We need to prepare a web based sports booking software for “Aryen Sports Arena”.

Sports can be booked per person or full ground . it depends on the sports like turf can be booked full on hourly basis but swimming and badminton can be booked per person or full ground on hourly or monthly basis .

Max capacity can be defined only based on per person booking option available for specific ground like small pool will have 10 at a time and big pool 30 at a time likewise for other grounds, where for full ground it’s not needed .

swimming and badminton will be basically booked on monthly basis but some time it can be booked on hourly basis also where as turf can be basically booked on hourly basis but some time it can be booked on monthly basis as well.

time slots will be same for all sports but they will be peak or nonpeak hours.

pricing will depend on sport, ground, plan ( hourly/monthly/yearly etc.), booking mode(per person/full ground), time slot(peak/non peak), day (week/week end/ any specific day) in case of hourly plan.

Client can select sport, ground, plan, mode, date(s), time slot(s) and specify the no of persons if mode is per person, based on his selection we need to check the availability of the combination for specified date(s) and time slots for the required no of persons. Also we need to check the valid entries like booking should be for current or future dates only. While booking we need to him the pricing for the selected combination. Ask for the confirmation if available, After confirmation, total booking amount will be calculated based on selected sport, ground, plan, mode, time slot/time slots. if client is having coupon/credit, he can apply at that time to avail discount or if admin wants, he can give discount, based on this, the final amount will be calculated to pay. At the time of booking client can pay full or partial through cash/upi/card modes, accordingly we need to collect the amount and book his slot/slots. send a message on his mobile or email his receipt containing booking details along with the pending amount.

in future we need to collect his remaining amount for which we need to send reminder to pay,

Also need to keep record of coupon usage because coupons will have the validity period along with no of times usage for the specified sport and plan.

Send notifications for his upcoming booking, expire booking for renewal.

Admin / client can cancel/reschedule the bookings. Notification should be sent for this also.

We need to specify the cancellation and rescheduling policy and show in the main page.

Admin can have all the controls over every module to add,edit,delete,view and update any time. He should see reports of every aspect of the business to analyse with text format reports along with charts.

Clients can only view the facilities, can book the slots and view their own information.

prepare the complete sports booking software layout begin with the welcoming screen having information about the company, available facilities, calendar view, login/registration for users, policies, etc.

**Booking Policy**

* Bookings must be made for current or future dates only
* Advance booking recommended for peak hours
* Full or partial payment accepted at booking
* Confirmation SMS/Email will be sent

**Cancellation Policy**

* 24 hours advance notice required
* 50% refund for cancellations within 24 hours
* No refund for same-day cancellations
* Admin approval required for special cases

**Rescheduling Policy**

* Free rescheduling with 12 hours notice
* One-time free rescheduling per booking
* Subject to availability
* Additional charges for peak hour upgrades

**General Rules**

* Follow dress code for each facility
* Maintain cleanliness and hygiene
* No outside food/drinks in pool area
* Report damages immediately

**Web App – Welcome Screen Layout**

**Homepage Sections**:

1. **Hero Banner / Slideshow**
   * Show: Aryen Sports Arena logo, tagline, rotating facility images
   * CTA: “Book Now”, “View Calendar”, “Login/Register”
2. **About Us**
3. **Available Facilities Grid**
   * With: sport name, ground type, image, booking mode(s), capacity info
4. **Calendar View**
   * Color-coded peak/non-peak hours per sport
5. **Policies Section**
   * Booking / Cancellation / Rescheduling / General Rules
6. **User Area**
   * Login / Register (User dashboard: bookings, payments, profile)
7. **Admin Login Link**

**🧾 II. Core Functional Modules**

**🎯 1. Booking Module**

* Select: Sport, Ground, Plan (hourly/monthly), Mode (Per Person / Full Ground), Date(s), Time Slot(s), No. of Persons (if applicable)
* Show availability & pricing instantly
* Check validity: (future date, slot capacity)
* Confirm → Apply coupon/credit → Select payment mode
* Finalize & generate booking
* Notify via SMS/Email
* Reminder for balance amount

**💳 2. Payment Module**

* Accept: Full / Partial payment via Cash / UPI / Card
* Store transaction details
* Generate receipt (with pending info if partial)
* Reminder system for pending payments

**🎟️ 3. Coupon Module**

* Coupon Code validation:
  + Validity date
  + Usage count per sport/plan
* Discount % or Flat amount
* Track usage by client

**📅 4. Rescheduling / Cancellation**

* Check policy conditions
* Notify client/admin
* Track status
* Auto apply extra charges if rescheduled to peak hour

**📢 5. Notification Engine**

* Triggers:
  + Booking confirmation
  + Upcoming booking reminder
  + Pending payment reminder
  + Coupon expiry reminder
  + Cancellation / Reschedule info
* Channels: SMS / Email

**📊 6. Admin Dashboard**

* Add/Edit/Delete/View: Sports, Grounds, Plans, Time Slots, Coupons, Users, Bookings
* Reports (Text & Charts):
  + Daily/Monthly Booking Trends
  + Revenue Reports
  + Facility Utilization
  + Pending Payments
  + Coupon Usage

**User Access Control**

**Clients**

* Login/Register
* View Facilities
* Book Slot
* View/Cancel/Reschedule Booking
* View Payments
* Get Notifications

**Admin**

* Full Access to all Modules
* Create/Update Sports, Grounds, Slots, Plans, Pricing, Coupons
* View All Reports and Logs
* Cancel/Reschedule Bookings
* Approve Refunds / Special Reschedules

**Aryen Sports Arena - Complete Database Structure**

**Core Master Tables**

**1. Sports Master**

sql

CREATE TABLE sports\_master (

sport\_id INT PRIMARY KEY AUTO\_INCREMENT,

sport\_name VARCHAR(100) NOT NULL,

sport\_code VARCHAR(10) UNIQUE NOT NULL,

description TEXT,

image\_path VARCHAR(255),

is\_active BOOLEAN DEFAULT TRUE,

created\_date DATETIME DEFAULT CURRENT\_TIMESTAMP,

modified\_date DATETIME DEFAULT CURRENT\_TIMESTAMP ON UPDATE CURRENT\_TIMESTAMP

);

**2. Grounds Master**

sql

CREATE TABLE grounds\_master (

ground\_id INT PRIMARY KEY AUTO\_INCREMENT,

sport\_id INT NOT NULL,

ground\_name VARCHAR(100) NOT NULL,

ground\_code VARCHAR(20) UNIQUE NOT NULL,

location VARCHAR(255),

facilities TEXT,

max\_capacity INT NULL, *-- Only for per person booking*

per\_person\_booking BOOLEAN DEFAULT FALSE,

full\_ground\_booking BOOLEAN DEFAULT TRUE,

image\_path VARCHAR(255),

is\_active BOOLEAN DEFAULT TRUE,

created\_date DATETIME DEFAULT CURRENT\_TIMESTAMP,

modified\_date DATETIME DEFAULT CURRENT\_TIMESTAMP ON UPDATE CURRENT\_TIMESTAMP,

FOREIGN KEY (sport\_id) REFERENCES sports\_master(sport\_id)

);

**3. Plans Master**

sql

CREATE TABLE plans\_master (

plan\_id INT PRIMARY KEY AUTO\_INCREMENT,

plan\_name VARCHAR(50) NOT NULL, *-- Hourly, Monthly, Yearly*

plan\_code VARCHAR(10) UNIQUE NOT NULL,

description TEXT,

is\_active BOOLEAN DEFAULT TRUE,

created\_date DATETIME DEFAULT CURRENT\_TIMESTAMP

);

**4. Time Slots Master**

sql

CREATE TABLE time\_slots\_master (

slot\_id INT PRIMARY KEY AUTO\_INCREMENT,

slot\_name VARCHAR(50) NOT NULL,

start\_time TIME NOT NULL,

end\_time TIME NOT NULL,

is\_peak\_hour BOOLEAN DEFAULT FALSE,

slot\_order INT,

is\_active BOOLEAN DEFAULT TRUE,

created\_date DATETIME DEFAULT CURRENT\_TIMESTAMP

);

**5. Day Types Master**

sql

CREATE TABLE day\_types\_master (

day\_type\_id INT PRIMARY KEY AUTO\_INCREMENT,

day\_type\_name VARCHAR(50) NOT NULL, *-- Weekday, Weekend, Holiday*

day\_type\_code VARCHAR(10) UNIQUE NOT NULL,

description TEXT,

is\_active BOOLEAN DEFAULT TRUE

);

**6. Pricing Master**

sql

CREATE TABLE pricing\_master (

pricing\_id INT PRIMARY KEY AUTO\_INCREMENT,

sport\_id INT NOT NULL,

ground\_id INT NOT NULL,

plan\_id INT NOT NULL,

booking\_mode ENUM('per\_person', 'full\_ground') NOT NULL,

day\_type\_id INT NOT NULL,

slot\_id INT NULL, *-- NULL for monthly/yearly plans*

is\_peak\_hour BOOLEAN DEFAULT FALSE,

base\_price DECIMAL(10,2) NOT NULL,

effective\_from DATE NOT NULL,

effective\_to DATE NULL,

is\_active BOOLEAN DEFAULT TRUE,

created\_date DATETIME DEFAULT CURRENT\_TIMESTAMP,

FOREIGN KEY (sport\_id) REFERENCES sports\_master(sport\_id),

FOREIGN KEY (ground\_id) REFERENCES grounds\_master(ground\_id),

FOREIGN KEY (plan\_id) REFERENCES plans\_master(plan\_id),

FOREIGN KEY (day\_type\_id) REFERENCES day\_types\_master(day\_type\_id),

FOREIGN KEY (slot\_id) REFERENCES time\_slots\_master(slot\_id)

);

**User Management Tables**

**7. Users Master**

sql

CREATE TABLE users\_master (

user\_id INT PRIMARY KEY AUTO\_INCREMENT,

user\_code VARCHAR(20) UNIQUE NOT NULL,

first\_name VARCHAR(50) NOT NULL,

last\_name VARCHAR(50) NOT NULL,

email VARCHAR(100) UNIQUE NOT NULL,

mobile VARCHAR(15) UNIQUE NOT NULL,

password\_hash VARCHAR(255) NOT NULL,

date\_of\_birth DATE,

gender ENUM('Male', 'Female', 'Other'),

address TEXT,

city VARCHAR(50),

state VARCHAR(50),

pincode VARCHAR(10),

user\_type ENUM('Admin', 'Client') DEFAULT 'Client',

profile\_image VARCHAR(255),

email\_verified BOOLEAN DEFAULT FALSE,

mobile\_verified BOOLEAN DEFAULT FALSE,

is\_active BOOLEAN DEFAULT TRUE,

last\_login DATETIME,

created\_date DATETIME DEFAULT CURRENT\_TIMESTAMP,

modified\_date DATETIME DEFAULT CURRENT\_TIMESTAMP ON UPDATE CURRENT\_TIMESTAMP

);

**8. User Credits**

sql

CREATE TABLE user\_credits (

credit\_id INT PRIMARY KEY AUTO\_INCREMENT,

user\_id INT NOT NULL,

credit\_amount DECIMAL(10,2) DEFAULT 0.00,

last\_updated DATETIME DEFAULT CURRENT\_TIMESTAMP ON UPDATE CURRENT\_TIMESTAMP,

FOREIGN KEY (user\_id) REFERENCES users\_master(user\_id)

);

**Booking Management Tables**

**9. Bookings Master**

sql

CREATE TABLE bookings\_master (

booking\_id INT PRIMARY KEY AUTO\_INCREMENT,

booking\_no VARCHAR(20) UNIQUE NOT NULL,

user\_id INT NOT NULL,

sport\_id INT NOT NULL,

ground\_id INT NOT NULL,

plan\_id INT NOT NULL,

booking\_mode ENUM('per\_person', 'full\_ground') NOT NULL,

no\_of\_persons INT NULL, *-- Only for per person booking*

booking\_date DATE NOT NULL,

start\_date DATE NOT NULL,

end\_date DATE NOT NULL, *-- Same as start\_date for hourly, different for monthly*

total\_slots INT DEFAULT 1,

base\_amount DECIMAL(10,2) NOT NULL,

discount\_amount DECIMAL(10,2) DEFAULT 0.00,

coupon\_discount DECIMAL(10,2) DEFAULT 0.00,

admin\_discount DECIMAL(10,2) DEFAULT 0.00,

credit\_used DECIMAL(10,2) DEFAULT 0.00,

total\_amount DECIMAL(10,2) NOT NULL,

paid\_amount DECIMAL(10,2) DEFAULT 0.00,

pending\_amount DECIMAL(10,2) DEFAULT 0.00,

booking\_status ENUM('Confirmed', 'Cancelled', 'Expired', 'Completed') DEFAULT 'Confirmed',

payment\_status ENUM('Paid', 'Partial', 'Pending', 'Refunded') DEFAULT 'Pending',

created\_by INT NOT NULL,

created\_date DATETIME DEFAULT CURRENT\_TIMESTAMP,

modified\_date DATETIME DEFAULT CURRENT\_TIMESTAMP ON UPDATE CURRENT\_TIMESTAMP,

FOREIGN KEY (user\_id) REFERENCES users\_master(user\_id),

FOREIGN KEY (sport\_id) REFERENCES sports\_master(sport\_id),

FOREIGN KEY (ground\_id) REFERENCES grounds\_master(ground\_id),

FOREIGN KEY (plan\_id) REFERENCES plans\_master(plan\_id),

FOREIGN KEY (created\_by) REFERENCES users\_master(user\_id)

);

**10. Booking Slots Detail**

sql

CREATE TABLE booking\_slots\_detail (

detail\_id INT PRIMARY KEY AUTO\_INCREMENT,

booking\_id INT NOT NULL,

slot\_date DATE NOT NULL,

slot\_id INT NOT NULL,

slot\_price DECIMAL(10,2) NOT NULL,

status ENUM('Active', 'Cancelled', 'Completed') DEFAULT 'Active',

FOREIGN KEY (booking\_id) REFERENCES bookings\_master(booking\_id),

FOREIGN KEY (slot\_id) REFERENCES time\_slots\_master(slot\_id)

);

**11. Slot Availability**

sql

CREATE TABLE slot\_availability (

availability\_id INT PRIMARY KEY AUTO\_INCREMENT,

sport\_id INT NOT NULL,

ground\_id INT NOT NULL,

slot\_date DATE NOT NULL,

slot\_id INT NOT NULL,

available\_capacity INT NOT NULL, *-- For per person booking*

booked\_capacity INT DEFAULT 0,

is\_blocked BOOLEAN DEFAULT FALSE,

blocked\_reason VARCHAR(255),

created\_date DATETIME DEFAULT CURRENT\_TIMESTAMP,

FOREIGN KEY (sport\_id) REFERENCES sports\_master(sport\_id),

FOREIGN KEY (ground\_id) REFERENCES grounds\_master(ground\_id),

FOREIGN KEY (slot\_id) REFERENCES time\_slots\_master(slot\_id),

UNIQUE KEY unique\_slot (sport\_id, ground\_id, slot\_date, slot\_id)

);

**Payment Management Tables**

**12. Payments Master**

sql

CREATE TABLE payments\_master (

payment\_id INT PRIMARY KEY AUTO\_INCREMENT,

payment\_no VARCHAR(20) UNIQUE NOT NULL,

booking\_id INT NOT NULL,

payment\_date DATETIME DEFAULT CURRENT\_TIMESTAMP,

payment\_mode ENUM('Cash', 'UPI', 'Card', 'Credit') NOT NULL,

transaction\_id VARCHAR(100),

amount DECIMAL(10,2) NOT NULL,

payment\_status ENUM('Success', 'Failed', 'Pending') DEFAULT 'Success',

remarks TEXT,

created\_by INT NOT NULL,

created\_date DATETIME DEFAULT CURRENT\_TIMESTAMP,

FOREIGN KEY (booking\_id) REFERENCES bookings\_master(booking\_id),

FOREIGN KEY (created\_by) REFERENCES users\_master(user\_id)

);

**13. Credit Transactions**

sql

CREATE TABLE credit\_transactions (

transaction\_id INT PRIMARY KEY AUTO\_INCREMENT,

user\_id INT NOT NULL,

transaction\_type ENUM('Credit', 'Debit', 'Refund') NOT NULL,

amount DECIMAL(10,2) NOT NULL,

balance\_before DECIMAL(10,2) NOT NULL,

balance\_after DECIMAL(10,2) NOT NULL,

booking\_id INT NULL,

description VARCHAR(255),

created\_date DATETIME DEFAULT CURRENT\_TIMESTAMP,

FOREIGN KEY (user\_id) REFERENCES users\_master(user\_id),

FOREIGN KEY (booking\_id) REFERENCES bookings\_master(booking\_id)

);

**Coupon Management Tables**

**14. Coupons Master**

sql

CREATE TABLE coupons\_master (

coupon\_id INT PRIMARY KEY AUTO\_INCREMENT,

coupon\_code VARCHAR(20) UNIQUE NOT NULL,

coupon\_name VARCHAR(100) NOT NULL,

description TEXT,

discount\_type ENUM('Percentage', 'Amount') NOT NULL,

discount\_value DECIMAL(10,2) NOT NULL,

max\_discount DECIMAL(10,2) NULL,

min\_booking\_amount DECIMAL(10,2) DEFAULT 0.00,

valid\_from DATE NOT NULL,

valid\_to DATE NOT NULL,

max\_usage\_per\_user INT DEFAULT 1,

total\_usage\_limit INT NULL,

applicable\_sports JSON, *-- Array of sport\_ids*

applicable\_plans JSON, *-- Array of plan\_ids*

is\_active BOOLEAN DEFAULT TRUE,

created\_date DATETIME DEFAULT CURRENT\_TIMESTAMP

);

**15. Coupon Usage**

sql

CREATE TABLE coupon\_usage (

usage\_id INT PRIMARY KEY AUTO\_INCREMENT,

coupon\_id INT NOT NULL,

user\_id INT NOT NULL,

booking\_id INT NOT NULL,

discount\_amount DECIMAL(10,2) NOT NULL,

used\_date DATETIME DEFAULT CURRENT\_TIMESTAMP,

FOREIGN KEY (coupon\_id) REFERENCES coupons\_master(coupon\_id),

FOREIGN KEY (user\_id) REFERENCES users\_master(user\_id),

FOREIGN KEY (booking\_id) REFERENCES bookings\_master(booking\_id)

);

**Notification & Communication Tables**

**16. Notifications Master**

sql

CREATE TABLE notifications\_master (

notification\_id INT PRIMARY KEY AUTO\_INCREMENT,

user\_id INT NOT NULL,

notification\_type ENUM('Booking\_Confirmation', 'Payment\_Reminder', 'Upcoming\_Booking', 'Cancellation', 'Rescheduling', 'Expiry\_Reminder') NOT NULL,

title VARCHAR(255) NOT NULL,

message TEXT NOT NULL,

booking\_id INT NULL,

is\_read BOOLEAN DEFAULT FALSE,

sent\_via ENUM('SMS', 'Email', 'Both') NOT NULL,

sent\_status BOOLEAN DEFAULT FALSE,

created\_date DATETIME DEFAULT CURRENT\_TIMESTAMP,

FOREIGN KEY (user\_id) REFERENCES users\_master(user\_id),

FOREIGN KEY (booking\_id) REFERENCES bookings\_master(booking\_id)

);

**17. SMS/Email Logs**

sql

CREATE TABLE communication\_logs (

log\_id INT PRIMARY KEY AUTO\_INCREMENT,

user\_id INT NOT NULL,

communication\_type ENUM('SMS', 'Email') NOT NULL,

recipient VARCHAR(100) NOT NULL,

subject VARCHAR(255),

message TEXT NOT NULL,

status ENUM('Sent', 'Failed', 'Pending') DEFAULT 'Pending',

booking\_id INT NULL,

sent\_date DATETIME DEFAULT CURRENT\_TIMESTAMP,

error\_message TEXT,

FOREIGN KEY (user\_id) REFERENCES users\_master(user\_id),

FOREIGN KEY (booking\_id) REFERENCES bookings\_master(booking\_id)

);

**Policy & Configuration Tables**

**18. Policies Master**

sql

CREATE TABLE policies\_master (

policy\_id INT PRIMARY KEY AUTO\_INCREMENT,

policy\_type ENUM('Cancellation', 'Rescheduling', 'Terms\_Conditions', 'Privacy') NOT NULL,

policy\_title VARCHAR(255) NOT NULL,

policy\_content TEXT NOT NULL,

effective\_from DATE NOT NULL,

is\_active BOOLEAN DEFAULT TRUE,

created\_date DATETIME DEFAULT CURRENT\_TIMESTAMP,

modified\_date DATETIME DEFAULT CURRENT\_TIMESTAMP ON UPDATE CURRENT\_TIMESTAMP

);

**19. System Settings**

sql

CREATE TABLE system\_settings (

setting\_id INT PRIMARY KEY AUTO\_INCREMENT,

setting\_key VARCHAR(100) UNIQUE NOT NULL,

setting\_value TEXT NOT NULL,

setting\_description VARCHAR(255),

data\_type ENUM('String', 'Number', 'Boolean', 'JSON') DEFAULT 'String',

is\_editable BOOLEAN DEFAULT TRUE,

modified\_date DATETIME DEFAULT CURRENT\_TIMESTAMP ON UPDATE CURRENT\_TIMESTAMP

);

**Booking History & Audit Tables**

**20. Booking History**

sql

CREATE TABLE booking\_history (

history\_id INT PRIMARY KEY AUTO\_INCREMENT,

booking\_id INT NOT NULL,

action\_type ENUM('Created', 'Modified', 'Cancelled', 'Rescheduled', 'Payment', 'Completed') NOT NULL,

old\_values JSON,

new\_values JSON,

remarks TEXT,

action\_by INT NOT NULL,

action\_date DATETIME DEFAULT CURRENT\_TIMESTAMP,

FOREIGN KEY (booking\_id) REFERENCES bookings\_master(booking\_id),

FOREIGN KEY (action\_by) REFERENCES users\_master(user\_id)

);

**21. Holidays Master**

sql

CREATE TABLE holidays\_master (

holiday\_id INT PRIMARY KEY AUTO\_INCREMENT,

holiday\_name VARCHAR(100) NOT NULL,

holiday\_date DATE NOT NULL,

day\_type\_id INT NOT NULL,

is\_active BOOLEAN DEFAULT TRUE,

created\_date DATETIME DEFAULT CURRENT\_TIMESTAMP,

FOREIGN KEY (day\_type\_id) REFERENCES day\_types\_master(day\_type\_id)

);

**Sample Data Insertions**

**Insert Sample Plans**

sql

INSERT INTO plans\_master (plan\_name, plan\_code, description) VALUES

('Hourly', 'HR', 'Hourly booking plan'),

('Monthly', 'MT', 'Monthly subscription plan'),

('Yearly', 'YR', 'Yearly subscription plan');

**Insert Sample Day Types**

sql

INSERT INTO day\_types\_master (day\_type\_name, day\_type\_code, description) VALUES

('Weekday', 'WD', 'Monday to Friday'),

('Weekend', 'WE', 'Saturday and Sunday'),

('Holiday', 'HD', 'Public holidays');

**Insert Sample Time Slots**

sql

INSERT INTO time\_slots\_master (slot\_name, start\_time, end\_time, is\_peak\_hour, slot\_order) VALUES

('Morning 6-7', '06:00:00', '07:00:00', FALSE, 1),

('Morning 7-8', '07:00:00', '08:00:00', FALSE, 2),

('Morning 8-9', '08:00:00', '09:00:00', TRUE, 3),

('Morning 9-10', '09:00:00', '10:00:00', TRUE, 4),

('Morning 10-11', '10:00:00', '11:00:00', TRUE, 5),

('Morning 11-12', '11:00:00', '12:00:00', TRUE, 6),

('Afternoon 12-1', '12:00:00', '13:00:00', FALSE, 7),

('Afternoon 1-2', '13:00:00', '14:00:00', FALSE, 8),

('Afternoon 2-3', '14:00:00', '15:00:00', FALSE, 9),

('Afternoon 3-4', '15:00:00', '16:00:00', FALSE, 10),

('Evening 4-5', '16:00:00', '17:00:00', TRUE, 11),

('Evening 5-6', '17:00:00', '18:00:00', TRUE, 12),

('Evening 6-7', '18:00:00', '19:00:00', TRUE, 13),

('Evening 7-8', '19:00:00', '20:00:00', TRUE, 14),

('Night 8-9', '20:00:00', '21:00:00', TRUE, 15),

('Night 9-10', '21:00:00', '22:00:00', TRUE, 16);

**Insert System Settings**

sql

INSERT INTO system\_settings (setting\_key, setting\_value, setting\_description, data\_type) VALUES

('arena\_name', 'Aryen Sports Arena', 'Name of the sports arena', 'String'),

('contact\_email', 'info@aryensportsarena.com', 'Contact email address', 'String'),

('contact\_phone', '+91-9876543210', 'Contact phone number', 'String'),

('advance\_booking\_days', '30', 'Maximum advance booking days allowed', 'Number'),

('cancellation\_hours', '24', 'Minimum hours before booking for cancellation', 'Number'),

('auto\_confirm\_payment', 'true', 'Auto confirm booking after payment', 'Boolean'),

('sms\_enabled', 'true', 'Enable SMS notifications', 'Boolean'),

('email\_enabled', 'true', 'Enable email notifications', 'Boolean');

**Key Indexes for Performance**

sql

*-- Booking related indexes*

CREATE INDEX idx\_bookings\_user\_date ON bookings\_master(user\_id, start\_date);

CREATE INDEX idx\_bookings\_ground\_date ON bookings\_master(ground\_id, start\_date);

CREATE INDEX idx\_bookings\_status ON bookings\_master(booking\_status);

CREATE INDEX idx\_booking\_slots\_date ON booking\_slots\_detail(slot\_date, slot\_id);

*-- Availability indexes*

CREATE INDEX idx\_availability\_ground\_date ON slot\_availability(ground\_id, slot\_date);

CREATE INDEX idx\_availability\_sport\_date ON slot\_availability(sport\_id, slot\_date);

*-- User related indexes*

CREATE INDEX idx\_users\_email ON users\_master(email);

CREATE INDEX idx\_users\_mobile ON users\_master(mobile);

CREATE INDEX idx\_users\_type ON users\_master(user\_type);

*-- Pricing indexes*

CREATE INDEX idx\_pricing\_sport\_ground ON pricing\_master(sport\_id, ground\_id, plan\_id);

CREATE INDEX idx\_pricing\_active ON pricing\_master(is\_active, effective\_from, effective\_to);

*-- Communication indexes*

CREATE INDEX idx\_notifications\_user\_date ON notifications\_master(user\_id, created\_date);

CREATE INDEX idx\_communications\_user\_type ON communication\_logs(user\_id, communication\_type);

This database structure is specifically designed for your Aryen Sports Arena requirements with support for per-person and full ground bookings, flexible pricing based on multiple parameters, coupon management, payment tracking, and comprehensive notification system.

**Key Features Covered:**

1. **Flexible Booking System**:
   * Per person vs Full ground booking modes
   * Capacity management for per person bookings (like small pool: 10, big pool: 30)
2. **Complex Pricing Structure**:
   * Based on sport, ground, plan (hourly/monthly/yearly), booking mode, time slots (peak/non-peak), day types (weekday/weekend/holiday)
3. **Multi-Plan Support**:
   * Swimming & Badminton: Primarily monthly, sometimes hourly
   * Turf: Primarily hourly, sometimes monthly
4. **Availability Management**:
   * Real-time slot availability tracking
   * Capacity management for concurrent bookings
5. **Payment System**:
   * Partial/Full payment support
   * Multiple payment modes (Cash/UPI/Card/Credit)
   * Credit system and transaction tracking
6. **Coupon Management**:
   * Validity periods and usage limits
   * Sport and plan specific coupons
   * Usage tracking to prevent misuse
7. **Communication System**:
   * SMS/Email notifications for bookings, reminders, cancellations
   * Receipt generation with pending amounts
8. **Policy Management**:
   * Cancellation and rescheduling policies
   * System settings for business rules

AI PROMPT

**Complete Sports Booking Software Development Prompt for Aryen Sports Arena**

**Project Overview**

Create a comprehensive web-based sports booking software for "Aryen Sports Arena" with a modern, responsive design and complete functionality for both clients and administrators.

**Core Business Requirements**

**Booking System Features:**

* **Flexible Booking Modes**: Sports can be booked per person OR full ground
* **Sport-Specific Rules**:
  + **Turf**: Primarily hourly booking, occasionally monthly
  + **Swimming & Badminton**: Primarily monthly booking, occasionally hourly
  + **Per Person Capacity**: Small pool (10 max), Big pool (30 max), other grounds as defined
* **Time Management**: Same time slots for all sports with peak/non-peak pricing
* **Complex Pricing**: Based on sport + ground + plan + booking mode + time slot + day type
* **Payment Flexibility**: Full or partial payments via Cash/UPI/Card/Credit
* **Availability Checking**: Real-time slot availability with capacity management

**User Management:**

* **Client Features**: View facilities, book slots, manage bookings, view history
* **Admin Features**: Complete control over all modules, comprehensive reports with charts
* **Authentication**: Login/Registration with email and mobile verification

**Additional Features:**

* **Coupon System**: Validity periods, usage limits, sport-specific discounts
* **Credit System**: User credit balance for payments and refunds
* **Notification System**: SMS/Email for bookings, reminders, cancellations
* **Policy Management**: Cancellation/rescheduling policies displayed prominently
* **Booking Management**: Cancel/reschedule functionality with notifications

**Frontend Requirements**

**1. Welcome/Landing Screen**

Create a modern, engaging homepage with:

- \*\*Hero Section\*\*:

- Striking banner with arena image/video

- Company tagline and welcome message

- Quick booking CTA button

- \*\*Company Information\*\*:

- About Aryen Sports Arena

- Mission, vision, and values

- Contact information and location map

- Operating hours

- \*\*Available Facilities Section\*\*:

- Visual cards for each sport (Football Turf, Swimming Pool, Badminton Courts)

- High-quality images with facility descriptions

- Capacity information and key features

- Pricing starting from indicators

- \*\*Calendar View Widget\*\*:

- Interactive monthly calendar showing availability

- Color-coded slots (Available/Booked/Peak hours)

- Quick date selection for booking

- \*\*Authentication Section\*\*:

- Login/Register buttons prominently placed

- Quick registration form in modal/sidebar

- Social media integration options

- \*\*Policies Section\*\*:

- Cancellation policy summary

- Rescheduling policy summary

- Terms & conditions link

- Privacy policy link

- Safety guidelines

- \*\*Features Highlights\*\*:

- Flexible booking options

- Multiple payment methods

- Mobile app availability

- Customer testimonials/reviews

- \*\*Footer\*\*:

- Contact details

- Social media links

- Quick links to important pages

- Newsletter subscription

**2. User Dashboard Layout**

\*\*Client Dashboard\*\*:

- Profile management

- Current bookings overview

- Upcoming bookings with reminders

- Booking history

- Credit balance and transaction history

- Favorite venues quick access

- Notification center

\*\*Admin Dashboard\*\*:

- Business overview with KPI metrics

- Today's bookings summary

- Revenue analytics with charts

- Occupancy rates by sport/ground

- User management section

- Booking management tools

- Reports and analytics hub

- System settings access

**3. Booking Flow Interface**

\*\*Step 1 - Sport & Ground Selection\*\*:

- Visual sport selection with images

- Ground options based on selected sport

- Capacity and facility information display

\*\*Step 2 - Plan & Mode Selection\*\*:

- Plan options (Hourly/Monthly/Yearly) with pricing

- Booking mode selection (Per Person/Full Ground)

- Person count input for per person bookings

\*\*Step 3 - Date & Time Selection\*\*:

- Calendar widget with availability

- Time slot grid with peak/non-peak indicators

- Multi-date selection for monthly bookings

- Real-time availability checking

\*\*Step 4 - Pricing & Confirmation\*\*:

- Dynamic price calculation display

- Coupon code application

- Credit balance usage option

- Admin discount application (admin only)

- Booking summary with all details

\*\*Step 5 - Payment\*\*:

- Payment method selection

- Partial/Full payment options

- Payment processing interface

- Booking confirmation and receipt

**4. Management Interfaces**

\*\*Booking Management\*\*:

- Search and filter bookings

- Bulk operations for bookings

- Cancellation and rescheduling tools

- Payment status tracking

- Communication logs

\*\*Sports & Grounds Management\*\*:

- Add/Edit sports with images

- Ground configuration with capacity

- Facility management

- Availability calendar management

\*\*Pricing Management\*\*:

- Complex pricing matrix interface

- Bulk pricing updates

- Special event pricing

- Peak hour configuration

\*\*User Management\*\*:

- User search and filtering

- Credit management

- Communication history

- Booking patterns analysis

\*\*Reports & Analytics\*\*:

- Revenue reports with charts

- Occupancy analytics

- User behavior analysis

- Popular time slots analysis

- Financial summaries

**Technical Requirements**

**Frontend Framework:**

* **Technology**: React.js with TypeScript
* **Styling**: Tailwind CSS for responsive design
* **State Management**: Redux Toolkit or Zustand
* **UI Components**: Modern component library (Ant Design/Material-UI/Chakra UI)
* **Charts**: Recharts or Chart.js for analytics
* **Date Handling**: React DatePicker with custom calendar components
* **Forms**: React Hook Form with validation
* **Icons**: Lucide React or Heroicons

**Design Principles:**

* **Mobile-First**: Responsive design for all screen sizes
* **Modern UI**: Clean, contemporary design with smooth animations
* **Accessibility**: WCAG 2.1 compliant with keyboard navigation
* **Performance**: Optimized loading with lazy loading and code splitting
* **User Experience**: Intuitive navigation with minimal clicks to book
* **Visual Feedback**: Loading states, success/error messages, confirmations

**Key Components to Create:**

1. \*\*Layout Components\*\*:

- Header with navigation and user menu

- Footer with contact and links

- Sidebar navigation for dashboards

- Breadcrumb navigation

2. \*\*Booking Components\*\*:

- SportSelector with images and descriptions

- GroundSelector with capacity indicators

- CalendarView with availability colors

- TimeSlotGrid with peak hour indicators

- PricingCalculator with real-time updates

- PaymentForm with multiple options

3. \*\*Dashboard Components\*\*:

- KPI cards with metrics

- BookingCard with status indicators

- RevenueChart with time period filters

- OccupancyHeatmap for ground utilization

- NotificationPanel with real-time updates

4. \*\*Management Components\*\*:

- DataTable with search, filter, and pagination

- FormModal for add/edit operations

- BulkActionBar for multiple selections

- StatusBadge for booking states

- ImageUploader for facility photos

5. \*\*Common Components\*\*:

- LoadingSpinner and Skeleton screens

- Toast notifications for feedback

- ConfirmationModal for critical actions

- SearchBar with autocomplete

- DateRangePicker for reports

**Data Integration:**

* **API Integration**: RESTful API calls using Axios or Fetch
* **Real-time Updates**: WebSocket connection for live availability
* **Caching**: React Query for efficient data fetching and caching
* **Form Validation**: Client-side and server-side validation
* **Error Handling**: Comprehensive error boundaries and user feedback

**Security & Performance:**

* **Authentication**: JWT tokens with refresh mechanism
* **Authorization**: Role-based access control (Admin/Client)
* **Data Protection**: Input sanitization and XSS prevention
* **Performance**: Memoization, virtual scrolling for large lists
* **SEO**: Meta tags and structured data for better search visibility

**Database Integration Points:**

Use the provided database structure with these key integration patterns:

* Dynamic pricing calculation based on pricing\_master table
* Real-time availability checking with slot\_availability table
* Comprehensive booking workflow using bookings\_master and related tables
* User credit system integration with credit\_transactions
* Coupon validation using coupons\_master and coupon\_usage
* Notification system using notifications\_master and communication\_logs

**Deliverables Expected:**

1. **Complete Frontend Application** with all screens and functionality
2. **Responsive Design** working on desktop, tablet, and mobile
3. **Interactive Prototypes** for booking flow and admin panels
4. **Component Documentation** with usage examples
5. **Integration Guidelines** for backend API connections

Create a modern, professional, and user-friendly sports booking platform that provides an exceptional experience for both clients making bookings and administrators managing the arena operations. Focus on intuitive design, efficient workflows, and comprehensive functionality that matches the complex business requirements of Aryen Sports Arena.