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**Enable Systems**  
**Software Requirements Specifications**  
**Version 1.0**



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¿Cuál es el nombre del grupo?

## Introduction

### 1.1 Purpose

The purpose of the Software Requirements Specifications (SRS) will contain various explanations of the product that the developers will be working on. The people that will have access to this document are will be the developers and the clients. The developers are Victor Rivera, Nilka Quiles, Yanilett Lopez, Tania Peña and Jonathan Melendez. The clients will be the GameStop general employees. This document will be able to explain the specifications of the product to the clients; this documentation will let them know how to use the product and the changes that might be done.

### 1.2 Scope

Enable Systems (ES):  
• Es un programa de inventario.  
• Los verbos

- Is an inventory program.
- The program improves the database, organization, selection and sale from the product inventory of all GameStop stores throughout Puerto Rico and The United States.

- The program provides certain information to the regular employee that he could not search the inventory information he wanted, returned erroneous information or outdated in the current program in use.
- This helps the employee provide better customer service thereby increasing sales and organization to all stores across Puerto Rico and The United States.

• ¿Por qué en la lista?

Table 1.2.1 Requirements

Requirements	<p>1.0. Only Local GS employee can access the ES DBMS.</p> <p>2.0. Data will be updated at any time.</p> <p>3.0. ES will be able to look in other stores.</p> <p>4.0. The system will be able to Order, Pay and Hold in External Store .</p> <p>5.0. Increase the sales and eliminates delays.</p> <p>6.0. Electronic Confirmations to communicate with other stores.</p>
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### 1.3 Definitions, Acronyms and Abbreviations

#### 1.3.1 Definitions

Table 1.3.1 Definitions

Words	Definitions
Software Requirements Specifications (SRS)	The explanation of the product that the developers will be working on.
GameStop (GS)	A company with GameStop stores worldwide, it is the world's largest video game and entertainment software retailer.
Portable Computer (PC)	Is a computer that is design to move from one place to another place.

Fiction

movez a la otra pagina

verbos o oraciones

Encabulado

<b>Art</b>	real, mostly is invented by the author.
<b>Magic</b>	The way of people expressing senses, emotions and intellect.
<b>Supernatural</b>	Art of manipulating the aspects of reality. <span style="color: red; font-size: 1.5em; float: right;">Frase</span>
<b>Phenomenon</b>	The meaning of this word is not clearly but it can be interpreted as above or existing outside the laws of nature.
<b>Fantasy</b>	Is any observable occurrence.
<b>early Childhood (eC)</b>	Is fiction that commonly uses magic and supernatural phenomenon, which usually takes place on imaginary worlds.
<b>Cartoon</b>	Content for ages 3 and older.
<b>Mild violence</b>	It could be a drawing or a painting in a form of two dimensional visual arts.
<b>Mild language</b>	Will contain moderate physical force.
<b>Everyone (E)</b>	May contain moderate bad words, which parents may not want their children to hear.
<b>Suggestive themes</b>	Content for ages 6 and older, could contain minimal cartoon, fantasy or mild violence or use of mild language.
<b>Everyone+10 (E+10)</b>	Contains provocative themes, which may cause people to feel certain way.
<b>Gambling</b>	Content for ages 10 and older, could contain more cartoon, fantasy or mild violence, mild language or minimal suggestive theme.
<b>Strong language</b>	A way of gathering money or valuable objects.
<b>Teen (T)</b>	May contain insults, rude and vulgar vocabulary.
	Content for ages 13 and older, could contain violence, suggestive themes, minimal blood,

# Encabezado

	gambling or usage of strong language.
<b>Sexual content</b>	Contains actual or simulated sexual explicit.
<b>Mature (M)</b>	Content for the 17 and older, contain intense violence, blood, sexual content or strong language.
<b>Intense violence</b>	Will contain intense physical force.
<b>Nudity</b>	State of wearing no clothing, which mean peoples genitals are in the out.
<b>Adults only</b>	Content for ages 18 and older, could contain scenes of intense violence, graphic sexual content or nudity.
<b>Rating Pending (RP)</b>	Have been submitted to the ESRB and is waiting for the final rating. RP only appears when advertising before the release of the game.
<b>Item Look Up</b>	Old GS DBMS

## 1.3.2 Acronyms

 *Table 1.3.2 Acronyms* describes the general factors

<i>Acronyms</i>	<i>Meaning</i>
ES	Enable System
DBMS	Database Management System
GS	Game Stop
eC	early Childhood
E	Everyone
E+10	Everyone+10
T	Teen
M	Mature
Ao	Adults only
RP	Rating Pending
SRS	Software Requirements Specifications
<b>Acronyms</b>	<b>Meaning</b>
ES	Enable System

DBMS	Database Management System
GS	Game Stop
UML	Unified Modeling Language

### 1.3.3 Abbreviations

Table 1.3.3 Abbreviations

Abbreviations	Meaning
Info	Information

### 1.4 References

Table 1.3.4 References

References	
	www.google.com
	www.wikipedia.com
	www.gamestop.com
	www.esrb.com
	org

### 1.5 Overview

The rest of this document is overall description that describes the general factors that affect the product and its requirements. It includes details about the problem, its solution, the function of all the services and UML diagrams. As the document progresses, all the details will be explained in full detail with explanation of technical specifications. Also contains specific requirements. The last part is mostly intended to the developer since it contains all the details in an elaborate form.

Indicar las secciones que quedan ¿que significa?

indicar que la sección #2 es para clientes y usuarios son muchos use cases?

## 2.0 Overall Description

### 2.1 Product Perspective

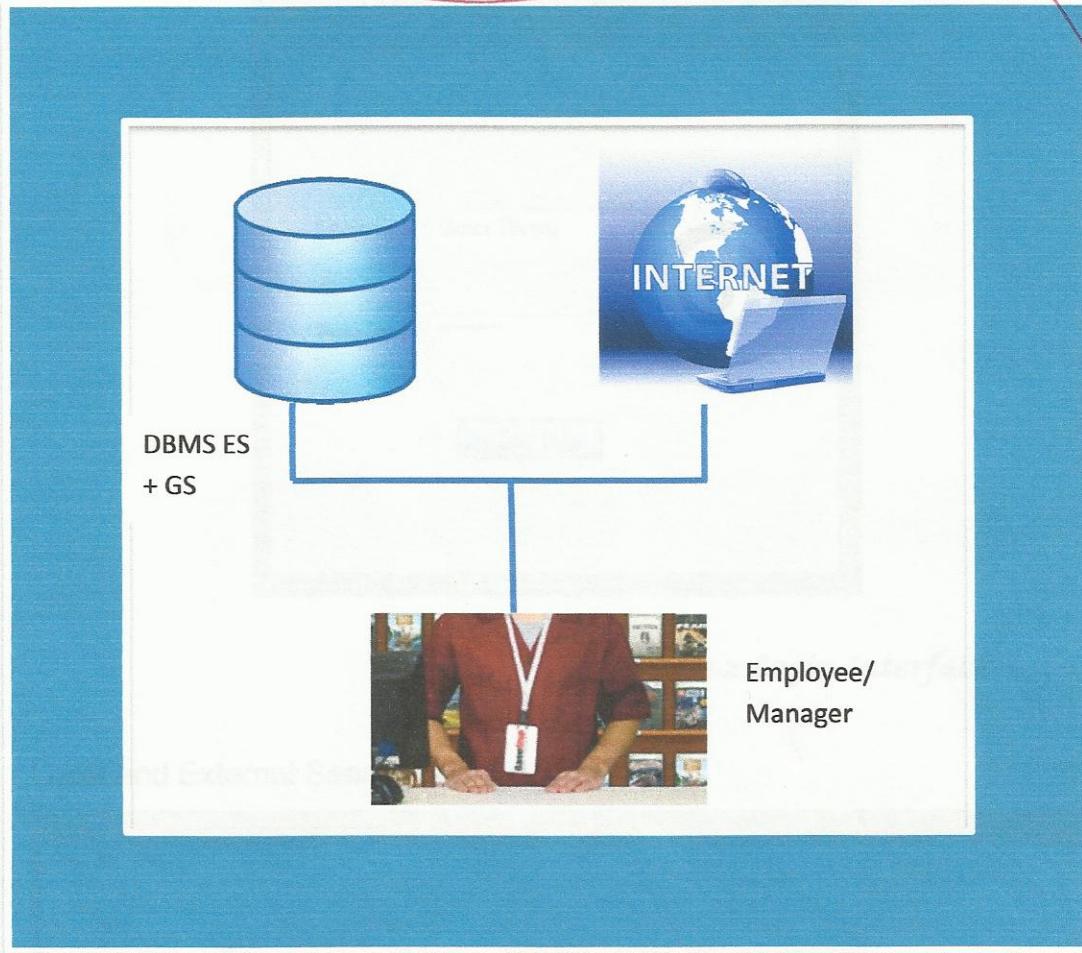
The ES Software is being developed as a revision of the current "Item Lookup" application GS is working with currently and it is an extension for the POS system that is the mainframe for running a store. Our software would function similarly to the "Item Lookup" Borders had in-store. Their software allowed the clients to know if the item was available, if not then where it was and finally the option to order the item. This allows the sales to be kept inside the company and not have the customer go elsewhere. The difference between Borders Lookup and ES is that as an addition to the POS system, the Lookup searches internally for the item, if it is available it leads directly to the transaction for the sale, if not it can lookup others stores inventory and communicate with the other stores to set the item aside for the client and finally if it is not available anywhere an order can be placed.

#### 2.1.1 System Interfaces

##### ES DBMS is based on:

- Is a database system for GameStop (GS) Stores.
- Is a modification of "Item look up" (DBMS OF GS).
- The GS DBMS and the Internet takes part as components of the ES.
- The Internet is a priority if the Employee/Manager is doing an external search.
- The ES thru Internet in external Search is able to make orders on other stores.
- For local search the internet isn't necessary.
- The DBMS used is Oracle

## How the ES Works



How the ES works Figure 2.1.1

### 2.1.2 User Interface

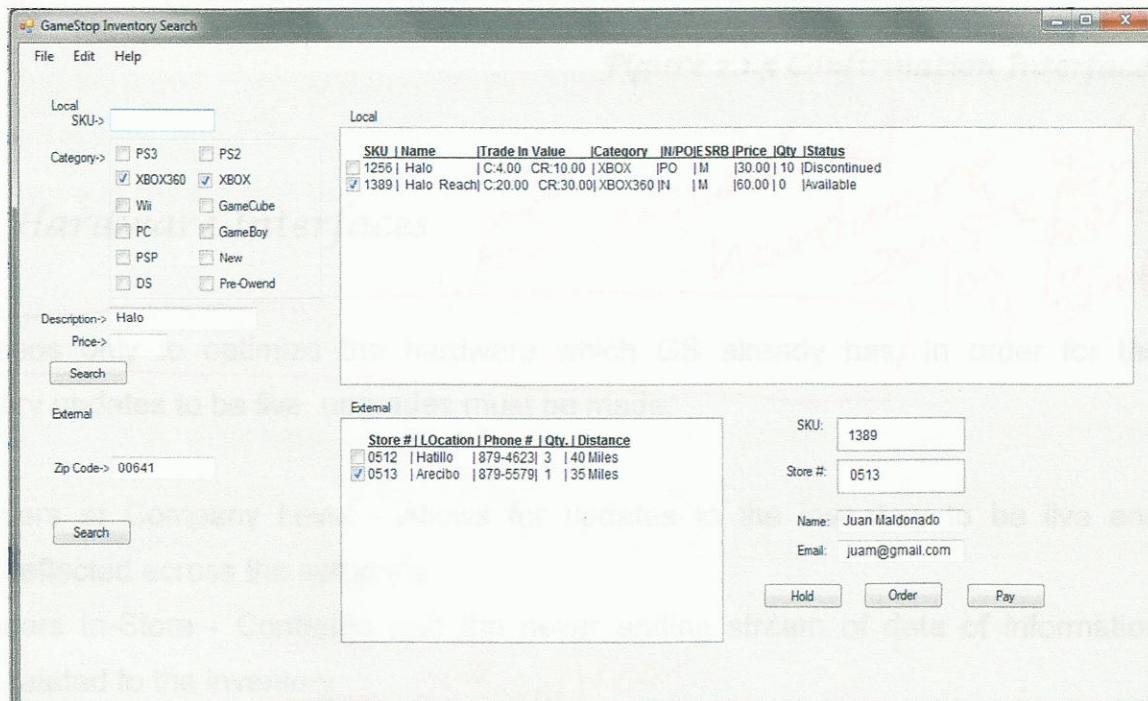
GSDB will provide the managers and students several data base interfaces views which they will interact with the data base specified the search of inventory in there store. At least 20 minutes the students should be able to learn how to use the system. The following will show the required user interfaces that are necessary for the students to be able to complete enrolling their inventory search using GSDB.

- Login Interface



*Figure 2.1.2 Login Interface*

- Local and External Search Search



*Figure 2.1.3 Local and External Search Interface*

- Confirmation Interface

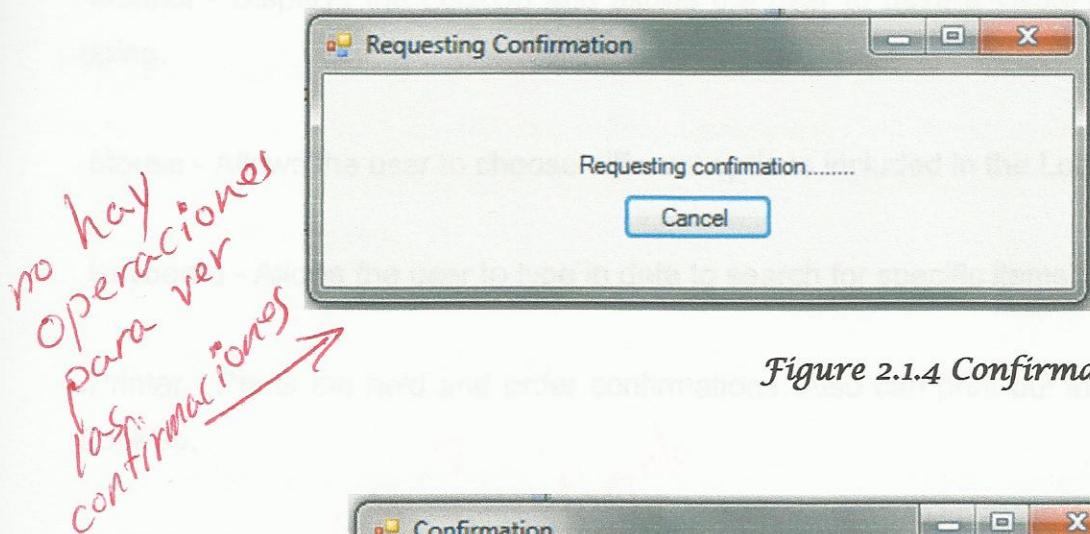


Figure 2.1.4 Confirmation Interface



Figure 2.1.5 Confirmation Interface

### 2.1.3 Hardware Interfaces

ES usará el hardware que ya tiene las tiendas existentes de la compañía

ES needs only to optimize the hardware which GS already has. In order for the inventory updates to be live, upgrades must be made:

- Servers at Company Level - Allows for updates to the inventory to be live and reflected across the company.
- Routers In-Store - Contends with the never ending stream of data of information related to the inventory. que significar
- The other components which the stores already possess are:

Monitor - Displays the LookUp and allows the user to have a visual of what they are doing.

Mouse - Allows the user to choose different options included in the LookUp.

Keyboard - Allows the user to type in data to search for specific items.

Printer - Prints the hold and order confirmations. Also can print out inventory from the LookUp.

LAN? → tarjeta  
por

#### *2.1.4 Software Interfaces*

DBMS? Separar

ES will be a retooling of the current system so it must be compatible with the software it has now which consists of a customized version of Windows XP as its OS and the Point of Sale software which contains this reworked LookUp. It will also require to be configured so it can communicate with the POS option to start up a sale with the data from the LookUp. It will also require the use of Database Software in order for it to keep an inventory of the items in the store.

#### *2.1.5 Communications Interfaces*

In order for ES to work seamlessly, it requires high end implementation of the TCP/IP model. Using the framework to access external information around the company such as inventory quantities, instant communication between stores for hold confirmation and placing an order at the company warehouse.

un párrafo  
debe tener 3  
o más oraciones

### *2.1.6 Memory Constraints*

*memory constraints*  
The ES is designed to have everything available on the same screen but without the need for them to take up memory unless necessary. Due to the system not needing to support extra applications, there would not be any constraints on the 4 GB of RAM that Windows XP supports.

### *2.1.7 Site Adaptation Requirements*

As ES is part of a bigger system, it needs access to 2 different applications within the system:

- POS - Locating the game and getting confirmation from client that they want to purchase, the LookUp will pass along the information to the Transaction application to finalize the sale.
- Inventory Control - Allows the user to utilize the inventory info to make transfers to other stores, modify quantities or find where the items are available.

## 2.2 Product Functions

The employee needs to enter username and password to Access the ES DBMS.

If the user or password or both are invalid the employee can login to ES DBMS.

Requirement 1.0 (See Table 1.2.1)

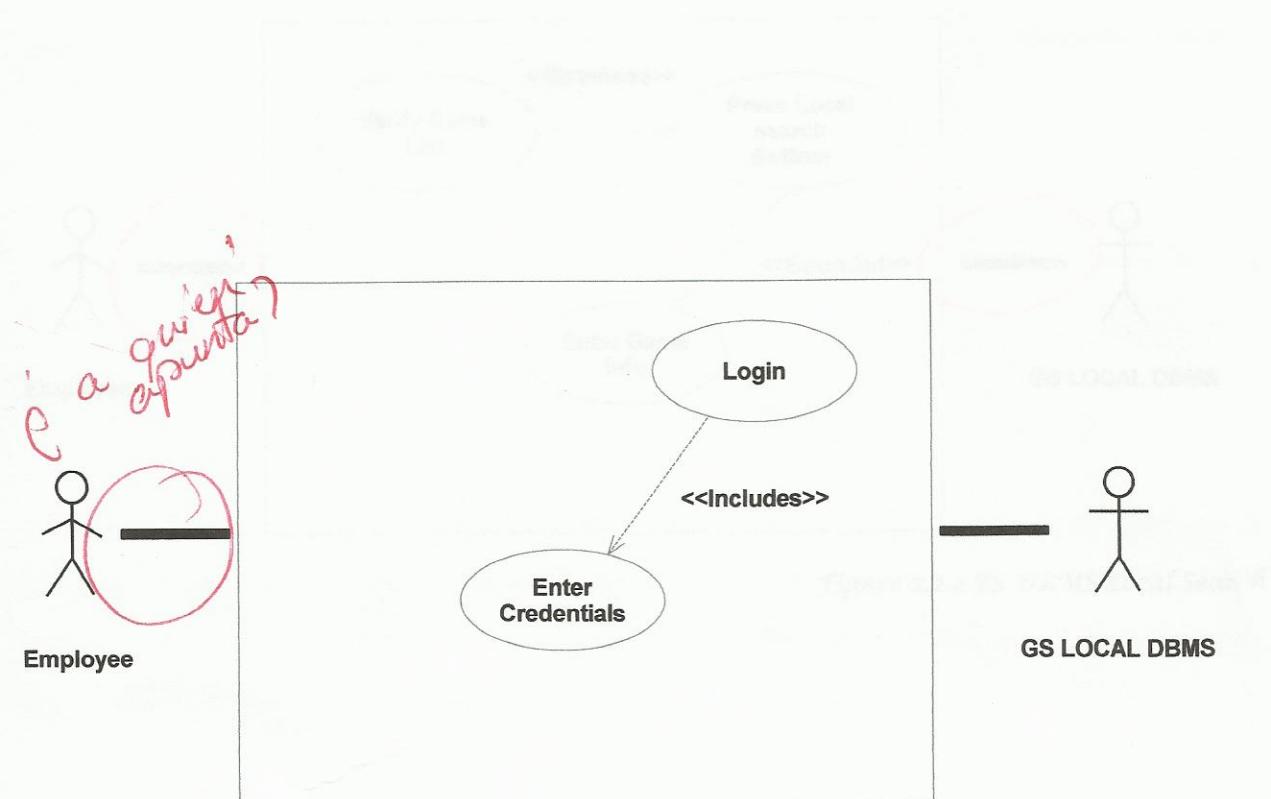


Figure 2.2.1 Access to ES DBMS

If the query or operator in the local DBMS been successfully inserted the system will search.

The employee selected the query, then enter the zip code and the system will search.

Requirement 1.0 (See Table 1.2.1)

Is POS an actor?

For Local Search the employee enter the game information then look if the game is available in the store. Requirement 2.0 (See Table 1.2.1).

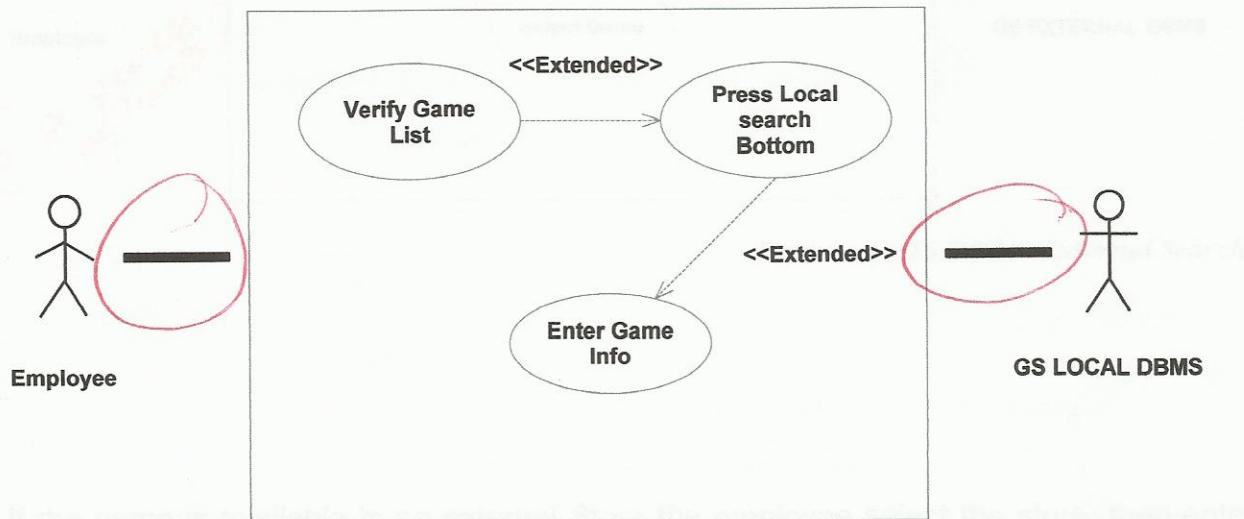


Figure 2.2.2 ES DBMS Local Search

If the game isn't available in the local Store then employee preceed to external search. The employee select the game, then enter the zipcode and verify if the game is available in other store. Requirements 2.0 (See Table 1.2.1).

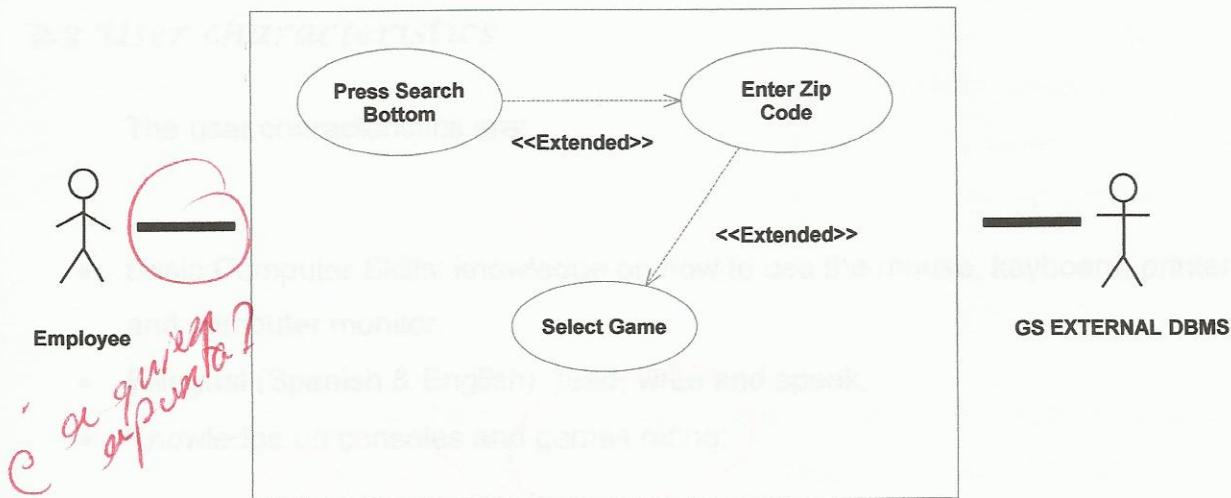


Figure 2.2.3 ES DBMS External Search

If the game is available in an external Store the employee select the store, then enter the client info and select the methos of order, then send the request Confirmation and wait for an aswer to know if the game is available on the external Store. Requirement 3.0, 4.0, 5.0, 6.0(See Table .2.1)

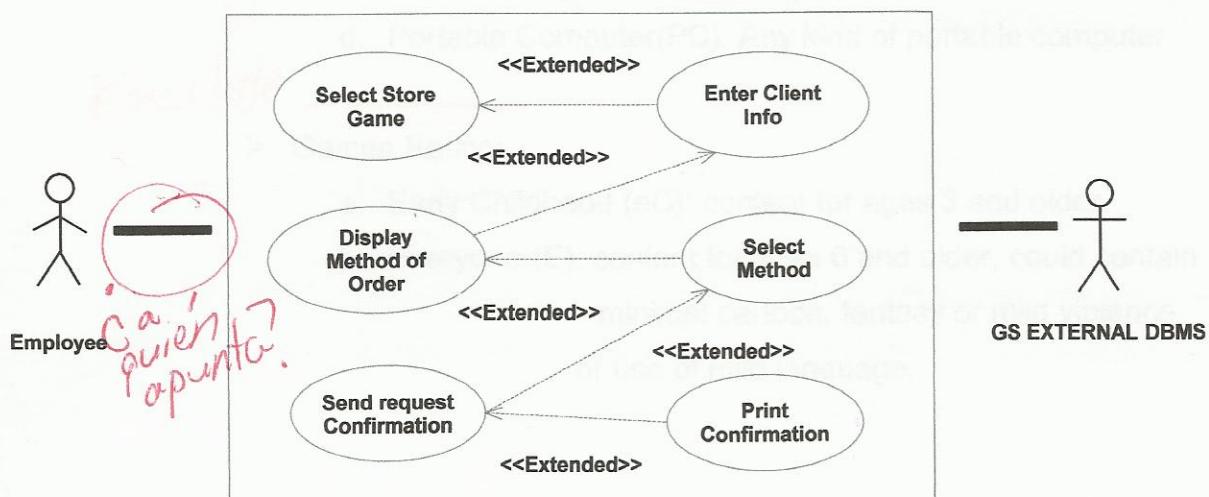


Figure 2.2.4 Order and Confirmation

## 2.3 User characteristics

The user characteristics are:

- Basic Computer Skills: knowledge on how to use the mouse, keyboard, printer and computer monitor.
- Bilingual (Spanish & English): read, write and speak.
- Knowledge on consoles and games rating:

### Consoles:

- a. PlayStation(PS): PS1, PS2, PS3, PSP, PS Move
- b. Xbox: Xbox, Xbox360, XboxKinect
- c. Nintendo: Super Nintendo Entertainment System (SNES),  
Nintendo64, Nintendo GameCube, Nintendo Wii,  
Nintendo DS, Nintendo 3DS

Gameboy: GameBoy, GameBoy Pocket, GameBoy Color,  
GameBoy Advance, GameBoy Advance SP,  
GameBoy Micro

- d. Portable Computer(PC): Any kind of portable computer

### Knowledge

#### Games Rating:

- a. Early Childhood (eC): content for ages 3 and older.
- b. Everyone (E): content for ages 6 and older, could contain minimal cartoon, fantasy or mild violence or use of mild language.

c. Everyone +10 (E+10): content for ages 10 and older, could contain more cartoon, fantasy or mild violence, mild language or minimal suggestive theme.

d. Teen (T): content for ages 13 and older, could contain violence, suggestive themes, minimal blood, gambling or usage of strong language.

e. Mature (M): content for ages 17 and older, could contain intense violence, blood, sexual content or strong language.

e. Adults only (Ao): content for ages 18 and older, could contain scenes of intense violence, graphic sexual content or nudity.

f. Rating Pending (RP): have been submitted to the ESRB and is awaiting for the final rating. RP only appears when advertising before the release of the game.

- GameStop general employees.
- 4<sup>th</sup> year of high school required.

The users that will use this product, will be the general employees of GameStop, these employees might already have the necessary skills to work with the system, as mention.

## 2.4 Constraints

In this subsection will provide a general description of the operator's limitations.

### ❖ Regulatory Policies

- ?
- Hardware and Software limitations
  - Separar
  - Minimum Processor speed: 1.0 GHz
  - Minimum Memory: 1GB RAM
  - OS: Windows XP, Windows Vista and Windows 7
  - Internet connection with at least a speed of 512 kbps
  - Receipt Printer
- Interfaces to other applications
  - The stores management program.
  - The ?
- Parallel operation
  - Operates parallel with the other stores ESDBMS ?
- Audit functions

Se usan  
que hardware  
en la hoy  
extienda  
etc

? que significa?

• N/A ?

- Control Functions

- N/A

- Languages needed for implementation

- C#

- MySQL

- Security

- User and Password Authentication.

- Safety And Security Considerations

- N/A

- Reliability Requirements

- Must have user friendly environment for new employees.

- Update the information constantly and automatically.

## 2.5 Assumptions and Dependencies

2.5.1

### Assumptions:

- Employee/Manager have an account to access the ES.
- ES DBMS is installed in the Operating Systems Windows
- GS DBMS is integrated on ES DBMS
- GS DBMS is created in Oracle

2.5.2

### Dependencies:

- Every employee needs an account (username, password) to access ES.
- This account is a priority to access ES.
- Employee will not be able to access the ES DBMS.
- The ES have to be installed on Windows OS.
- ES doesn't work on Linux or others OS.
- GS and ES DBM work together.
- If GS DBMS is not on the ES DBMS the ES will not work properly.
- ES DBMS was created in Oracle.
- Is mandatory the GS DBMS doesn't change otherwise the ES DBMS will not function correctly.

que significa?  
¿que es windows?  
¿que son los otros?

¿son distintos?  
¿en que forma son distintos?

en que  
forma  
no deje  
combinar?

## 2.6 Apportioning of Requirements

• Relationship to other process or output: some inputs will be used throughout the

Some of the implementation will be created:

- ES DBMS will be able for the public on the internet so people could be able to buy and hold products, then just go to the store to pick up the product.

## 3.0 Specific Requirements

### 3.1 External Interfaces

Our system, ES GameStop Inventory, will be able to interact with the user and the GameStop DBMS via inputs provided by the user. They will be organized in the following format as input/output, purpose of input/output and source of input/outputs.

#### 3.1.1 Type-Input

A. Name: User Log in credentials (username and password)

B. Purpose: The purpose of this input is to validate the user's credentials so that he may use the system to search the local inventory of the store, view external stores inventories, etc.

C. Source: User

D. Accuracy and Tolerance: The credentials, being a string type the input needs to be exact and will receive no tolerance as user-name and passwords will be considered case sensitive in order to make sure the user logging to our system is a valid one.

E. Unit of Measure: none

- F. Timing: none
- G. Relationship to other inputs or output: these inputs will be used throughout the whole software processes since all operations need these credentials so that the system performs its tasks accordingly and these tasks are to be applied on the correct user.
- H. Screen format/organization: Log in text box user-name [ ] password [ ] upper part of a window.
- I. Windows format/organization: On the window you will commonly see a title below that you will see a log in text boxes and the log in button.
- J. Data Formats: char, string
- K. Commands Formats: none
- L. End Messages: It invokes the inventory program.

### 3.1.2 Type- Input

- A. Name: Game stock information
- B. Purpose: To tell the system which game the user desires to search availability.
- C. Source: User
- D. Accuracy and Tolerance: This will be invoked by clicking a search button with any one of these inputs SKU, Category, Description, price or all of the above as long as the mouse is hovered above the button and then performing a left click will execute the input and subsequent script functions to do after the input is received by the system.

- E. Unit of Measure: none
- F. Timing: none
- G. Relationship to other inputs or output: this input will produce an output so that the user may verify or select the game.
- H. Screen format/organization: :Search text box SKU[ ] Category[x]  
Description[ ] price[ ]on the top left
- I. Windows format/organization: SKU, Category, Description and price text boxes displayed on the top left and below the search button right next to that on the top right it will have the list box.
- J. Data Formats: char, string
- K. Commands Formats: none
- L. End Messages: none

### 3.1.3 Type- Output

- A. Name: Game list viewer.
- B. Purpose: To show the user the search results and to find which one they were looking for and if it is in stock or not in stock.
- C. Source: ES GameStop Inventory
- D. Accuracy and Tolerance: doesn't apply here
- E. Unit of Measure: none
- F. Timing: none
- G. Relationship to other inputs or output: invoked by ES GameStop Inventory receiving a game information input before this output the system invokes.

- H. Screen format/organization: Lists the search result in the list box [x] |SKU |Name  
|T/V |Cat. |N/PO |ESRB |Price |Qty. |Status
- I. Windows format/organization: Same window next to the search inputs.
- J. Data Formats: char, string
- K. Commands Formats: none
- L. End Messages: None

### 3.1.4 Type-Input-Output

- A. Name: External inventory search
- B. Purpose: If the game is not in stock the user can search for a nearby store that has it in Stock.
- C. Source: User
- D. Accuracy and Tolerance: The system will show which stores nearby depending on the zip code the user entered have the game it in stock.
- E. Unit of Measure: none
- F. Timing: none
- G. Relationship to other inputs or output: The user will then ask the costumer if he wants to put it on hold, pay or order it and entering the costumers name and email.
- H. Screen format/organization: [x] |Str # |Location |Phone # |Qty. |Distance
- I. Windows format/organization: List Box
- J. Data Formats: string, char
- K. Commands Formats: none

- L. End Messages: none

no puede quedar sola

### 3.1.4 Type-Input-Output

- A. Name: Hold, Pay or Order
- B. Purpose: Put it on hold for the costumer or sell him the game from the store or order the game entering the costumers name and email.
- C. Source: User
- D. Accuracy and Tolerance: The system will show which stores nearby depending on the zip code the user entered have the game it in stock.
- E. Unit of Measure: none
- F. Timing: none
- G. Relationship to other inputs or output: The user will then ask the costumer if he wants to put it on hold, pay or order it.
- H. Screen format/organization: SKU \_\_\_\_\_ Str# \_\_\_\_\_ Name[\_\_\_\_\_] Email[\_\_\_\_\_]
- I. Windows format/organization: Bottom right
- J. Data Formats: string, char
- K. Commands Formats: none
- L. End Messages: Your transaction was successful or Your transaction was unsuccessful.

## 3.2 Functional Requirements

### 3.2.1 Access to ES DBMS

Table 3.2.1 User Case: Access to ES DBMS

User Case Name:	Access to ES DBMS (Figure 2.2.1)
<b>Actors:</b>	Primary: Employee Secondary: ES LOCAL DBMS Be an employee of GS Store
<b>Pre-Condition:</b>	The employee is login in the ES DBMS
<b>Post-Condition :</b>	1. Enter username and password 2. Press the login bottom 3. User is login to ES DBMS
<b>Principal Stage :</b>	N/A
<b>Alternate Stage :</b>	
<b>Exception Stage 1:</b>	1a. User doesn't enter user and password 1a.2 User press login bottom 1a.2 User can't login to the ES DBMS 2a. User doesn't press the login bottom
<b>Exception Stage 2:</b>	2a.1 User can't login to the ES DBMS
<b>Exception Stage 3:</b>	3b. User can't login because isn't an employee of this Store.

### 3.2.2 ES DBMS Local Search

*Table 3.2.2 User Case: ES DBMS Local Search*

User Case Name:	ES DBMS Local Search (Figure 2.2.2)
<b>Actors:</b>	Primary: Employee Secondary: ES LOCAL DBMS
<b>Pre-Condition:</b>	Be an employee of GS Store
<b>Post-Condition :</b>	The game is in the Store
<b>Principal Stage :</b>	<ol style="list-style-type: none"> <li>1. Enter Game Info</li> <li>2. Press Search Bottom</li> <li>3. Verify the List of games</li> <li>4. The game is available</li> </ol>
<b>Alternate Stage :</b>	<ol style="list-style-type: none"> <li>4a. The game is not available in the Store</li> <li>4a.1 Search in the External ES DBMS</li> <li>3a. The game doesn't exist</li> </ol>
<b>Exception Stage 1:</b>	<ol style="list-style-type: none"> <li>3a.1 The game isn't available</li> <li>3b. No entry received, Please try again</li> </ol>
<b>Exception Stage 2:</b>	
<b>Exception Stage 3:</b>	4a. The game isn't available

### 3.2.3 ES DBMS External Search

*Table 3.2.3 User Case: ES DBMS External Search*

User Case Name:	ES DBMS External Search (Figure 2.2.3)
<b>Actors:</b>	Primary: Employee Secondary: ES External DBMS
<b>Pre-Condition:</b>	Be an employee of GS Store
<b>Post-Condition :</b>	The game is in the Store
<b>Principal Stage :</b>	<ol style="list-style-type: none"> <li>1. Select the game</li> <li>2. Enter Zip Code</li> </ol>

	3. Press Search Bottom
	4. The game is available
Alternate Stage :	N/A
Exception Stage 1:	3a. The Zip Code isn't valid
Exception Stage 2:	5a. You don't select the game, Try again
Exception Stage 3:	4a. The game isn't available

### 3.2.3 Order and Confirmation

*Table 3.2.3 User Case: Order and Confirmation*

User Case Name:	Order and Confirmation ( <i>Figure 2.2.4</i> )
Actors;	Primary: Employee Secondary: ES External DBMS Be an employee of GS Store
Pre-Condition:	The game is in the Store
Post-Condition :	1. Select Store
Principal Stage :	<p>2. Enter Client Info</p> <p>3. Select method of Order</p> <p>4. Pay Method</p> <p>5. Send request Confirmation</p> <p>6. Receive Confirmation</p> <p>7. Print Confirmation</p>
Alternate Stage1 :	<p>4a. Hold Method</p> <p>4a.1. Send request Confirmation</p>

	<b>4a.2. Receive Confirmation</b>
<b>Alternate Stage2 :</b>	<b>4a.3. Print Confirmation</b>
	<b>4b. Order Method</b>
	<b>4b.1. Send Request Confirmation</b>
<b>Exception Stage 1:</b>	<b>4b.2. Receive Confirmation</b>
	<b>4b.3. Print Confirmation</b>
<b>Exception Stage 2:</b>	<b>6a. No Confirmation Received</b>
	<b>6a.1 Can't proceed with the process</b>
	<b>7a. The game isn't available</b>

### *3.3 Performance Requirements*

Static Numerical Requirements:

ES DBS has two applications:

- Local: Confined to the store and reliant on the inventory available at the time of the item- lookup.
- Global: Open to every store in the district, region or the whole GS chain, including the main warehouse.

Locally the ESDBS can be used in any terminal at any time inside the store. This number varies per store, due to the category the store belongs to, such as High Volume and Low Volume. The average number of terminals is 5 and the average number of employees working at the same time is 3.

The number of simultaneous users can be one user per terminal company wide. Based on information from a form from the United States Securities and Exchange Commission from 2009, the company has a little over 6,450 locales so the average

numbers of simultaneous users at the busiest time would be 19,350.

The amount of information is incalculable since it would depend on the queries of the client at any certain time and that information would be shared between the servers which store the global values and the 6,450 locales which can access it or are affected by it because of a sale, hold or request. The type of information to be shared is personal client information when an item is ordered from the main warehouse or held/bought at a store and the values for the products GameStop handles. This includes but is not limited to: games, systems, accessories, guides, digital content and toys. Meaning that the data being shared will number in the hundreds of Tera Bytes, since last years numbers bordered one 200 TB.

#### Dynamic Numerical Requirements:

The ESDBS is optimized to react to the ever-changing amount of information that is going to be added or removed from the database, so the peak and normal values would be the same with the exception of the system crashing for some unforeseen reason.

Leaving some wiggle room for circumstances that are out of control, **99%** of the searches should maintain their processing time at less than **1 second**.

When a hold/request is sent to another store they will receive it as soon as it is posted since it updates live, with a **1 second** delay between requests if another one reached the store at the same time. It will sort them out by order to have fair play between the stores and most importantly the clients that are purchasing. When processing orders sent to the warehouse, an order can be finalized in **3 seconds per item** without any delay as long as there is no queue from other stores. With the short amount of time for the orders to finalize, there would only be any waiting time during the November - January season when sales and customer movement reaches their peak and the exchange of information will be double to triple times as fast. The order will require at least **2 seconds** per order to take into account other stores asking for the same item.

### 3.4. Logical database requirements

#### Introducción

- The data is going to be used as a character type. The data will be names, descriptions, localization, inventory, and other things that are related with characters.
- The frequency of this database system is expected to be frequently. Also the database will be live updated. The data must be verifying weekly to check for some irregularities and to have the report of the new information.
- The accessing of our data in the database will be by the program developer. This program is linked to the database. The accessing capabilities will be easy since everything will be graphic.

¿que significa?

• facilitar el acceso?  
• que es gráfico?  
• ¿que significa?

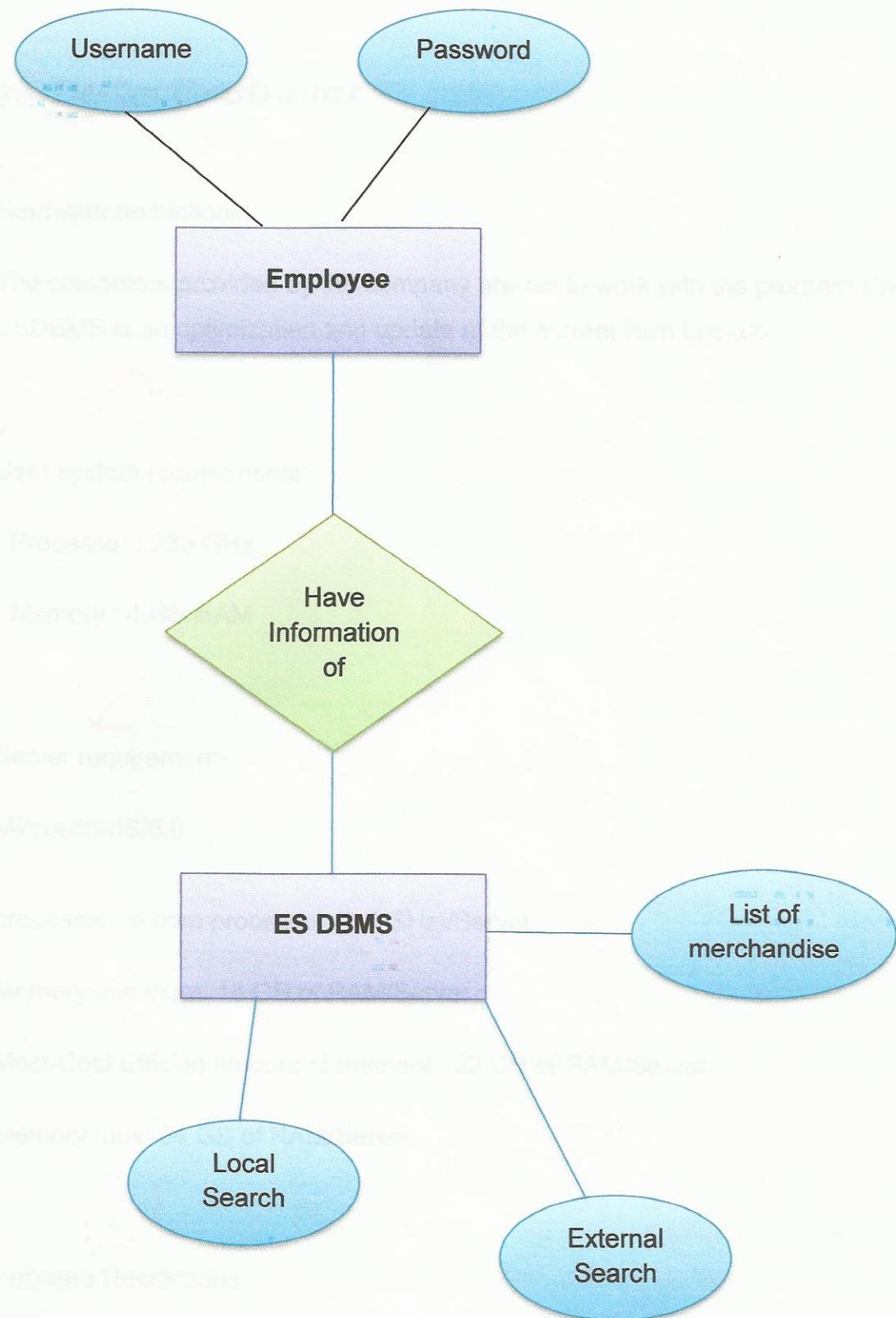


Figure 3.4.1 ERD

### 3.5 Design Constraints

3.5.1

Hardware restrictions:

The computers provided by the company are set to work with the program since ESDBMS is an optimization and update of the current Item Lookup.

3.5.2



User system requirements:

- Processor : 233 GHz
- Memory : 4 GB RAM

3.5.3



Server requirements:

4

Microsoft-IIS/6.0

processor : 8 core processor (3.6 GHz)/Server

Memory minimum: 16 GB of RAM/Server

Most-Cost Efficient amount of memory: 32 GB of RAM/Server

Memory max: 64 GB of RAM/Server

3.5.4



Software Restrictions:

OS: GS Authorized Customized Windows XP with Integrated Point of Sale Software.

Web browser: Customized Internet Explorer Browser embedded inside the proprietary OS.



35 Programming languages:



- PHP (ver 4.3 or higher)
- JavaScript Library (to work with jQuery)
- jQuery
- Document Information: Cascading Style Sheets

Encoding: utf-8

Server: Header: Microsoft-IIS/6.0

### 3.5.1 Standards Compliance

ESDBMS is an extension of the main system that GS utilizes so as such it does not deal with data altering, report generating or deal with accounting.

It uses the user and password securities to keep a log of the the hold/requests and orders placed in order to follow up on them, but any payment/customer information is not stored or can be added inside the ESDBMS extension. The log in software is only present when the program is initiated and belongs to the main system.

### 3.6 Software System Attributes

- Reliability

The system will need a proper internet connection when it comes to DBMS external GS stores to check the available merchandise on other stores. The external DBMS will be updated constantly and automatically, just like the local DBMS. The internet connection needs to be with at least a speed of 512 kbps. Even though the system needs a proper internet connection, it won't interfere with the transactions, unless there is an order or a hold of merchandise been made on another GS store, which will be made with the external DBMS.

- Availability

Item-Look Up system will be only used for its purpose, which is localizing merchandise external & local GS stores, and also making transactions. The system will be only available on GS stores and only used by GS employees on GS store hours. As mention the system external and local DBMS will be available all the time because it will be updated constantly and automatically. Even though the system needs maintenance, these task will be try to be done overnight by the developers, that way the system won't have any kind of interruptions on GS store hours .

- Security

Our system will require username and password authentication, which will be only used by GS employees who will use their name initials for the username and a four digit password. The authentication will be used for security log-in records on the employees. The computer that will contain our system will be on a restricted area. The GS employees are the only people authorized to have access to the restricted area which is closed for non-employees.

- **Maintainability**

Although our system will be live if there is an error, the system will send a report immediately to the developers, with the GS employees concern. This report will contain a quick summary of the system error. As soon as the report is received, the developers will get to it as soon as possible. Even though the system's main functions aren't that much of independent, the developers will do their best to resolve the problem without changing neither the system concept nor anything else.

- **Portability**

Our system will definitely have portability. If other GS store's open the system will simply be installed on the new store computer. The system will have the same process as mention on the Software Requirements Specifications (SRS) document.