

Final Report

Software :pharmacy mangement system

Grpoup :6

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Team Members:

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Project subject

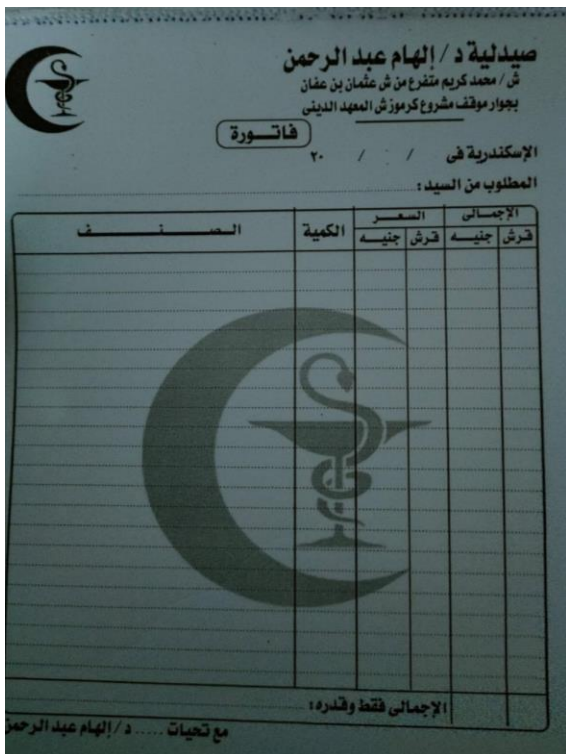
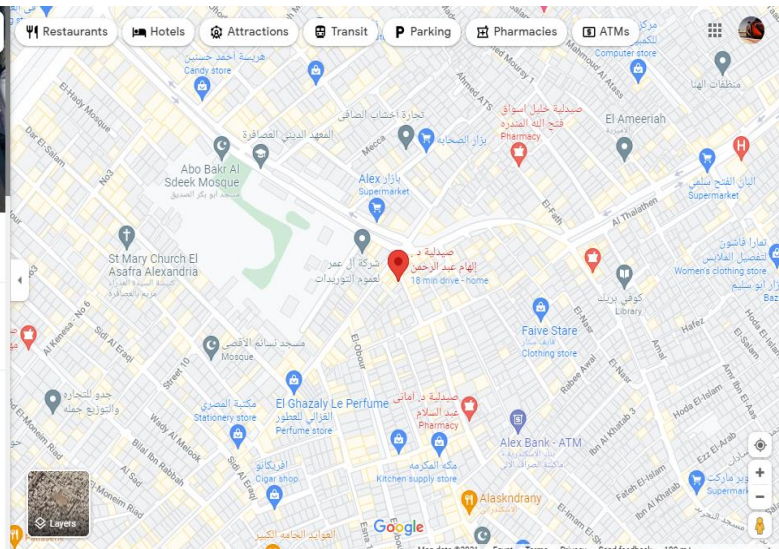
Develop pharmacy management system to

- ✓ manage staff and customer.
- ✓ manage products ,suppliers and pharmaceutical companies.
- ✓ Make staff login/out system.
- ✓ Modification of staff information in the data base system
- ✓ and view and remove information.
- ✓ Printing the sales process to the customer.
- ✓ Divide products into section.
- ✓ Add clients and search for clients by phone number, List of missing products.

Customer proof

Information:

- ✓ Name : Dr. Elham Abdel Rahman pharmacy
- ✓ Phone : 035360233/0122 856 1444
- ✓ Address: Al Asafra Kebli – Muhammad Karim Street, branching from mahad eldiny street
- ✓ Location:<https://maps.app.goo.gl/jbyHeM1tTSrBS1xy7>



Requirements

Functional

- ✓ **Staff login system / Staff logout system:**
Staff log in/out in the (enter the software)system with username (id) and password (read from staff database) each member in staff has unique id Password would be like staff-id for example.
- ✓ **Add or Modification of staff information and show the information:**
Add or remove and edit in staff information like (username , phone num ,salary ,name ,birthday ,address ,hours work)
Pharmacy owner only he can be able to modification in staff information and show the information
This data is provided by a staff database.
- ✓ **Add or Modification of suppliers/ pharmaceutical companies and show the information :**
Add or remove and edit in supplier's information like (name ,phone num ,address, payment method)
This data is provided by a supplier's/ / pharmaceutical companies database.
- ✓ **Search for staff or suppliers/ pharmaceutical companies** (search by id or name)
Staff can search for suppliers/ pharmaceutical companies and show them
Owner only can search for staff information
This data is included in supplier's /staff /companies database.
- ✓ **Add or Modification of products and**
Add or remove and edit in products information like (name ,price ,section ,location ,expiration date, type , barcode (unique number for product)) This data is included & read in products database
- ✓ **Search for product**
Staff can Search for product by name or bar code or section (This data is included in product database)
- ✓ **Divide products into sections**
Divide all similar products into categories by type of similarity (drugs for similar symptoms or products that have the same use)
- ✓ **Add or Modification of client :**
Add or remove and edit in client information like (phone num, name, address)
Provided by client's database.
- ✓ **The way to sell the product is direct or delivery must be recorded**

Recorded means that data stored in client's database during the purchase operation.

- ✓ **Search for client using phone number or full name**
Staff can search for any customer To complete the purchase
This data can be found in client's database.
 - ✓ **List of missing products**
Missing data means products that have expired ,shortage of this
Product ,staff can add the ended products into this list
 - ✓ **Warning before the expiration of some products**
System Send message warning the staff about that product will expire soon(month)
 - ✓ **Printing the sales process to the customer (invoice)**
This means the invoice that included in this presentation, staff can print the invoice from the software
 - ✓ **printing a detailed report**
This report can be about any needed thing ,Make print option to make staff print any thing.
 - ✓ **Implement the delivery option using number (0122 856 1444).**
When customer use this number To use **delivery** option to complete the purchase
In this process must recorded in database as delivery transaction
 - ✓ **Make the required databases**
Design and implement databases for staff ,supplier ,product & client
-

Non-Functional:

- ✓ ***Search for product must be in a few seconds (performance)***
As the staff member search in the product's database there should not be any lag The software should be efficient & with acceptable performance.
- ✓ ***Log in-out must be in a few seconds (performance)***
Log in with user user-name & password /Log out when the user clicks on the button called (Log out) simultaneously.
- ✓ ***Add sound system to software just to make the experience enjoyable.(interface)***
- ✓ ***Need Barcode reader (device) to store & check the product is in the database.***
- ✓ ***Add logo to the software to make the software whole & complete. (interface)***
- ✓ ***The background must be dark to make the experience better for users.)***

- ✓ **The font must be clear ,large enough & this is recommended by the client.(interface)**
 - ✓ **Implementation The system**
system is implemented in Intel(R) Core(TM) i3 processor with 2 GB RAM,32 bit computer. And it is implemented through testing on both Black and White testing. The language we use implement the system is python and MYSQL database.
 - ✓ **Supportability:** This pharmacy management system operates in any version of windows operating system. Such as windows xp. windows 2003, windows 7. windows 8 and other related versions
 - ✓ **Safety & Security:** staff and owner only can enter the software
-

Model: Incremental model

1. the requirements of the complete system are clearly defined and understood.
 2. There is a need to get the software to the customer early.
 3. Early increments act as a prototype that continuously improving after each increment.
 4. The highest priority system services tend to receive the most testing.
 5. The cost of accommodating changing customer requirements is reduced.
 6. Lower risk of overall project failure.
-

Requirements: are **divided** (and incremented in each release or as we call it an INCREMENT) & **prioritized** in a specific way in order to satisfy the customer also that match the customer's needs, With each increment add new requirements given the feedback of the client to adjust problems that were in the previous increments.

1st INCREMENT

As initial release should have a full log in system about the pharmacy that receive information about staff , everything related to them as well as a log out system

Requirements:

- (1) Staff login system.
- (2) Modification of staff information
- (3) Staff logout system

2nd INCREMENT

has all the services for Products , Suppliers as well as Companies

Requirements :

- (5) Searching for suppliers and adding new suppliers.
- (6) Search for pharmaceutical companies and add pharmaceutical companies.
- (7) Divide products into sections
- (8) List of missing products Added in later increments (2nd increment to be specific)
- (9) Warning before the expiration of some products
- (10) The way to sell the product is direct or delivery.

3rd INCREMENT

Include the logo , Clients services , Some adjustments given from the client's feedback in the previous increment were added in this release.

Requirements :

- (11) Add clients and search for clients by phone number
- (12) Search for product must be in a few seconds
- (13) Add sound system to software
- (14) Add logo to the software
- (15) The background must be dark
- (16) The font must be clear ,large enough.
- (17) Add the delivery option with number (0122 856 1444)

Cost estimation :

using basic comco

We have three increment each increment implement in 4000 line of code

Size of code =12000 line of code =12 KLOC

Type	Value
Effort	$A * (KLOC)^B = 3 * 12^{1.12} = 48.50 \text{ person/month}$
Time	$C * (KLOC)^d = 2.5 * 12^{0.35} = 5.9 \text{ month}$
Person required	Effort/ Time=8 person
Productivity	2000lines/month

Risk in project:

- Manger or staff forget password
- Manger or staff enter username Uppercase letters from lowercase
- Add barcode for product in wrong way
- Search for product by name
- Register an existing product in the software
- The way to sell the product is direct or delivery not recorded
- Add an existing product to the missing products list
- Failure to remind the software of the product's expiration date
- Add phone number for suppliers or companies in wrong way
- Search for suppliers or companies by name
- Register an existing suppliers or companies in the software
- Add phone number customer in wrong way
- Search for customer by name
- Register an existing customer in the software

Risk type

Risk	Probability	effort
The time required to develop the software is underestimated	High	Serious
The size of the software is underestimated .	High	Tolerable
Required training for staff is not available	Moderate	Tolerable
The rate of defect repair is underestimated	Moderate	Tolerable
Software tools cannot be integrated	High	Tolerable
Customers fail to understand the impact of requirements changes	Moderate	Tolerable

Risk indicators

Risk	Potential indicators
Technology	Late delivery of hardware or support software; many reported technology problems.
Requirements	Many requirements change requests; customer complaints.
Estimation	Failure to meet agreed schedule; failure to clear reported defects.

Test Technique:

In each Increment

Black-box testing: Deriving tests from external descriptions of the software, including specifications, requirements, and design

White-box testing: Deriving tests from the source code internals of the software, specifically including branches, individual conditions, and statements

Test-to-pass: assures that the software minimally works, does not push the capabilities of the software, applies simple and straightforward test cases, does not try to “break” the program

Test-to-fail: designing and running test cases with the sole purpose of breaking the software, strategically chosen test cases to probe for common weaknesses in the software.

In all Increment

Integration test: Involves building a system from its increments and testing it for problems that arise from increments interactions

Interface testing: to detect faults due to interface errors or invalid assumptions about interfaces

Performance testing: involve testing the emergent properties of a system, such as performance and reliability.

And we can do **Test-to-pass** , **Test-to-fail** also

Test case:

Test case	Description	steps	Test data	Expected Result
TC1	Check results on entering valid User Id & Password	(1) Enter ID (2) Enter Password (3) Click Sign in	username: moh985 Password: INf9^Oti7^2h	Login should be successful
TC2	Check results on entering invalid User Id & Password	(1) Enter ID (2) Enter Password (3) Click Sign in	username: moh985 Password: 0000	Login should be insuccessful
TC3	Search for product with barcode	(1) Enter barcode (2) click search	Barcode:55788776hhg	Show Real specific product data
TC4	Add product	(1) Enter product info (2) click add	Product informaton	Add product to data base
TC5	Search for customer with phone_num	(1) Enter phone_num (2) click search	Phone number:05065677665	Show Real specific customer data
TC6	Search for suppliers with phone_num	(1) Enter phone_num (2) click search	Phone number:05065677665	Show Real specific customer data
TC7	Add customer	(1) Enter customer info (2) click add	Customer info	Add clinet to data base
TC8	Add suppliers	(1) Enter suppliers info (2) click add	suppliers info	Add supplier to data base
TC9	Add product to List of missing products	(1) Enter product Barcode (2) click add	Barcode:55788776hhg	Add product to List of missing products database
TC10	printing a detailed report	(1) click print	-----	Print the report should be done
TC11	printing the invoice	(1) click print	-----	Print the invoice should be done

Use case diagram

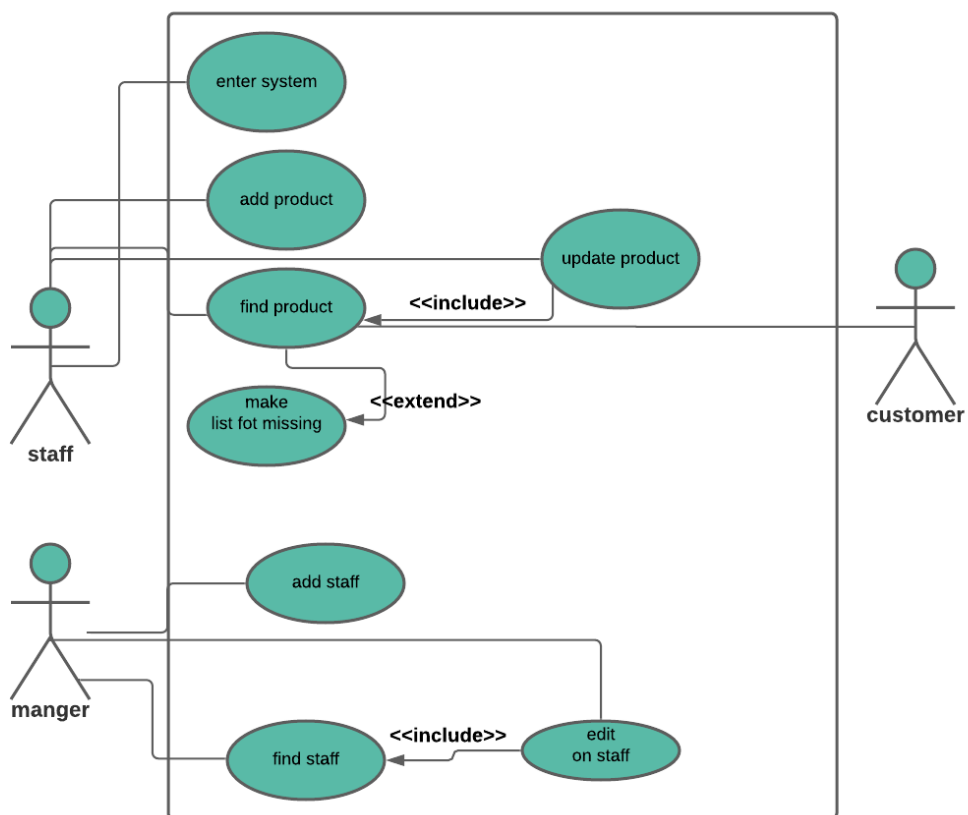
Level 1

In this use case

1-Staff can enter the software using id,password .

2-Staff can add product(name,barcode,type), search for product by name or barcode, update product information(name,barcode,type) and customer can ask staff to find product using (name,type).

3-Manger can add new staff, find old staff, edit on staff information.



Level2

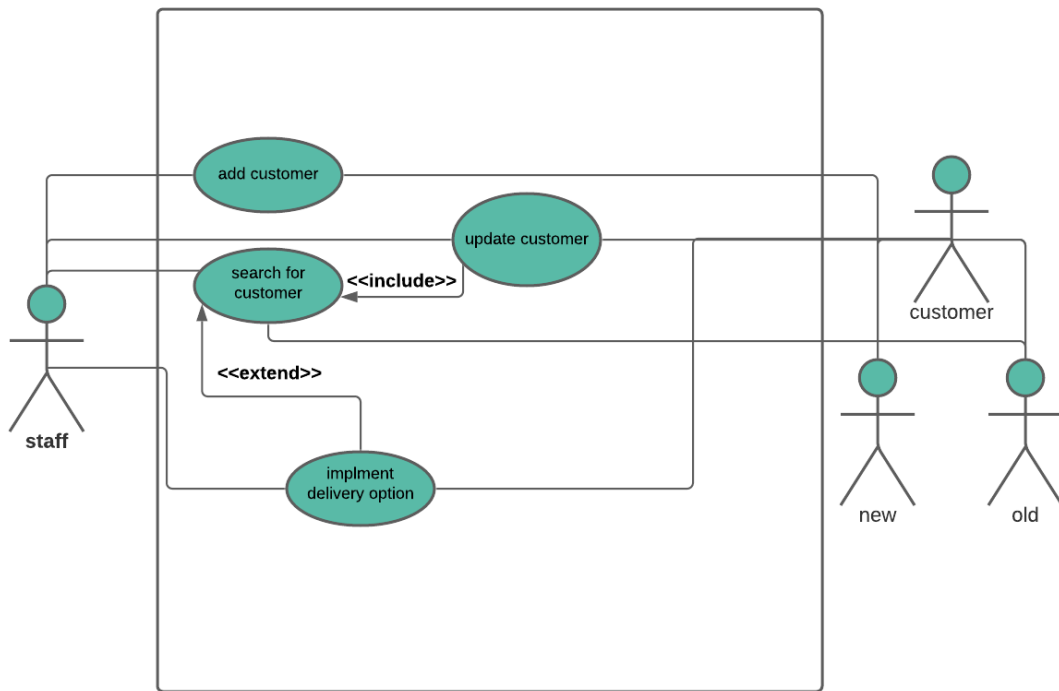
In this use case

1-Staff can add new customers using (names ,phone number)

2-Staff can search for old customers using phone number

3-Staff can update old customers information (phone ,name)

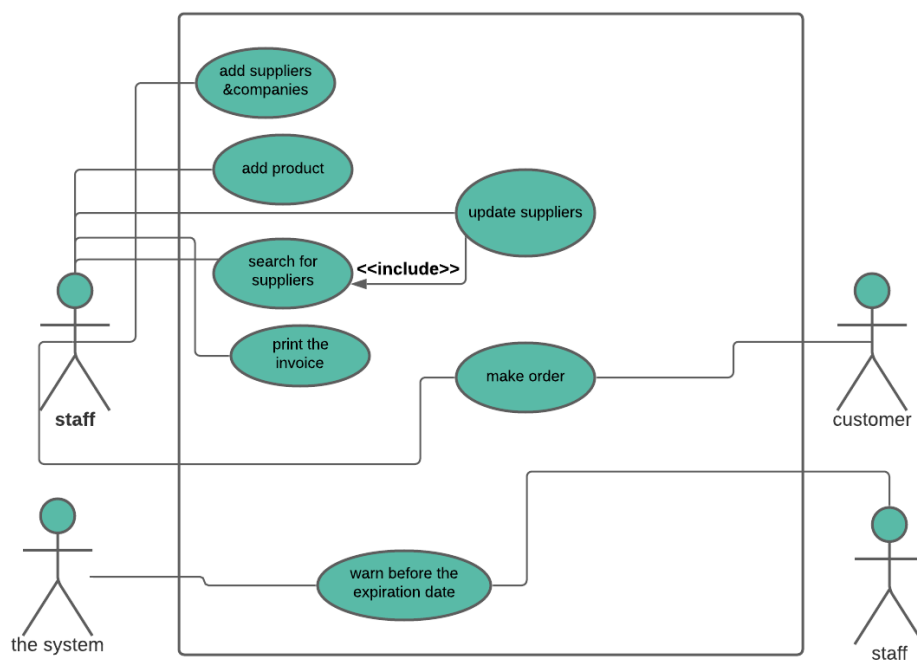
4-Staff can implement delivery option for customers



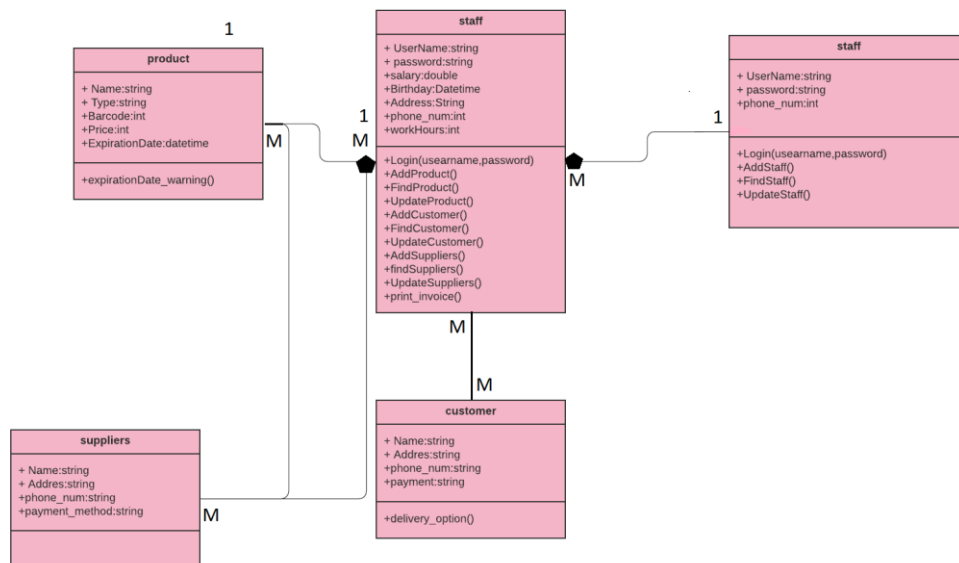
Level3

In this use case

- 1-Staff can add new suppliers using (names ,phone number)
- 2-Staff can search for old suppliers using phone number
- 3-Staff can update old suppliers information (phone ,name)
- 4-Staff can print the invoice
- 5-staff can make order for customer
- 6-system warn the staff before expiration date

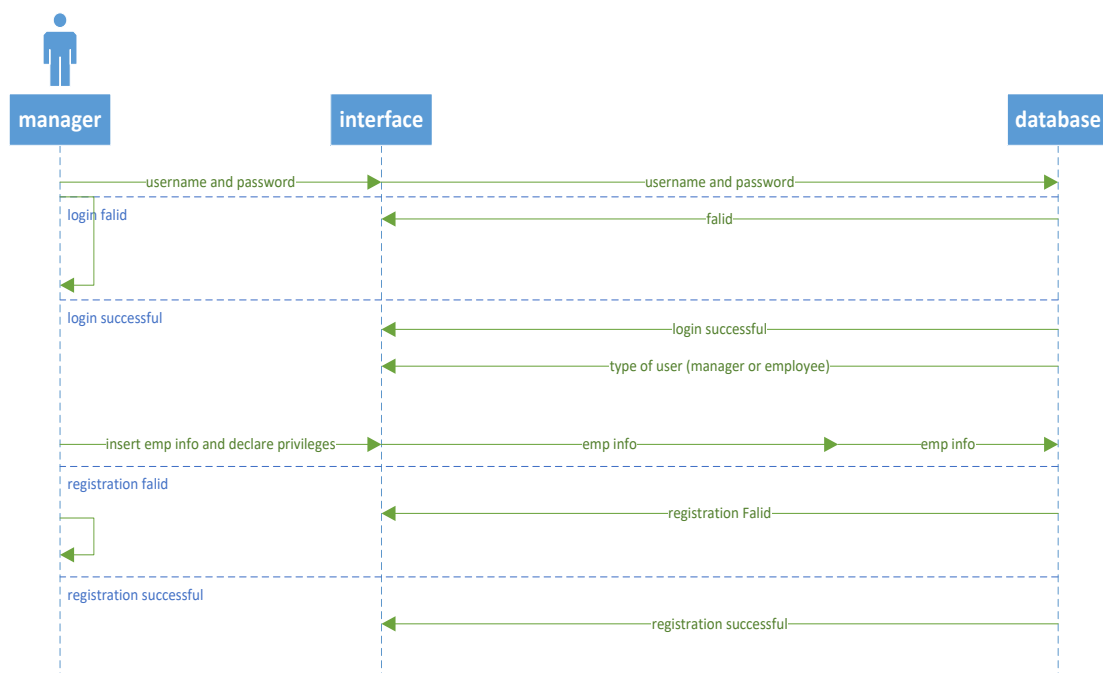


Class Diagram

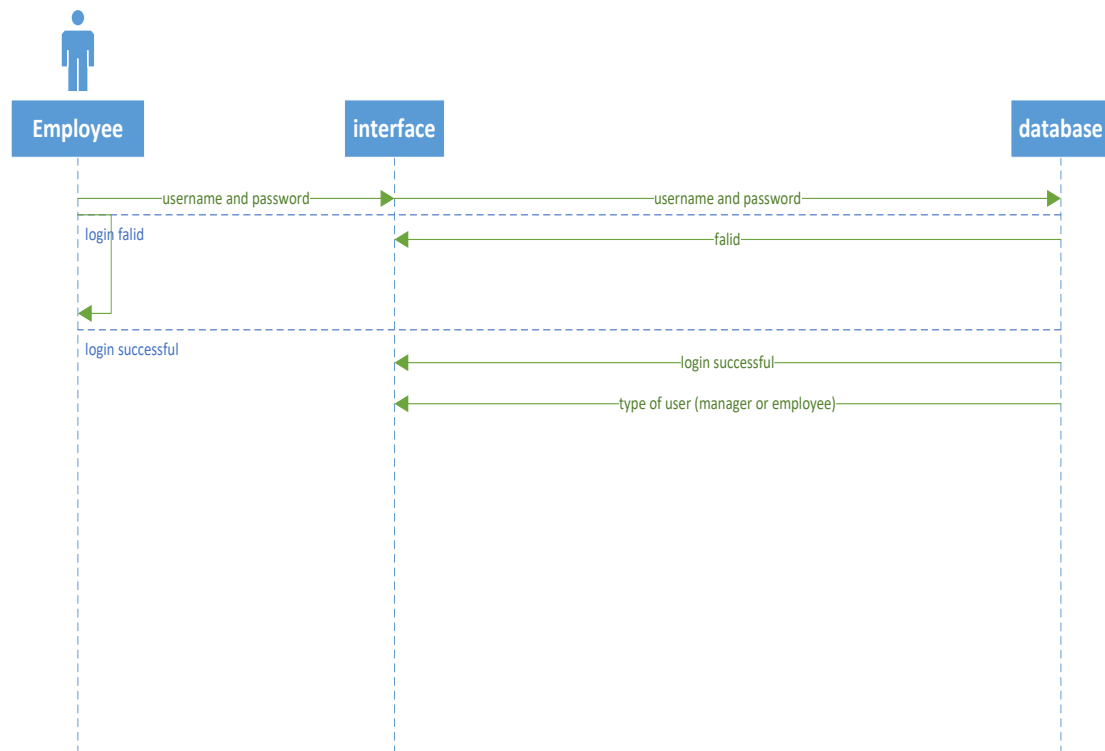


Sequence Diagram :

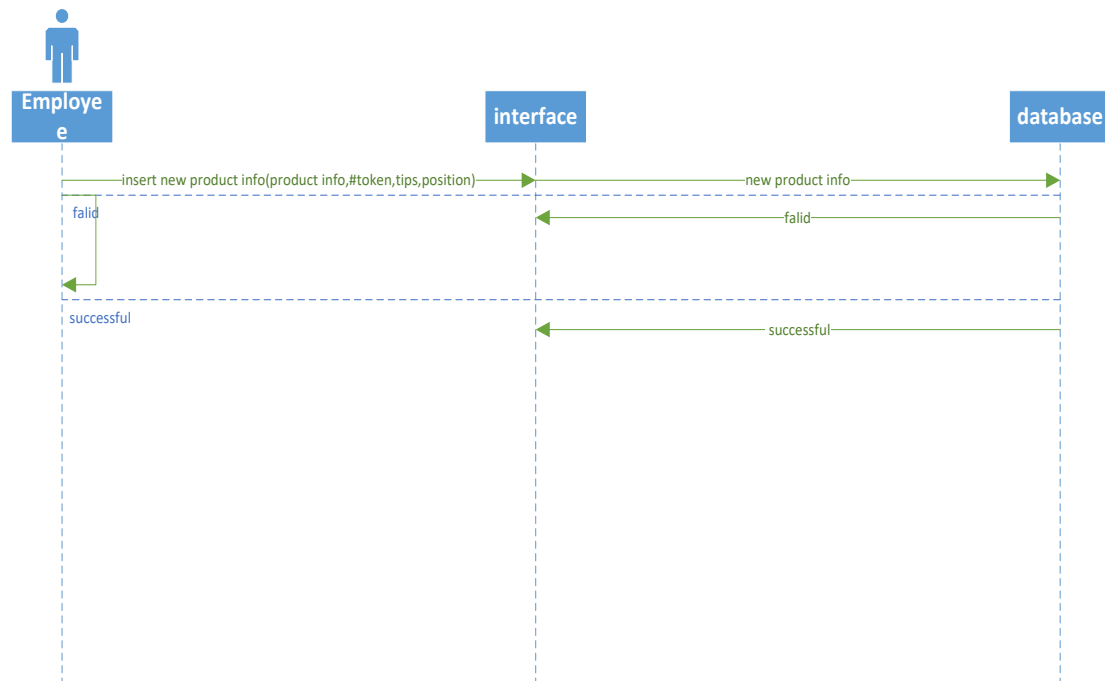
manager Login And Register New Employee



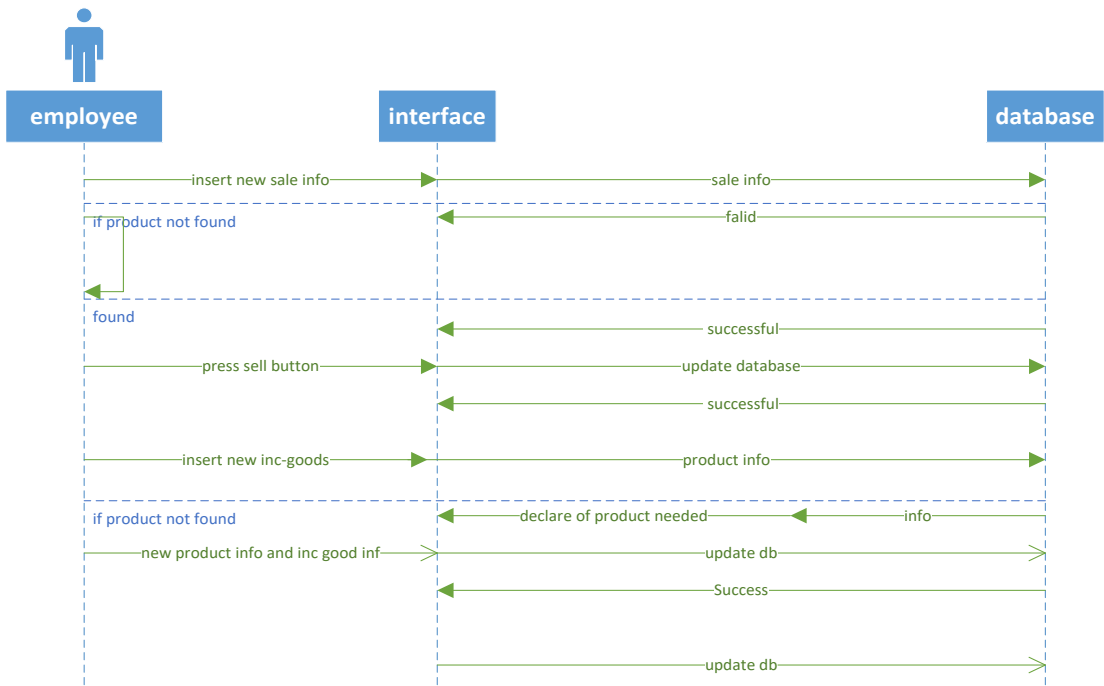
Employee Login



employee Login Insert new product or new customer or new suppliers:



employee sale and insert inc. goods




Data base design and intrface design

Increments Model

1st INCREMENT

DB

Staff	
	sID
	sName
	sAddress
	Salary
	Phone number

UI

Navigation

☒ Log In Page

☐ Log Out

Navigation

☐ Log In Page

☒ Log Out

PHARMACY

Please Enter Your Name

Ahmed

Please Enter Your Id

1

LOG IN

Welcome Thanks For Logging in

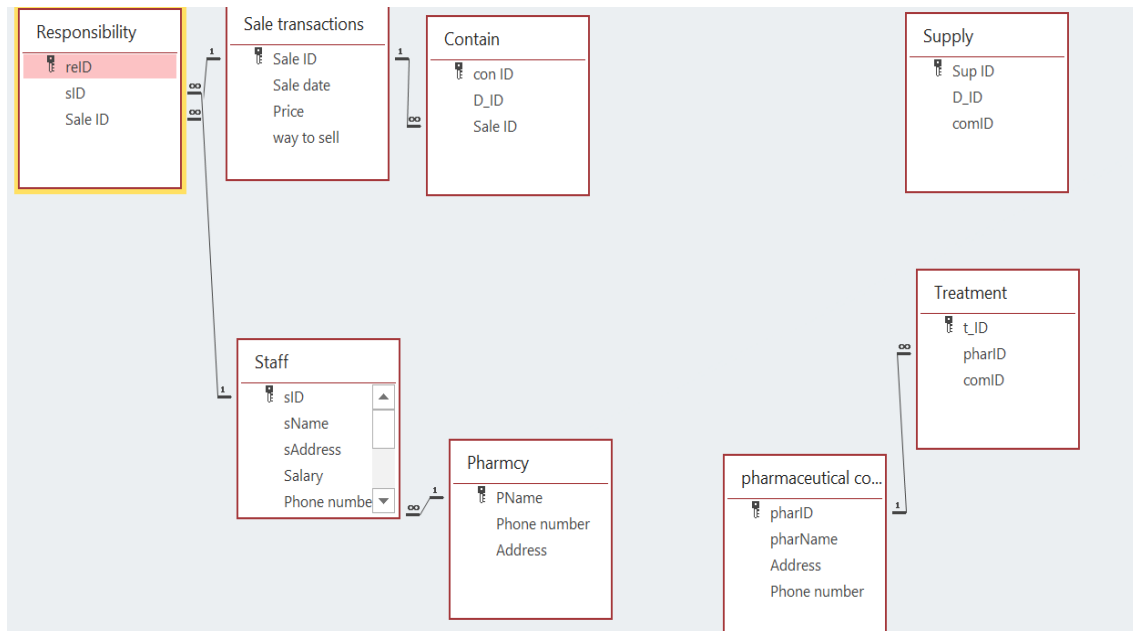
PHARMACY

LOG Out

Thanks For Visiting

2st INCREMENT

DB



UI

Navigation

- ☐ Log In Page
- ☒ Services
- ☐ Clients
- ☐ Log Out

Select The Service

Staff

Staff

Supplier

Product

Pharmaceutical Companies

Pharmacy

	Id	Name	Address	Phone_Number	Date-Of-Birth	Salary	Years-of-Expe
0	1	Ahmed	sedibishr	01856164868	15/10/1958	180	
1	2	Mohamed	sedigaber	01255516516	20/10/1951	150	
2	3	Ali	Seyouf	01223156648	25/10/1952	200	

Pharmacy

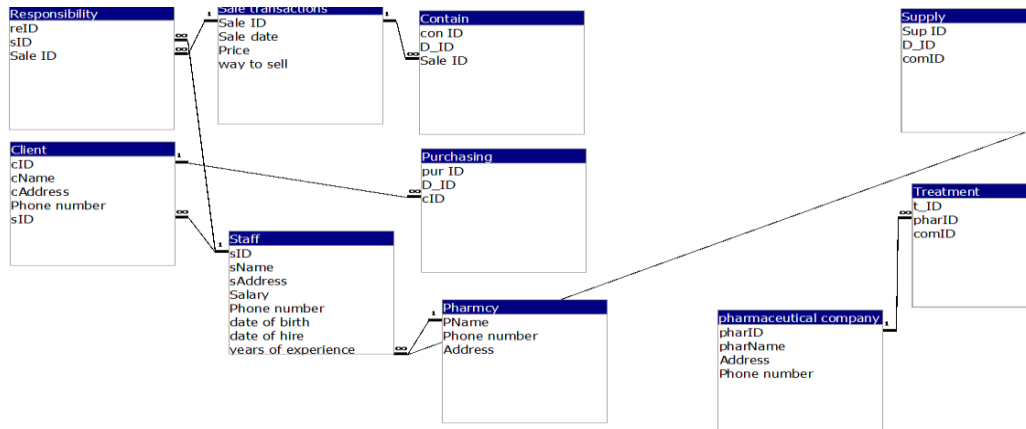
	Date-Of-Birth	Salary	Years-of-Experience	Date-of-Hiring	Specialization
0	15/10/1958	180		1/6/2018	Pharmaceutical
1	20/10/1951	150		2/6/2017	Accounting
2	25/10/1952	200		3/7/2016	Delivery

3st INCREMENT

DB

3st INCREMENT

DB




UI

Navigation

- ☒ Log In Page
- ☐ Services
- ☐ Clients
- ☐ Log Out

PHARMACY



Pharmacy Logo

Please Enter Your Name

Please Enter Your Id

LOG IN

0122 856 1444

Pharmacy Number


Navigation

- ☐ Log In Page
- ☒ Services
- ☐ Clients
- ☐ Log Out

Select The Service

Staff

The Services Of The Pharmacy



Pharmacy Logo

The Staff

	Id	Name	Address	Phone_Number	Date-Of-Birth	Salary	Years-of-Expe
0	1	Ahmed	sediBishr	01856164868	15/10/1950	100	
1	2	Mohamed	sediGaber	01255516516	20/10/1951	150	
2	3	Ali	Seyouf	01223156648	25/10/1952	200	