
SOFTWARE REQUIREMENTS SPECIFICATION

for

TIME MANAGEMENT SYSTEM

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Contents

1	Introduction	3
1.1	Purpose	3
1.2	Project Scope	3
1.3	Definitions, Acronyms and Abbreviations	3
1.3.1	TMS	3
1.3.2	GUI	3
1.3.3	Token	3
1.3.4	Metadata	3
1.3.5	Executive	3
1.3.6	Secretary	3
1.3.7	Analyst	3
2	Overall Description	4
2.1	Product Perspective	4
2.2	User Classes and Characteristics	4
2.3	Product Functions	4
2.3.1	Executives	4
2.3.2	Secretaries	4
2.3.3	Analysts	4
2.4	Operating Environment	5
2.5	General Constraints	5
2.6	Assumptions and Dependencies	5
3	System features and Requirements	6
3.1	Functional Requirements	6
3.1.1	Login	6
3.1.2	Update Schedules	6
3.1.3	Register Executives	6
3.1.4	Send Mails	6
3.1.5	Register Appointment	6
3.1.6	Show Schedules	7
3.1.7	Register Leaves	7
3.1.8	Generate Statistics	7
3.2	External Interface Requirements	7
3.2.1	GUI	7
3.3	Non Functional Requirements	7
3.3.1	Performance Requirements	7
3.3.2	Safety Requirements	8
3.3.3	Security Requirements	8

1 Introduction

1.1 Purpose

The main objective of this document is to illustrate the requirements of the project Time Management System. The document gives detailed description of both functional and non functional requirements for the software.

1.2 Project Scope

The TMS tool will help in efficient time management for its executives. It includes a web-based application used to track an employee's work hours. TMS gives organizations insights into their workforce, allowing them to see, plan and manage employees' time. Doing so allows organizations to manage labor costs and increase productivity.

1.3 Definitions, Acronyms and Abbreviations

1.3.1 TMS

Time Management System

1.3.2 GUI

Graphical User Interface

1.3.3 Token

Response from server conforming login which also includes some metadata about the user.

1.3.4 Metadata

Data providing information about one or more aspects of the data

1.3.5 Executive

Someone who is employed by a business at a senior level. They decide what the business should do and make sure that it is done.

1.3.6 Secretary

A person employed by an individual or in an office to assist with correspondence, make appointments, and carry out administrative tasks.

1.3.7 Analyst

A person who processes, interprets and documents business procedures, products, services and software through analysis of data.

2 Overall Description

2.1 Product Perspective

TMS is the replacement of the manual scheduling system. The work which had been done manually, i.e. on paper, which includes creating schedules and providing appointments, have been implemented into a cross-platform web-app which would streamline the time management process and provide a hassle-free experience for executives, secretaries and analysts alike.

2.2 User Classes and Characteristics

TMS has basically 3 types of users.

- Executives:
- Secretaries
- Analysts

Secretaries and Analysts will have roles akin to administrators and have privileges as such.

2.3 Product Functions

When an employee logs in, they will receive a token corresponding to the employee type.

2.3.1 Executives

- Register their daily appointments on the schedule.
- Mark periods for which they will be on leave.
- Mark important jobs they need to do.

2.3.2 Secretaries

- See appointments of all executives.
- Make relevant entries and find a common slot for arranging meetings.
- Add, delete or update executive metadata.
- Send notifications via email.

2.3.3 Analysts

- Provide several types of statistics such as which executive spent how much time on meetings.
- Display for which project how many meetings were organized for what duration and how many man-hours were devoted to it.
- Display on the whole during any given period of time what fraction of time on the average each executive spent on meetings.
- Generate reports based on given analysis.

2.4 Operating Environment

The website will be operate in any Operating Environment - Mac, Windows, Linux etc.

2.5 General Constraints

- The information of all employees, project and meeting timings, and leaves taken by an employee must be stored in a database that is accessible by the website.
- Users must input correct credentials to enter their accounts.

2.6 Assumptions and Dependencies

The assumptions are:-

- The code is error free.
- The time-allocation mechanism is fast.

The dependencies are :-

- The end users (admin) should have proper understanding of the product.
- The information of all the users must be stored in a database that is accessible by the TMS.
- Any update regarding an employee of the organization is to be recorded to the database and the data entered should be correct.

3 System features and Requirements

3.1 Functional Requirements

TMS should be able to perform the following functions:

3.1.1 Login

Intro Used for authorizing a user to view their dashboard.

Input User credentials (username, user type and password).

Processing The software requests credentials from the user and provides a token based on the user type.

Output Entry to respective dashboards.

Error Handling If username and/or password is incorrect, the system requests the user to enter correct credentials.

3.1.2 Update Schedules

Intro The software should help the secretary by sending metadata for all executives using which the secretary should be able to query for their respective schedules and be able to update them in the common schedule database.

Input Executive Schedule (Appointments and Leaves)

Output Updated Executive Schedule

3.1.3 Register Executives

Intro The software should help the secretary store information which includes person(s) invited for a meeting, venue of the meeting, the time and duration of the meeting, and the purpose (e.g. for a specific project work).

Input Executive data (Name, Contact Number, Email, Password, Executive ID).

Processing Storage of data into the executive database.

Output Message of successful registration displayed on the screen.

3.1.4 Send Mails

Intro On registration of an appointment, TMS should send executives a confirmatory mail regarding details of a new meeting they need to attend.

Input Appointment Details (date, description and participants), Executive schedules.

Output Notification emails send to the respective executives.

3.1.5 Register Appointment

Intro The software should let the executives register their daily appointment schedules.

Input Appointment Details (Date, Start time, Duration, Description, participants)

Output Available Slots (Date, Time of free slot)

3.1.6 Show Schedules

Intro TMS should display the respective schedules to each executive.

Input Executive schedules (Appointment and Leave details)

Output Display the schedule.

3.1.7 Register Leaves

Intro Besides registering their appointments and meetings, the executives might mark periods for which they plan to be on leave.

Input Leave details from executive (start date, duration) and confirmation from secretary.

Output A mail of acceptance/rejection is sent to the executive and a confirmation message is displayed to the secretary.

3.1.8 Generate Statistics

Intro Provide several types of statistics such as which executive spent how much time on meetings, for which project how many meetings were organized and how many man-hours were devoted to it.

Input Executive schedules

Processing Data is retrieved from the database for particular items over a particular time period

Output Generated charts or tables are displayed on the screen.

3.2 External Interface Requirements

3.2.1 GUI

Login Interface

An unregistered user can enter their details and create an account. Once an account is created they can 'Login' which requires the user to type their username and password. If the credentials are incorrect then an error message appears.

Calendar

Executives can check the schedule for the day, week or month and can also add their own personal schedules.

Scheduling and Communications Panel

Secretaries can schedule meetings based on timings provided by the executives and send notifications regarding the same via email. They can also handle leave requests and other employee information through this panel.

Dashboard

This dashboard will provide analysts statistical information on employees like leaves taken, salary, and other insights like project deadline and records of past meetings held.

3.3 Non Functional Requirements

3.3.1 Performance Requirements

The response time must be quick to extend convenience. Also, the associations between database server, web page and web servers must be smooth without any idleness to avoid the misfortune of information and keep the stream of utilization going.

3.3.2 Safety Requirements

The framework is secured because it will as give access to approved users. It'll have legitimate login framework which is able require client id and password. The database is secured from injection methods with the assistance of private keys and a SSL/TLS key encryption. This guarantees that all information passed between the internet server and browsers stay private and indispensable.

3.3.3 Security Requirements

- Keep specific log or history data sets
- Assign certain functions to different modules
- Restrict communications between some areas of the program
- Check data integrity for critical variables