

# Software Requirements Specification Document

# Systems Requirements Specification

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# Systems Requirements Specification

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**A Purpose**

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**C Definition, Acronyms, or Abbreviations**

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# Systems Requirements Specification

## **II. General Description**

**A Product Perspective**

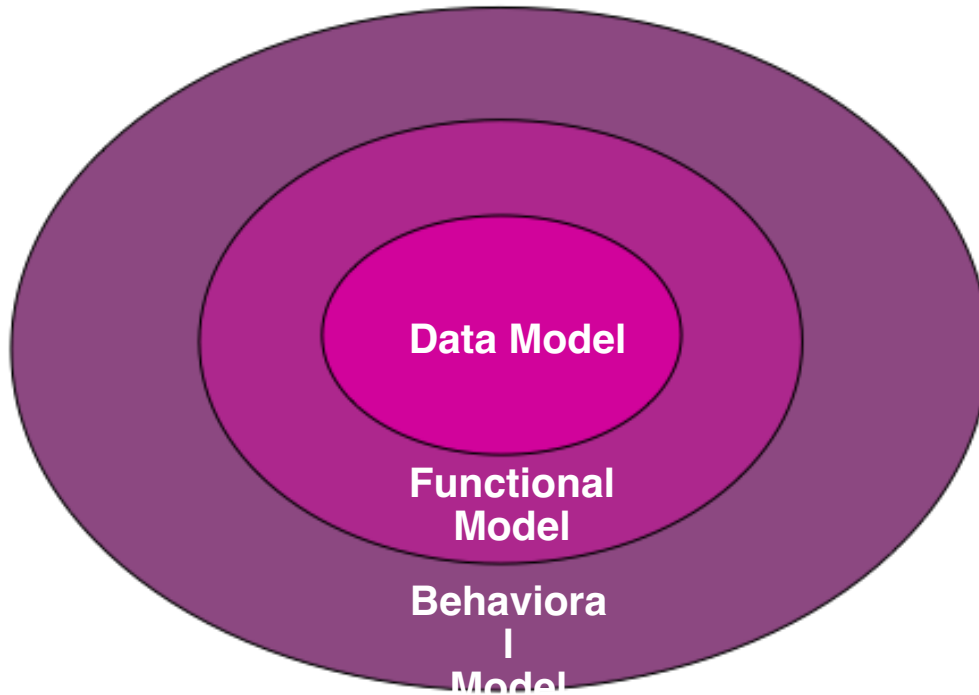
**B Product Functions**

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# Systems Requirements Specification



**The SRS is composed of the outer layer of the behavioral model, the functional model, then the data model.**

# Systems Requirements Specification

## I. Introduction

### A Purpose

- The purpose of this Software
- Requirements Specification document
- Intended audience of this document

# Systems Requirements Specification

## I. Introduction

### A Purpose

The purpose of the Software Requirements Specification document is to clearly define the system under development, namely the Video Rental System (VRS). The intended audience of this document includes the owner of the video store, the clerks of the video store, and the end users of the VRS. Other intended audience includes the development team such as the requirements team, requirements analyst, design team, and other members of the developing organization.

# Systems Requirements Specification

## I. Introduction

### B. Scope

- Origin of need
- High-level description of the system functionality
- Goals of proposed system



# Systems Requirements Specification

## I. **Introduction**

### **B. Scope**

Origin of the need

- I. who and what triggered the request for this software development activity
- II. gives developers an understanding of the goals for the proposed system

# Systems Requirements Specification

## I. **Introduction**

### **B. Scope**

High-level functionality

I. defined for the system

II. usually in list separated by commas

# Systems Requirements Specification

## I. Introduction

### B. Scope

Goals are general purposes of a system. They are fuzzy and non measurable.

A typical goal would be things like

- Increase customer satisfaction
- Make xyz easier for the customer
- Improve customer relationships

# Systems Requirements Specification

## I. **Introduction**

### **B. Scope**

The owner of a local video store wanted to create a new business plan where everything about renting a video (except the picking up and returning of videos) was done online. Therefore, the new VRS will allow the following functionality online: to search for videos, to become members, to rent videos, to modify membership information, and to pay overdue fees. The store personnel may use the VRS to process the rented or returned videos, to add or remove videos to/from his store's video inventory and to update video information. The VRS is intended to increase the owner's profit margin by increasing video sales with this unique business approach and by allowing him to reduce the staffing needed in his stores.

# Systems Requirements Specification

## I. **Introduction**

### **C. Definitions, Acronyms..**

As you begin to define a system, you will encounter words which need definition and general usage acronyms. These should be documented for new personnel and for clarity of all concerned parties.

# Systems Requirements Specification

## I. Introduction C Definitions, Acronyms..

*FSU – Florida State University*

*CS - Computer Science*

*MSES - Masters in Software Engineering Science*

*DOE - Department of Education*

....

# Systems Requirements Specification

## I. Introduction

## D. References

Many references may be used to define existing systems, procedures (both new and old), documents and their requirements, or previous system endeavors. These references are listed here for others.

If any of these references are provided in the appendices, it should be noted here.

# Systems Requirements Specification

## I. Introduction D References

*Clerk - Personnel staff who is working in a video store*

*Customer - Anyone who interacts with the VRS with becoming a member*

*Functional requirement - A service provided by the software system*

*Member - Anyone who registers with the VRS to acquire membership in the video store*



# Systems Requirements Specification

## I. Introduction

### E. Overview

This section defines the organization of the entire document. It will lay the framework for reading the document.

# Systems Requirements Specification

## I. Introduction E Overview

*Section 2 of the SRS describes the product in more detail. Section 3 provides a complete list of the functional requirements of the intended system. Section 4 provides the non-functional requirements. Section 5 shows the class diagram, and Section 6 the use case diagram. The appendices appear next.*

# Section I of SRS

I.A Purpose	Paragraph form
I.B Scope of the System Specified	Paragraph form
I.C Definitions, Acronyms, and Abbreviations	Table form or bulleted list
I.D References to Supporting Documents	Bulleted list
I.E Overview of rest of SRS	Paragraph form

# Systems Requirements Specification

## II. General Description

**A Product Perspective**

**B Product Functions**

**C User Characteristics**

**D General Constraints**

**E Assumptions**

# Systems Requirements Specification

## II General Description

### A Product Perspective

This defines the relationship this product has in the entire spectrum of products.

It defines who will be responsible for the product and what business purpose it serves.

It also defines what interfaces it may have to other systems.

# Systems Requirements Specification

## II General Description

### A Product Perspective

*The VRS is a web-based system. The system interfaces with two other systems, the owner's email system, the video distributor's video system, and the browsers used by VRS customers. The system provides a secure environment for all financial transactions and for the storing and retrieving of confidential member information.*

# Systems Requirements Specification

## II. General Description B Product Functions

This section lists the major functions of the system.

It provides a summary of all the functions of the software. The functions should be organized in a way that makes the list of functions understandable to the customer or to anyone else reading the document for the first time.

This section should be consistent with the functional requirements defined in Section III.

# Systems Requirements Specification

## II. General Description – B Product Functions

*The VRS allows customers to search the video inventory provided by this video store. To rent videos through the VRS, one must register as a member using the VRS. Upon becoming a member and logging into the VRS, the VRS provides the functionality for renting videos, modifying membership information, and paying overdue fines.*

*The clerks of the video store use VRS to process the return of rented videos. The owner of the video store uses VRS to add new videos into the system, remove videos from the system, and modify video information.*

*The VRS sends emails to members concerning video rentals. One day before a rented video is due to be returned, VRS emails the member a reminder of the due date for the video(s). For any overdue videos, VRS emails the member every 3rd day with overdue notices. At the 60-day limit for outstanding videos, VRS debits the member's credit card with the appropriate charge and notifies the member of this charge.*



# Systems Requirements Specification

## II. General Description – C User Characteristics

List the users involved with the proposed system including the general characteristics of eventual users (for example, educational background, amount of product training).

List the responsibility of each type of user involved, if needed.

# Systems Requirements Specification

## II. General Description – C User Characteristics

*The three main groups of VRS users are customers, members, and store personnel. A customer is anyone who is not a member. The customer can only search through the video inventory. The amount of product training needed for a customer is none since the level of technical expertise and educational background is unknown. The only skill needed by a customer is the ability to browse a website.*

*Member is someone who has registered with VRS. A member can rent videos and pay fees online. As with a customer, these activities require no product training since the level of technical expertise and educational background of a member is unknown. The only skill needed by a member is the ability to browse a website.*

*The store personnel are divided into two groups: the clerk-level personnel and owner-level personnel. Their educational level is unknown and both group needs little to no training.*

# Systems Requirements Specification

## II. General Description – D General Constraints

### D General Constraints

In this section, the constraints of the system are listed. They include hardware, network, system software, and software constraints. It also includes user constraints, processing constraints, timing constraints, and control limits.

# Systems Requirements Specification

## II. General Description – D General Constraints

*This system provides web access for all customer and member functions. The user interface will be intuitive enough so that no training is required by customers, members, or store personnel. All online financial transactions and the storage of confidential member information will be done in a secure environment. Persistent storage for membership, rental, and video inventory information will be maintained.*

# Systems Requirements Specification

## II General Description – D Assumptions and Dependencies

This includes assumptions made at the beginning of the development effort as well as those made during the development.

List and describe each of the factors that affect the requirements stated in the SRS. These factors are not design constraints on the software but any changes to them can affect the requirements in the SRS.

For example, an assumption might be that a specific operating system will be available on the hardware designated for the software product. If, in fact, the operating system is not available, the SRS would then have to change.

# Section II of SRS

II.A Product Perspective	Paragraph form
II.B Product Functions	Paragraph form
II.C User Characteristics	Paragraph form
II.D General Constraints	Paragraph form
II.E Assumptions and Dependencies	Paragraph form

# Systems Requirements Specification

## III Functional Requirements

**Functional requirements are those business functions which are included in this software under development. It describes the features of the product and the needed behavior.**

**The functional requirements are going to be written in narrative form identified with numbers. Each requirement is something that the system SHALL do. Thus, it has a common name of a *shall* list. You may provide a brief design rationale for any requirement which you feel requires explanation for how and/or why the requirement was derived.**

# Systems Requirements Specification

## IV Non Functional Requirements

**Non functional requirements are properties that the system must have such as performance, reusability, usability, user friendliness, etc.**

**The same format as the functional requirements is to be used for the non-functional requirements. You may provide a brief design rationale for any requirement which you feel requires explanation for how and/or why the requirement was derived.**



# Systems Requirements Specification

## V System Architecture

**This section presents a high-level overview of the anticipated system architecture using a class diagram. It shows the fundamental objects/classes that must be modeled with the system to satisfy its requirements. Each class on the diagram must include the attributes related to the class. All the relationships between classes and their multiplicity must be shown on the class diagram. The classes specified in this document only are those directly derived from the application domain.**

# Systems Requirements Specification

## VI System Models

**This section presents the use case diagram for the system under development. The use case diagram should be a complete version containing all the use cases needed to describe the functionality to be developed.**

# **Systems Requirements Specification**

## **VII Appendixes**

**Appendix A. Data dictionary**

**Appendix B. Raw use case point analysis**

**Appendix C. Screens and reports with navigation matrix.**

**Appendix D. Scenario analysis tables**

**Appendix E. Screens/reports list**

**Appendix F and following. Other items needed**