Software Requirements Specification

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Pharmacy Automation

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# Introduction

## 1.1 Purpose

The purpose of this document is to provide a detailed description of the automation of work in a pharmacy, explaining how the system works, its features, and the way users interact with this system. This document is intended for stakeholders and developers.

## 1.2 Scope of Project

This system will help the pharmacist to organize medicine information and facilitate access and record pharmacy imports and sales. Designed to facilitate pharmacy management, dispensing with the old manual methods and replacing them with more sophisticated methods. The system contains a database of medicines to know the quantities, Expiration dates and more details about the medicines in the pharmacy.

## 1.3 Glossary

|  |  |
| --- | --- |
| Definition | Term |
| Collection of all the Medicines information, Buying and selling bills and Supplier information | Database |
| Pharmacy money box | Fund |
| Information about the quantity purchased of this drug and the quantity sold, with prices and dates | The movement of medicine sale |
| 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. | Software Requirements Specification |
| Any person with an interest in the project who is not a developer. | Stakeholder |
| The person we are buying the medicine from | Supplier |
| Assistant or Pharmacist | User |

## 1.4 References

IEEE. IEEE Std 830-1998 IEEE Recommended Practice for Software Requirements Specifications. IEEE Computer Society, 1998.

## 1.5 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.

# 2.0 Overall Description

## 2.1 System Environment

Desktop Application

Medicines Manager

Pharmacy Automation





Pharmacist



Database

System

Pharmacist Assistant System has two active actors and one cooperating system.

The pharmacist interacts with the desktop application with its simple interface that enables him (the pharmacist) to carry out multiple tasks, the most important of which is managing medicines data and storing it in a database in an orderly manner and records the pharmacy imports and sales on a daily basis in addition to the ability to search for specific medicine information to see the movement of its sale and all its information.

The system gives notifications if the quantity of a certain medicine has reached its minimum or if there are medicines that will soon expire.

## 

## 2.2 Functional Requirements Specification

This section outlines the use cases for each of the Actors separately. The Pharmacist has five use cases, the System have one use case.

### 

### 2.2.1 Pharmacist Use cases



Use case: Manage medicines data

|  |
| --- |
|  |
|  |  |

Brief Description

The pharmacist enters all new medicines information in the pharmacy through a simple interface, and he can also modify or delete existing medicine information.

Initial Step-By-Step Description

1. Click on the Pharmacy Information Management button.
2. An interface appears with fields for filling in the name of the medicine and all of its specification.

* After entering the name of the medicine, there are two cases: Either medicine has not been added previously: all data related to it are added.
* In the other case, the medicine information is already available: all the medicine information appears with the possibility of modification.

1. Then press the OK button to add or save the changes.
2. Or, the Delete button, followed by an OK button, to confirm deleting all medicine information.

XRef: Section 3.2.1, Manage medicines data

## 2.2.2 System Use Case

Use case: Send Notifications



Brief Description

The system sends notifications with two statuses to alert a certain Medicine’s quantity to a minimum quantity previously set by the pharmacist, or when the expiration date of a particular Medicine is approaching.

Initial Step-By-Step Description

1. For each medicine type there is a field for the minimum quantity. When the field reaches the minimum quantity, the system performs two things:

* First: Sending a notification to the application specifying the type of medicine and the current quantity.
* Second: Sending a text message to the store to request the missing quantities.

2. The system sends a notification to the application when the expiration date of a particular medicine approaches, specifying the medicine, the expiration date and the current quantity

XRef: Section 3.2.2, Send Notifications

## 2.3 User Characteristics

The Pharmacist is expected to be windows literate and to be able to use button, pull down menus and similar tools.

## 2.4 Non-Functional Requirements

Usability.

Security.

# 3.0 Requirements Specification

## 3.1 External Interface Requirement

This software is linked to an external system that is a database for storing Medicine data and supplier accounts to know the suppliers that are dealt with, in addition to storing incoming billing data and sold materials to know reports on the daily pharmacy fund and that through the interface of a desktop application.

The interaction between the user interface and the database is carried out using fields such as Medicine name, price, quantity, minimum, supplier information, expiration date, sales/purchase bill and other fields that will be clarified in the third section.

## 3.2 Functional Requirements

### 3.2.1 Manage medicines data

|  |  |
| --- | --- |
| Use Case Name | Manage medicines data |
| XRef | Section 2.2.1 Manage medicines data |
| Trigger | Pharmacist presses a Manage medicines data button |
| Precondition | The user is on the main page |
| Basic Path | 1. Click on the Pharmacy Information Management button.  2. An interface appears with fields for filling in the name of the medicine and all of its specification.   * After entering the name of the medicine, there are two cases: Either medicine has not been added previously: all data related to it are added. * In the other case, the medicine information is already available: all the medicine information appears with the possibility of modification.   3. Then press the OK button to add or save the changes.  4. Or, the Delete button, followed by an OK button, to confirm deleting all medicine information. |

### 3.2.2 Send Notifications

|  |  |
| --- | --- |
| Use Case Name | Send Notifications |
| XRef | Section 2.2.2 Send Notifications |
| Trigger | System when the amount of medicine reaches the minimum |
| Precondition | The amount of medicine reaches the minimum |
| Basic Path | 1. For each medicine type there is a field for the minimum quantity. When the field reaches the minimum quantity, the system performs two things:   * First: Sending a notification to the application specifying the type of medicine and the current quantity. * Second: Sending a text message to the store to request the missing quantities.   2. The system sends a notification to the application when the expiration date of a particular medicine approaches, specifying the medicine, the expiration date and the current quantity |

## 3.3 Detailed Non-Functional Requirements

### 3.3.1 Logical Structure of the Data

The logical structure of the data to be stored in the Database is given below:

Medicine data entity:

|  |  |  |  |
| --- | --- | --- | --- |
| Data Item | Type | Description | Comment |
| Name | Text | Name of the medicine |  |
| Price | Integer | Price of the medicine |  |
| Expiration date | Date | The date on which the medicine is no longer effective |  |
| Company | Text | Medicine manufacturer |  |
| Supplier name | Text | Supplier entity | The name of the person we are buying the medicine from |
| Quantity | Integer | Amount of medicine available in the pharmacy |  |
| Pharmaceutical composition | Text | Substances in the composition of the medicine |  |
| Dosage | Text | Amount of medication needed for treatment |  |
| Aalternatives | Text | The effect of some substances (may be another medicine) on the effectiveness of this medicine |  |

Supplier entity:

|  |  |  |  |
| --- | --- | --- | --- |
| Data Item | Type | Description | Comment |
| Store Name | Text | The name of the store we buy medicines from |  |
| Supplier Name | Text | Store owner name |  |
| Medicines | Nested table | Medicines we buy from this store | Medicine name and quantity |

Bill entity:

|  |  |  |  |
| --- | --- | --- | --- |
| Data Item | Type | Description | Comment |
| Total price of the  Bill | Nested table | Total prices of medicines in the Bill (buy/sell( | Nested table) Medicine name, price, amount) |
| Date | Date | Date of sale/buy |  |

### 3.3.2 Security:

Security is an idea implemented to protect software against malicious attacks so that the software continues to function correctly under such potential risks.

### 3.3.3 Usability:

This focuses on the appearance of the user interface and how people interact with it. What color are the screens? How big are the buttons?