**SOFTWARE REQUIREMENTS SPECIFICATION**

***for***

**Company Management System**

***Prepared By***

***Syswriters***

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CHANGE HISTORY

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***Table 1***

PREFACE

*The document contains the Software Requirements Specification of COMPANY MANAGEMENT SYSTEM. The mission of the project is to develop a web-based management system for companies,schools etc. The goal of the SRS is to describe the requirements of the COMPANY MANAGEMENT SYSTEM.*

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# INTRODUCTION (Section 1 of the SRS)

## Purpose of the SRS

The purpose of the Software Requirements Specification (SRS) is to identify what the COMPANY MANAGEMENT SYSTEM is supposed to do,  to provide better communication among the Syswriters and the acquirers, who are the intended audience of the SRS,  to provide a basis for controlling the evolution of the COMPANY MANAGEMENT SYSTEM and system verification in a correct, complete, unambiguous and verifiable manner.

## Scope of the Product

CMS is a web access management system that managing your employees. Also customer of the companies can see their projects. For this reason, the overall system will consist of web interfaces. And these interfaces are used to support the following functions:

* Make real-time operations on projects.
* Assure data consistency.
* Access the information of the projects ands employees from anywhere and at anytime.
* Customers can see the project,people that assigned to the project.
* Customers can comment about the project.
* Manage employees from anytime and at anyplace by using only a web browser.
* Managers informs up to date information to the customers about projects or jobs via using CMS web page.

## Definitions, acronyms and abbreviations

Project: Jobs that company should done.

DNS: Domain Name System

EX: Exception

ER: Entity Relationship

HTML: Hypertext Markup Language

HTTP: Hyper Text Transform Protocol

Instructor: Teacher of the Course

C#: Programmin language

.NET:Framework

MVC:Model View Controller

CMS: Company Management System

OS: Operating System

RDBMS: Relational Database Management System

SQL: Structured Query Language

SRS: Software Requirements Specification

TCP / IP: Transmission Control Protocol / Internet Protocol

UC Use Case

WAP: Web Application Project

XML: Extensible Markup Language

## References

In this subsection, a complete list of all documents referenced in the SRS will be specified.

## Overview

The SRS is organized in three sections.

* Introduction Section (Section 1 of the SRS) in which purpose, scope, definitions,

references and an overview of the SRS are given.

* Overall Description Section (Section 2 of the SRS) describes the general factors

that affect the product and its requirements. This section does not state specific

requirements. Instead, it provides a background for those requirements, which are

defined in detail in specific requirements part (Section 3 of the SRS), and makes

them easier to understand.

* Specific Requirements Section (Section 3 of the SRS) contains all of the software

requirements to a level of detail sufficent to enable Syswriters to design the COMPANY MANAGEMENT SYSTEM to satisfy those requirements, and testers to test that the system satifsies those requirements.

# OVERALL DESCRIPTION (Section 2 of the SRS)

This section of this SRS describes the general factors that affect the CMS Software and its requirements. It does not state specific requirements, but provides a background for them.

## Product perspective

### System interfaces

The Company Management System will be a stand-alone system and it is independent from platform just needs web browser.

### User interfaces

* All of the user interfaces shall be web-based.
* The format of the screens may differ depending on the operating system, the window manager and the HTTP client used by the user.
* There shall be 8 different types of user interfaces. These are :

1. authentication
2. root/admin/manager interface
3. customer interface
4. employee interfaces
5. displaying projects interface(3 different user interfaces)
6. user management(add,update,delete) interface (only for manager )

* The COMPANY MANAGEMENT SYSTEM shall be designed such that a university graduate shall be able to learn using it after 30 minutes of continuous training.

### Hardware interfaces

There is no defined hardware interface for the COMPANY MANAGEMENT SYSTEM.

### Software interfaces

The required software products shall be:

**Name** : Apache HTTP Server

**Version number**:2.4.37

**Source**:https://httpd.apache.org/download.cgi

**Purpose of the interfacing software with the proposed software** : In order to execute the client site of COMPANY MANAGEMENT SYSTEM, the web server specified above is required as the provider of the client software at the server site.

**-----------------------------------------------------------------------**

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### Communication interfaces

In this subsection, various interfaces to communications will be specified such as local network protocols.

### Memory Constraints

This should specify any applicable characteristics and limits on primary and secondary memory.

### Operations

This should specify the normal and special operations required by the user such as:

1. The various modes of operations in the user organization for example user-initiated operations. (In order to show the user required operations you can use **Use-Case diagrams**)
2. Periods of interactive operations and periods of unattended operations
3. Data processing support functions
4. Backup and recovery operations.

### Site adaptation requirements

This should;

1. Define the requirements for any data or initialization sequences that are specific to a given site, mission or operational mode such as grid values and safety limits;
2. Specify the site or mission-related features, which should be modified to adapt the software to particular installation.

## Product Functions:

This subsection of SRS should provide a summary of the major functions that the software will perform. Sometimes the function summary that is necessary for this part can be taken directly from the section of the higher-level specification (if one exists) that allocates particular functions to the software product. Note that for the sake of clarity

1. The functions should be organized in a way that makes the list of functions understandable to the acquirer.
2. Textual or graphical methods can be used to show the different functions and their relationships. Such a diagram is not intended to show a design of a product. However, simply shows the logical relationships among variables.

## User Characteristics:

This subsection of SRS should describe those general characteristics of the intended users of the product including educational level, experience and technical expertise. It should not be used to state specific requirements, but rather provide the reasons why certain requirements are later specified in section 3 of the SRS.

## Constraints:

This subsection of SRS should provide a general description of any other items that will limit the developer’s options. These include:

1. Regulatory policies,
2. Hardware limitations
3. Interface to other applications
4. Parallel operation,
5. Audit functions,
6. Control functions,
7. Higher-order language requirements,
8. Signal handshake protocols,
9. Reliability requirements,
10. Criticality of the application,
11. Safety and security considerations.

## Assumptions and Dependencies:

This subsection of the SRS should list each of the factors that affect the requirements stated in the SRS. These factors are not designed constraints on the software. However, they are any changes to them that can affect the requirements in the SRS.

## Apportioning of Requirements:

This subsection of SRS should identify requirements that may be delayed until versions of the system.

# SPECIFIC REQUIREMENTS (Section 3 of the SRS)

This subsection of SRS should contain the software requirements to a level of detail sufficient to designer to design a system to satisfy those requirements and testers to test that system satisfies those requirements. Every stated requirement should be externally perceivable by users, operators or other external systems. **These requirements should include at a minimum a description of every input into the system, every output from the system, and all functions performed by the system in response to an input or in support of an output.** As this is often the largest and most important part of the SRS, the following principles apply:

1. Specific requirements should be sated in conformance with all the following characteristics
   * Correct,
   * Unambiguous,
   * Complete,
   * Consistent,
   * Ranked for importance and stability,
   * Verifiable,
   * Modifiable,
   * Traceable.
2. Specific requirements should be cross-referenced to earlier documents that relate.
3. All requirements should be uniquely identifiable.
4. Careful attention should be given to organizing the requirements to maximize readability.

## External Interfaces:

This should be detailed description of all inputs into and outputs from the software system. It should complement the interface description in section 2. It should include both content and format as follows:

1. Name of item,
2. Description of purpose,
3. Source of input or destination of output,
4. Valid range, accuracy, and/or tolerance,
5. Units of measure,
6. Timing,
7. Relationships to other inputs/outputs,
8. Screen formats/organization (You can give a draft screen view),
9. Window formats/organization,
10. Data Formats,
11. Command formats,
12. End messages.

## Functions:

Functional requirements should define the fundamental actions that must take place in the software in accepting and processing the inputs and processing and generating the outputs. These are generally listed as “shall” statements with “The system shall…” These include:

1. Validity checks on the inputs,
2. Exact sequence of operations,
3. Responses to abnormal situations, including
   * Overflow,
   * Communication facilities,
   * Error handling and recovery,
4. Effect of parameters,
5. Relationship of outputs to inputs, including,
   * Input/output sequences,
   * Formulas for input to output conservation.

It may be appropriate to partition the functional requirements into sub functions or sub processes. This does not imply that the software design will also be partitioned that way. (You can use Data Flow Diagrams or Use Cases.)

## Performance Requirements:

This subsection should specify both the static and the dynamic numerical requirements placed on the software or human interaction with the software as a whole. Static numerical requirements may include the following:

1. The number terminals to be supported,
2. The number of simultaneous users to be supported,
3. Amount and type of information to be handled.

Static numerical requirements are sometimes identified under a separate section entitled Capacity.

Dynamic numerical requirements may include, for example, the number of transactions and tasks and the amount of data to be processed within certain time periods for both normal and peak workload conditions.

All of these requirements should be in measurable terms. For example: 95% of the transactions shall be processed in less than 1 s. rather than an operator shall not have to wait for the transaction to complete.

**Note:** Numerical limits applied to one specific function are normally specified as a part of processing subparagraph description of that function.

## Logical Database Requirements

This should specify the logical requirements for any information that is to be placed into a database (You can use ER diagram).

## Design Constraints

This should specify design constraints that can be imposed by other standards, hardware limitations, etc.

### Standards Compliance

This subsection should specify the requirements derived from existing standards or regulations. They may include the following:

* Report format
* Data naming
* Accounting procedures
* Audit tracing

## Software System Attributes

### Reliability

This should specify the factors required to establish the required reliability of the software system at time of delivery.

### Availability

This should specify the factors required to guarantee a defined availability level for the entire system.

### Security

This should specify the factors that protect the software from accidental or malicious access, use, modification, destruction, or disclosure.

### Maintainability

This should specify attributes of software that relate to the ease of maintenance of the software itself.

### Portability

This should specify attributes of software that relate to the ease of porting the software to other host machines and/or operating systems.