
Software Requirements Specification

for

**<Pharmacy management
system>**

Version 1.0

Prepared by <

Team: Pharmacy management system

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<8/3/2023>

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Revision History

| Name | Date | Reason For Changes | Version |
|------------|----------|--------------------|---------|
| All member | 8/3/2023 | | |
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1. Introduction

Pharmacy management system is a web application that is designed to improve accuracy and to enhance safety and efficiency in the pharmaceutical store. It is a computer based system which helps the Pharmacist to improve inventory management, cost, medical safety etc.

The pharmacy is divided into several departments
Each section has a set of features:

Suppliers: the system provide collecting all details about the suppliers(phone number, national id, name) and choose from it depending on the offers and prices as well as the how fast they are in delivering the products and they also accept taking the expired medications. The pharmacist pays to its suppliers according to their desire, if it is in cash or by credit.

Inventory: the system will automatically arrange the medication in alphabetic form and it will also register all details about medication (amount, name, expiry date, product date) as it also alert the pharmacist with a warning message for the medications that's about to expire or for the medicines that will sold out of stock and it will provide a special document that will store all the details about the medications that will expire soon as it will automatically filter the medication and will make a list for the medications that will sold out soon.

HR: The system provide account for the assistant pharmacists and the doctor determine the power of the assistants pharmacists as The system will also provide to register all details about pharmacist assistant (Name, Phone number, National Id, Address ,salary ,bonus ,discount) as well as the customer doesn't have an access to the system.

Delivery worker: The system will connected to the delivery man's phone to get orders with all the details of the patient(address, phone number).

Purchase & sales: The system provide the pharmacists to enter the name of the medication and its quantity and will alert (pharmacists assistant) to make allergy test for specific medications as it also will show pharmacists the alternative medicines if a specific medication is out of stock and will make a special sales list for the medication which contain a percentage of drugs.

(pharmacists assistance doesn't have authority to open this list).

Accounting & Finance: The system provide to take all details about patients(customer) (name, phone number, address) and this details is benefit for making discount and for deferred payment and it will alert the pharmacist of the upcoming salary payment date also system provide to compare between weeks, months, years , days to know net profit or sales percentage and will also show the pharmacists all details that the pharmacist chose to compare.

1.1 purpose

The purpose of this project is to develop a software for the effective management of a pharmaceutical store that will be able to achieve the following objectives:

1. It provides the pharmacists with ease and convenience to get all the details on all pharmaceutical products & supplier at any time accurately.
2. Provides all the patient's requirements in terms of safety, health and safety.

1.2 Product Scope

The system of this project is limited to all pharmaceutical products and since we are in a modern society that is constantly evolving so we have established a management system based on improving the efficiency of the pharmacy.

The system will contain all information about pharmaceutical purposes, including recording the date of production, expiry and quantity.

1.3 References

[Pharmacy management system - Wikipedia](#)

[Why using pharmacy management system? - برنامج ادارة الصيدليات \(pharmacare-phms.com\)](#)

[Dr.sanaa Maher](#)

[7IJECC-JUN20218-Pharmacy\[1\].pdf](#)

2. Overall Description

2.1 Product Functions

the major functions the product must perform or must let the user perform will be as the following:

1. Make it easier for the pharmacists to know the amount available for a particular medication..
2. Make it easier for the pharmacists/pharmacists assistance to know if the medicine exist or not.
3. Make it easier for the pharmacists to know details of the drug.
4. Make it easier for the pharmacists /pharmacists assistance to know the cost for a particular medication..
5. Make it easier for the pharmacists /pharmacists assistance to know the alternative medicines for the same type of medicine.
6. The system provide multiple way for payment(cash, credit).
7. The system will make the pharmacists /pharmacists assistance save more money and more time for the patient (customer) by taking his (name, phone number, national id)to register him on the system by this details .
8. If the pharmacists client doesn't have money he can pay another time by taking his (name, phone number, national id).
9. A system will provide the creation of a sales list for medicines that contain a drug percentage, and it is the prerogative of the pharmacist only.

2.2 User Classes and Characteristics

1. The pharmacist will have all the powers of the system he can know all the details about the system).
2. The Pharmacist Assistant who Records the medicines with the date of production and expiration, the quantity of medicines available, the price of each medicines and the registration of client information(address, phone number, name) as he also have the authority to sell and retrieve medicines.
3. client doesn't have access to the system.

2.3 Operating Environment

Hardware:

Processor: Pentium V or higher .

Microcontroller: Uno Board Humidity, Air Quality, Pressure

Processor speed: 2.6GHz.

Ram:1 GB.

Hard disk :1 GB or higher.

Software:

Operating System:

Windows 7 or higher.

Platform: XAMPP .

Database: MySQL.

Technologies used: C, SQL, PHP.

chrome & google :this is for web application.

2.4 Assumptions and Dependencies

- 1) the system got hacked .
- 2) Drop in the system.
- 3) Old version of browsers.

3. System Functions

3.1.1 Supplier

| Code | Requirements statement | Must/should | Comments |
|-------|---|-------------|----------|
| FR001 | The system make a list for all supplier (for the pharmacists). | Must | |
| FR002 | The system will compare the supplier(depending on the prices and there offers and how fast they are in delivering the products). | Must | |
| FR003 | The system will automatically store all the details about the supplier(name ,phone ,national id). | Must | |
| FR004 | The system will specify the major of the supplier(Pharmaceutical purposes differ from one supplier to another) | Should | |
| FR005 | The system will show you the rating of the supplier . | Must | |
| FR006 | The system will show you the offer for each supplier. | Must | |
| FR007 | The system will show you the negative comment about the supplier. | Should | |
| FR008 | The system will show you the pharmacies that contacted with these supplier. | Should | |

| | | | |
|-------|---|--------|--|
| FR009 | Once the drug is finished, the system will provide all the details about the drug, all the suppliers associated with the drug, and all the most abundant documents. | Must | |
| FR010 | The system will directly contact with the supplier for new updates about the medication. | Should | |

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3.2 Product

| Code | Requirements statement | | Comments |
|-------|---|------|----------|
| FR008 | The system will arrange the medicines in alphabetic form. | Must | |
| FR009 | The system will store every detail about the medicines . | Must | |
| FR010 | The system will store the alternative medicines for any medication | Must | |
| FR011 | The system will store the quantity for the medications. | Must | |
| FR012 | The system will send alert message for the pharmacist to show that the quantity of the medicines almost sold out. | Must | |
| FR013 | The system will allow the pharmacists to store the stock of the medicines manually. | Must | |
| FR014 | The system will allow the pharmacists to register the expiration date and the production date of the medication. | Must | |
| FR015 | The system will send alert message for the pharmacist to show the medication that will almost expire . | Must | |
| FR016 | The system will automatically filter the medication . | Must | |
| FR017 | The system will make a list for the medications that will sold out soon after filtering. | Must | |
| FR018 | The system will make special sales list for specific medicines (drugs). | Must | |
| FR019 | The system will send alert message for the pharmacist assistant to inform her to make allergy test. | Must | |

| | | | |
|-------|--|--------|--|
| FR020 | Once the system will registered the name of the drug it will be give a special code. | Should | |
| FR021 | The system will send warning message for the pharmacist assistant when he sell a medicine from special list. | Must | |
| FR022 | The system will provide to sell the medication <u>(tablet)(strips ,tablet ,big box ,small box).</u> | Must | |
| FR023 | The system will allow me to update the price of the medication | Must | |
| FR024 | The system contains a list of conflicting medications | Must | |
| FR025 | 1)The system will send an alert message to the pharmacist if the customer requests two types of medication that conflict with each other 2)Every medicine should have a bar code for the system to scan it. | Must | |

3.3 Payment

| Code | Requirements statement | Must/should | Comments |
|-------|--|-------------|----------|
| FR026 | The system Payment should be by cash, credit. | Must | |
| FR027 | The system should register the customer's name, address and phone number. | Must | |
| FR028 | The system should show points that are recorded on every payment and can be redeemed for another purchase. | Must | |
| FR029 | The system should let the customer can use the points to pay the order. | Should | |
| FR030 | The system should entered customer data is saved to facilitate future purchases. | Should | |
| FR031 | A message will be sent to the user on his registered phone number or e-mail, | Should | |

| | | | |
|--|--|--|--|
| | thanking him for shopping from the site. | | |
|--|--|--|--|

3.4 Delivery

| Code | Requirements statement | Must/should | Comments |
|-------|--|-------------|----------|
| FR032 | The system should let the delivery order automatically canceled if the customer cannot be reached. | Must | |
| FR033 | The system should let the delivery price to be determined according to the client area. | Must | |
| FR034 | The system should let the delivery have all the details about the client(address). | Must | |
| FR035 | When the customer orders an order, he will receive a special number on his phone to receive the order, and the same number will be with the delivery | Must | |
| FR036 | After receiving the order, the customer can evaluate the delivery. | Should | |
| FR037 | The system will save all previous deliveries are recorded and saved in history. | Must | |
| FR038 | The customer can return a previously purchased product through delivery | Should | |
| FR039 | Once the customer orders an order from the pharmacy, he will be given a code for the order. | Must | |
| FR040 | On the site during the delivery request, a GPS is shown to the customer to track the order. | Must | |

3.5 Customer

| Code | Requirements statement | Must/should | Comments |
|-------|---|-------------|----------|
| FR041 | The system will Record client data in the event that he is a regular customer of the pharmacy(phone number, name ,national id). | Must | |
| FR042 | The system will record his number in the event that he was buying a medicine and he had money left, so the pharmacist would put the rest of his money on this number in the event that he came and took another treatment | should | |
| FR043 | The system will let the pharmacists client if doesn't have | Should | |

| | | | |
|-------|---|--------|--|
| | money he can pay another time by taking his (name, phone number, national id). | | |
| FR044 | The customer has the right to find a machine to pay with the credit card | Should | |
| FR045 | To have the right to have a fast system when paying the treatment account | Must | |
| FR046 | to have the right to find the medicine he wants immediately | Should | |
| FR047 | Allow customers to cancel an order within a specific time frame | Should | |
| FR048 | That he has the right to take treatment with a percentage of drugs, but with the permission of the doctor | Must | |
| FR049 | Calculate total price of the order including taxes and any applicable fees | Must | |

3.6 Pharmacy assistance

| Code | Requirements statement | Must/should | Comments |
|-------|--|-------------|---------------------|
| FR050 | The system should Access to the website by the account that the pharmacist gave him. | Must | |
| FR051 | The system will allow the pharmacists assistance to review all operations of buying, selling and retrieval on a daily basis. | Must | (its his authority) |
| FR052 | The system should offer alternative medicines to the customer in case the request is not available | Must | |
| FR053 | The system should Take customer data and keeping it in the system | Must | |
| FR054 | The system should have sufficient experience in dealing with the system | Must | |
| FR055 | The system should have a license to give the appropriate medicine commensurate with the diagnosis from the doctor | Should | |
| FR056 | The system should arrange the medicine alphabetical or by expired data | Should | |
| FR057 | The system should know what to do with the expired medicine | Should | |
| FR058 | The system should have the data about supplies and inventory | Should | |
| FR059 | The system have the right to deal with suppliers and do purchase request | Should | |

| | | | |
|-------|---|--------|--|
| FR060 | The system should add bonus or points for old customers | Should | |
| FR061 | The system should know the percentage of profits | Should | |

3.7 Doctor(Pharmacists)

| Code | Requirements statement | Must/should | Comments |
|-------|--|-------------|----------|
| FR062 | The system should Ensure that medicines are used safely and correctly. | Must | |
| FR063 | The system should Determine the appropriate medication for the patient. | Must | |
| FR064 | The system should Coordinating with doctors regarding the optimal use of medicines | Must | |
| FR065 | The system should Educating the patient about the side effects of the drug | Must | |
| FR066 | The system should organizing the pharmacy and its medicines in an effective and orderly | Must | |
| FR067 | The system should maintain records of patients' conditions and information | Must | |
| FR068 | The system should Follow up the expiry dates of medicines continuously | Must | |
| FR069 | The system should Follow up the expiry dates of medicines continuously | Must | |
| FR070 | The system should Follow up on invoices for purchases and sales of medicines and medical supplies | Must | |
| FR071 | The system should Provide some medical assistance such as giving injections and measuring temperature and blood pressure | Must | |
| FR072 | The system should Study the results of laboratory analyzes | Must | |

Nonfunctional Requirements

3.3 Security

| Code | | | Comments |
|--------|--|------|----------|
| NFR001 | The pharmacy system is password protected to change things on the system | Must | |

| | | | |
|--------|---|------|--|
| NFR002 | the pharmacist Manager control over the system by login to the pharmacy system | Must | |
| NFR003 | Any user can not use the system without registered by the Administrator and all result data is protected and controlled by the Administrator. | Must | |
| NFR004 | The system give automatically a code when a client ordered. | Must | |

3.4 usability

| Code | Requirements statement | Must/should | Comments |
|--------|---|-------------|----------|
| NFR001 | Any familiar in using windows operation can operate the system since it has user friendly user interface. Which have the instruction menu's how to use it which self-directive application then can be used the system without ambiguity. | Must | |

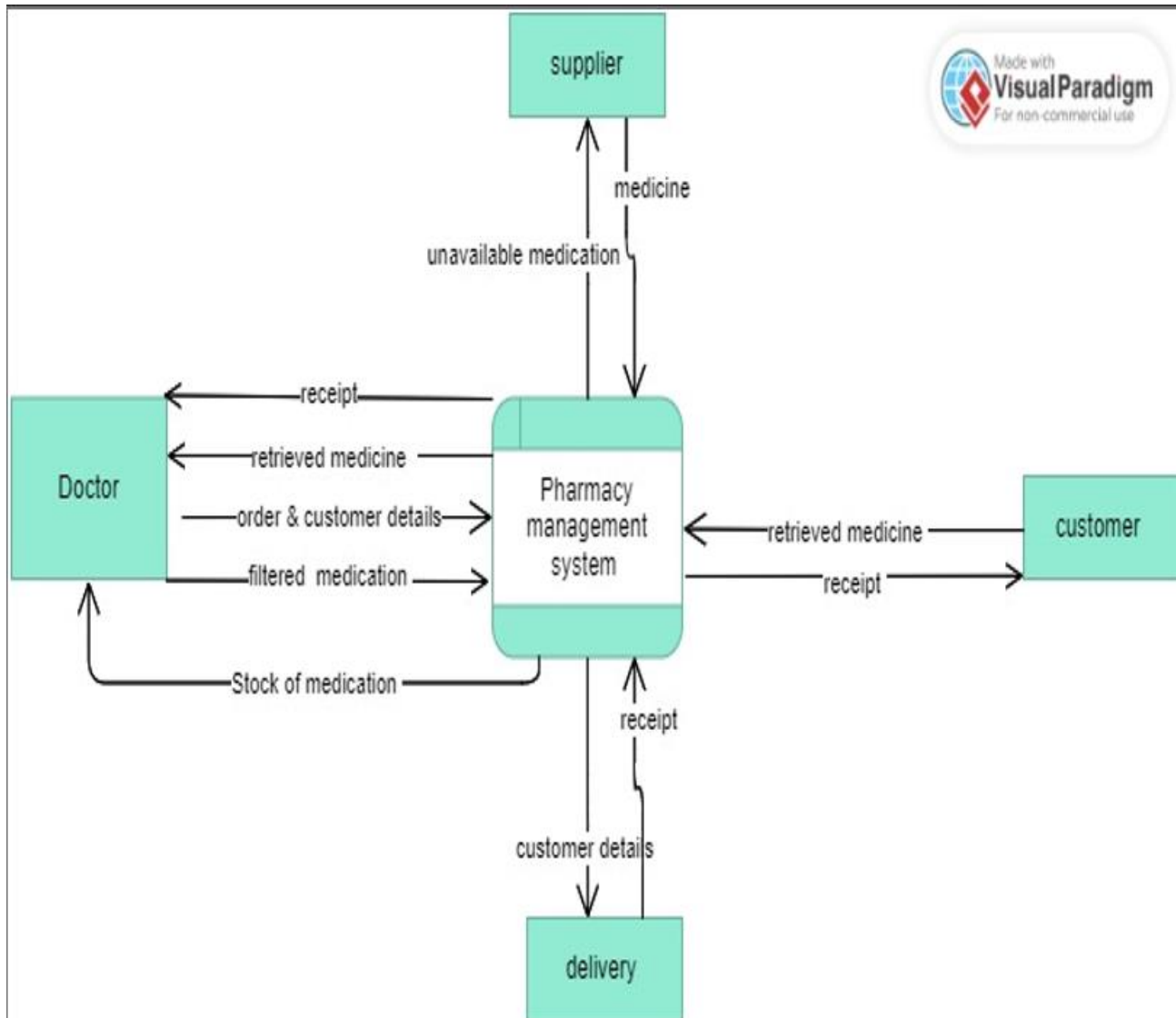
3.5 Reliability

| Code | Requirements statement | Must/should | Comments |
|--------|--|-------------|----------|
| NFR001 | the system will restart in order to prevent data loose as well as safe operation within 5 seconds. | Must | |

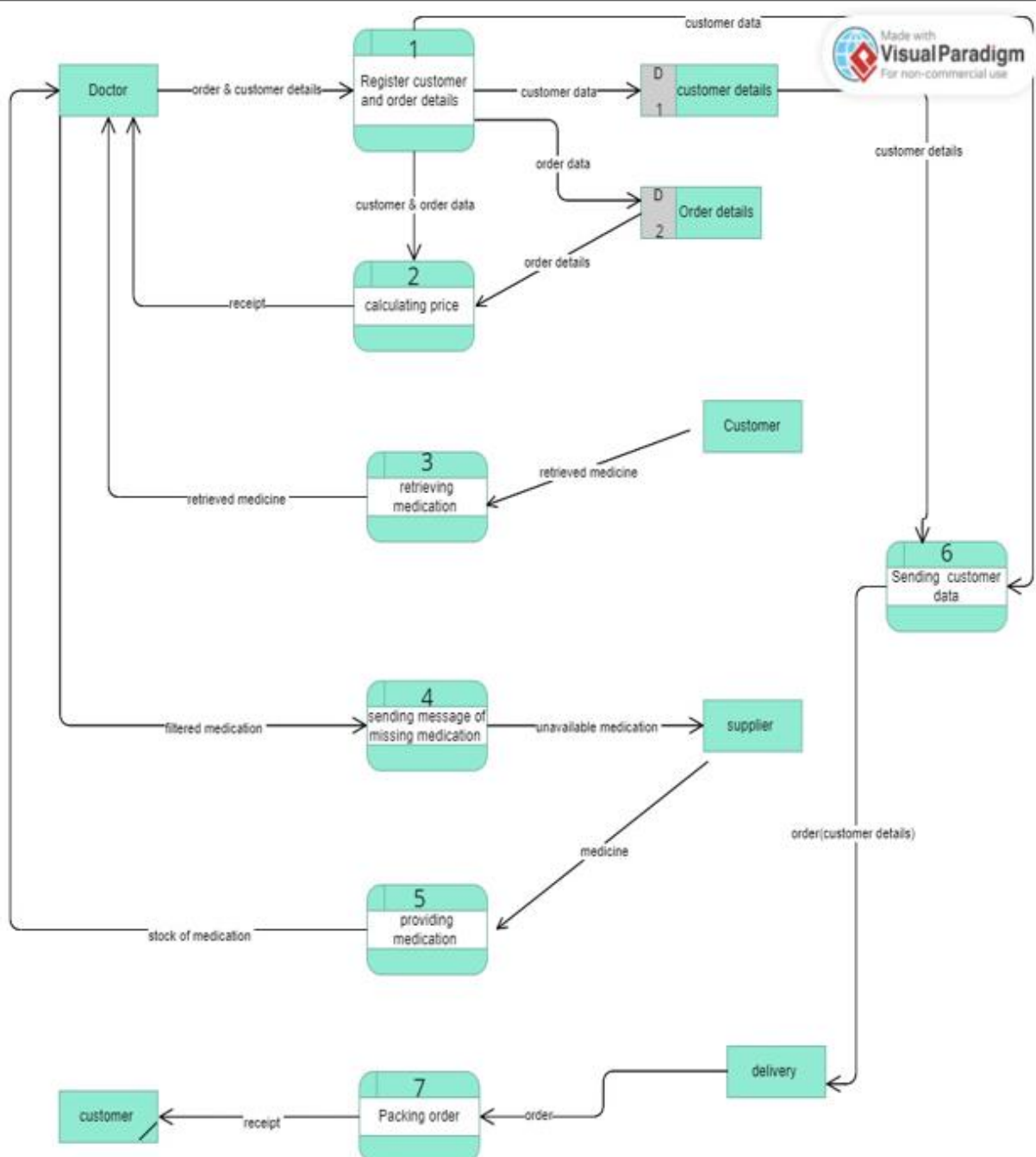
4. Diagrams

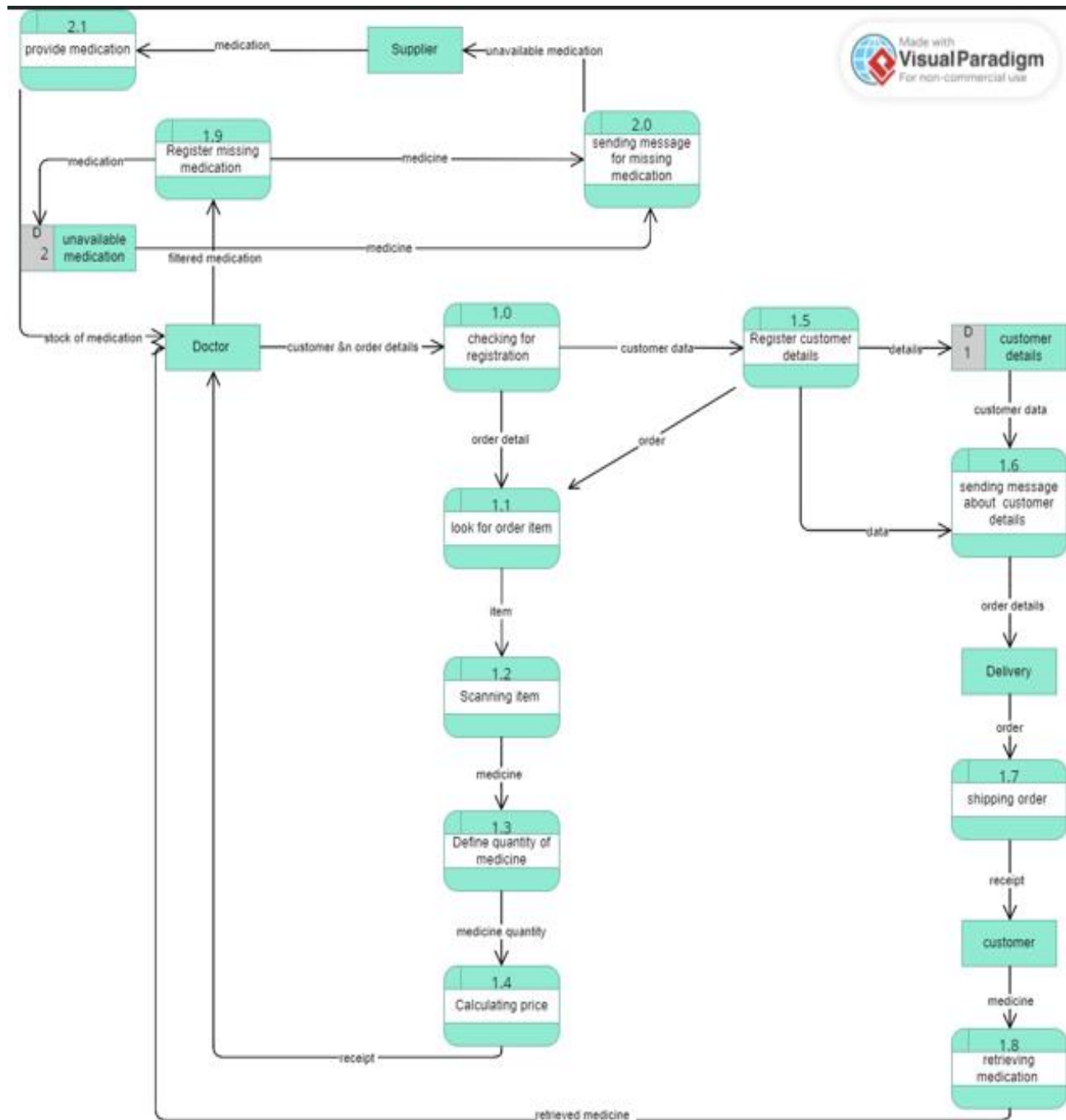
4.1 Data-Flow Diagram (DFD)

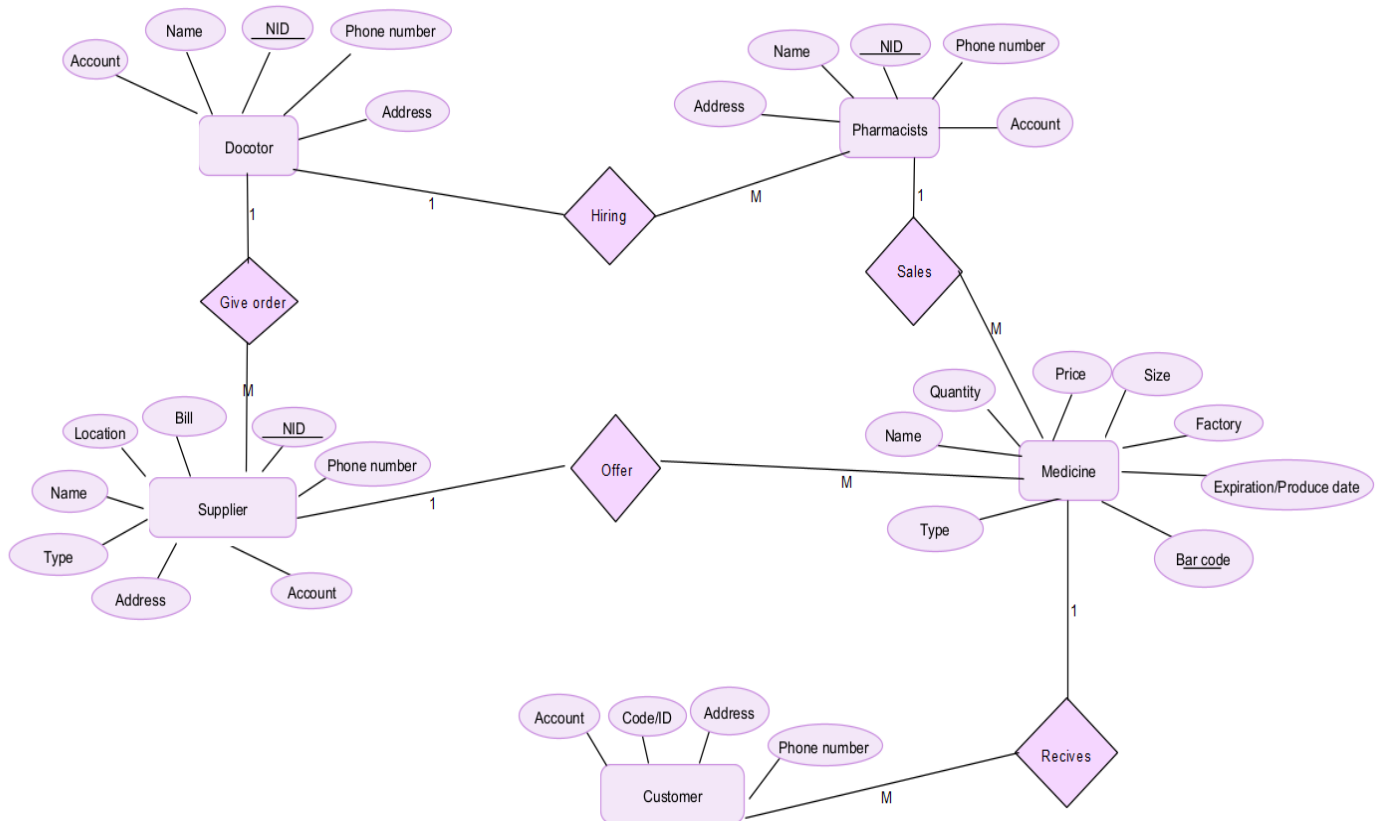
4.2 Entity-Relationship Diagram (ERD)

Pharmacy management system DFD**CONTEXT DIGRAM:**

LEVEL ONE DFD:



LEVEL 2 DFD:

ER-DIGRAM

SQL CODE

```
CREATE DATABASE pharmacy;  
USING pharmacy;
```

CUSTOMER ENTITY:

```
CREATE TABLE CUSTOMER (  
    ID int NOT NULL,  
    Name varchar(255) NOT NULL,  
    Phone number int,  
    Account varchar(255) NOT NULL,  
    Address varchar(255) NOT NULL,  
    PRIMARY KEY (ID)  
);
```

DOCTOR ENTITY:

```
CREATE TABLE Doctor (  
    NID int NOT NULL,  
    Name varchar(255) NOT NULL,  
    Phone number int,  
    Account varchar(255) NOT NULL,  
    Address varchar(255) NOT NULL,  
    PRIMARY KEY (NID)  
);
```

PHARMASICTS ENTITY:

```
CREATE TABLE PHARMASICTS (  
    NID int NOT NULL,  
    Name varchar(255) NOT NULL,  
    Phone number int,  
    Account varchar(255) NOT NULL,  
    Address varchar(255) NOT NULL,  
    PRIMARY KEY (NID)  
);
```

MEDICINE ENTITY:

```
CREATE TABLE MEDICINE (  
    Name varchar(255) NOT NULL,  
    Factory varchar(255) NOT NULL,  
    Type varchar(255) NOT NULL,  
    Size varchar(255) NOT NULL,  
    Quantity int,  
    Price int,  
    Expire/Production int,  
    Bar code int,  
    PRIMARY KEY (Bar code)  
);
```

SUPPLIER ENTITY:

```
CREATE TABLE Supplier (  
    NID int NOT NULL,  
    Name varchar(255) NOT NULL,  
    Type varchar(255) NOT NULL,  
    Address varchar(255) NOT NULL,  
    Location varchar(255) NOT NULL,  
    Bill int NOT NULL,  
    Account varchar(255) NOT NULL,  
    Phone Number int NOT NULL,  
    PRIMARY KEY (NID)  
);
```

Thank you!