Software Requirements Specification (SRS) Document

Contents

1 Introduction

1.1 Purpose

The purpose of this Software Requirements Specification (SRS) document is to provide a detailed description of the requirements for the system. This document is intended for stakeholders, developers, and testers.

1.2 Scope

The scope of this project is to develop a system that provides authentication, authorization, and auditing capabilities.

1.3 Definitions

- **System**: The system refers to the software application being developed.

- **User**: A user is an individual who interacts with the system.

1.4 References

- **IEEE830-1998**: Standard for Software Requirements Specifications.

1.5 Overview

The system will provide the following capabilities:

- User authentication and authorization

- Auditing and logging

- Integration with existing user management systems

2 Overall Description

2.1 Product Perspective

The system will be a web-based application that interacts with a database to store user information and system logs.

2.2 Product Functions

The system will provide the following functions:

- User authentication and authorization

- Auditing and logging

- Integration with existing user management systems

2.3 User Characteristics

The users of the system will be administrators and end-users.

2.4 Constraints

The system will be built using a web-based architecture and will be hosted on a cloud-based infrastructure.

2.5 Assumptions

The following assumptions have been made:

- The system will be built using a web-based architecture.

- The system will be hosted on a cloud-based infrastructure.

3 Specific Requirements

3.1 Functional Requirements

3.1.1 Authentication

REQ-001   The system shall authenticate users via a unique username and password combination.

- **Description**: The system shall authenticate users using a unique username and password combination.

- **Inputs/Outputs**:

  - Input: Username and password
  - Output: Authentication result (success/failure)

- **Processing Logic**:

  - The system shall verify the username and password against the stored credentials.

- **Business Rules**:

  - The system shall enforce password complexity rules.

- **Exception Handling**:

  - The system shall display an error message for invalid login attempts.

- **Acceptance Criteria**:

  - Successful login with valid credentials.

REQ-003 The system shall display a login error message when invalid credentials are provided.

- **Description**: The system shall display a login error message for invalid credentials.

- **Inputs/Outputs**:

  - Input: Invalid username and/or password
  - Output: Login error message

- **Processing Logic**:

  - The system shall verify the username and password against the stored credentials.

- **Business Rules**:

  - The system shall enforce password complexity rules.

- **Exception Handling**:

  - The system shall display an error message for invalid login attempts.

- **Acceptance Criteria**:

  - Error message displayed within2 seconds of invalid login attempt.

3.2 Non-Functional Requirements

REQ-008 The system shall handle1000 concurrent user sessions without performance degradation.

- **Description**: The system shall handle1000 concurrent user sessions without performance degradation.

- **Measurable Criteria**:

  - System response time ¡2 seconds for1000 concurrent users.

3.3 Interface Requirements

REQ-014 The system shall support integration with existing user management systems via LDAP or SAML.

- **Description**: The system shall support integration with existing user management systems via LDAP or SAML.

- **Measurable Criteria**:

  - Successful integration with LDAP or SAML systems.

4 Appendices

4.1 Data Dictionary

- **User**: A user is an individual who interacts with the system.

- **Username**: A unique identifier for a user.

- **Password**: A secret password for a user.

4.2 Traceability Matrix

Requirement ID	Business Objective
REQ-001	Authenticate users
REQ-003	Display login error message
REQ-008	Handle1000 concurrent user sessions

4.3 Risk Analysis

The following risks have been identified:

- **Risk1**: Technical difficulties in implementing the system.

- **Risk2**: Delay in development timeline.

4.4 Assumptions and Constraints

The following assumptions and constraints have been identified:

- **Assumption1**: The system will be built using a web-based architecture.

- **Assumption2**: The system will be hosted on a cloud-based infrastructure.

- **Constraint1**: The system shall be developed within a specific timeline.

5 Approval and Version Control

5.1 Approval

This document has been approved by:

- **Name**: John Doe

- **Title**: Project Manager

- **Signature**:

- **Date**:

5.2 Version Control

This document is version1.0.