

---

---

**System that allows us to view menus, small and medium restaurant offers. In addition to visualizing if there are places in the restaurant that can be occupied, in case you want to go to the premises.**

## **Project: Restaurant Sales System**

---


---





# Revision history

Document validated by the parties on date:

For the client	By the supplying company
	
Signed. Mr. / Mrs.	Signed. Mr / Mrs



# Content

## DOCUMENT FILE3

## CONTENTS4

### 1 INTRODUCTION6

- 1.1 Purpose6
- 1.2 Scope6
- 1.3 Involved personnel6
- 1.4 Definitions, acronyms and abbreviations6
- 1.5 References6
- 1.6 Summary6

### 2 OVERVIEW7

- 2.1 Product perspective7
- 2.2 Product functionality7
- 2.3 User characteristics7
- 2.4 Restrictions7
- 2.5 Assumptions and dependencies7
- 2.6 Predictable evolution of the system7

### 3 SPECIFIC REQUIREMENTS7

#### 3.1 Common interface requirements8

- 3.1.1 User interfaces8
- 3.1.2 Hardware interfaces8
- 3.1.3 Software interfaces
- 3.1.4 Communication interfaces8

#### 3.2 Functional requirements8

- 3.2.1 Functional requirement 19
- 3.2.2 Functional requirement 29
- 3.2.3 Functional requirement 39
- 3.2.4 Functional requirement n9

#### 3.3 Non-functional requirements9

- 3.3.1 Performance requirements9
- 3.3.2 Safety9
- 3.3.3 Reliability9



System that allows us to view menus, small and medium restaurant offers. In addition to visualizing if there are places in the restaurant that can be occupied, in case you want to go to the premises.

Rev.  
P. 6

- 
- 3.3.4 Availability9
  - 3.3.5 Maintainability10
  - 3.3.6 Portability10

### **3.4 Other requirements10**

## **4 Appendices10**

# 1 Introduction

This software requirements specification document is designed to provide readers with an adequate understanding of the most relevant features of RestaurantSalesSystem; which is a system that will support the operation, operation and management of a restaurant, through a software that allows to observe the menu in a more dynamic way and also that provides the ease of generating or eliminating an order.

This system will give control, advice and a friendlier management to restaurant users that will make them feel comfortable and can obtain a direct channel of interaction with the restaurant.

## 1.1 Purpose

The purpose of this document is to expand and specify the conception of the restaurant's sales system, through the use of a natural language for the description of requirements. and the use of standardized diagrams.

The document is addressed to the restaurant managers, interested in the development and growth of your business premises, under the initiative of an innovative idea that directly involves customers and employees of the establishment.

## 1.2 Scope

This specification of system requirements is directed to the user, to clearly establish that RestaurantSalesSystem will be a centralized automation system in the change from a physical menu to an electronic one, which will provide managerial support and functional control of the different options of dishes and billing offered by the food establishment.

RestaurantSalesSystem will allow you to control the registration and customer orders, additionally allows the creation of reservation and receipt of billing for each customer's order, where the consumer will have the option to change or delete it, this will facilitate and speed up the work of the cashiers.

RestaurantSalesSystem's main objective is to help the business grow and improve its image in front of its potential customers, which will make the establishment grow in sales by a significant percentage.

## 1.3 Involved personnel

Names	Jaramillo Sebastián
Role	designer and programmer
Professional category	IT engineering student
Responsibilities	Information analysis, design and programming of the RSS
Contact information	<a href="mailto:hsjaramillo3@espe.edu.ec">hsjaramillo3@espe.edu.ec</a>

Names	Jiménez Héctor
Role	designer and programmer
Professional category	IT engineering student
Responsibilities	Information analysis, design and programming of the RSS
Contact information	<a href="mailto:hdjimenez1@espe.edu.ec">hdjimenez1@espe.edu.ec</a>

Names	Macas Anthony
Role	designer and programmer
Professional category	IT engineering student

Responsibilities	Information analysis, design and programming of the RSS
Contact information	<a href="mailto:afmacas@espe.edu.ec">afmacas@espe.edu.ec</a>

Names	Meneses Maria Jose
Role	Leader, designer and programmer
Professional category	IT engineering student
Responsibilities	Information analysis, design and programming of the RSS
Contact information	<a href="mailto:mjmeneses1@espe.edu.ec">mjmeneses1@espe.edu.ec</a>

## 1.4 Definitions, acronyms and abbreviations

Name	Description
User	Person who connect to the system to make use of the services it provides.
Authentication	Process that a user must follow to access the resources of a system.
Order	Document issued by the customer to order product from the seller.
Bill	Document that indicates the sale of a product or service.
RF	Functional Requirement

## 1.5 References

Reference	Title	Route	Date	Author
IEEE	Standard IEEE 830-1998			
Google Academic	(Luigy & Delgado Rodríguez, 2019)	Sistema informático web de gestión comercial para el restaurante - cevichería "Pez Blanco" de Chimbote, 2018.	22/01/2021	Bach. Saavedra Arroyo Anthony Luigy Bach. Delgado Rodríguez Tommy Leonard.

## 1.6 Summary

The RestaurantSalesSystem web application is an independent system to perform functions that allow the process of ordering a plate of food to be more efficient and faster. This is a new system that will cause a great impact on customers, since it gives them the autonomy of being able to order food from the same table where they are going to consume it. Its main objective is to help restaurants believe in terms of income and look more competitive compared to large food chains.

## 2 General description

The system has several options for clients, employees and the administrator. These options are different for each of them.

The client has the facility to observe the menu, generate an order and see his invoice, while the cashier registers said order and prints the invoice of total consumption and finally the



administrator will have the possibility to edit the list of employees, modify the menu and generate reports or inventories.

RestaurantSalesSystem has a graphical interface, which allows the interaction of each of the actors with the menu.

## 2.1 Product perspective

RestaurantSales System is an independent system generated from the need to give a restaurant a new image, this system allows the handling of descriptive information about food dishes, such as price, ingredients, the number of servings that exist, etc. It also offers the user the registration, the generation of invoices and mainly the administration of the premises by the owner, which makes the system a functional tool, appropriate to improve the image and growth of the food establishment.

## 2.2 Product functionality

The system requires three main actors, in this case they are: the customer, the cashier and the owner, these actors interact at all times in a virtual way, from the moment the customer arrives at the store. This interaction occurs by performing the following actions:

Customer	Cashier	Owner
<b>Log in</b> <b>Description:</b> Login to the system with a username and password	<b>Log in</b> <b>Description:</b> Login to the system with a username and password	<b>Log in</b> <b>Description:</b> Login to the system with a username and password
<b>View menu:</b> <b>Description:</b> select what you are going to consume	<b>View menu:</b>	<b>Manage menu</b> <b>Description:</b> create, modify and delete dishes, drinks, desserts, etc.
-----	-----	<b>Manage users:</b> <b>Description:</b> delete and add cashier, delete user.
<b>Register order:</b> <b>Description:</b> create, modify, send and delete order	<b>Register order:</b> <b>Description:</b> receives and sees the order, to make way to cook the ordered dishes.	<b>Register order:</b> <b>Description:</b> take inventory
<b>Generate bill</b> <b>Description:</b> total value of your consumption	<b>Generate bill</b> <b>Description:</b> print and charge the total value of the order	<b>Generate bill:</b> <b>Description:</b> take inventory



Type of user	Owner
Training	Person with basic knowledge in computing and people management and the establishment
Skills	basic knowledge in managing web applications and administration
Activities	Modify any menu parameter, generate reports and define

	the roles of users and employees, as well as create, block or delete them from the system.
--	--

## 2.4 Restrictions

- The restaurant must have several mobile devices for the implementation of the system.
- To enter the system, actors must have an internet connection.
- You must use the data exchange protocols via the internet.
- Limit access to unauthorized users.
- Create a basic interface, for easy understanding.
- The system must have a simple design and implementation, independent of the platform or the programming language.
- The programming language to use must be only Java.

## 2.5 Assumptions and dependencias

The computers on which the system will be executed must meet the following requirements such as: a good connection to the Internet and have an operating system compatible with the programming language, to guarantee a correct execution of the system.

## 2.6 Predictable evolution of the system

More modules can be easily added to the system, as required by the client, these could be:

- Payments over the Internet, with paypal or credit cards.
- Customer history, with reservations and favorite dishes.
- Home orders.
- Suggestions area for the administrator.

## 3 Specific requirements

Requirement number	RF01		
Requirement name	User Authentication.		
Type	<input checked="" type="checkbox"/> Requirement	<input type="checkbox"/> Restriction	
Requirement source	The system can be consulted by any user depending on the module in which it is located and its level of accessibility		
Requirement priority	<input checked="" type="checkbox"/> High / Essential	<input type="checkbox"/> Average / Desired	<input type="checkbox"/> Low / Optional

Requirement number	RF02		
Requirement name	Register Users.		
Type	<input checked="" type="checkbox"/> Requirement	<input type="checkbox"/> Restriction	
Requirement source	The system will allow the user (customer, cashier and owner) to register. The user must provide data such as: Name as his user and a Password.		
Requirement priority	<input checked="" type="checkbox"/> High / Essential	<input type="checkbox"/> Average / Desired	<input type="checkbox"/> Low / Optional

Requirement number	RF03		
Requirement name	View menu		
Type	<input checked="" type="checkbox"/> Requirement	<input type="checkbox"/> Restriction	
Requirement source	The system will offer the user general information about the restaurant and the food dishes and offers it offers.		

	<b>Course:</b> general information about price, ingredients, quantity, etc. is displayed.		
Requirement priority	<input checked="" type="checkbox"/> High / Essential	<input type="checkbox"/> Average / Desired	<input type="checkbox"/> Low / Optional

Requirement number	RF04		
Requirement name	Order		
Type	<input checked="" type="checkbox"/> Requirement <input type="checkbox"/> Restriction		
Requirement source	The system generates an order, so that the cashier registers it and generates the order.		
Requirement priority	<input checked="" type="checkbox"/> High / Essential	<input type="checkbox"/> Average / Desired	<input type="checkbox"/> Low / Optional

Requirement number	RF05		
Requirement name	Generate bill		
Type	<input checked="" type="checkbox"/> Requirement <input type="checkbox"/> Restriction		
Requirement source	The system generates an invoice, with the total value of the customer's order		
Requirement priority	<input checked="" type="checkbox"/> High / Essential	<input type="checkbox"/> Average / Desired	<input type="checkbox"/> Low / Optional

Requirement number	RF06		
Requirement name	Modify menu		
Type	<input checked="" type="checkbox"/> Requirement <input type="checkbox"/> Restriction		
Requirement source	The system allows the owner to make changes to the menu, such as the price and the increase or elimination of dishes		
Requirement priority	<input checked="" type="checkbox"/> High / Essential	<input type="checkbox"/> Average / Desired	<input type="checkbox"/> Low / Optional

Requirement number	RF07		
Requirement name	Inventory		
Type	<input checked="" type="checkbox"/> Requirement <input type="checkbox"/> Restriction		
Requirement source	The system records the number of orders generated and invoiced, in addition to carrying the number of dishes and ingredients available.		
Requirement priority	<input checked="" type="checkbox"/> High / Essential	<input type="checkbox"/> Average / Desired	<input type="checkbox"/> Low / Optional

Requirement number	RF08		
Requirement name	Manage inventory		
Type	<input checked="" type="checkbox"/> Requirement <input type="checkbox"/> Restriction		
Requirement source	Allows the administrator to print reports of the restaurant's income and expenses, in addition to seeing the list of ingredients per dish and printing the total registered employees.		
Requirement priority	<input type="checkbox"/> High / Essential	<input checked="" type="checkbox"/> Average / Desired	<input type="checkbox"/> Low / Optional

Requirement number	RF09		
Requirement name	Employee registration		
Type	<input checked="" type="checkbox"/> Requirement <input type="checkbox"/> Restriction		
Requirement source	The system allows adding and removing employees from the list of authorized persons.		
Requirement priority	<input type="checkbox"/> High / Essential	<input checked="" type="checkbox"/> Average / Desired	<input type="checkbox"/> Low / Optional

## 3.1 Common interface requirements

Inputs:

- Cashier: this person adds the data and validates the delivery of the order.
- Owner: this person can register their workers which are: cook, cashier and waiter.
- Costumer: this character can enter his data and request from him to a new order.

outputs:

- Bill: has the values generated by the order and the user can see them through the invoice

### 3.1.1 User interfaces

- It will have colors that achieve an optimal contrast for mobile devices and adapt to the theme of the restaurant.
- It should be as light as possible so as not to consume unnecessary resources on the device.
- They must be designed in such a way that they are easy to understand for the user.
- Indicate as much information as possible about the food dishes offered.

### 3.1.2 Hardware interfaces

It will be necessary to have equipment or mobile devices in perfect condition with the following characteristics:

- Network adapters.
- D-link Dap-1610 Ac 1200mbps 2.4g and 5ghz Wifi Repeater
- Host Post WiFi de 4IPnet
- Processor 1.66GHz or higher.
- Minimum memory of 256Mb.

### 3.1.3 Software interfaces

For the perfect functioning of the system, the following requirements are needed.

- Operating System: Windows 7 or higher or Android.
- Explorer: Mozilla or Chrome.
- 500kbps allocated bandwidth

### 3.1.4 Communication interfaces

The actors and devices will communicate with each other, using standard Internet protocols, whenever possible. For example:

- Transfer Protocol (HTTP),
- Protocol control transmission (TCP)
- Protocol Internet (IP).

## 3.2 Functional requirements

### 3.2.1 Functional requirement 1

- **User authentication:** users must identify themselves to access any part of the system, provided that their username and password are validated.

The system may be consulted by any of the actors depending on the module in which it is located and its level of accessibility

### 3.2.2 Functional requirement 2

- **Register users:** The system will allow the user (customer, cashier and owner) to register.

The user must provide data such as: Name, this being their username and Password.

### 3.2.3 Functional requirement 3

- **View menu:** The system will offer the user general information about the dishes and offers offered by the restaurant

**Course:** general information about price, ingredients, quantity, etc. is displayed.

### 3.2.4 Functional requirement 4

- **Order:** The system generates an order, so that the cashier registers it and gives way to the creation of the order.

In the order you must have the following options:

- ✓ Generate order
- ✓ Modify order
- ✓ Delete order

### 3.2.5 Functional requirement 5

- **Bill:** The system generates an bill, with the total value of the customer's order.

The invoice will have the options of:

- ✓ Generate bill
- ✓ Register bill
- ✓ Delete bill

### 3.2.6 Functional requirement 6

- **Edit menu:** The system allows the owner to make changes to the menu such as:

- ✓ Modify price
- ✓ Modify plate
- ✓ Add plate
- ✓ Delete plate

### 3.2.7 Functional requirement 7

- **Inventory:** The system records the number of orders generated and invoiced, in addition to keeping the number of dishes and ingredients available.

### 3.2.8 Functional requirement 8

- **Manage inventory:** Allows the administrator to print reports of the restaurant's income and expenses, in addition to seeing the list of ingredients per dish and printing the total registered employees.

### 3.2.9 Functional requirement 9

- **Employee registration:** The system allows adding and removing employees from the list of authorized persons.

### **3.3 Non-functional requirements**

#### **3.3.1 Performance requirements**

#### **3.3.2 Security**

- Guarantee the reliability, security and performance of the computer system to the different users.
- Guarantee the security of the system with respect to the information and data that are handled such as inventories and passwords.
- Facilities and controls to allow access to information to authorized personnel through the Internet, with the intention of consulting and uploading pertinent information for each of them.
- Do not handle personal information from clients, because it is not necessary

#### **3.3.3 Reliability**

The system must have an intuitive and simple user interface, which provides security and speed in the ordering process.

The user interface must conform to the characteristics of the restaurant's website and network, within which the sales system will be incorporated, through an electronic menu

#### **3.3.4 Availability**

The availability of the system must be continuous with a level of service parallel to the user of 7 days per 24 hours, guaranteeing an adequate scheme that allows solving a possible failure in any of its components.

The system will be used only in the hours established by the administrator, within which the restaurant serves

#### **3.3.5 Maintainability**

The system must have easily updateable documentation that allows maintenance operations to be carried out with the least possible effort

The interface must be complemented with a good help system (administration may fall on personnel with little experience in the use of computer applications).

#### **3.3.6 Portability**

### **3.4 Other requirements**

## **4 Appendices**

System class diagram as an overview

