Software Requirements Specification



MAVRYCK

Version 1.0

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Revision History

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Date** | **Reason For Changes** | **Version** |
| Afreen Ghazal | 15-JUL-24 | 1st draft prepared for SRS version 1.0 | 1.0 |
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|  |  |  |  |

# Introduction

## Purpose

The purpose of this document is to build an online project management system that uses Artificial intelligence to ease users. This document will outline the system's functionality, performance, and constraints.

## Document Conventions

This document uses the following conventions.

|  |  |
| --- | --- |
| DB | Database |
| AI | Artificial Intelligence |
| ER | Entity Relationship |
| UI | User Interface |
| API | Application Programming Interface |

## Intended Audience and Reading Suggestions

This project is a prototype for the project management system with AI based capabilities. This document is useful for software developers, project managers, business analyst, marketing staff, users, testers, and documentation writers.

## Project Scope

The AI-Based Project Management System will leverage artificial intelligence to enhance project planning, tracking, and execution. Key features include task automation, predictive analytics, and resource optimization.

## References

IEEE Std 830-1998, IEEE Recommended Practice for Software Requirements Specifications

# Overall Description

## Product Perspective

The AI-Based Project Management System will be an integrated solution that can be deployed as a standalone application or as a web-based service. It will interact with other project management tools via APIs.

## Product Features

* **Task Management**: Create, assign, and track tasks.
* **AI-based Recommendations**: Suggest optimal resource allocation and timelines.
* **Predictive Analytics**: Forecast project risks and milestones.
* **Automated Reporting**: Generate progress reports and performance metrics.

## User Classes and Characteristics

* **Project Managers:** Primary users responsible for overseeing project progress.
* **Team Members**: Individuals assigned to tasks within the project.
* **Stakeholders**: Individuals interested in the project outcome but not involved in daily operations.

## Operating Environment

* **Platform:** Web-based application.
* **Operating Systems**: Windows
* **Browsers**: Chrome, Firefox, Safari.
* **Database:** MongoDB database
* **Platform/Technology:** Java React

## Design and Implementation Constraints

* Scalability to handle multiple projects and large teams.
* Compatibility with existing project management tools.
* Implement the database at least using a centralized database management system.

## Assumptions and Dependencies

* Reliable internet connection for web-based functionalities.
* Availability of existing data for AI algorithms to learn from.

# System and App Features

## System Features

* **Time Manager**

Mavryck Time Manager can revolutionize your daily productivity like organize your tasks, prioritize deadlines, and optimize your time with intelligent suggestions, ensuring you stay focused on what matters most. Experience the efficiency of smart scheduling, automatic reminders, and adaptive learning that tailors your calendar to your unique work rhythm.

* **Vivclima**

We have combined ISO 14067 with GHG Protocol to build this innovative solution where enterprises can understand, monitor and control their project carbon footprint supplemented by a powerful recommendation engine to reduce this carbon footprint and contribute towards UNSGD Goals.

* **S AI f**

Mavryck uses advanced AI technology to monitor workers for safety violations and detect signs of stress or fatigue. This data-driven approach helps prevent injuries and provides clear visibility into job site progress, allowing for quick resolution of disputes.

* **AIstimate Pro**

Transform your estimation management. Gain unparalleled accuracy and efficiency in estimating project timelines and resource requirements. Utilize sophisticated algorithms that leverage historical data, anticipate challenges, and deliver meticulous project estimates, ensuring your team is equipped with the insights needed for successful planning and execution. Elevate your project outcomes by embracing the precision and foresight of cutting-edge AI technology.

* **Cost Brain**

Empower your financial strategy with our breakthrough solution. Effortlessly track expenses, analyze spending patterns, and make informed budget decisions with real-time insights. Harness the power of predictive analytics to anticipate costs, optimize resource allocation, and drive financial efficiency, ensuring your organization's fiscal health is always in peak condition.

* **Reporting Manager**

Mavyrck's Reporting Manager is a powerful tool designed to streamline and enhance reporting processes. It provides user-friendly interfaces and advanced capabilities for efficient data collection, analysis, and presentation. This application empowers reporting managers to generate insightful reports, facilitating data-driven decision-making within organizations.

* **Contract Manager**

Mavyrck's Contracts Manager Application is a sophisticated and highly specialized tool designed to streamline and enhance contract management processes within organizations. Tailored to Mavyrck's specific requirements, this application provides a comprehensive set of features to empower contract managers in their roles.

* **Resource Optimizer**

Revolutionize your Resource Management & Optimization with our AI-driven solution. Seamlessly allocate resources, optimize workforce efficiency, and maximize productivity. Leverage predictive analytics to identify potential bottlenecks, align resources with project demands, and enhance overall operational efficiency. Experience the future of resource management, where intelligent insights empower your organization to thrive in dynamic environments, ensuring optimal utilization of resources for unparalleled success.

* **Risk IQ**

Mavyrck's Risk Manager Application is a vital tool for contemporary project management, crafted to assist organizations in identifying, assessing, and mitigating project risks. This advanced application empowers project managers and teams to proactively overcome challenges, ensuring smoother project execution and contributing to overall venture success.

## App Features

* **Task Creation and Management**
  + Users must be able to create, assign, and update tasks.
  + System must track task status and deadlines.
* **AI-Based Recommendations**
  + System must analyze historical data to suggest optimal timelines.
  + System must recommend resource allocation based on availability and skill sets.
* **Predictive Analytics**
  + System must forecast potential delays and risks.
  + System must provide actionable insights to mitigate identified risks.
* **Automated Reporting**
  + System must generate periodic progress reports.
  + Reports must be customizable based on user requirements

# External Interface Requirements

## User Interfaces

* Descriptions and mock-ups of primary screens.
* Navigation flow and user interactions

## Hardware Interfaces

Description of hardware required for the system to function optimally.

## Software Interfaces

Following are the software used for the flight management online application.

|  |  |
| --- | --- |
| **Software used** | **Description** |
| Operating system | We have chosen Windows operating system for its best support and user-friendliness. |
| Database | To save the records we have chosen SQL+ database. |
| Technology/ Programming Language | To implement the project we have chosen React for its more interactive support. |

## Communications Interfaces

Protocols and standards for data exchange between the system and external tools.

# Other Nonfunctional Requirements

## Performance

System must handle up to 1,000 concurrent users without performance degradation.

## Reliability

System must have an uptime of 99.9%.

## Availability

System must be available 24/7 except for scheduled maintenance.

## Maintainability

System codebase must follow industry standards to ensure ease of maintenance.

## Portability

System must be portable across different operating systems with minimal adjustments.

## Safety Requirements

If there is extensive damage to a wide portion of the database due to catastrophic failure, such as a disk crash, the recovery method restores a past copy of the database that was backed up to archival storage (typically tape) and reconstructs a more current state by reapplying or redoing the operations of committed transactions from the backed up log, up to the time of failure.

# Other Requirements

<Define any other requirements not covered elsewhere in the SRS. This might include database requirements, internationalization requirements, legal requirements, reuse objectives for the project, and so on. Add any new sections that are pertinent to the project.>

Appendix A: Glossary

<Define all the terms necessary to properly interpret the SRS, including acronyms and abbreviations. You may wish to build a separate glossary that spans multiple projects or the entire organization, and just include terms specific to a single project in each SRS.>

Appendix B: Analysis Models

<Optionally, include any pertinent analysis models, such as data flow diagrams, class diagrams, state-transition diagrams, or entity-relationship diagrams.>