

1. Project Background

1.1 Business Problem

Indoor sports facilities face operational challenges:

- Manual booking processes (phone calls, walk-ins)
- No real-time visibility of court availability
- Underutilized courts during off-peak hours
- Difficulty managing multiple sports and courts
- Limited player engagement and community building
- No structured membership or revenue optimization
- Players struggle to find partners for doubles games

2. My Role & Contributions

Business Analyst

- Conducted market research on sports booking apps
- Defined feature requirements based on facility pain points
- Created user stories for players, facility managers, admins
- Analyzed competitive landscape (Playtomic, CourtReserve, etc.)
- Defined membership tier structure and pricing strategy
- Documented functional and business requirements

Membership Benefits Comparison:

Feature	Basic	Medium	Premium
Monthly Fee	Free	\$19.99	\$39.99
Booking Discount	0%	10%	20%
Advance Booking	7 days	21 days	30 days
Guest Passes	0	2/month	5/month
Peak Hour Access	Standard	Standard	Guaranteed
Free Equipment	✗	✗	✓
Tournaments	Public only	Members	Exclusive

Screenshots shown for portfolio demonstration purposes only
Full documentation available upon request

User Flow:

Browse Open Games → View Game Details (2/4 players, skill level) →
Request to Join → Game Creator Approves → Payment Split →
Play Together → Rate Each Other

Example:

Open Game: Badminton Doubles
Court: 5
Time: 2:00 PM - 3:00 PM
Players: 2/4
- Sarah (Host) - Skill: Intermediate
- Mike - Skill: Intermediate
- [Join Game] ← Available Spot
- [Available Spot]

Cost: \$20/hour = \$5 per player

5. Database Design

5.1 Core Entities

Users

- user_id (PK)
- name, email, phone, password_hash
- profile_picture_url
- date_of_birth, gender
- skill_level (Beginner / Intermediate / Advanced / Professional)
- membership_tier (Basic / Medium / Premium)
- membership_expiry_date
- payment_method_id (FK)
- created_at, last_login