Software Requirements Specification (SRS)

Project: Example Software Project

Date: 2025-04-02 17:54:40

# 1. Introduction

This document describes the Software Requirements Specification (SRS) for the project. It includes both Functional Requirements (FR) and Non‑Functional Requirements (NFR) which have been extracted and/or generated.

## 1.1 Purpose

The purpose of this document is to provide a detailed description of the system to be developed and serve as a guideline for design, development, and testing teams.

## 1.2 Scope

This SRS document outlines functionalities, performance criteria, design constraints, and quality attributes of the system. It covers all major aspects of the software product.

# 2. Overall Description

This section provides an overview of the system including user characteristics, assumptions, and constraints that affect system design.

# 3. Functional Requirements (FR)

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| ID | Requirement |
| FR-001 | The platform must allow employees to log in and view their assigned tasks, while managers should be able to assign and track work in real time. |
| FR-002 | Managers should be able to export employee performance data in formats such as PDF, CSV, or Excel. |
| FR-003 | These reports should be customizable, allowing managers to select specific parameters for analysis. |
| FR-004 | The system should analyze employee skills, past performance, and availability to automatically assign tasks to the most suitable individual. |
| FR-005 | To achieve this, the AI model should: • Consider employee workload and avoid task over-assignment. |

# 4. Non-Functional Requirements (NFR)

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| ID | Requirement |
| NFR-001 | Furthermore, the system should include automated report generation to provide insights into workforce productivity. |
| NFR-002 | To ensure seamless operation, the system should be accessible via web and mobile devices. |
| NFR-003 | Additionally, users should have the ability to update their profile details, track performance metrics, and receive notifications related to their tasks. |
| NFR-004 | To protect sensitive company information, the system must implement role-based access control (RBAC). |
| NFR-005 | Employees should only have access to their own data, whereas managers and administrators should have broader access to view and edit employee information. |
| NFR-006 | To prevent unauthorized access, multi-factor authentication (MFA) must be integrated. |
| NFR-007 | It was agreed that all user credentials should be encrypted using SHA-256 hashing, and all communications should be secured using TLS/SSL encryption. |
| NFR-008 | Furthermore, sensitive documents and reports generated by the system should be stored in an encrypted database to prevent data breaches. |
| NFR-009 | The backend infrastructure should be capable of supporting at least 10,000 concurrent users without significant delays in response time. |
| NFR-010 | It was suggested that the system should incorporate load balancing techniques to distribute incoming traffic efficiently across multiple servers. |
| NFR-011 | Additionally, the database architecture should be optimized for fast query execution by implementing indexed searches and caching mechanisms. |
| NFR-012 | The platform should aim for a 99.99% uptime guarantee, ensuring that critical functionalities remain operational even during peak hours. |
| NFR-013 | The system should follow a clean and structured UI layout, allowing users to navigate easily across different sections. |
| NFR-014 | To ensure consistency across different devices, the application should be designed using responsive UI frameworks such as React.js or Flutter for mobile compatibility. |
| NFR-015 | The system should include data anonymization techniques to protect user identity while maintaining analytical capabilities. |
| NFR-016 | Furthermore, users should have the right to request data deletion, in compliance with privacy laws. |
| NFR-017 | Integration with Third-Party Services The platform will need to integrate with third-party tools such as payroll management systems, HR databases, and cloud storage solutions. |
| NFR-018 | The API architecture should be designed for easy third-party integration, supporting REST and GraphQL-based interactions. |
| NFR-019 | Data migration issues – The system will need to import data from legacy HR management software. |
| NFR-020 | Ensuring real-time updates – Task status should be updated instantly without page reloads. |

# 5. External Interface Requirements

## 5.1 User Interfaces

The system will provide a web-based user interface supporting modern browsers (Chrome, Firefox, Edge, Safari) and a mobile interface optimized for both Android and iOS devices. The design will be responsive to various screen sizes.

## 5.2 Hardware Interfaces

The system is designed to operate on standard server hardware and may interface with peripheral devices such as printers, barcode scanners, or IoT devices when required.

## 5.3 Software Interfaces

The system will integrate with external systems via RESTful APIs supporting JSON and XML data formats. It will also offer secure endpoints for third-party integrations.

# 6. Appendix & References

## 6.1 Glossary

Key terms and acronyms:  
- UI: User Interface  
- API: Application Programming Interface  
- DB: Database

## 6.2 Supporting Documentation

Supporting documentation includes software design documents, user manuals, industry standards, and reference architectures.

## 6.3 References

1. IEEE Standard for Software Requirements Specifications (IEEE 830)  
2. ISO/IEC/IEEE 29148:2018 Requirements Engineering  
3. Additional industry publications and white papers.