



**ROCKET SPORTS
CENTER**

Rocket Sports Reservation System

System-Wide Requirements Specification

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Table of Contents

Introduction	4
System-Wide Functional Requirements	4
Authentication	4
Security	4
System Qualities	4
Usability	4
Reliability	5
Performance	5
Supportability	5
System Interfaces	5
User Interfaces	6
Look & Feel	6
Layout and Navigation Requirements	6
Consistency	6
User Personalization & Customization Requirements	6
Interfaces to External Systems or Devices	7
Software Interfaces	7
Hardware Interfaces	7
Communications Interfaces	7
Business Rules	7
Sign-Up Information Control	7
Sign-Up Email BR0001	7
Email and Password Check BR0003	7
Reservation Control	7
Reservations to Same Slot BR0004	8
System Constraints	8
System Compliance	8
Licensing Requirements	8
Legal, Copyright, and Other Notices	8
Applicable Standards	8
System Documentation	9

Rocket Sports Reservation System	
System-Wide Requirements Specification	Date: 29/02/2020

Revision History

Date	Author(s)	Changes	Version
29.02.2020	Deniz Çoker Gülşah Kırtıloğlu Serçin Üstündağ	Initial version	1.0

Rocket Sports Reservation System	
System-Wide Requirements Specification	Date: 29/02/2020

1. Introduction

The purpose of this document is to give a system-wide requirements in sufficient detail for the Rocket Sports Reservation System. Proposed system has a set of system requirements to be fulfilled. These requirements are unfamiliar to the majority of the stakeholders, therefore this documentation can be used as a guideline and a related checklist.

2. System-Wide Functional Requirements

2.1 Authentication

- Access to the system shall be controlled with user authentication.
- Username and password combination shall be required to authenticate users.

2.2 Security

- System shall allow registered users to have control over their personal data.
- All files saved to the system shall be tamper proof so that any unauthorized modification of a file will be detected.

3. System Qualities

3.1 Usability

- The system shall be easy to use by all users over the age of 9.
- The system shall be easy to learn. Internal flow and navigation of the application shall be straightforward.
- The system shall provide informative messages to online users when there are changes in the schedule.
- The system shall let users make their own personal schedules.
- The system shall provide information on already set schedules.
- The system shall let users make changes in their schedules.
- Making any type of booking per one time frame for an activity shall not take more than 5 mouse clicks.

Rocket Sports Reservation System	
System-Wide Requirements Specification	Date: 29/02/2020

3.2 Reliability

- The system shall be available at times when it reaches the peak usage. If any maintenance operations require the system to be taken offline, it must be done outside of these hours.
- The system shall continue functioning even if one network node fails.
- The system shall take hourly backups of the system data to avoid any data loss.
- In the event of a system failure, the latest backup shall be immediately restored such that the system is offline for less than one hour.
- In the event of a power failure, uncompleted transactions shall roll back. The system must be able to recover from power failures and continue operating without any side effects.
- When there are failures in the system, the system shall give informative messages.

3.3 Performance

- The system shall support 500 concurrent users with a possibility of increasing the user number.
- Database system shall be able to store 5,000 user data.
- Database queries shall take less than 2 seconds.
- Over fairly common internet connection speeds, the client requests shall be responded to in less than 3 second.
- Any changes made in the schedules shall be available for all users in 5 seconds.

3.4 Supportability

- As the RSRS grows and member count increases, the storage shall be increased to accommodate the increased data.
- Architecture design shall adopt low coupling principle between components such that it will be easy to integrate the system with other components if needed.
- There shall be info buttons on menus to provide usage help.
- As there are upgrades to the system, information on the changes shall be available for users.

4. System Interfaces

Rocket Sports Reservation System	
System-Wide Requirements Specification	Date: 29/02/2020

4.1 User Interfaces

4.1.1 Look & Feel

- A simple and minimalistic Graphical User Interface (GUI) shall be designed.
- Upon client's request, the interface shall be designed by using the color combination of Rocket Sports Center logo which are blue (RAL 5023) and white (RAL 9016).
- Simplistic approach shall also be valid while displaying informative messages.
- The GUI shall give an authoritative feeling with it's appearance.

4.1.2 Layout and Navigation Requirements

- There shall be an options menu consisting of tabs stable on the left and users shall be able to reach options menu from every page.
- Screens shall be grouped into tabs for account settings, courses and user weekly schedule.
- Main screen shall be changed according to the selected tab from the left menu.
- Main page after login shall be the weekly schedule of the current user.

4.1.3 Consistency

- Current page shall be indicated with a different color so that users shall know which page they are on. Colors used for the accessed (current page) tab and the rest of the tabs must be always shown using the same set of two colors.
- Booking on any type of activity shall be done following the same procedure.
- Login screen shall be no different than any other app, textboxes to fill username and password in each line following the "login" button, such as Instagram.
- Terminology used shall be simple, short and easy to understand.
- Error/failure messages shall be consistent and easy to understand.

4.1.4 User Personalization & Customization Requirements

The system shall not offer user personalization or customization options.

Rocket Sports Reservation System	
System-Wide Requirements Specification	Date: 29/02/2020

4.2 Interfaces to External Systems or Devices

4.2.1 Software Interfaces

The system shall not offer any external software interfaces.

4.2.2 Hardware Interfaces

The system requires an Internet connection and any hardware that is used to provide the Internet connection such as Modem, 4.5G, WAN-LAN to the system shall be hardware interface to the system.

4.2.3 Communications Interfaces

The system requires an Internet connection and the communication shall be provided via HTTP (Hypertext Transfer Protocol). Web browsers on user end shall be fully compatible with HTTP and HTTP 2.0.

5. Business Rules

5.1 Sign-Up Information Control

5.1.1 *Sign-Up Email* BR0001

A registered email address shall not be used to sign up to the system.

5.1.2 *Sign-Up Password* BR0002

Password length shall be 6 characters long without character restrictions.

5.2 Login Information Control

5.2.1 *Email and Password Check* BR0003

Email and password combination shall be checked during the login process. If there is no such combination found registered, the system will give a warning.

5.3 Reservation Control

Rocket Sports Reservation System	
System-Wide Requirements Specification	Date: 29/02/2020

5.3.1 Reservations to Same Slot BR0004

If a member user tries to reserve a personal trainer to the same slot he/she already has a reservation with another personal trainer, then the system shall give a warning.

5.3.2 Reservation Confirmation BR0005

Reservations made by members shall not need to be confirmed by personal trainers.

6. System Constraints

1. Java programming language shall be used to implement the system and Eclipse IDE will be used as the development environment.
2. MySQL shall be used as the database management system.
3. Developers shall provide and implement security for the database management system to keep the user data protected.
4. Developers shall be aware that the system will work on web browsers Chrome, Firefox and Internet Explorer browsers. Common libraries that will support these browsers shall be used during implementation.

7. System Compliance

7.1 Licensing Requirements

Not applicable.

7.2 Legal, Copyright, and Other Notices

Developers shall be careful about the privacy of users. Necessary precautions shall be taken to protect user data.

7.3 Applicable Standards

Developers shall implement the system with Java programming language. The code shall be compatible with ISO/IEC 25051.

Rocket Sports Reservation System	
System-Wide Requirements Specification	Date: 29/02/2020

8. System Documentation

There shall be a Frequently Asked Questions (FAQ) page provided and system functionality shall be explained in brief sentences in a question-answer manner.