



ESPE

UNIVERSIDAD DE LAS FUERZAS ARMADAS
INNOVACIÓN PARA LA EXCELENCIA

Specification of software requirements

Project: Holistica Center System

Members:

Matias Lugmaña

Josue Marín

Camilo Orrico



November 10, 2024

Document Sheet

Date	Review	Author	Verified quality dep.
10/11/2024	1	Matias Lugmaña Josue Marín Camilo Orrico	

Document validated by the parties on date: November 10 the 2024

By the client	For the supplying company
Sñr: Guillermo Orrico	Equipo Alpha Team

Content

DOCUMENT SHEET	2
CONTENT	3
1 INTRODUCTION	5
1.1 Purpose	5
1.2 Scope	5
1.3 Staff involved	5
1.4 Definitions, acronyms and abbreviations	6
1.5 References	6
1.6 Summary	6
2 OVERVIEW	7
2.1 Product Outlook	7
2.2 Product Functionality	7
2.3 User characteristics	7
2.4 Restrictions	8
2.5 Assumptions and dependencies	9
2.5.1 Assumptions	9
2.5.2 Dependencies	9
2.6 Foreseeable evolution of the system	9
3 SPECIFIC REQUIREMENTS	10
3.1 Common interface requirements	10
3.1.1 User Interfaces	10
3.1.2 Hardware Interfaces	10
3.1.3 Software Interfaces	10
3.1.4 Communication Interfaces	10
3.2 Functional requirements	10
3.2.1 Functional Requirement 1: Customer Registration	10
3.2.2 Functional Requirement 2: Course Navigation and Searches	10
3.2.3 Functional Requirement 3: Course Display	11
3.2.4 Functional Requirement 4: Payment of Courses	11
3.2.5 Functional Requirement 5: Content Management	11
3.2.6 Functional Requirement 6: Customer Support	12
3.2.7 Functional Requirement 8: User Authentication	12
3.2.8 Functional Requirement 7: Course Reports	12



3.1	Non-functional requirements	13
3.1.1	Non-functional requirement 1: Information Security	13
3.1.2	Non-functional requirement 2: Stability	13
3.1.3	Non-Functional Requirement 3: Browser Compatibility	13
3.1.4	Non-Functional Requirement 4: System Interface	13
3.1.5	Non-functional requirement 5: Maintenance	13
3.1.6	Non-Functional Requirement 6: User Level	14
3.1.7	Non-Functional Requirement 7: Continuous System Reliability	14
3.1.8	Non-functional requirement 8: Performance	14
3.2	Other requirements	14
3.2.1	IRQ-01 Customer Data Storage	15
3.2.2	IRQ-02 Course Data Storage	15
3.2.3	IRQ-03 Transaction Log	15
4	APPENDICES	15
4.1	Use Case	15
4.1.1	Login Customer	15
4.1.2	Manage content	16
4.1.3	Payment of courses	16
4.1.4	Navigation and search	17
4.1.5	Reports	17

1 Introduction

Software development consists of several phases: planning, analysis, development, testing and maintenance everything makes up an iterative cycle, for any process, but everything starts from the need to cover with software to automate the process, under this context a documentation process is carried out divided into several phases that culminate with the drafting of an artifact that serves as a legal framework establishing agreements between the development team and the stakeholders. The specification of requirements reflects these agreements for the socialization of this among all those involved in the development process.

1.1 Purpose

This document describes the functional and non-functional requirements for the development of a web platform aimed at the offer and sale of cosmetology courses, focused on the area of massages. Where the purpose is to create a website that aims to provide users with an experience where they can access to explore, acquire and manage specialized courses in massage techniques, favoring people in the field of cosmetology.

1.2 Scope

This document aims to create a web platform where it allows people interested in cosmetology, specifically in massage, to access and acquire courses of different modalities: online, pre-recorded and mixed classes, this scope includes: the development of the website where it is accessible on different types of devices such as telephone, tablets or computers in a way that is friendly and intuitive for the person who is going to handle it, it will also include the management of content and available courses such as the management of users on the website, also a system that may include different methods of payment, this website will only provide support for cosmetology courses.

1.3 Staff involved

Name	Guillermo Orrico
Role	Managed
Professional category	Graduate
Responsibilities	In charge of managing the courses on the web platform
Contact Information	
Approval	

Name	Josue Isaac Marin Alquina
Role	ERS Documentation Team
Professional category	Software Engineering Student
Responsibilities	Team in charge of creating the ERS document in compliance with the client's expectations and also the IEE830 standards. Software Development Team
Contact Information	jimarin@espe.edu.ec
Approval	

Name	Matias Lugmaña
Role	ERS Documentation Team
Professional category	Software Engineering Student

Responsibilities	Team in charge of creating the ERS document in compliance with the client's expectations and also the IEE830 standards. Software Development Team
Contact Information	malugmana2@espe.edu.ec
Approval	

Name	Camilo Orrico
Role	ERS Documentation Team
Professional category	Software Engineering Student
Responsibilities	Team in charge of creating the ERS document in compliance with the client's expectations and also the IEE830 standards. Software Development Team
Contact Information	jimarin@espe.edu.ec
Approval	

1.4 Definitions, acronyms and abbreviations

- **Requirements:** o The criteria, constraints or needs that must be satisfied or fulfilled by a system to achieve a specific objective. They can be functional or non-functional.
- **Functional:** o Functional requirements describe the specific functions and tasks that the system must be able to perform, such as processing data, performing calculations, or interacting with the user.
- **Efficient:** o Ability to perform a task or achieve a goal using the least amount of resources possible, such as time, effort, or money.

1.5 References

Reference	Title	Date	Author
IEEE 830	IEEE 830 Software Requirements Survey Document	1998	Institute of Electrical and Electronics Engineers (IEEE)

1.6 Summary

This document specifies in detail the requirements for the development of the online course system. It contains structured information about the functionalities and limitations that the system must meet, providing a clear reference for developers and the project team. In addition to the functional requirements, the document addresses non-functional aspects and describes the operating environment, users, and their roles. This information facilitates the alignment of the equipment with the needs of the client and ensures that the system meets the established objectives.

The document is organized as follows:

- **Introduction:** Includes the purpose of the system, the scope of the project, and a list of key actors and stakeholders. Definitions, acronyms and references relevant to the system are also presented.
- **Overview:** Provides a high-level view of the system, including operating environment perspectives and key assumptions.
- **Specific Requirements:** Breaks down the functional and non-functional requirements of the system. Each requirement is described in detail, indicating its priority and, if relevant, the interactions between modules.
- **Annexes:** Contains any additional information, such as definitions or technical references, that may be useful for implementation.

2 Overview

2.1 Product Outlook

The Holistica Center system is a standalone product designed to promote and sell cosmetology courses. Unlike general education platforms, this page focuses exclusively on cosmetology techniques, offering content created by professional people and an experience optimized for hands-on learning. Through a website that is intuitively managed and contains course management tools, both the instructor and students can easily access the resources offered by the page. Users also have a secure payment system. This platform allows you to learn flexibly and at your own pace, adapting to both different types of users who want to acquire or improve their massage techniques.

2.2 Product Functionality

The system has the purpose of having a platform of online courses which will be focused on different topics, some functionalities that the system will have are the following:

- User management: There will be different users who will be able to access the system with different functions in charge.
- Study Modules: These modules will be enabled for a limited time, and several can be registered at once.
- Reports: There will be sales, registration and status course reports.
- Multimedia management: The platform will have the possibility of adding, deleting and editing content of images, links or text.

2.3 User characteristics

User Type	Administrator
Formation	Completed secondary education, preferably with training in sales or customer service.
Skills	<ul style="list-style-type: none"> • Knowledge in user management and system roles. • Familiarity with the system and its functionalities. • Ability to manage permissions and security settings.
Activities	<ul style="list-style-type: none"> • Creation and management of user accounts. • Assigning roles and permissions to users. • Supervision of system activities and generation of reports. • Full access to system functionalities and configurations.

User Type	Customer
Formation	No specific training is required.
Skills	<ul style="list-style-type: none"> • Ability to navigate the platform and make class registrations. • Basic skills in the use of the internet and email.
Activities	<ul style="list-style-type: none"> • Registration and consultation of classes. • Viewing classes and offers.

User Type	Content Editor
-----------	----------------

Formation	Preferably with a background in education or experience in digital content creation.
Skills	<ul style="list-style-type: none"> • Ability to edit and update content on the course platform. • Knowledge in the use of content management systems (CMS). • Familiarity with basic text and image editing tools.
Activities	<ul style="list-style-type: none"> • Creation and editing of courses and materials on the platform. • Administration and updating of content. • Supervision of the quality of published materials.

User Type	Custom User
Formation	According to the specific requirements for the role to be defined.
Skills	<ul style="list-style-type: none"> • Specific skills for the functions assigned to them within the system. • Ability to adapt to the system environment and your custom roles.
Activities	<ul style="list-style-type: none"> • The activities will be defined according to the specific permissions and responsibilities assigned to this role.

2.4 Restrictions

- **Integration with payment methods:** The page must support secure payment APIs for course purchases.
- **User authentication:** Only registered users will be able to access content exclusive to the course purchased.
- **Performance and scalability:** The system must support growth in users and content without affecting its speed or functionality.
- **Technologies used:** HTML, CSS, and JavaScript for development.
- **Multi-device compatibility:** The page should be suitable for mobiles, tablets, and computers.
- **Client/Server Architecture:** The system will be based on a client/server model to handle user data and course content.
- **Privacy and data protection:** The system must comply with personal data protection regulations, such as GDPR if applicable, especially with regard to user information and payment data.
- **Maintenance and updates:** The page should allow for easy maintenance and future content updates without affecting user access to courses.
- **Storage capacity:** The server must have the capacity to securely store both course content and user data.
- **Access Restrictions:** Sections of the course will only be accessible after purchase, and any attempts at unauthorized access must be blocked.
- **Bandwidth limits:** If heavy multimedia materials (videos, audios) are used, consider bandwidth and optimization limits so as not to affect performance.
- **Browser compatibility:** The site must be compatible with the most commonly used browsers (Chrome, Firefox, Safari, Edge).
- **Web accessibility compliance:** The design must comply with basic accessibility standards, such as WCAG, so that people with disabilities can navigate and purchase courses seamlessly.
- **Backup and recovery:** The system must have a data backup and recovery plan in case of data failure or loss.

2.5 Assumptions and dependencies

2.5.1 Assumptions

- **Internet access:** It is assumed that users will have a stable internet connection to browse the platform and access the content of the courses.
- **Use of supported browsers:** It is assumed that users will employ up-to-date web browsers (Chrome, Firefox, Safari, Edge) that support the latest versions of HTML, CSS, and JavaScript for an optimal experience on the platform.
- **Basic knowledge of web browsing:** It is assumed that users will have basic knowledge of internet navigation, facilitating the use and interaction with the platform.
- **Availability of development team resources:** It is assumed that the development team will have access to all the necessary tools and technologies (HTML, CSS, JavaScript, databases, and servers) during the development cycle.
- **Support for multimedia materials:** It is assumed that users will have appropriate devices and connections to play multimedia content, such as videos, audios, or graphics, which will be included in some courses.
- **Confidentiality and Privacy of User Data:** It is assumed that users will trust the platform to handle their data securely and that they will agree to the established privacy policies.

2.5.2 Dependencies

- **Payment Service Provider:** The system relies on a secure and supported payment service (e.g., Stripe, PayPal) to complete course purchase transactions. This provider must ensure the security of payment information and service availability.
- **Web and Storage Server:** The platform relies on reliable server infrastructure (e.g., a cloud server) to host the web page and course content. This server must ensure high availability, data backup, and security measures.
- **Authentication and authorization mechanism:** The platform requires a reliable authentication system (e.g., an external authentication service such as OAuth or an internal solution) to validate the identity of users and control access to restricted content.
- **Data Privacy Compliance:** The system relies on compliance with privacy regulations (e.g., GDPR) to ensure the proper handling of users' personal information, which may require changes in the event of regulatory changes.
- **Email service:** The system relies on an email service to send important notifications, purchase confirmations, and account updates. This service must be reliable and not classify messages on the platform as spam.
- **Security and technology updates:** The system relies on regular updates of the technologies used (e.g., JavaScript libraries or frameworks) to ensure protection against vulnerabilities and ensure continued compatibility with current browsers and devices.

2.6 Foreseeable evolution of the system

- There may not be an evolution in the system

3 Specific requirements

3.1 Common interface requirements

3.1.1 User Interfaces

The platform's user interface will need to be intuitive and accessible on both desktop and mobile devices. Include:

- Homepages, course catalog, course details, shopping cart, and user profile.
- Simplified interactions for registration, login, course purchase, and content access.
- Navigation system with menus and filters to facilitate the search and viewing of courses.
- Responsive design to adapt to different screen sizes.

3.1.2 Hardware Interfaces

The page shall allow integration with various hardware devices used in cosmetology and wellness to deliver interactive and personalized experiences.

3.1.3 Software Interfaces

Electronic Payment System:

Payment Provider Connection: Implement an API from a third-party payment provider to manage transactions securely and in real-time.

3.1.4 Communication Interfaces

The platform must comply with the following communication requirements to ensure integration with other systems and services:

- **API for Payment Processing:** Use the HTTPS protocol to connect the platform with external payment services in a secure way.
- **Notifications:** Send automatic emails and notifications via SMTP protocols to confirm purchase and progress in courses.

3.2 Functional requirements

3.2.1 Functional Requirement 1: Customer Registration

Requirement Number	RF01
Requirement Name	Customer Registration
Characteristics	The system must allow the registration of new users by email
Description	The system must allow users to register with the following data: name, surname, email, telephone, ID, address and password.
Non-functional requirement	
Priority	Loud

3.2.2 Functional Requirement 2: Course Navigation and Searches

Requirement Number	RF02
Requirement Name	Course navigation and searches
Characteristics	The system must allow users to browse the catalog of created courses.

Description	The system can be navigated by the different customers where they can filter and search for courses by category, type and price.
Non-functional requirement	<ul style="list-style-type: none"> • RNF01 • RNF02 • RNF05 • RNF08
Priority	Loud

3.2.3 Functional Requirement 3: Course Display

Requirement Number	RF013
Requirement Name	Course Display
Characteristics	Users must be able to view the course content, such as description, duration, content.
Description	The system should allow customers to view the necessary information describing the objective of the available course, as well as its description and the duration of the course.
Non-functional requirement	<ul style="list-style-type: none"> • RNF01 • RNF02 • RNF05 • RNF08
Priority	Loud

3.2.4 Functional Requirement 4: Payment of Courses

Requirement Number	RF04
Requirement Name	Payment of courses
Characteristics	The system should allow users to add courses to the shopping cart and pay for them reliably and securely.
Description	The system should allow the user to pay securely, accepting methods such as transfers or online payments.
Non-functional requirement	<ul style="list-style-type: none"> • RNF01 • RNF02 • RNF05 • RNF08
Priority	Loud

3.2.5 Functional Requirement 5: Content Management

Requirement Number	RF05
Requirement Name	Content Management
Characteristics	This requirement will allow the page administrator to manage course content.
Description	The system should allow administrators to create, edit, or delete courses, categories, or materials, as well as review and respond to comments that customers may leave in the course.
Non-functional requirement	<ul style="list-style-type: none"> • RNF01 • RNF02 • RNF05 • RNF08
Priority	Loud

3.2.6 Functional Requirement 6: Customer Support

Requirement Number	RF06
Requirement Name	Customer Support
Characteristics	The client must be able to contact an administrator in order to respond to course inquiries or information.
Description	The system must allow users to contact the administrator either through an email or by contacting the company's WhatsApp
Non-functional requirement	<ul style="list-style-type: none"> • RNF01 • RNF02 • RNF05 • RNF08
Priority	Loud

3.2.7 Functional Requirement 8: User Authentication

Requirement Number	RF018
Requirement Name	User authentication
Characteristics	Users must identify themselves to access the system.
Description	The system can be consulted by any user depending on the module in which it is located and its level of accessibility.
Non-functional requirement	<ul style="list-style-type: none"> • RNF01 • RNF02 • RNF05 • RNF08
Priority	Loud

3.2.8 Functional Requirement 7: Course Reports

Requirement Number	RF07
Requirement Name	Course Report
Characteristics	This requirement details the generation of reports on the status and movement of courses on the website.
Description	<p>The system will generate reports that will show:</p> <ul style="list-style-type: none"> • Best-selling courses. • Least-sold courses. • Abandoned courses • Completed Courses
Non-functional requirement	<ul style="list-style-type: none"> • RNF01 • RNF02 • RNF05 • RNF08
Priority	Loud

3.1 Non-functional requirements

3.1.1 Non-functional requirement 1: Information Security

Requirement Number	RNF01
Requirement Name	Information Security
Characteristics	Protection of user data and transactions.
Description	The system must ensure the confidentiality and security of users' personal and payment data through encryption and other security measures.
Priority	Loud

3.1.2 Non-functional requirement 2: Stability

Requirement Number	RNF02
Requirement Name	Scalability
Characteristics	Ability to support a growing number of users and courses.
Description	The platform should be designed to support the increase in the number of users and courses without significant loss of performance.
Priority	Stocking

3.1.3 Non-Functional Requirement 3: Browser Compatibility

Requirement Number	RNF03
Requirement Name	Browser Compatibility
Characteristics	Support in multiple browsers (Chrome, Firefox, Safari, Edge).
Description	The page must be compatible with the most popular browsers and work correctly on current versions of these.
Priority	Loud

3.1.4 Non-Functional Requirement 4: System Interface

Requirement Number	RNF04
Requirement Name	System interface.
Characteristics	The system will feature a simple user interface to make it easy for users of the system to use.
Description	The system must have an intuitive and simple user interface.
Priority	Loud

3.1.5 Non-functional requirement 5: Maintenance

Requirement Number	RNF05
Requirement Name	Maintenance.

Characteristics	The system must have an installation manual and user manual to facilitate the maintenance that will be carried out by the administrator.
Description	The system must have easily updatable documentation that allows maintenance operations to be carried out with the least possible effort.
Priority	Loud

3.1.6 Non-Functional Requirement 6: User Level

Requirement Number	RNF06
Requirement Name	User level.
Characteristics	It will guarantee the user access to information according to the level he or she has.
Description	Facilities and controls to allow authorized personnel access to information through the Internet, with the intention of consulting and uploading information relevant to each of them.
Priority	Loud

3.1.7 Non-Functional Requirement 7: Continuous System Reliability

Requirement Number	RNF07
Requirement Name	Continuous system reliability.
Characteristics	The user interface must present a help system so that the users of the system themselves can facilitate their work in terms of the operation of the system.
Description	The interface must be complemented by a good help system (administration may fall on personnel with little experience in the use of computer applications).
Priority	Loud

3.1.8 Non-functional requirement 8: Performance

Requirement Number	RNF08
Requirement Name	Yield
Characteristics	The system should be able to handle up to 50 connected users simultaneously without performance degradation.
Description	The system must allow a number of simultaneous users on the website and 95% of transactions must be completed in less than 2 seconds.
Priority	Loud

3.2 Other requirements

There are also the Information requirements where it is of vital importance since these help us to manage all the data that stores the information of the entire system. Among them are:

3.2.1 IRQ-01 Customer Data Storage

The system must store information about the customer who will use the system, including names, addresses, phone numbers, and email addresses for personalization of services, promotions, and billing.

3.2.2 IRQ-02 Course Data Storage

The system should store detailed information about the courses, such as names, descriptions, prices, categories, start time, end of course time, and offers applied by the administrator as well as have the course materials in a secure manner.

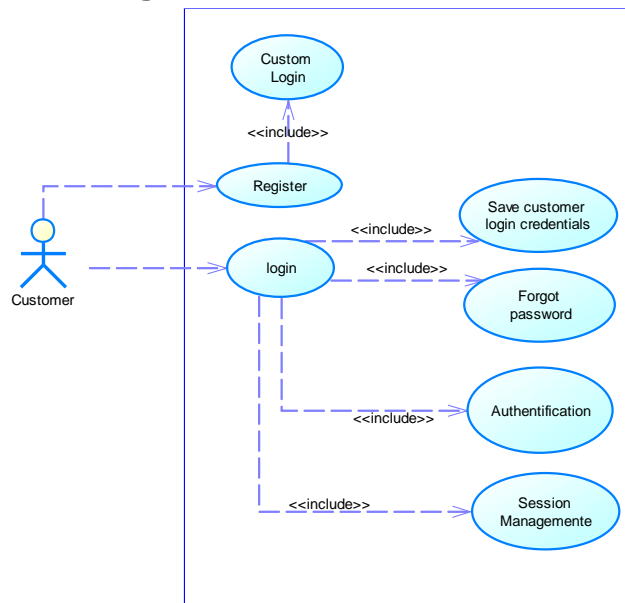
3.2.3 IRQ-03 Transaction Log

The system should allow the owner to record all transactions made, including sales, returns, inventory adjustments, and product data modifications, while maintaining a complete and auditable history.

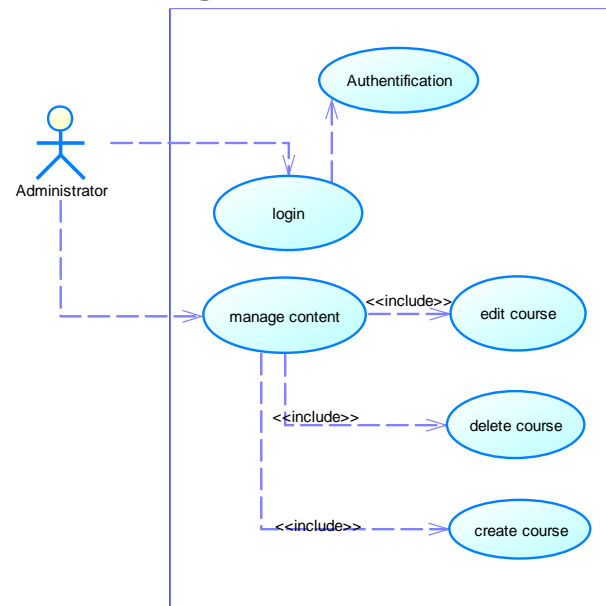
4 Appendices

4.1 Use Case

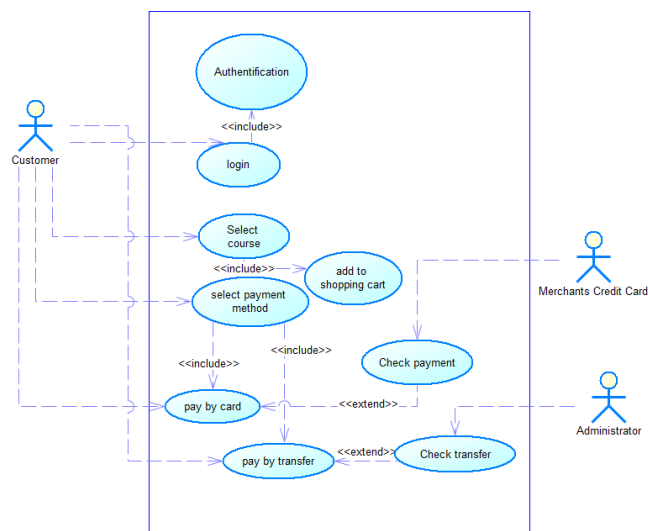
4.1.1 Login Customer



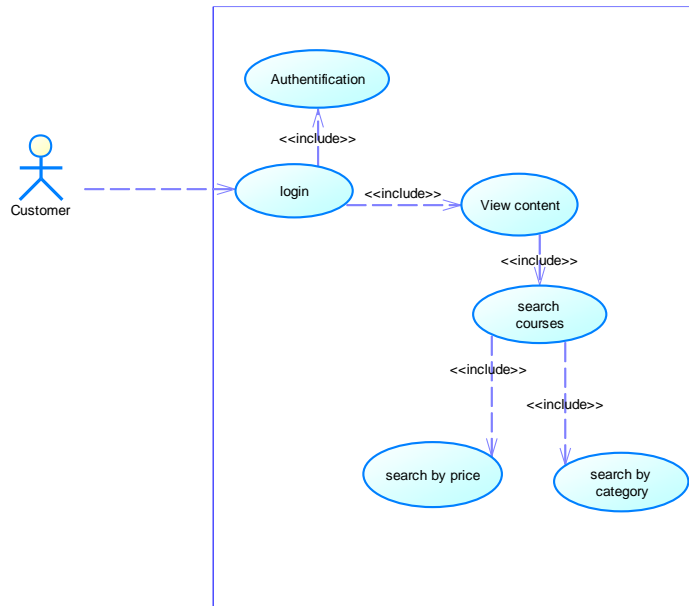
4.1.2 Manage content



4.1.3 Payment of courses



4.1.4 Navigation and search



4.1.5 Reports

