UNIVERSIDAD TECNOLÓGICA DE

SAN LUIS RÍO COLORADO

REACTIVO PARCIAL # 1

PROF. SOTO MORALES RICARDO ALEJANDRO

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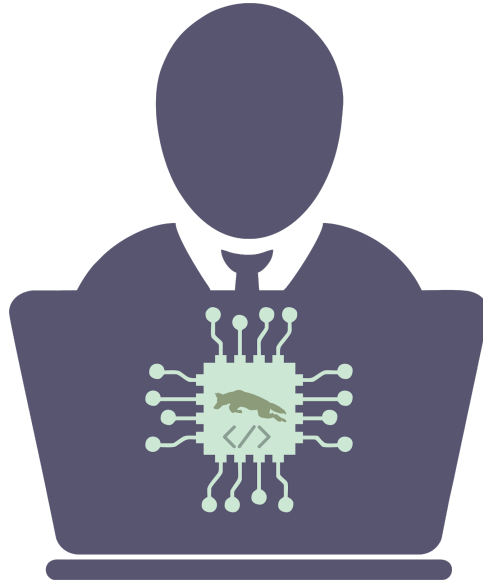
AUTOR(ES):

ESPINO TRIGUERAS LEONARDO SAHID

GALVAN COVARRUBIAS VICTOR MANUEL

MEZA ALVAREZ JUAN

PARRA SANCHEZ LESTAT

VEGA SAUCEDA ALAN GUADALUPE

San Luis Rio Colorado, Sonora   junio, 2020

SOFTWARE REQUIREMENTS SPECIFICATION

OF THE SYSTEM

Development of the <u>Coyote system</u> for the company

ACME S.A. de C.V.

SOFTWARE REQUIREMENTS SPECIFICATION

S.R.S.

IEEE-830

ACME S.A. de C.V.

San Luis Rio Colorado, Sonora.   February 16, 2026

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INTRODUCTION

1.1 Purpose of the document.

The purpose of this specification is to define in a clear and precise manner all the functionalities and restrictions of the system to be constructed.

This document is targeted at both the production team, the stakeholders, the management of the ACME company, as well as the participants of the free documentation projects and the community of future end users.

This document will be the channel of communication between the parties involved, taking part in each party's member making. This specification is subject to revisions by the parties involved , especially by potential users, which will be collected through successive versions of the document until their approval is reached.

Once approved, the development team will serve as the basis for the construction of the new system.

1.2 Objectives and scope of the product.

This system is required as a result of the increasing complication of inventory work in the warehouses of the company's franchises, constantly expanding, ACME.

The need for a computer system to automate the inventory and product management work in the warehouses of the ACME company's premises has been established in such a way that they are easily located and quickly made available to users and workers.

Use inventory, management, labeling and organization rules will generalize the use and future application of the program to any form of product handled by the ACME company that can be categorized.

The scope of the system developed reaches the realization of ACME customers; preferring the design of a system that can be embedded in other similar applications so that they can in turn be applications compatible with other ACME modules.

1.3 Definitions and abbreviations

Resource: Element accessible through an inventory classifiable URL.

Scheme: Description of a syntax.

Description: Instance of a scheme that unambiguously defines a resource by means of metadata.

Inventory: collection of items available.

Server: Node that attends inventory consultations.

Client: Node that produces application queries.

Consultation: petition for a subset of descriptions expressed in a standardized language.

ERS/SRSD: Software Requirement Specification Document.

GFDL: GNU Free Documentation License.

GPL: GNU Software License.

RDF: Resource Description Framework, World Wide Web Consortium (W3C) standard for coding and managing metadata using XML brand language.

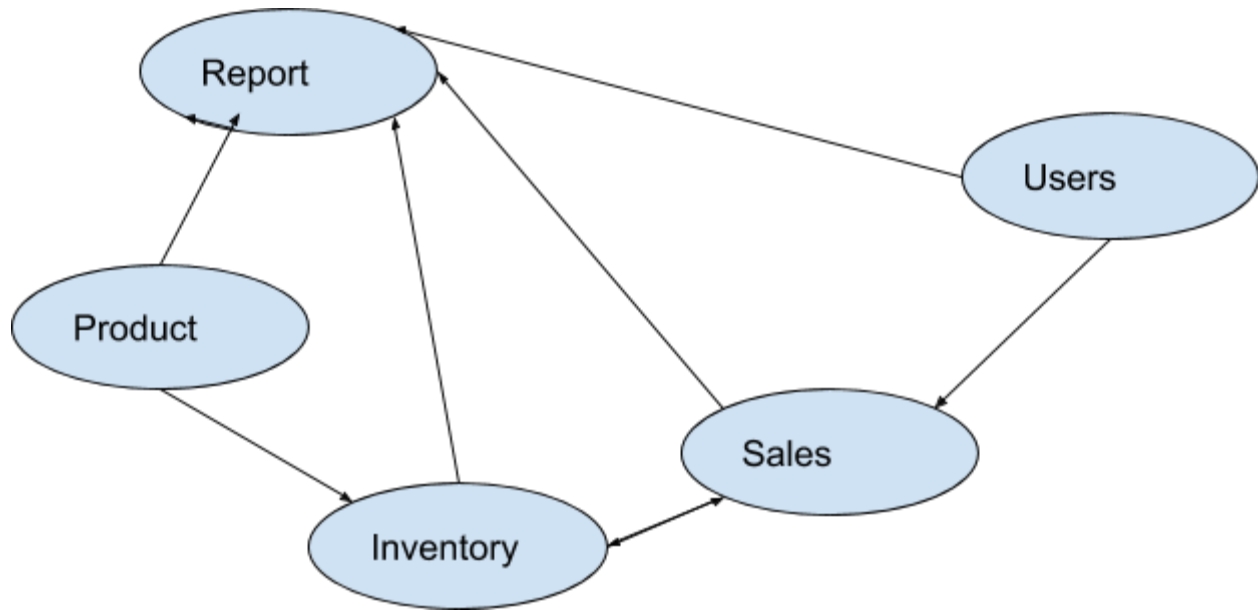*URL:* Uniform Resource Locator, a scheme used to find an Internet resource.

XML: eXtended Language Markup. Structured mark language, W3C standard.

GENERAL DESCRIPTION

2.1 Product perspective

Envisioning a form of accessing information concerning the management of resources of the ACME company getting to their disposal all data available regarding the company to the respective departments.

SCREEN	FUNCTIONS	SPECIFICATIONS
REGISTRY	SIGN IN	The user registers in the system with his own data and creates his username and password.
log in	Log in	After validating their email, the user will be able to access their account using their password and username.
START	SHOW MENU	It presents a tab with the option to display to access information, such as account data, reservations, order fulfillment, inventory, and announcements.
Users	User management section	Modification, deletion and / or creation of users.
customers	Customer management section	CRUD (customers).
products	Product management section	CRUD (products).
Sales	Sales management section	Invoice management, sales report, cancellations, inventory and receipts.
Billing	Billing at the end of the sale	CRUD (bill).
Inventories	Inventory management section	CRUD (inventory).

2.2 Product features

Seizing and measure of sales and inventory on stock as well as on demand to know how the products are doing on the market and the current state of the locations, by learning the success rate on sales of a product and the profit made they can know how to react to a product demand regarding production and transport of it.

Features and users	User tools	Features
Admin	Competent level of knowledge of system management	Manages users data, general reports data, inventory, sales, factures, clients, backups data, cancellations, etc.
User	Basic level or null of system management	Users registration, access to sales and clients data, only access to review data with no capacity of modification.

2.3 User features

The workers will have their on account to access information pertinent and concerning to their role on the company to improve or at least help in their departament, as well as have a log of the respective schedules so they can get an appropriate payment proporcional to the laboral hours, and finally make reports to the managements for theirs revision; complaints, request of product, etc.

2.4 General restrictions

Depending on the role in the company you will be granted access to information owned by the company, the company will decide which level of accessibility each department will be guaranteed associates, inversionist, owners, managers, transportist, workers; each will get to access the needed information to ensure they do their job correctly. all this being considered private information that only the company employees will have access to.

3. FUNCTIONAL REQUIREMENTS

3.1 Sales Module.

Create	
Function	Allow to create a sale
Description	With this function the user can make sales.
Input	Product code, product quantity, sale confirmation, method of payment
Output	Sales ticket, money exchange
Source	Keyboard, scanner
Restrictions	In case of not having a certain product, the purchase cannot be made
Process	The system shows a window where you will put the data of the article -mentioned in the input row-

Update	
Function	Allow update sales
Description	The user can update any data of the sale
Input	Product code, product quantity, method of payment, sale date
Output	Confirmation of changes made
Source	Keyboard, scanner

Restrictions	Only the manager can make these changes
Process	The system will show a window where you can update the data of said sale. These data are folio, product code, product quantity, money to pay.

Delete	
Function	Allow delete a sale
Description	The user may delete any sale that has been made
Input	Sale date, ticket ID
Output	Confirmation of sale to be removed
Source	Keyboard, scanner
Restrictions	Only the manager can make these changes
Process	The system will display a form where you can delete the sale, it will ask the user for the Ticket ID, the date and the reason why you want to delete the sale.

Read	
Function	Allow reading the sale of products
Description	The user will be able to read the sale of the products
Input	Sale date, ticket ID
Restrictions	None
Process	The system will show a window where the user can read the sales that have been made.The user will be able to search by date and by ticket ID.

3.2 Inventory Module.

Create	
Function	Register products in the system
Description	Allow the user to register or enter products in the system
Input	Product code, product quantity product name.
Output	Registration confirmation, show dated data
Source	Keyboard, scanner
Restrictions	Only the manager can does the register
Process	The system will display a form where the product data for registration is placed. These data are product code, product quantity product name. After being registered they remain stored in the database.
Postconditions	Any registered product will be saved in the database

Update	
Function	Make changes to products in the system
Description	The user can update any product that is registered in the system
Input	existence, location, entry date, stored time, product code, product quantity product name.
Output	Confirmation of changes made
Source	Keyboard, scanner
Restrictions	Only the inventory administrator or manager can remove the products.
Process	The system will show a window where you can see the data of the products, the user must enter the product code to be able to make the modifications

Postconditions	Any modification that has been made will be saved in the database in real time

Delete	
Function	Delete any product found in the system
Description	Allow the user to delete any product that is registered in the system.
Input	Product code, product name,product quantity
Output	Confirmation to delete the product
Source	Keyboard, scanner
Restrictions	Only the inventory administrator or manager can remove the products.
Process	The system will show a window where the user will enter the product code, the product name, the quantity of the product. Then the system will display a dialog box to confirm the product to be removed.
Postconditions	Any modification that has been made will be saved in the database in real time

Read	
Function	Allows you read the products that are in the inventory
Description	The user can see all the products that are registered in the system.
Input	Sale date, ticket ID
Restrictions	None
Process	The system will show a list where all the products registered in the system are. In case of looking for a specific product, the user must put the product code in the search engine.

3.3 Product Module.

Create	
Function	Register a product in the system
Description	The user can register a product in the system
Input	Product code, product name, quantity, price, supplier, minimum stock
Output	Registration confirmation
Source	Keyboard
Restrictions	Only the manager or the inventory administrator can register products.
Process	The system will display a form in which the user must add the aforementioned data for product registration. Then the system will ask if you are sure of the data that was entered.
Postconditions	The products are registered in the database with the date in which they were registered

Update	
Function	Modify any product that is registered
Description	The user will be able to update the data of the products that are registered.
Input	Product code, product name, quantity, price, supplier, minimum stock
Output	Confirmation of the modification made.
Source	Keyboard
Restrictions	Only the manager or the inventory administrator can modify products.
Process	The system will display a form with the current data of the product, the user can modify any data of the product. Once the modification has been made he will ask if you are sure of making the changes.
Postconditions	Any modification that has been made will be saved in the database in real time

Delete	
Function	Delete any product that is registered
Description	Allow the user to delete any product that is registered in the system.
Input	Product code, product name,product quantity
Output	Confirmation to delete the product
Source	Keyboard
Restrictions	Only the inventory administrator or manager can remove the products.
Process	The system will show a window where the user will enter the product code, the product name, the quantity of the product. Then the system will display a dialog box to confirm the product to be removed.
Postconditions	Any product that has been removed from the system will be removed from the database and the deleted products will be available for consultation.

Read	
Function	Show all product registrations that have been made
Description	The user can see all the products that are registered in the system.
Input	Sale date, ticket ID
Restrictions	None
Process	The system will show a list where all the products registered in the system are. In case of looking for a specific product, the user must put the product code in the search engine.

4. DEVELOPMENT REQUIREMENTS.

4.1. Software requirements.

The control program for the company ACME S.A de C.V will be programmed through:

- with the object-oriented language the realization will be done in a simple way and for its postponement the program will be able to adapt itself to any requirement that may arise in the future. In the same way, if at any given point the owner decides to hire another developer team, it will not present problems to adapt or modify the system.
- SQL: to capture and record data of different types it will be used. Thanks to the wide variety of options that SQL has, the database of records and movements of the company will be stored securely on a remote server to which managers and owners will be connected at all time.

4.2. Hardware requirements.

- Minimum requirements.

Computer with intel i3 or intel pentium processor.
2Gb Ram.
HHD 1Tb.
3 Gb VRAM graphic card.

- Recommended requirements.

Computer with intel i5 9300h or higher.
12Gb Ram.
SSD 2Tb.
8 Gb VRAM graphic card.

4.3. Personnel requirements.

- Programmer # 1: is in charge of developing the program in java as well as designing the entire system structure.
- Programmer # 2: will be in charge of creating the database in SQL.
- Designer # 1: It will create all the windows that will be in direct contact with the users as well as the administration of users in the system.

4.4. Delivery requirements.

- The system has an estimated development time of 2 months. From June 4, 2026 to August 4, 2026.
- It will be delivered through an external hard drive with an installer program.
- User manual and contact telephone number for questions.
- 1 hour of training for managers and workers. 3 hours of training for the owner.

4.6. Approval and acceptance.

During the development of the software, 42 demonstrations will be carried out to the client to verify that the requirements are adequate and a report will be signed specifying said authorization as well as confidentiality agreements with the company ACME.

The dates established for the presentation of progress are:

- June 20, 2026 at 3:00 pm in the offices of the company ACME S.A. de C.V.
- July 10, 2026 at 3:00 pm at the offices of the company ACME S.A. de C.V.