

Software Requirements Specification

for

BookMyTurf

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1 Introduction

1.1 Purpose

The purpose of this Software Requirements Specification (SRS) document is to provide a clear description of the **BookMyTurf – Online Sports Turf Booking and Management System**.

This document outlines the system's objectives, features, and overall behavior. It serves as a reference for developers, testers, instructors, and stakeholders to understand the functional and non-functional requirements of the system.

1.2 Document Conventions

This document follows standard IEEE Software Requirements Specification (SRS) conventions. Section headings, numbered subsections, and bullet-point formatting are used for clarity and consistency.

1.3 Intended Audience

This document is intended for:

- **Faculty and Evaluators** – to review the project scope, design, and correctness
- **Developers** – to understand system requirements and implementation goals
- **Testers** – to verify system behavior against specified requirements
- **Students** – to understand the structure and functionality of the BookMyTurf system

1.4 Product Scope

BookMyTurf is an online sports turf booking and management system that enables players to discover nearby turfs, view real-time slot availability, and book playing slots through a centralized platform. The system allows turf owners to register their turfs, manage slot schedules, and monitor bookings, while administrators verify turf registrations before they are listed.

The system reduces manual booking issues, improves accessibility to sports facilities, and ensures reliable and conflict-free bookings through a secure and organized digital process.

1.5 References

We referenced a research article on a Turf Booking System to understand real requirements and system models. This study outlines features such as real-time slot availability, booking management, user profile management, and secure reservations – validating our project’s goals.

Study Reference:

<https://www.ijfmr.com/papers/2025/3/44829.pdf>

2. Overall Description

2.1 Product Perspective

BookMyTurf is developed as a centralized web-based platform for managing sports turf discovery and bookings. The system is intended for players who want to book turfs, turf owners who manage turf details and bookings, and administrators who verify turf registrations and monitor platform activities.

The system provides a structured digital approach to turf booking by allowing verified turfs to be listed, enabling real-time slot visibility, and supporting efficient management through dashboards and administrative controls.

2.2 Product Functions

Turf Search:

- Search turfs based on location
- View verified turfs and basic details

Slot Booking and Management:

- View available time slots
- Book turf slots through the system

User Management:

- Register and log in players and turf owners
- Role-based access for players, turf owners, and admins

Turf Registration and Verification:

- Submission of turf details by owners
- Admin verification before turf listing

Booking Records and Reports:

- Maintain booking history
- Generate basic booking summaries for users

2.3 User Classes and Characteristics

Player

- Searches and views verified turfs
- Selects available time slots and books turfs
- Views booking history and details

Turf Owner

- Registers and submits turf details for verification
- Manages turf information and booking activities

- Monitors booking records

Admin

- Verifies and approves turf registrations
- Manages users and turf listings
- Monitors system activities

2.4 Operating Environment

- Web-based application
- Runs on standard web browsers (Chrome, Firefox, Edge)
- Server-side processing using Django framework
- Requires a stable internet connection

2.5 Design and Implementation Constraints

The design and implementation of the BookMyTurf system are the following constraints:

- The system will be developed as a web-based application using Python and the Django framework.
- A relational database such as MySQL will be used to store user details, turf information, bookings, and transaction data.
- The system shall support secure user authentication using Django's built-in authentication mechanism.

2.6 User Documentation

- Basic user guide for navigating the BookMyTurf website

- Instructions for turf booking and booking history
- Guidelines for turf owners to manage turfs and bookings

2.7 Assumptions and Dependencies

- Users have basic knowledge of using web applications
- Turfs are visible to players only after admin verification
- Accurate turf and booking data is provided by turf owners
- Internet connectivity is required for booking and management

3. External Interface Requirements:

3.1 User Interfaces

- Home Page
- Registration
- Login
- Dashboard
- Browse Turf
- Turf Booking
- Add Turf
- Slot Manage
- Turf Verification Panel

3.2 Hardware Interface

- Client (User's Computer): You can use any laptop or desktop PC or Mobile to open the website.

3.3 Software Requirements

- BookMyTurf is developed using the Django web framework, which handles request processing, user authentication, and role-based access for players, turf owners, and administrators.

- The system uses a MySQL database to store user information, turf details, booking records, and verification status.
- BookMyTurf interacts with a payment gateway to process online payments securely and receive transaction confirmations.
- The system integrates with Google Maps services to display turf locations and provide navigation directions to users.

3.4 Functional Requirements

R1: Manage User

R1.1: Login

This function allows users to login to the system.

Input:

Email, password

Output:

Login success message

R1.2: Register

This function allows users to create an account.

Input:

Name, email, mobile number, password

Output:

Registration success message

R2: Manage Turf

R2.1: Add Turf

This function allows turf owners to add their turf to the system.

R2.1.1: Enter Turf Details

Input:

Turf name, city, address, Google Maps link, images, facilities

R2.1.2: Upload Verification Documents

Input:

Ownership proof, ID proof

Output:

Request under verification

R2.2: Verification of Turf by Admin

This function allows admin to verify turf details.

R2.2.1: Open Pending Verification Requests

Admin views pending requests.

R2.2.2: Verify Owner Details and Documents

Processing:

Admin checks submitted details and documents

Output:

Turf approval or rejection status

R2.3: Manage Turf Slots

This function allows turf owners to manage time slots

R2.3.1: Slot Generation

Input:

Start date, end date, slot duration

Processing:

System creates slots based on duration

R2.3.2: Price Configuration

Processing:

Owner sets price day-wise or hour-wise

R2.3.3: Cancel Slot

Input:

Reason for cancellation

Processing:

System marks slot as unavailable

R3: Manage Booking

R3.1: Search Turf

This function helps users find turfs.

Input:

Location, price range

Processing:

System filters turfs

Output:

List of available turfs

R3.2: View Turf Details

This function shows selected turf information.

Output:

Turf name, location, images, facilities, price per hour, available slots

R3.3: Book Turf

This function allows users to book a turf.

R3.3.1: Select Turf, Date and Time Slot

Input:

Selected turf, date, and time slot

Processing:

System checks slot availability and temporarily reserves the slot.

Output:

Slot reserved for booking.

R3.3.2: Make Payment

This function processes payment for the selected slot.

Input:

Any Payment Method

Processing:

System sends payment request to the payment gateway.

Output:

Payment success or failure message.

R3.3.3: Booking Confirmation

Processing:

System permanently locks the slot after successful payment and sends booking notification.

Output:

Booking confirmation with Booking ID.

R3.4: Booking History

This function shows previous bookings.

Output:

Booking date, time, amount, turf name

R3.5: Cancel Booking

This function allows users to cancel bookings.

Input:

Booking ID

Processing:

System updates booking status

Output:

Cancellation confirmation

4. Other Nonfunctional Requirements

4.1 Performance Requirements

The system should allow users to search turfs and book slots with minimal response time. It must support multiple users accessing the platform simultaneously without significant performance degradation.

4.2 Safety & Security Requirements

The system must protect user data and prevent unauthorized access through secure authentication and role-based permissions. Sensitive information such as login credentials and payment-related data must be handled securely to avoid data loss or misuse.

4.3 Software Quality Attributes

The system should be reliable, user-friendly, and maintainable. It must provide a simple interface for players, turf owners, and administrators while ensuring accurate booking and verification operations

4.4 Database Requirements

The system will use a secure database to store user details, turf information, booking records, and verification status. The database must ensure data integrity, support fast read and write operations, and handle multiple records efficiently.

4.5 Data Integrity Requirements

The system shall prevent double booking of turf slots. Booking and verification records shall remain consistent across all system modules.

