

SPECIFICATION OF REQUIREMENTS ACCORDING TO THE STANDARD  
FROM IEEE 830

Project Delta Team

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# **1. Introduction**

The Software Requirements Specification (SRS) became important at the time of program development. As a result of this we can apply a correct application of the same. Next, this document will present the project carried out by Delta Team.

## **1.1. Purpose**

The objective of this Software Requirements Specification document is the creation of a program that meets the expectations of our client, by developing a "Menu" type application. Our user becomes the owner of the Restaurant "Mega Apanados de la ESPE" located in the Sangolquí sector, this initially started as a small fast food stand, so now it plans to expand and attract more customers with the use of technology to offer your products. This document is addressed to H, who runs said company, since he has given us the confidence to develop the application, which is based on requirements that will meet not only his expectations, but also those of his clients.

## **1.2. System Scope**

The name that is planned to be given to the system will be a generic one, being simply a menu that offers the restaurant's food, it was simply sought to put the name of the company together with the system, that is, MegaApanadosSystem.

The program will be presented as a disposable window, where you will have the option to see the menu of products, place your order by adding the products to the "cart", you can pay in cash or by means of a transfer, it will print your invoice applying the laws of national taxes. It will also have a Ratings tab where the customer can rate the service and food received. In order not to lose said information, this will be stored in a database. Navigability will be from window to window. On the contrary, what the system will not contain is payment by card, or adding non-existent extra portions of food, it will only work with the store's stock.

The benefits of the development and use of the system are to harmonize the environment of the young society, which is much more attached to technology than any other person, in addition, with the database it will be possible to observe the quantity of products consumed, which is what the client likes best, in which aspects to improve and, give exact accounts so that the client has more confidence when giving their money for an excellent service. In this way, not only the client benefits, but also the company "Los Mega Apanados de la ESPE".

### **1.3. Definitions, acronyms and abbreviations**

The first thing we must understand is the meaning of application, here we refer directly to a program that works or is applied by the user. Window, will be the spaces where the options of our system will be seen, where the visual is developed for the user. A Database is considered as the cloud that contains your data through the system to be used, this will be protected over time and will help to carry out various business rules. It must be considered that all these definitions are given by being directly based on everyday technology.

Both acronyms and abbreviations will be avoided to provide a more understandable text for our customer.

### **1.4. Document Overview**

As an overview of the document, the following points will be considered:

There will be a screen as the main page, through this you will navigate by buttons to the other windows such as view menu, directly place the order, support, or information about the business.

As a menu Display Window, the products to be offered will be displayed, it will only be a view, and here there will be a button to return to the beginning and another to make the purchase.

On the order page you can choose the products you want and their quantity, and you must click the add button to continue adding more products. here there is also a button to return to see the menu or to continue to pay once the client feels ready.

To pay, the customer can enter their personal data, which will have their respective validations, in addition to showing the table with their products, the quantity, total price and final price with their value added tax (I.V.A.). As mentioned, you have the option of paying with cash, or with a card, where the user can enter their data, they can also return to the order window or press for payment.

Finally, if you wish, you can add a rating to the service received, otherwise the system will deliver the invoice to the customer. being able to return to the beginning or simply exit.

## **2. General description**

Next, the context of these requirements that directly affects the product, which is our Mega Bundled system, will be described.

### **2.1. Product perspective**

From the perspective of the product, the design of an app that essentially depends on a hardware system with a windows operating system or directly android is expected, since in this way electronic devices will be more economical to acquire for the store. The program would depend on it as it is the entity where the file can be executed without problem and that the user can appreciate and use it effectively.

The product will give its functionality by providing the customer service that a cashier or order receiver would, but now you can proceed as you wish, and receive your same order according to the stock present in the store.

Finally, the aforementioned relationship in both software and hardware is based on its smooth operation, with good navigability where the customer feels comfortable.

## **2.2. Product functions**

The functions that one has of the product as it is a system for purchasing products from a restaurant is based on the following:

- Allow the user who is going to consume to view the menu digitally, from the comfort of their seat. the program may be on a device, it will open and the user will be able to see, browsing each window.
- Place the order of what you want to consume safely. Here you can add each product to be consumed, it is a kind of cart like the famous consumer apps, and it will be safe because they are the products that are present in the store.
- Keep consumer data private in a database that will help your data analysis. Whether it is by contact by the company, or the consumption of a product when making the invoice, this data will be stored, helping the company to see what is the best seller, the most frequent users, including the age and days in which the most consumption there is, to generate a better projection of sales to the same location.
- Add qualifications so that the company can continue to improve. Ratings will not only improve the service, but also the program put into development.
- Display your invoice so that the customer has proof of purchase.

As a result of these actions, a clear goal of the design of this project can be visualized.

## **2.3. User characteristics**

When talking about user characteristics, we refer directly to a general concept of how they will behave in our program. We begin by analyzing what, the location of the business is in front of the ESPE Armed Forces University, therefore, the target audience is both students and teachers, and in some cases local residents or parents.

In this term, the largest number of users will be the students, which if we consider the presence of all, there are more than 13,000 students, many can consume in the bar or other businesses considered competition, but for this reason it seeks to provide a good service.

Being students, a large part of these will know how to use technology to perfection, otherwise, the app seeks to be friendly with its client, from the owner of the premises, to each student or teacher who comes to help himself to a plate of food.

Students are always open to learning new technology, so it won't be difficult for you to adapt to the program with its generic name of MegaApanadosSystem.

## **2.4. Restrictions**

If we talk about restrictions to the development of the system, the following is considered:

- The graphical interface must not be the same as that of the competition, it must be different and differentiate from the rest.
- Being a small business, low electricity costs should be sought, considering that the system must be used at specific times.
- The tests must be with true data, but not fictitious.

## **2.5. Assumptions and dependencies**

Although it is unlikely that it will happen, its percentage of passing is not taken away, if the University, regardless of its reason, closes its doors, the main client will not be able to use the program, since its main clients would be missing, without giving it profit percentage, and leaving the app in disuse.

Another dependency is that Our Client no longer sees the program as necessary, that he believes that continuing to manage it manually, with ATMs, with his notes, among others, is enough, since he has not gotten used to the new technology.

On the other hand, it is that the clients of the same restaurant do not find any option useful, and its frequency marks a high degree of importance in that the service is modified.

On the other hand, another dependency could be the need to occupy new functions such as payment with different cards, in addition to seeking to implement new dishes, or that the interface has more animations, thus partly changing some items and modules of our system.

## **2.6. Future requirements**

In the future, the system will need maintenance and improvements that satisfy the customer, therefore, it is considered that the fields to be improved could be the following:

- Graphic interface with colors more in line with the business.
- Much faster browsing, with larger windows and placed in the center of the screen, no longer in the upper left corner.
- The printing of the invoice is improved, no longer presenting only that, but the option of the final consumer, sales note, among others, considering all the legal limits in the sense of accounting.
- The fact of a mascot as a logo is considered, in addition to the fact that the machine where it will be presented must be optimal for its use.

## **3. Specific requirements**

In this section, we seek to define the system requirements in detail, it will be done without the need for technicalities, since the objective is to make it understandable by any individual.

### **3.1. External Interfaces**

As an external interface we will define the following requirements, both software and hardware.

We start with the software, the software was developed in the Java programming language, with the Apache NetBeans application, for the moment it is presented in this same application considering that it will be implemented as a system application so that it can be executed in various operating systems. regardless of your hardware. On the other hand, access to the MongoDB Compass database is needed, because that is where the key business rules for system improvement will be stored.



As Hardware few aspects will be seen, here it is important to mention that the processor must be from 32 to 64 bits, so the program will not be slow for the user, currently a computer is needed to run it, for the user's comfort the presence of a mouse is recommended or a TouchPad.

### **3.2. Functions**

The system must fulfill the following functions:

- Show the Menu of the restaurant "Los Mega Apanados de la ESPE", considering that you want to replace that physical menu with a digital one.
- It must have Navigation Buttons behind between windows, that is, it will not be a single screen, but several for each system action and the buttons will control this.
- There must be a section that leads to the information of the Mega Apanados Company, where you can be directly contacted with the company, or, on the contrary, or in addition, there must be a button on the main page that takes you to support, that is say, contact the company.
- On the See Menu Screen, there will be a button that will take you directly to placing the order, since seeing the menu is where the customer is convinced to purchase a product or not, or, also or in addition, there will be a button on the main page of the system that will take you immediately to place the order, this is for people who have already consumed before and know very well what they want to order.
- In the order window, a table will also be displayed with the prices of the available products, with this you will have a ComboMenu, where you can select the product you want, later, you will have a spinner to select the quantity, as it is a company small, the quantity will vary from 1 to 10 units of the same product. At the end of the window you will find 3 buttons, the first to return to see the menu, the second to add to the cart, that is, when you select the product and the quantity, you will add to the cart to select more, and finally the Order Ready button, which means that the customer has finished placing his order and is ready to make his purchase.
- By clicking on the Order List button, you will be able to go to the billing information, you will have text boxes to fill out, but also, without fear of a mistake,

since these will be validated, then the table of your purchase will be displayed, and it will give you the value and its total price, already including VAT, consider in fact that it will make you select if your payment will be by card or in cash, if you have a card you can enter your data, likewise, this is validated. There it gives you two options, the button to return to the order, or to pay definitively.

- Once you select to pay, you can choose between adding a rating or quitting, if you just quit, your invoice will be displayed, otherwise it will take you to the App Service Rating window.
- Finally, in Comments you can add your name, rank the service and leave your comment.
- Both the contact with the service, the sum of the data when placing an order, your VAT, and the comments are in the database implementing your business rules.

### **3.3. Performance requirements**

Approximately 5 computers are estimated to perform the operations, up to the same 5 users when performing, if the business grows, this may improve.

Once again, the data to be stored in the database when placing an order, the data that the user entered, the emails sent by the contact support with the company, the accounts collected, the VAT.

### **3.4. Design requirements**

Some Design Options were discarded, such as the Slider, Multifaceted Tables as they are also modifiable, as they become limitations in our Apache NetBeans program.

But as a result of this, simpler tables have been implemented, Menu Combo, Slider, Text Boxes, buttons, among other elements so that the user can enter their data and save it in an ideal way.

### **3.5. System Attributes**

Reliability becomes a key factor in the system, as it provides a lot of discretion and privacy with customer data by using a secure database. Its maintainability is appropriate, since it seeks to be an understandable code for other programmers who are hired for the same reason to create improvements and maintain the software life cycle. Portability is a bit more complicated as you need the Apache NetBeans Application, plus various MongoDB Cloud implements or dependencies.

### **3.6. Other requirements**

It is necessary to take into account that prior training will be needed for the owner of the premises, and for their employees, so that they are better acquainted with the program and they can help their clients understand it and use it without difficulties.