Software Requirements Specification

Version 1.0

<<Annotated Version>>

June 15, 2020

House of Movies

Mohammad Haidar

Sleman Almohammad

Rajab Omran

Mohammad Idris

Submitted in partial fulfillment

Of the requirements of

CS 310 Software Engineering

<<Any comments inside double brackets such as these are *not* part of this SRS but are comments upon this SRS example to help the reader understand the point being made.

Refer to the SRS Template for details on the purpose and rules for each section of this document.

This work is based upon the submissions of the spring 2004 CS 310. The students who submitted these team projects were **Mohammad Haidar, Sleman Almohammad, Rajab Omran, Mohammad Idris.** >>

# Table of Contents

[Table of Contents i](#_Toc77487619)

[List of Figures ii](#_Toc77487620)

[1.0. Introduction 1](#_Toc77487621)

[1.1. Purpose 1](#_Toc77487622)

[1.2. Scope of Project 1](#_Toc77487623)

[1.3. Glossary 2](#_Toc77487624)

[1.4. References 2](#_Toc77487625)

[1.5. Overview of Document 2](#_Toc77487626)

[2.0. Overall Description 4](#_Toc77487627)

[2.1 System Environment 4](#_Toc77487628)

[2.2 Functional Requirements Specification 5](#_Toc77487629)

[2.2.1 Receptionist Use Case 6](#_Toc77487630)

[Use case: Gets Customer orders 5](#_Toc77487631)

[2.2.2 orders employee Use Case 7](#_Toc77487632)

[Use case: bring order 7](#_Toc77487633)

[2.2.3 Director Use Case 8](#_Toc77487634)

[Use case: Make an inventory 8](#_Toc77487635)

[2.2.4 Accountant Use Cases 9](#_Toc77487636)

[Use case: invoice preparation 9](#_Toc77487637)

[2.3 User Characteristics 10](#_Toc77487648)

[2.4 Non-Functional Requirements 10](#_Toc77487649)

[3.0. Requirements Specification 11](#_Toc77487650)

[3.1 External Interface Requirements 11](#_Toc77487651)

[3.2 Functional Requirements 11](#_Toc77487652)

[3.2.1 Search DVD\CD 11](#_Toc77487653)

[3.2.2 Communicate 12](#_Toc77487654)

[3.2.3 Add DVD\CD 13](#_Toc77487655)

[3.2.4 Update DVD 13](#_Toc77487656)

[3.2.5 Update DVD Status 14](#_Toc77487657)

[3.2.6 Remove DVD\CD 14](#_Toc77487658)

# List of Figures

[Figure 1 - System Environment 6](#_Toc77487669)

[Figure 3 - Accountant Use Cases 9](#_Toc77487671)

[Figure 4 - Logical Structure of the Lounge Data 14](#_Toc77487672)

# 1.0. Introduction

## 1.1. Purpose

The purpose of this document is to present a detailed description of the House of Movies Lounge automation system. It will explain the purpose and features of the system, the interfaces of the system, what the system will do, the constraints under which it must operate and how the system will react to external stimuli. This document is intended for both the stakeholders and the developers of the system and will be proposed to the Regional Historical Society for its approval.

## 1.2. Scope of Project

This software system will be a Lounge automation system for a lounge to sell DVD/CD. This system will be designed to facilitate and accelerates work within the Lounge by providing the necessary tools for that. By doing that, the managers of the lounge, employees and even the customer will feel the flexibility of work and service.

More specifically, the system automates the work by dividing the lounge into sections and each section with a specific type of disk and has a unique identifier, and each section divided by a group of ranks and each has a unique number.

All of this information is in the lounge database.

## 1.3. Glossary

|  |  |
| --- | --- |
| **Term** | **Definition** |
| Product | The DVD/CD that the customer wants. |
| Director | The owner of the lounge and the person who responsible for the general supervision |
| Database | Collection of all the information monitored by this system. |
| Receptionist | Person who receives the customer and takes his order. |
| Orders Employee | A person who fetching the orders from departments. |
| Customer | The person who gets the service. |
| Software Requirements Specification | A document that completely describes all of the functions of a proposed system and the constraints under which it must operate. For example, this document. |
| Stakeholder | Any person with an interest in the project who is not a developer. |

## 1.4. References

IEEE. *IEEE STD 830-1998 IEEE Recommended Practice for Software Requirements Specifications.* IEEE Computer Society, 1998.

## 1.5. Overview of Document

The next chapter, the Overall Description section, of this document gives an overview of the functionality of the product. It describes the informal requirements and is used to establish a context for the technical requirements specification in the next chapter.

The third chapter, Requirements Specification section, of this document is written primarily for the developers and describes in technical terms the details of the functionality of the product.

Both sections of the document describe the same software product in its entirety, but are intended for different audiences and thus use different language.

# 

# 2.0. Overall Description

## 2.1 System Environment

Orders Employee

Receptionist

Customer

Select orders and provide service

Movies Lounge

Director

Figure 1 - System Environment

The Lounge automation system has four active actors and one cooperating system.

The Receptionist, orders Employee, Director, and Customer.

Any customer communication with the system by visiting the lounge.

## 2.2 Functional Requirements Specification

This section outlines the use cases for each of the active readers separately. The Director, the Receptionist , the orders Employee, and the Customer while the director is main actor in this system.

### 2.2.1 Receptionist Use Case

#### Use case: gets the customer order

**Diagram:**

Receptionist

Gets the customer order

**Brief Description**

The Receptionist receive the customer and he gets his order and what he wants.

**Initial Step-By-Step Description**.

1. The Receptionist receive the customer.
2. The Receptionist gets the order from the customer.
3. The receptionist search through the database about the department number for that order.
4. The system determines the department number and the rank number.

### **2.2.2 Order Employee Use Case**

#### Use case: bring the order

**Diagram:**

Order employee

Bring order

**Brief Description**

The order employee bring the order from the correct department.

**Initial Step-By-Step Description**.

1. The employee get the requested order from the receptionist.
2. He go to the selected department and get the order from the correct rank.
3. Finally, he gives the order to the customer.

-------------------------------------------------------------------------------------------------------------------

### **2.2.3** **Director Use Case**

#### Use case: make an inventory

**Diagram:**

Director

**Make an** inventory

**Brief Description**

Director make an inventory for sells in the lounge.

**Initial Step-By-Step Description**.

1. Every day he Checks for all sales.
2. He Calculates the amount of profit and employee benefits
3. Learn about sales that have been taken in installment

### **2.2.4 Receptionist (Accountant)**

Accountant

Invoice Preparation

### Use Case: invoice preparation

Figure 3 -Accountant Use Case

**Brief Description**

1. The accountant calculates the value of the total orders and make an invoice.

**Initial Step-By-Step Description**

1. The accountant calculates the value of orders.
2. He prepare the invoice.
3. He make a discount.
4. Finally, he print the invoice**.**

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

**2.2.5 Customer use cases**

**Diagram:**

Customer

Bill Payment

**Brief Description**

Customer is the main person in this system, he make an order and get the service.

**Initial Step-By-Step Description**

1. The customer go to the lounge.
2. He received by the receptionist.
3. He give the receptionist his orders.
4. He get his orders and go back to the receptionist.
5. After the receptionist prepare the invoice, a customer Pay the bill.
6. Additional option is to visit the lounge website and search for products.

---------------------------------------------------------------------------------------------------

**2.3 User Characteristics**

Because the lounge have a website to display their products , the customer is expected to be Internet literate and be able to use a search engine.

The main screen of the Website will have the search function.

Authorized employees is expected to be Windows literate and to be able to manage, communicate with customers.

## 2.4 Non-Functional Requirements

The lounge website will be on a server with high speed Internet capability.

The software developed here assumes the use of a tool such as Tomcat for connection between the Web pages and the database. The speed of the customer’s connection will depend on the hardware used rather than characteristics of this system.

The lounge Manager PC will contain an Access database. Access is already installed on this computer and is a Windows operating system.

# 3.0. Requirements Specification

## 

## 3.1 External Interface Requirements

The only link to an external system is the link to the lounge Database to verify the membership of a customer.

The lounge Database fields of interest to the lounge automated System are customer’s name, (ID) number, and email address (an optional field for the HS Database).

The *customer* use case sends the customer ID to the Database and a Boolean is returned denoting membership status..

## 3.2 Functional Requirements

The Logical Structure of the Data is contained in Section 3.3.1.

### 3.2.1 Search DVD

|  |  |
| --- | --- |
| **Use Case Name** | Search DVD |
| **Trigger** | The customer access the Online lounge Website |
| **Precondition** | The Web is displayed with grids for searching |
| **Basic Path** | 1. The customer chooses how to search the Web site. The choices are by name, by Category, by year, and by Keyword. 2. If the search is by name, the system creates and presents an alphabetical list of all names in the database. 3. The customer selects a DVD/CD. 4. The system displays the Abstract for the DVD. 5. The customer selects to by the DVD or to return to the DVDs list or to the previous list. |
| **Alternative Paths** | In step 2, if the customer selects to search by category, the system creates and presents a list of all categories in the database.   1. The customer selects a category. 2. The system creates and presents a list of all DVDs in that category in the database.   In step 2, if the Reader selects to search by keyword, the system presents a dialog box to enter the keyword or phrase.   1. The customer enters a keyword or phrase. 2. The system searches the Abstracts for all DVDs with that keyword or phrase and creates and presents a list of all such DVDs in the database |
| **Postcondition** | The selected DVDs is added to the Customer digital bag. |
| **Exception Paths** | The Customer may abandon the search at any time. |
| **Other** | The categories list is generated from the information provided when DVD are published. |

### 3.2.2 Communicate

|  |  |
| --- | --- |
| **Use Case Name** | Communicate |
| **Trigger** | The user selects a *mailto* link. |
| **Precondition** | The user is on the *Communicate* page linked from the Online lounge website main page. |
| **Basic Path** | This use case uses the *mailto* HTML tag. This invokes the client email facility. |
| **Alternative Paths** | If the user prefers to use his or her own email directly, sufficient information will be contained on the Web page to do so. |
| **Postcondition** | The message is sent. |
| **Exception Paths** | The attempt may be abandoned at any time. |
| **Other** | None |

### 3.2.3 Add DVD\CD

|  |  |
| --- | --- |
| **Use Case Name** | Add DVD/CD |
| **Trigger** | The Concerned employee selects to add a new DVD\CD to the database. |
| **Precondition** | The Concerned employee has accessed the website Manager main screen. |
| **Basic Path** | 1. The system presents a blank grid to enter the DVD information. 2. The Concerned employee enters the information and submits the form. 3. The system checks that the name field are not blank and updates the database. |
| **Alternative Paths** | If in step 2, either field is blank, the employee is instructed to add an entry. No validation for correctness is made. |
| **Postcondition** | The DVD\CD has been added to the database. |
| **Exception Paths** | The employee may abandon the operation at any time. |
| **Other** |  |

### 3.2.4 Update DVD

|  |  |
| --- | --- |
| **Use Case Name** | Update DVD/CD |
| **Trigger** | The Concerned employee selects to update an DVD is already in the database. |
| **Precondition** | The employee has accessed the lounge website Manager main screen. |
| **Basic Path** | 1. The employee selects DVD\CD. 2. The system creates and presents an alphabetical list of DVD in the category. 3. The employee selects a DVD\CD to update. 4. The system presents the database information in grid form for modification. 5. The employee updates the information and submits the form. 6. The system checks that required fields are not blank. |
| **Alternative Paths** | In step 5, if any required field is blank, the employee is instructed to add an entry. No validation for correctness is made. |
| **Postcondition** | The database has been updated. |
| **Exception Paths** | If the DVD\CD is not already in the database, the use case is abandoned. In addition, the employee may abandon the operation at any time. |
| **Other** |  |

### 3.2.5 Update DVD Status

|  |  |
| --- | --- |
| **Use Case Name** | Update DVD Status |
| **Trigger** | The employee selects to update the status of a DVD in the database. |
| **Precondition** | The employee has accessed the lounge website Manager main screen, and the DVD is already in the database. |
| **Basic Path** | 1. The system creates and presents an alphabetical list of all active DVD. 2. The employee selects the article to update. 3. The system presents the information about the DVD in grid format. 4. The employee updates the information and resubmits the form. |
| **Alternative Paths** |  |
| **Postcondition** | The database has been updated. |
| **Exception Paths** | If the DVD is not already in the database, the use case is abandoned. In addition, the employee may abandon the operation at any time. |
| **Other** | This use case can be used to add categories for a DVD, to correct typographical errors. It may also be used to allow access to the named use case to enter an updated DVD. |

### 3.2.6 Remove DVD\CD

|  |  |
| --- | --- |
| **Use Case Name** | Remove DVD\CD |
| **Trigger** | The employee selects to remove a DVD from the active DVDs database. |
| **Precondition** | The employee has accessed the lounge website Manager main screen. |
| **Basic Path** | 1. The system provides an alphabetized list of all active DVD. 2. The employee selects a DVD. 3. The system displays the information about the DVD\CD and requires that the employee confirm the deletion. 4. The employee confirms the deletion. |
| **Alternative Paths** | None. |
| **Postcondition** | The DVD\CD is removed from the database. |
| **Exception Paths** | The employee may abandon the operation at any time. |
| **Other** | Find out from the employee to see if the DVD and its information information should be archived somewhere. |

## 3.3 Detailed Non-Functional Requirements

### 3.3.1 Logical Structure of the Data

The logical structure of the data to be stored in the lounge database is given below.

Customer

DVD\CD

Employee

Add

Select

Add to bag

Figure 4 - Logical Structure of the lounge Data

The data descriptions of each of these data entities is as follows:

**Employee** **Data Entity**

|  |  |  |  |
| --- | --- | --- | --- |
| **Data Item** | **Type** | **Description** | **Comment** |
| Name | Text | Name of employee |  |
| Email Address | Text | Internet address |  |
| DVD\CD | Pointer | DVD entity | May be several |

**Customer Data Entity**

|  |  |  |  |
| --- | --- | --- | --- |
| **Data Item** | **Type** | **Description** | **Comment** |
| Name | Text | Name customer |  |
| ID | Integer | ID number of member | Used as key in Database |
| Email Address | Text | Internet address |  |
| DVD | Pointer | DVD\CD entity of | May be several |

**DVD\CD Data Entity**

|  |  |  |  |
| --- | --- | --- | --- |
| **Data Item** | **Type** | **Description** | **Comment** |
| Name | Text | Name of DVD |  |
| Employee | Pointer | Employee entity | Name of Employee |
| Category | Text | Area of content | May be several |
| Copyright | Boolean | Copyright form has been returned | Not relevant unless Accepted is True. |
| Customer | Text | Customer select DVD |  |

The Logical Structure of the data to be stored in the Lounge database on the server is as follows:

**Published DVD\CD Entity**

|  |  |  |  |
| --- | --- | --- | --- |
| **Data Item** | **Type** | **Description** | **Comment** |
| Name | Text | Name of DVD |  |
| Abstract | Text | Abstract of DVD | Used for keyword search |
| Category | Text | Area of content | May be several |

### 

### 3.3.2 Security

The server on which the Lounge website resides will have its own security to prevent unauthorized *write*/*delete* access. There is no restriction on *read* access. The use of email by customers is on the client systems and thus is external to the system.

The PC on which the lounge manager resides will have its own security. Only the authorized employee will have physical access to the machine and the program on it.