

# Software Requirements Specification

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Pharmacy management system

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A Description of Project Requirements as  
Standard

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## **1.0. Introduction**

### ***1.1. Purpose***

The purpose of this document is to present a detailed description about how to manage the work of Dima Pharmacy, services that must be provided and simple interfaces to the system.

This document is intended for both the stakeholders and the developers of the system.

### ***1.2. Scope of Project***

This software system will be a management System for a Pharmacy. This system will be designed to increase the speed and organization of the workflow through the possibility of automating the processes of buying and selling medicine whether for customers or from the representative of the drug store , which would otherwise have to be performed manually.

The pharmacy is contracted to some insurance companies.

The system also contains a database containing drug items, insurance companies, and buying and selling bills.

The scope of system services is only within the pharmacy because the companies that are deal with are not compatible with the program.

### ***1.3. Glossary***

<b>Term</b>	<b>Definition</b>
Database	Collection of all the information monitored by this system.
Software Requirements Specification	A document that completely describes all of the functions of a proposed system and the constraints under which it must operate. For example, this document.
Stakeholder	Any person with an interest in the project who is not a developer.
Customer	Reviewer or Author.
Insurance companies	Companies that provide discounts for prescriptions

### ***1.4. Overview of Document***

The next chapter, the Overall Description section, of this document gives an overview of the functionality of the product.

It describes the informal requirements and is used to establish a context for the technical requirements specification in the next chapter.

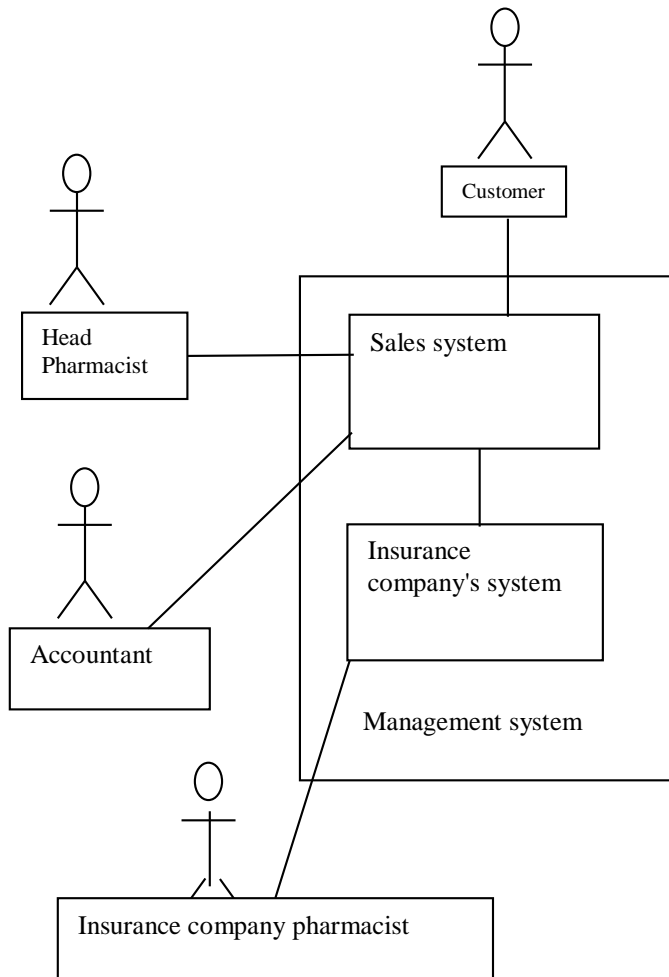
The third chapter, Requirements Specification section, of this document is written primarily for the developers and describes in technical terms the details of the functionality of the product.

Both sections of the document describe the same software product in its entirety, but are intended for different audiences and thus use different language.

The fourth chapter, Support section, will contain extensions and some of paper models for buy and sale bills and a prescription.

## 2.0. Overall Description

### 2.1 System Environment



**Figure 1 - System Environment**

The pharmacy management System has four active actors and one cooperating system.

The Customer accesses the system through the Head pharmacist. The Head pharmacist and the Accountant and the Insurance company's pharmacist access the system directly.

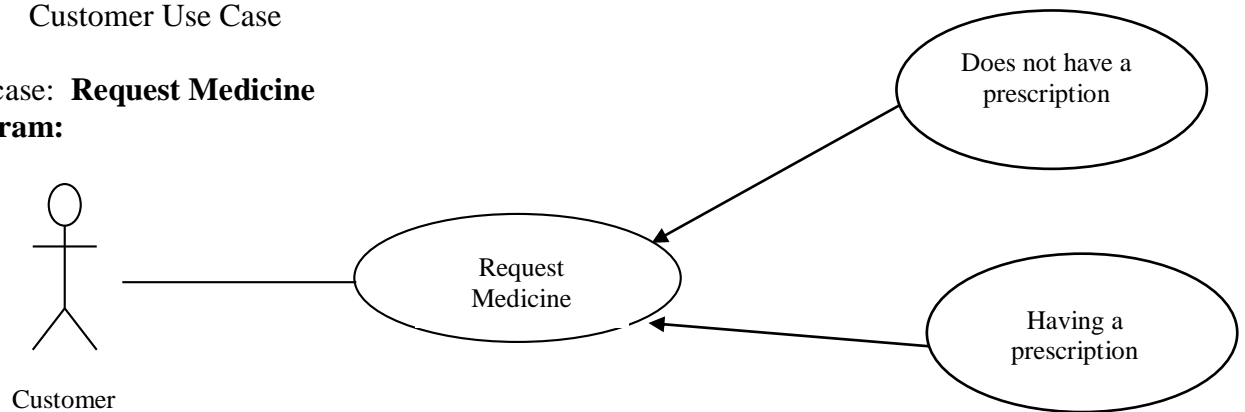
## 2.2 Functional Requirements Specification

This section outlines the use cases for each of the active readers separately. The Customer, the Insurance company's pharmacist and the Accountant have only one use case a piece while the Head pharmacist is main actor in this system.

### 2.2.1 Customer Use Case

Use case: **Request Medicine**

Diagram:



#### Brief Description

The Customer Request a Medicine to be bought either with a prescription or without, then pay for it and take it.

#### Initial Step-By-Step Description

Before this use case can be initiated, the Customer is already in the pharmacy.

1. The customer enters the pharmacy and asks for a medicine with or without a prescription.
2. The Head pharmacist checks the availability of the medicine.
3. The Head pharmacist checks the Strengths of the medicine.
4. The Head pharmacist initiate the Bill and add the required medicine to it.
5. The customer pays for the medicine and take it.

### 2.2.2 Head pharmacist Use Case

Use case: **Add a medicine card**

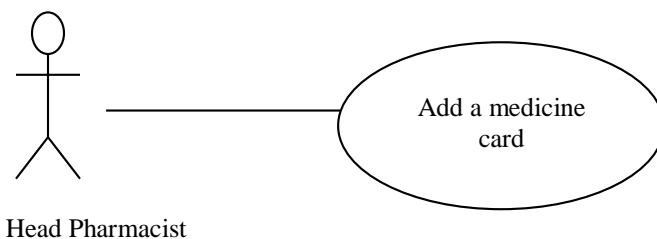


Diagram:

Brief Description

The head pharmacist adds a new medicine card for the new medicine.

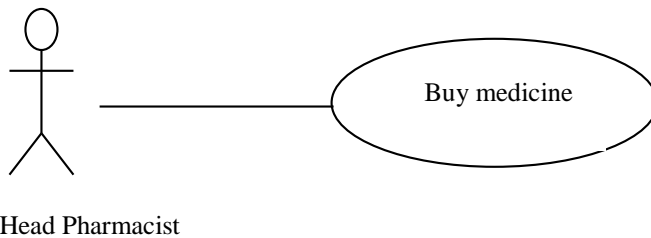
### **Initial Step-By-Step Description**

Before this use case can be initiated, the Head pharmacist must Buy a new medicine.

1. The head pharmacist asks the representative of company for a new medicine.
2. The Head pharmacist add a new card for the medicine containing details.
3. The new card gets placed with other cards.

Use case: buy medicine

### **Diagram:**



### **Brief Description**

The head pharmacist adds Buys a new medicine.

Before this use case can be initiated, the Head pharmacist must see the need of Buying a new Medicine or discover a new kind of medicine.

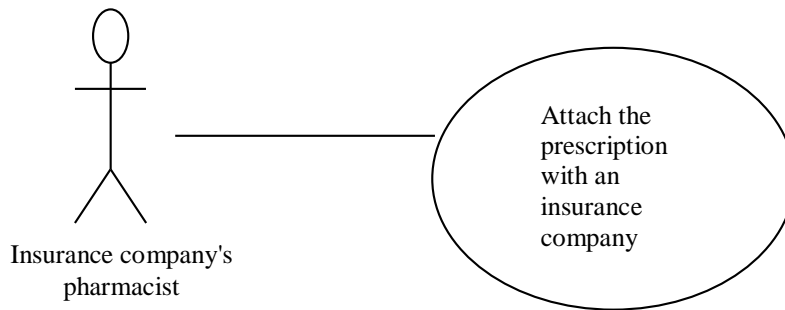
### **Initial Step-By-Step Description**

1. The head pharmacist discovers a shortage in a kind of a Medicine or a new kind of medicine
2. The Head pharmacist Asks the employee of the employee company for the availability of the medicine.
3. The Head pharmacist chooses the amount and the Strengths of the new medicine.
4. The Head pharmacist checks the Bonuses added by the medicine company.
5. The employee deliver the required Medicine.
6. The head pharmacist pay the price of the medicine.
7. The head pharmacist add a new buying bill for the new medicine.

### 2.2.3 Insurance company's pharmacist Use Case

Use case: Attach the prescription with an insurance company

**Diagram:**



#### **Brief Description**

The Insurance company's pharmacist checks for which insurance company does the bill belongs to and if the recipe is valid.

#### **Initial Step-By-Step Description**

Before this use case can be initiated, the customer recipe must belong to an insurance company.

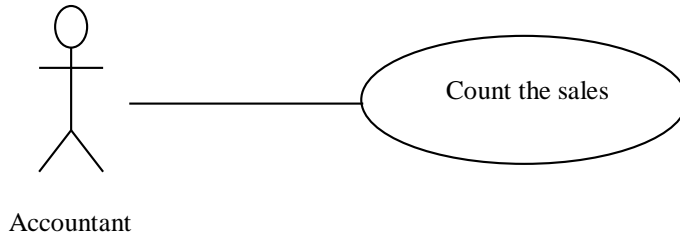
1. The Insurance company's pharmacist sends the recipe to the insurance companies responsible for the recipe.
2. The insurance company validate the recipe and respond with the answer.
3. The Insurance company's pharmacist then read the answer.
4. The Insurance company's pharmacist initiate the special bill for the insurance company's recipes.



#### 2.2.4 Accountant Use Cases

Use case: count the sales

**Diagram:**



##### **Brief Description**

The Editor enters a new Author or updates information about a current Author.

##### **Initial Step-By-Step Description**

Before this use case can be initiated, the Accountant has already Access the new sell and buy operation.

1. The Head pharmacist asks the Accountant count the sales in a time.
2. The Accountant checks the bills of the sales and buy's in that time.
3. The Accountant calculate the sales using the bills.
4. If the Accountant want to calculate the money gained, he only checks the sell bills.
5. The Accountant inform the Head pharmacist with the information.

#### 2.3 *User Characteristics*

The Customer is expected to know the medicine he want.

The Head pharmacist and Insurance company's pharmacist and the Accountant is expected to be Windows literate and to be able to use button, pull-down menus, and similar tools.

#### 2.4 *Non-Functional Requirements*

The System should be fast enough to be considered Real time so no delays happens.

The system should backup the buy and sell bills on the start of every month as a digital copy.

### 3.0. Requirements Specification

#### 3.1 External Interface Requirements

The only link to an external system is the link to the pages of the insurance companies.

The Insurance company's pharmacist has an email for every company that is dealt with and sign in to the company's page, he enters the customer number of his insurance company and then enters the medicines and the company's response comes with agreement or disagreement of the type of medicine.

#### 3.2 Functional Requirements

##### 3.2.1 Buy medicine

<b>Use Case Name</b>	Buy medicine
<b>XRef</b>	Section 2.2.2
<b>Trigger</b>	The head pharmacist asks the company representative to buy some kind of medicine and know about a new type of medicine.
<b>Precondition</b>	8. The head pharmacist discovers a shortage or unavailability in a kind of a Medicine or discover a new kind.
<b>Basic Path</b>	<ol style="list-style-type: none"><li>1. The head pharmacist requests the medicine from the representative with a specific quantity and type.</li><li>2. The head pharmacist checks the offers (bonuses) provided by the company the arrival of the required medicine from the company.</li><li>3. The head pharmacist Pay the buying bill</li><li>4. The head pharmacist Add the bill to purchase invoices</li></ol>
<b>Alternative Paths</b>	The head pharmacist Search for other option with the same Chemical composition or other category (pills, drink, suppository ....) if the type the customer need is not available.
<b>Postcondition</b>	An update on the quantity of types we did receive and initiate a card medicine if we have a new type.
<b>Exception Paths</b>	The type or quantity of the medicine is not available in the company
<b>Other</b>	None.

### 3.2.2 Sell medicine

<b>Use Case Name</b>	Sell medicine
<b>XRef</b>	Section 2.2.1
<b>Trigger</b>	The customer requested to buy medicines with or without a prescription
<b>Precondition</b>	The availability of the medicine required by the customer and the checking if the prescription belongs to an insurance company.
<b>Basic Path</b>	<ol style="list-style-type: none"> <li>1. The customer brings a prescription if he has it</li> <li>2. The head pharmacist checks for a prescription and ask if the prescription belongs to an insurance company.</li> <li>3. If the prescription belongs to an insurance company , the insurance company's pharmacist sends the prescription to the relevant insurance company.</li> <li>4. The head pharmacist Wait for the response from the insurance company about if the company agree or disagree about the prescription.</li> <li>5. The head pharmacist Collect medicines with attention to the required strength.</li> <li>6. The head pharmacist Create a sales invoice and add medicines to it and if the response from the insurance company is with agreement The head pharmacist have to add medicine to sales invoice for insurance companies while making sure of the medicine is acceptable and unacceptable</li> <li>7. The customer pays for the medicine and take it and if the prescription belongs to an insurance company he has a discount</li> </ol>
<b>Alternative Paths</b>	The head pharmacist Search for other option with the same Chemical composition or other category (pills, drink, suppository ...) if the type the customer need is not available.
<b>Postcondition</b>	Reducing the quantity of the medicines sold from the pharmacy storage
<b>Exception Paths</b>	The type or quantity of the medicine is not available in the pharmacy.
<b>Other</b>	None

### 3.2.3 Add medicine card

<b>Use Case Name</b>	Add medicine card
<b>XRef</b>	Section 2.2.2
<b>Trigger</b>	The head pharmacist asks the company representative for some new types of medicine.
<b>Precondition</b>	Availability of a new medicine for a specific company and the head pharmacist buy it.
<b>Basic Path</b>	<ol style="list-style-type: none"> <li>1. Company representative suggests a new type of medicine.</li> </ol>

	<ol style="list-style-type: none"> <li>The head pharmacist requests the new type from the representative with a specific quantity.</li> <li>The head pharmacist checks the offers (bonus) provided by the company.</li> <li>The arrival of the required medicine from the company.</li> <li>The head pharmacist Pay the buying bill.</li> <li>The head pharmacist Add a new medicine card.</li> </ol>
<b>Alternative Paths</b>	The medicine already has a card.
<b>Postcondition</b>	A new card of medicine has been added.
<b>Exception Paths</b>	The type or quantity of the medicine is not available in the company.
<b>Other</b>	The new medicine might not have a similar medicine yet.

#### 3.2.4 Inventory of medicine cards and bills.

<b>Use Case Name</b>	Inventory of medicine kinds and bills
<b>XRef</b>	---
<b>Trigger</b>	The head pharmacist asks the accountant to provide a report on the kinds of the medicine, the quantities, and the amount of buying and selling that happened during a specific time period
<b>Precondition</b>	The responsible pharmacist requests an inventory
<b>Basic Path</b>	<ol style="list-style-type: none"> <li>The accountant begins passing over the medicine kinds that are available in the system and determines the remaining quantity.</li> <li>The accountant includes all invoices, whether sales invoices for customers and purchase invoices from companies.</li> <li>The accountant Present the inventory report to the head pharmacist.</li> </ol>
<b>Alternative Paths</b>	Inventory of medicine for a specific company or expired medicine.
<b>Postcondition</b>	The head pharmacist knows the shortage of kinds.
<b>Exception Paths</b>	The head pharmacist did not register some of the buying and selling operations.
<b>Other</b>	None.

#### 3.2.5 Count the earnings

<b>Use Case Name</b>	Count the earnings
<b>XRef</b>	Section 2.2.4
<b>Trigger</b>	The head pharmacist asked for the monthly profit calculation.
<b>Precondition</b>	The head pharmacist requests a final profit report.
<b>Basic Path</b>	<ol style="list-style-type: none"> <li>The head pharmacist asks the accountant to count the earnings</li> <li>The Accountant displays the purchase and the sales bills that were made in the previous month.</li> <li>The Accountant Compares the purchase and sales bills.</li> <li>The Accountant Calculates the final profit in the last month.</li> </ol>

	5. The Accountant informs the head pharmacist for the final profit.
<b>Alternative Paths</b>	Calculating the earnings after every buying of a medicine from a company
<b>Postcondition</b>	Finding out the monthly earnings and discover the shortages.
<b>Exception Paths</b>	The price of some medicine changed during the specific period.
<b>Other</b>	None.

### 3.3 Detailed Non-Functional Requirements

#### 3.3.1 Data description of our entity

##### Medicine Card Entity

Data Item	Type	Description	Comment
ID	Integer	Number of the card	Can't have duplicates
Name	Text	Name of the medicine	
price	Integer	Price of the medicine	
Production date	Date	Date of production	May be null
Expiration date	Date	Date of expiration	Used to sort
Company's name	Text	Name of the company	
Amount	Integer	Amount available	
Amount in the last buying Bill	Integer	Amount in the last buying Bill	
Strength	integer	Strength of the medicine	
Alternatives	text	Alternative that has the same effect of the medicine	
Chemical composition	text	Composition of medicine	
category	text	Physical form of the medicine	(pill , drink,.....etc.)

##### Bill Entity

Data Item	Type	Description	Comment
ID	Integer	ID number of the bill	Can't have duplicates
Selling price	Integer	Price for the medicine to be sold with	

Price	Integer	The price that was paid for the medicine	
Chemical composition	Text	Composition of medicine	
Bonuses	Text	The special offer from the company	May be a percentage
Quantity	integer	Amount of medicine that was bought	

### 3.3.2 Security

The PC on which the Head pharmacist and the Accountant Use will have its own security. Only the Head pharmacist and the Accountant will have physical access to the machine and the program on it.

The PC on which the insurance company's pharmacist use will have its own security. Only the insurance company's pharmacist will have physical access to the machine and the program on it. There is no special protection built into this system other than to provide the Head pharmacist a Secure Internet connection.