

Software Requirements Specification

For

Turf/Ground Booking System, Release 1.0

Version 1.0 approved

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Date Created: September 3rd, 2024

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1. Introduction

1.1 Purpose

This SRS describes the software functional and nonfunctional requirements for Release 1.0 of the Turf/Ground Booking System (TGBS). The system aims to streamline the booking of sports turfs and grounds ,push notifications, process payments, and take reviews. This document is intended for the project team members responsible for implementing and verifying the system.

1.2 Project Scope and Product Features

The Turf/Ground Booking System will allow users to book sports grounds, schedule events,show bookings, payment portal and reviews. The system is designed to replace manual processes, enhance user engagement, and ensure a smooth and efficient booking experience.

1.3 References

1. [Sporloc], Turf/Ground Booking System Vision and Scope Document,
[<https://www.sporloc.com/>]
2. [Razorpay], Payment Gateway Integration Standards

2. Overall Description

2.1 Product Perspective

The Turf/Ground Booking System is a new software application replacing traditional booking methods. It integrates with payment gateways, provides booking updates, and includes a range of features to manage sports activities.

2.2 User Classes and Characteristics

- **Players/Users:** Individuals or groups booking grounds and participating in events.
- **Facility Managers:** Manage availability and maintenance of grounds.
- **Administrators:** Oversee system operations and user management.
- **IT Support:** Provide maintenance and troubleshooting.

2.3 Operating Environment

- **Software:** Operates on secure, scalable platforms compatible with modern web browsers and mobile devices (iOS, Android).

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- **Hardware:** Utilises computers, servers, and mobile devices.

2.4 Design and Implementation Constraints

- **Compliance:** Must comply with local regulations on public facility usage.
- **Security:** Requires encryption and secure protocols for all transactions.

2.5 User Documentation

- The system will provide user manuals, online help, and tutorials.

2.6 Assumptions and Dependencies

- **Assumption:** Reliable internet connectivity is required for optimal performance.
- **Dependency:** Integration with external payment gateways and APIs.

3. System Features

3.1 User Registration and Authentication

3.1.1 Description and Priority

Users can register using email, phone number, or social media accounts.

3.1.2 Stimulus/Response Sequences

- **Stimulus:** User requests to register or log in.
- **Response:** System verifies user credentials and provides access.

3.1.3 Functional Requirements

- The system shall allow users to register and log in using email, phone, or social media.
- The system shall provide password recovery options.

3.2 Book Turf/Ground

3.2.1 Description and Priority

Users can search and book available grounds for sports activities.

3.2.2 Stimulus/Response Sequences

- Stimulus: User searches for available grounds.
- Response: System displays available slots and confirms booking.

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3.2.3 Functional Requirements

- The system shall display available time slots for each facility.
- The system shall allow users to book grounds and receive booking confirmations.

3.3 Event and Match Scheduling

3.3.1 Description and Priority

Users can create, schedule, and manage sports events and matches.

3.3.2 Stimulus/Response Sequences

- Stimulus: User schedules a match or event.
- Response: System confirms scheduling and notifies participants.

3.3.3 Functional Requirements

- The system shall provide scheduling features to manage match timings and locations.

3.4 Payment Processing

3.4.1 Description and Priority

Handles secure payments for bookings and event participation. Priority = High.

3.4.2 Stimulus/Response Sequences

- Stimulus: User proceeds to payment after booking.
- Response: System processes payment and confirms the transaction.

3.4.3 Functional Requirements

- The system shall integrate with payment gateways to process transactions.
- The system shall provide payment confirmation and refund options.

3.5 Reviews and Ratings

3.5.1 Description and Priority

Allows users to rate and review facilities based on their experiences. Priority = Medium.

3.5.2 Stimulus/Response Sequences

- Stimulus: User submits a review or rating.
- Response: System updates the facility's rating.

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3.5.3 Functional Requirements

- The system shall allow users to leave reviews and ratings for facilities.
- The system shall display average ratings for each facility.
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3.6 Notifications and Alerts

3.6.1 Description and Priority

Provides real-time notifications and alerts for bookings, events, and payments.

3.6.2 Stimulus/Response Sequences

- Stimulus: System triggers a notification.
- Response: User receives an alert via email, SMS, or in-app.

3.6.3 Functional Requirements

- The system shall send notifications via email, SMS, or in-app alerts.
- The system shall allow users to customise notification settings.

3.7 User Role Management

3.7.1 Description and Priority

Manages user roles and access levels within the system.

3.7.2 Functional Requirements

- The system shall provide role-based access control for different user types.
- The system shall allow administrators to manage roles and permissions.

4. External Interface Requirements

4.1 User Interfaces

- The system will offer a responsive web and mobile interface with easy navigation.

4.2 Hardware Interfaces

- Integration with POS terminals for in-person payments at facilities.

4.3 Software Interfaces

- API integration with payment gateways and other third-party services.

4.4 Communications Interfaces

- Secure communication protocols for data transfer between the system and external interfaces.

5. Other Nonfunctional Requirements

5.1 Performance Requirements

- The system should handle 1000

concurrent users during peak times without performance degradation.

5.2 Safety Requirements

- The system must ensure safe transaction processing and protect user data against unauthorised access and data breaches.

5.3 Security Requirements

- All sensitive data, including financial and personal information, must be encrypted.
- Users must log in to the system to access any functionality beyond browsing available grounds and viewing public leaderboards.
- The system shall permit only authorised personnel (e.g., Administrators, Facility) to modify critical data, such as booking information, facility availability, and user roles.

5.4 Software Quality Attributes

- **Availability:** The system shall be available 99.9% of the time during peak hours, with regular maintenance scheduled during off-peak times.
- **Usability:** The system shall provide an intuitive user interface that allows users to complete their tasks with minimal learning curve.

- **Scalability:** The system shall support the addition of new features, users, and facilities without major architectural changes.
- **Reliability:** The system should maintain consistent operation and ensure data integrity, even in the event of network disruptions.

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5.5 Business Rules

- Users must agree to the terms of service before making any bookings.
 - Cancellation policies must be clearly communicated to users and enforced by the system, including any associated penalties.
 - Facilities can only be booked for time slots that are available, and no double bookings are permitted.
 - Payments must be completed before a booking is confirmed.
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6. Other Requirements

- A feedback mechanism should be in place for users to report issues or provide suggestions for improvement.
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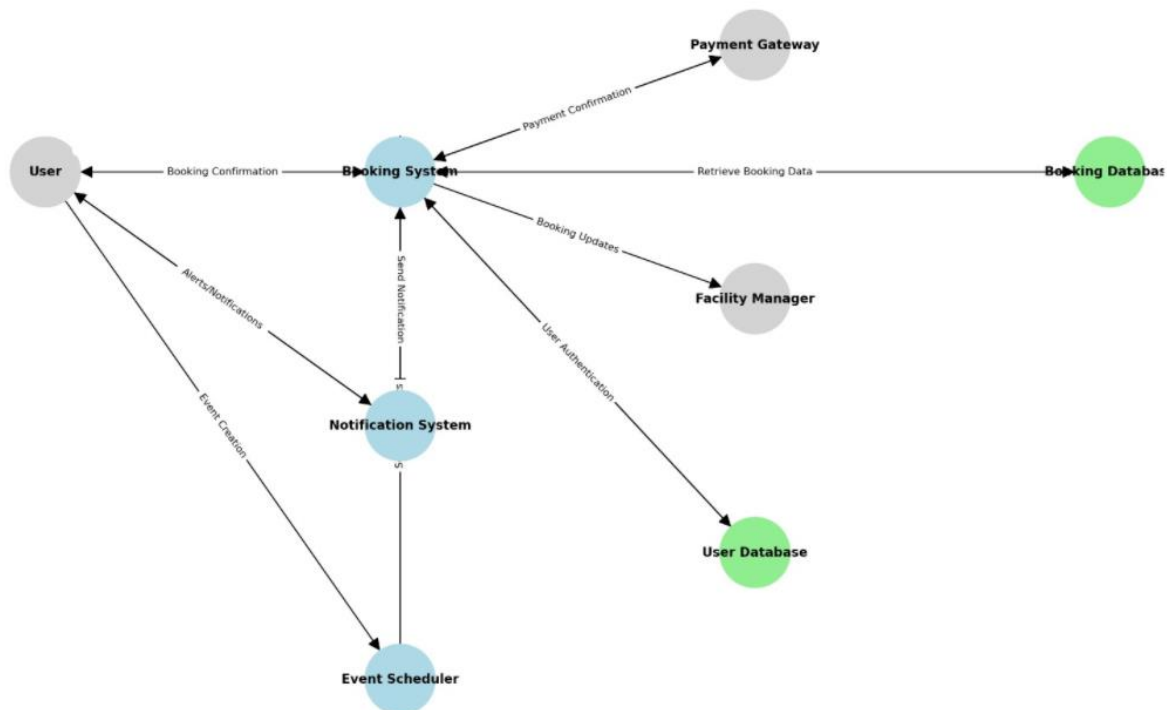
7. Appendices

Appendix A: Data Dictionary and Data Model

Key Entities:

- **User:** Contains information about users, including name, contact details, registration date, and roles.
- **Booking:** Details of reservations made by users, including ground, time slot, payment status, and booking status.
- **Event:** Contains information about scheduled matches or events, including participants, teams, and event outcomes.
- **Payment:** Tracks transaction details, including amount, payment method, status, and associated bookings.

Appendix B: Analysis Models



Appendix C: To Be Determined List

- Additional payment methods for international users.
- Integration with sports equipment rental services.
- Enhanced gamification features such as seasonal leaderboards and in-app rewards.
- Multilingual website