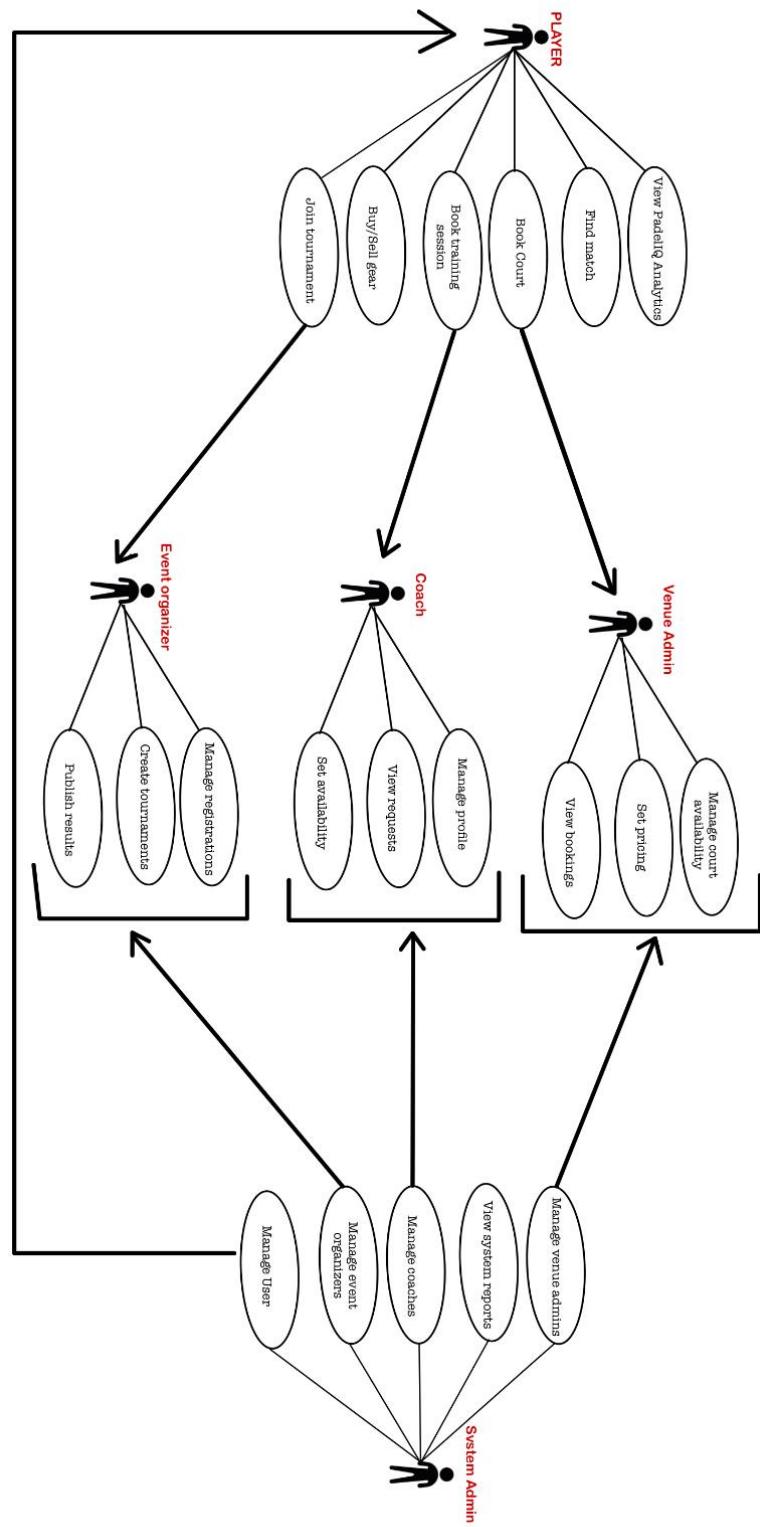
- **Other activities:**

- The booking is logged in both the players' and coach's schedules.
- The system sends reminders before the session.

- **System state upon completion:**

The coaching session is successfully booked and visible in the “My Sessions” section for both players and the coach.

## 11. Use cases



## 12. Form based specification and tabular specification

### → Form-Based Specification: Player Registration Function

Field	Details
<b>Function</b>	Create Player Profile
<b>Description</b>	Register a new player account with personal details and padel preferences
<b>Inputs</b>	<ul style="list-style-type: none"> <li>- Username: User-entered text (3–20 characters)</li> <li>- Email: User-entered email address</li> <li>- Gender: Dropdown (Male/Female/Other)</li> <li>- Date of Birth: Date picker (dd/mm/yyyy)</li> <li>- Height: Numeric input (cm)</li> <li>- Dominant Hand: Dropdown (Right/Left)</li> <li>- Preferred Position: Dropdown (Right Side/Left Side/Both)</li> <li>- Padel Level: Radio (Beginner/Intermediate/Advanced)</li> <li>- Location: Text (City, Country)</li> <li>- Password: Secure input</li> <li>- Confirm Password: Secure confirmation input</li> </ul>
<b>Outputs</b>	<ul style="list-style-type: none"> <li>- Player ID (auto-generated)</li> <li>- Success confirmation message</li> <li>- Welcome email</li> <li>- User session token</li> </ul>
<b>Requires</b>	<ul style="list-style-type: none"> <li>- User DB management system</li> <li>- Email service</li> <li>- Password hashing service</li> <li>- Input validation</li> <li>- Session management system</li> </ul>

<b>Action</b>	<ol style="list-style-type: none"> <li>1. Validate all fields</li> <li>2. Check username uniqueness</li> <li>3. Verify email format &amp; uniqueness</li> <li>4. Validate DOB (<math>\geq 13</math> years)</li> <li>5. Confirm password strength &amp; match</li> <li>6. Hash password securely</li> <li>7. Create player record</li> <li>8. Generate Player ID</li> <li>9. Store preferences</li> <li>10. Send welcome email</li> <li>11. Create session</li> <li>12. Redirect to dashboard</li> </ol>
<b>Pre-conditions</b>	<ul style="list-style-type: none"> <li>- User accesses registration form</li> <li>- User not authenticated</li> <li>- Database available</li> </ul>
<b>Post-conditions</b>	<ul style="list-style-type: none"> <li>- New profile created</li> <li>- User logged in</li> <li>- Player ID stored</li> <li>- Account active</li> <li>- Welcome email sent</li> </ul>

## → Form-Based Specification: User Sign-In Function

Field	Details
<b>Function</b>	Authenticate User
<b>Description</b>	Verify user credentials and establish authenticated session
<b>Inputs</b>	<ul style="list-style-type: none"> <li>- Email: User-entered email address</li> <li>- Password: Secure password input</li> <li>- Remember Me: Checkbox (optional)</li> </ul>
<b>Outputs</b>	<ul style="list-style-type: none"> <li>- Authentication status</li> <li>- Session token</li> <li>- Redirect to home</li> <li>- Error message (if fail)</li> </ul>
<b>Requires</b>	<ul style="list-style-type: none"> <li>- Encrypted user DB</li> <li>- Session management system</li> <li>- Email/password verification</li> <li>- Input validation</li> </ul>
<b>Action</b>	<ol style="list-style-type: none"> <li>1. Validate email format</li> <li>2. Verify email in DB</li> <li>3. Retrieve password hash</li> <li>4. Compare with entered password</li> <li>5. Create session if match</li> <li>6. Set persistent cookie if “Remember Me”</li> <li>7. Update last login</li> <li>8. Redirect to dashboard</li> <li>9. Show error if fail</li> </ol>
<b>Pre-conditions</b>	<ul style="list-style-type: none"> <li>- User accesses sign-in form</li> <li>- Account exists</li> <li>- DB connection available</li> <li>- Session system running</li> </ul>
<b>Post-conditions</b>	<ul style="list-style-type: none"> <li>- User authenticated</li> <li>- Session active</li> <li>- Last login updated</li> <li>- Redirect successful</li> </ul>

## → Form-Based Specification: Create New Match Function

Field	Details
<b>Function</b>	Create Match Listing
<b>Description</b>	Create a new match listing for players to join and play together
<b>Inputs</b>	<ul style="list-style-type: none"> <li>- Location: Text (venue name/address)</li> <li>- Club Name: Text (optional)</li> <li>- Date &amp; Time: Picker (dd/mm/yyyy hh:mm)</li> <li>- Duration: Dropdown (60/90/120 mins)</li> <li>- Skill Level: Dropdown (Beginner–Expert)</li> <li>- Players Needed: Numeric (1–5)</li> </ul>
<b>Outputs</b>	<ul style="list-style-type: none"> <li>- Match ID (auto-generated)</li> <li>- Confirmation details</li> <li>- Public listing</li> <li>- Player notifications (optional)</li> </ul>
<b>Requires</b>	<ul style="list-style-type: none"> <li>- Match DB system</li> <li>- User session</li> <li>- Location validation</li> <li>- Conflict checking</li> <li>- Notification service</li> </ul>
<b>Action</b>	<ol style="list-style-type: none"> <li>1. Validate authentication</li> <li>2. Verify inputs</li> <li>3. Check future date/time and Validate location</li> <li>5. Ensure valid player count and generate Match ID</li> <li>7. Create DB record</li> <li>8. Set “Open” status and add to listings</li> <li>10. Notify matching players</li> <li>11. Return confirmation</li> </ol>
<b>Pre-conditions</b>	<ul style="list-style-type: none"> <li>- User logged in and DB connected</li> <li>- Valid player profile</li> <li>- Match creation available</li> </ul>
<b>Post-conditions</b>	<ul style="list-style-type: none"> <li>- Match stored in DB / Public listing visible</li> <li>- Creator auto-added</li> <li>- Status: “Seeking players”</li> </ul>

## → Form-Based Specification: List Padel Gear Function

Field	Details
<b>Function</b>	Create Gear Listing
<b>Description</b>	Create a new listing for selling padel equipment
<b>Inputs</b>	<ul style="list-style-type: none"> <li>- Product Title: Text (e.g., “Bullpadel Hack 03”)</li> <li>- Brand: Text (e.g., “Bullpadel”)</li> <li>- Price: Numeric (€)</li> <li>- Condition: Dropdown (New/Used)</li> <li>- Image: File upload (multiple allowed)</li> </ul>
<b>Outputs</b>	<ul style="list-style-type: none"> <li>- Listing ID (auto-generated) / Listing confirmation</li> <li>- Public marketplace listing</li> <li>- Image URLs</li> </ul>
<b>Requires</b>	<ul style="list-style-type: none"> <li>- Marketplace DB / User session</li> <li>- Image storage / Input validation</li> <li>- Price formatting</li> </ul>
<b>Action</b>	<ol style="list-style-type: none"> <li>1. Validate authentication</li> <li>2. Verify inputs</li> <li>3. Check title length</li> <li>4. Validate brand</li> <li>5. Confirm valid price and validate image files</li> <li>7. Upload to storage</li> <li>8. Generate Listing ID / Create DB record</li> <li>10. Set “Active” status</li> <li>11. Add to search results</li> <li>12. Return confirmation</li> </ol>
<b>Pre-conditions</b>	<ul style="list-style-type: none"> <li>- User logged in / Seller privileges active</li> <li>- Marketplace accessible / Image service working</li> </ul>
<b>Post-conditions</b>	<ul style="list-style-type: none"> <li>- Listing created / Visible in marketplace</li> <li>- Images uploaded</li> <li>- Status: “Active”</li> </ul>

## → Tabular Based Specification: Forgot password function

Condition	Action
User enters a registered email	Send password reset link to the user's email
User enters an unregistered email	Display error message: "Email not found"
User clicks the reset link within valid time	Allow user to set a new password
User clicks the reset link after expiration	Display error message: "Link expired"

## → Tabular Based Specification: Court Booking function

Condition	Action
User is logged in and selects an available court and time	System confirms booking and sends confirmation notifications to both the user and the venue admin.
User tries to book without log in	System redirects the user to the login page. Booking is not created.
Selected court and time already booked	System displays an "Unavailable Slot" message.
User cancels booking 6 hours or more before the scheduled start time	System updates booking status to " <b>Cancelled by User</b> ", frees the court slot, and notifies the venue admin.
User attempts to cancel booking less than 6 hours before start time	System rejects the cancellation and displays a warning message: " <i>Cancellations are allowed only up to 6 hours before your booking.</i> "
User does not attend the booking and no cancellation was made	System marks the booking as " <b>No-Show</b> ", notifies the venue admin, and applies a <b>no-show strike</b> to the user's account.
User accumulates 3 no-show strikes in 6 months.	System automatically restricts the user's ability to book new courts for a penalty period (Example: 1 month ) and notifies both the user and admin.
User arrives and pays cash at the venue	Venue admin marks the booking as " <b>Completed</b> ", the system records payment, and updates the user's booking history.

## → Tabular Based Specification: Match Making function

Condition	Action
<b>Player searches for a match</b>	Display available matches based on location, time, and skill level.
<b>No matches found for criteria</b>	Display message: "No matches found. Try adjusting filters."
<b>Player asks to joins an open match</b>	Request send match creator, and send email to requester saying pending confirmation.
<b>Match creator accepts player</b>	Send confirmation to player that his is now part of the match
<b>Match creator rejects player</b>	Send email to player stating match canceled and remove it from his public listings.
<b>Match becomes full</b>	Update match status to "Full" and remove from public listings.