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# **Software Requirements Specification**

for

## **FastBuy**

**Version 1.0 approved**

**Prepared by Teams 6 - Syntax error**

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# 1. Introduction

## 1.1 Purpose

*This project proposes to create a software application that greatly helps supermarkets*

## 1.2 Document Conventions

*The execution of the services provided by the application will be carried out from the technological device that the user most conveniently or available*

## 1.3 Intended Audience and Reading Suggestions

*The Application is specifically dedicated to users, to the whole society in general, who need to make purchases in a supermarket and who need quick and controlled attention in the supermarket.*

- Teenagers
- Seniors
- Senior Citizens

## 1.4 Product Scope

- *Helps the customer to shop more easily at the supermarket.*
- *The efficiency of the application makes the customer manage time on a daily basis or when buying a specific product.*
- *The application creates profiles that help to analyze directly what the user is looking for.*
- *The application helps users to prepare products to pick up instantly and not waste time.*
- *The application shows product locations and pick-up points.*
- *It analyzes the estimated time it takes for products to be delivered.*

## 1.5 References

<https://www.ieee-security.org/TC/SP2011/PAPERS/2011/paper029.pdf>

*David Chaum, Amos Fiat, and Moni Naor. Untraceable electronic cash. In Proceedings on Advances in cryptology (CRYPTO '88).*

*Interspire Shopping Cart. <http://www.interspire.com/shoppingcart>*

*<https://repositorio.uesiglo21.edu.ar/bitstream/handle/ues21/17599/LUQUE%2C%20PEDRO%20HORACIO.pdf?sequence=1&isAllowed=y>*

## 2. Overall Description

### 2.1 Product Perspective



### 2.2 Product Functions

- The application should help users to purchase products quickly and easily.
- The application will replace the time it takes to checkout and exchange it for the speed of a click.
- The application offers various payment methods and facilities for consumption in the supermarket.
- The application locates products to improve the speed of shopping.
- The application provides notifications of promotions and products on offer.

#### PROCESO DE COMPRA MEDIANTE LA APP



## **2.3 User Classes and Characteristics**

### ***USERS WHO WILL USE THE APPLICATION***

<b><i>CUSTOMER</i></b>	<b><i>CHARACTERS</i></b>
<b><i>RATIONAL</i></b>	<ul style="list-style-type: none"><li>• <i>He knows what he wants and needs.</i></li><li>• <i>He is concrete and concise in his demands and opinions.</i></li></ul>

	<ul style="list-style-type: none"> <li>• <i>Asks for accurate information.</i></li> </ul>
<b>RESERVED</b>	<ul style="list-style-type: none"> <li>• <i>Avoid making eye contact.</i></li> <li>• <i>Try to keep your distance from the salesperson.</i></li> <li>• <i>Do not externalize your interests or opinions.</i></li> <li>• <i>Seek complete information.</i></li> <li>• <i>You need time to evaluate and decide.</i></li> </ul>
<b>INDECISO</b>	<ul style="list-style-type: none"> <li>• <i>Shows an attitude of doubt and indecision.</i></li> <li>• <i>Demands a great amount of information for decision making.</i></li> <li>• <i>Needs a lot of time to make up his mind</i></li> </ul>
<b>DOMINANT</b>	<ul style="list-style-type: none"> <li>• <i>Needs to express knowledge, show superiority and control the conversation.</i></li> <li>• <i>Believes he/she knows the products.</i></li> <li>• <i>Doubts the information offered about products and services and the solutions provided.</i></li> <li>• <i>Demands a lot of attention.</i></li> <li>• <i>Continually seeks praise.</i></li> </ul>
<b>SPEAKER</b>	<ul style="list-style-type: none"> <li>• <i>It exposes various topics even unrelated to the purchase.</i></li> <li>• <i>He is interested in the seller's opinion.</i> <ul style="list-style-type: none"> <li>• <i>He needs to be taken care of.</i></li> </ul> </li> </ul>
<b>IMPACT</b>	<ul style="list-style-type: none"> <li>• <i>He is always in a hurry.</i></li> <li>• <i>He needs attention.</i></li> <li>• <i>Gets nervous while waiting</i></li> </ul>

## 2.4 Operating Environment

*The app will work on mobile devices and will have versions for both Android and iOS systems, which will be constantly updated to avoid compatibility problems on the devices.*

*As a function of the app is the barcode scanning of the products, which is linked to the inventory of the supermarket which is also constantly updated.*

## 2.5 Design and Implementation Constraints

- *The app a problem that is found is that there is still an android system older than 9 that*

*continue to circulate since the system in android has to be from android 9 onwards and in iOS it is from 11 onwards*

- *Another problem can be the use of the app without being active since this can cause accumulation of inactive users and thus make it even slower for this we will take into account adding a limited time of inactivity*

## **2.6 User Documentation**

- The application will have a help and customer support section where there will be a forum of frequently asked questions or you will have the option to personally contact a customer support manager.
- The app will feature a web site for frequently Asked Questions and User Support.
- On the website of the application you will find tutorials and manuals to solve doubts to the client

## **2.7 Assumptions and Dependencies**

- The payment system of the application depends on the financial systems of each bank. This model works by sending the purchase data to a database, after this instructions are sent to the customer of the payment to be made. When the payment has been made, the customer notifies that the payment has been made and the purchase is released.
- There is no direct or personal contact with the client. The most requested element to make this type of payment is the credit card. The credit card is the most common and accepted electronic payment system today given the widespread use of credit cards. Electronic payment methods are much more agile but make the implementation of our project dependent on the associated external financial systems.

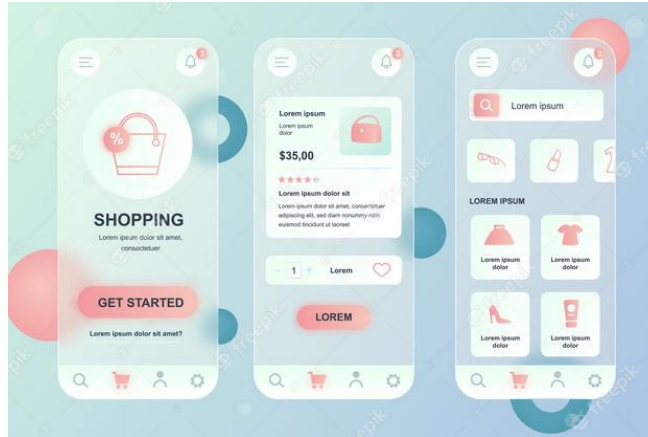
# **3. External Interface Requirements**

## **3.1 User Interface**

A user interface is formed by several logical elements that allow the user to navigate quickly and accurately in front of a system, however, for this interaction to work, it must be related to a system design in which users develop their activities productively taking into account the manageability, usability and friendliness that exists in the system and to achieve this, the simplicity, safety, comfort and efficiency that the user feels when viewing and doing it must be taken into account. The study of human computer interaction includes several aspects, among them how the hardware and



software influence the interaction, the mental models of people when navigating, and how the needs of the users are adapted to the system.



### 3.2 Hardware Interfaces

- The software will be an application that will be compatible for devices with iOS and Android operating systems.
- Mobile devices must have a camera with which each product that the customer wants to buy will be scanned individually through the application.
- The application will be linked to the supermarket inventory database

### 3.3 Software Interfaces

- The application will have a database with the profile and information of each user, part of the information will be their payment methods, purchase history, and the Big Data that is collected to offer personalized suggestions to each user.
- The application is linked to the inventory of products of each branch of the supermarket chain, this must always be updated.
- The application is linked to the financial system due to the electronic payment methods that are handled either banks or the supermarket system itself since it will offer the payment method in cash.

- The purchase application will be available to be downloaded for free through the Play Store if it is for android device or in the App Store for IOS devices.

### 3.4 Communications Interfaces

- The application will have a strict management of the security and privacy of the users. This will be maintained in a constant monitoring through the network so it is a necessary condition that the device where the purchase is being made remains connected to the internet either by mobile data or wifi.
- The application will handle various types of verification for user security. The app will count for the record what will be verification of identification number, email and cell phone number in order to avoid any type of problems
- The means of contact with the user will be via email or SMS messages since at the time of creating an account in the application such data will be requested.
- The application will have the functionality to identify that at the time of purchase and use of the application the customer does not leave the supermarket.
- The application will handle a reward system based on the loyalty and constancy of each customer when buying in the supermarket. Rewards can be bonuses or discount tickets.

## 4. System Features

### 4.1 System Feature 1

#### 4.1.1 Description and Priority

*Reduce waiting in lines, optimize purchases and give customer offers*

#### 4.1.2 Stimulus/Response Sequences

1. *enter username and password> verify that they are correct*
2. *enter the location of the establishment visited> show the details of the establishment visited*
3. *use camera to scan> camera permission request*

#### 4.1.3 Functional Requirements

<b>Id. Requerimiento</b>	FP1
<b>Case of use</b>	Automatic calculation of the total of your purchases, by scanning the products.
<b>Actors</b>	Team Syntax error, fast buy
<b>Description</b>	The system will calculate and display on the screen, the total value to pay for all the products that are in your shopping cart, in this way the user will know how much to pay, allowing to prioritize the purchase of the products according to their need and budget. which will decrease the time of payment in the boxes.
<b>Entries</b>	QR code or barcode scan, through the application.
<b>Outlets</b>	Product price and the total value to pay.
<b>Process</b>	<b>User :</b> <ul style="list-style-type: none"> <li>• Log in</li> <li>• Enter the option to check prices</li> <li>• Scan the product</li> <li>• The system displays the price of the product and its offers</li> <li>• Customer Add to your shopping cart</li> <li>• The system reflects the total value to pay, for all the products added to the shopping cart.</li> </ul>
<b>Preconditions</b>	<ul style="list-style-type: none"> <li>- System connected to the Updated Inventory of the supermarket.</li> <li>- The Client must be registered in the system and log in.</li> <li>- Mobile device camera access.</li> <li>- Access to device storage.</li> <li>- Internet connection.</li> </ul>
<b>Post conditions</b>	<ul style="list-style-type: none"> <li>- The customer must scan the product.</li> <li>- You must choose the check price option.</li> <li>- Choose add to cart.</li> <li>- Scan another product.</li> </ul>

<b>Alternate flow</b>	<ul style="list-style-type: none"> <li>• Product scanning must be by QR code or barcode.</li> <li>• You can check the price, add to the cart or leave that option.</li> <li>• The system will provide existing offers of the product or other available brands.</li> </ul>
<b>Priority</b>	<ul style="list-style-type: none"> <li>• Clear the doubt about the price of the product.</li> <li>• Calculate the total value of your purchase, in real time.</li> <li>• Provide existing product offerings.</li> <li>• Reduce payment time in billing.</li> </ul>

## 5. Other Nonfunctional Requirements

### 5.1 Performance Requirements

*One of the performance requirements would be that the cell phone comes to have android 9 onwards since from this version it is possible to read the codes instead in serious iphone from the iOS 11 version, another would be to have the app updated at all times and insert adequate data to be verified*

### 5.2 Safety Requirements

When installing the app, the user is required to create a profile with an email account, create a login password and ID number (in case of using the card payment function through the app), in order to secure the user's data and report irregularities such as entering an incorrect password several times or logging in from other devices.

### 5.3 Security Requirements

*For the security of the user, the app requests an email and password with which it is registered; and in the case of use of credit cards or use of any financial institution, you must first solve a Captcha, you must enter the ID numbers, a series of three security questions which are chosen and answered by the user. This will also be notified to the registered email of the profile.*

### 5.4 Software Quality Attributes

*The application does not weigh much since most of it is linked to the cloud and the internet, and is functional on both Android and iPhone. The interface with which the user interacts is intuitive as it is not complex and is available at any time of the day, constant maintenance and updates are given.*

## 5.5 Business Rules

- **Online help:** *In case of problems with the application, it will have online help to solve problems with the user profile, such as problems with payment methods.*
- **User's guide:** *In case the user does not know any function, the user will have available a guide of the application that explains the actions of each function.*
- **User history:** *this information is in user information within the application where you can find the record of purchases and the store you visited.*