RV College of Engineering®, Bengaluru – 59
Department of Computer Science and Engineering Database Design Laboratory (18CS53)

Synopsis

TITLE: Online Medical Shop.

TEAM

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1. Introduction

This project is based on an Online medical shop, wherein we store all the details about the customers, the stock of the medicines, orders and payments and also the project will include a page wherein the user will indicate the symptoms and will get a probable disease and the prescribed medicine.

2. Existing System

The existing Medicinal systems have the provision for any user to book a request for a particular medicine through e-commerce. And further the traditional methods to visit the medicinal centres for mere enquiry is time consuming and monotonous and the non-availability is disappointing. The data relevant to the processing of the request may or may not be manually stored or be captivated in a file system which is prone to manual errors, inconsistency, redundancy and difficulty in retrieval.

3. Proposed System

This system maintains the storage details of all the customers, medicines that are stored in the shop. The system will keep track of the orders made and the payment details. NOSQL will be used to store future suggestions and customer reviews. The main part of the project will be a part where the customer will be able to select his/her symptoms and a medicine will be referred to them. Along with expected disease. We also would integrate Web Scraping of all the medicines related to a particular disease entered by the user to store it in our database.

4. Relational Database Structure

Description:

CUSTOMER: Details of registered customers like full name, username, password etc.

MEDICINE: All the medicines with their availability and dosage that user wants to buy with price.

ORDER: Values of the attributes corresponding to the request made viz., customer_ID, Medicine_ID, Number, order_ID, insurance number.

INSURANCE: This has the insurance credentials embodied in it.

PAYMENT: This encompasses details of payment based on the services availed.

5. RDBMS AND NoSQL Integration

NoSQL is a technology which is not used much, hence we plan to learn various features offered by it and make use of them as needed. We plan to use NoSQL for storing the review and feedback about the website from the customers and use it to store Feedback from users regarding the experience in the website. .

6. Societal Concern

We hope our project would be useful for the customers to buy medicines without contact in the time of this Corona crisis. We in future would like to implement this project on a larger scale where it could be used by millions of people for their safety.

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Requirement specification

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1. Hardware Specification

- Processor: Minimum 1 GHz; Recommended 2GHz or more.
- Ethernet connection (LAN) OR a wireless adapter (Wi-Fi)
- Hard Drive: Minimum 32 GB; Recommended 64 GB or more.
- Memory (RAM): Minimum 1 GB; Recommended 4 GB or above.

2. Software Specification

- Language support required: Python 3.5 or later, HTML5, JS, CSS3
- NOSQL database required: MongoDB
- Relational Database required: MySQL
- Windows 7 or 10 /Mac OS X 10.11 or higher, 64-bit /Linux: RHEL 6/7, 64-bit (almost all libraries also work in Ubuntu)
- Heroku and pip are preferred for deployment and installation of packages.
- A web browser support needed.

  If using the software through deployment, no language support in your machine is required.

3. Functional Requirements

We describe the functional requirements by giving various use cases.

Use case related to Creation of user and Customer account:

Use Case 1: Creation of User Account

Primary Actor: User

Pre-Condition: Internet connection available.

Main Scenario:

1: User opens portal and creates account by filling all the primary details mentioned (e.g.: Name, phone, email id, password)

Alternate Scenario:

(a)Network failure.
(b)Account Creation aborted.

Use Case 2: Creation of Customer Account

Primary Actor: Customer

Pre-Condition: Internet connection available.

Main-Scenario:

1. User opens portal and creates account by filling all the primary details mentioned (e.g.: Name, phone, email id, password)

Alternate Scenario:

(a)Network failure.
(b) Account Creation aborted.

Use case related to orders and medicine:

Use Case 3: stock management of medicine

Primary Actor: User

Pre-Condition: Internet connection available.

Main Scenario:

1. User open the portal and uploads the present/updated stock of any item.
2. Remove stock of any expired/damaged medicine.

Alternate Scenario:

(a). Network failure.

Use Case 4: Orders of medicine

Primary Actor: Customer

Pre-Condition: Internet connection available.

Main Scenario:

1. Customer open the portal and selects the medicine he/she wants.
2. Customer inserts the insurance details (if he/she) has
3. Customer orders the medicine
4. Customer gives feedback

Alternate Scenario:

(a). Network failure.
(b) Stock inventory is less/zero for a given medicine.
(c) Validation of feedback

Use case related Insurance:

Use Case 5: Customer has insurance

Primary Actor: Customer

Pre-Condition: Internet connection available.

Main Scenario:

1. Customer open the portal after he/she added medicines
2. Customer inserts the insurance details such as (insurance number, company, type, discount percentage)

Alternate Scenario:
(a). Network failure
(b) Validation of given feedback

Use case related Payment:

Use Case 6: Customer does the payment:

Primary Actor: Customer

Pre-Condition: Internet connection available.

Main Scenario:

1. Customer open the portal after he/she ordered medicines
2. Customer inserts the payment details on the given portal and does the payment.

Alternate Scenario:
(a). Network failure
(b) payment failure
(c) no favorable payment option
(d) order discarded
(e) stock mismatch

Use case related Feedback:

Use Case 7: Customer writes a feedback:

Primary Actor: Customer

Pre-Condition: Internet connection available.

Main Scenario:

1. Customer open the portal after he/she ordered medicines
2. Customer inserts order details and other details.
3. Customer uploads insurance ID and Prescription

Alternate Scenario:
(a). Network failure
(b) payment failure

(c) wrong information entered

4 Non Functional Requirements:

A. Performance Requirements

Some Performance requirements identified is listed below:

- The database shall be able to accommodate a thousand record to store.
- The software shall support use of multiple users at a time.
- Should run on basic machine. i.e. 500Mhz and 1Gb machine.
- There are no other specific performance requirements that will affect development

B: Safety Requirements:

Users with a valid ID-password can log on the system, therefore only valid users can access the functionality of the program. Some of the factors that are identified to protect the software from accidental or malicious access, use, modification, destruction, or disclosure are described below. Keep specific log or history data sets

1. Assign certain functions to different module
2. Later version of the software will incorporate encryption techniques in the user/license authentication process.

C: Availability

The system while deployed should be available 24 x 7.

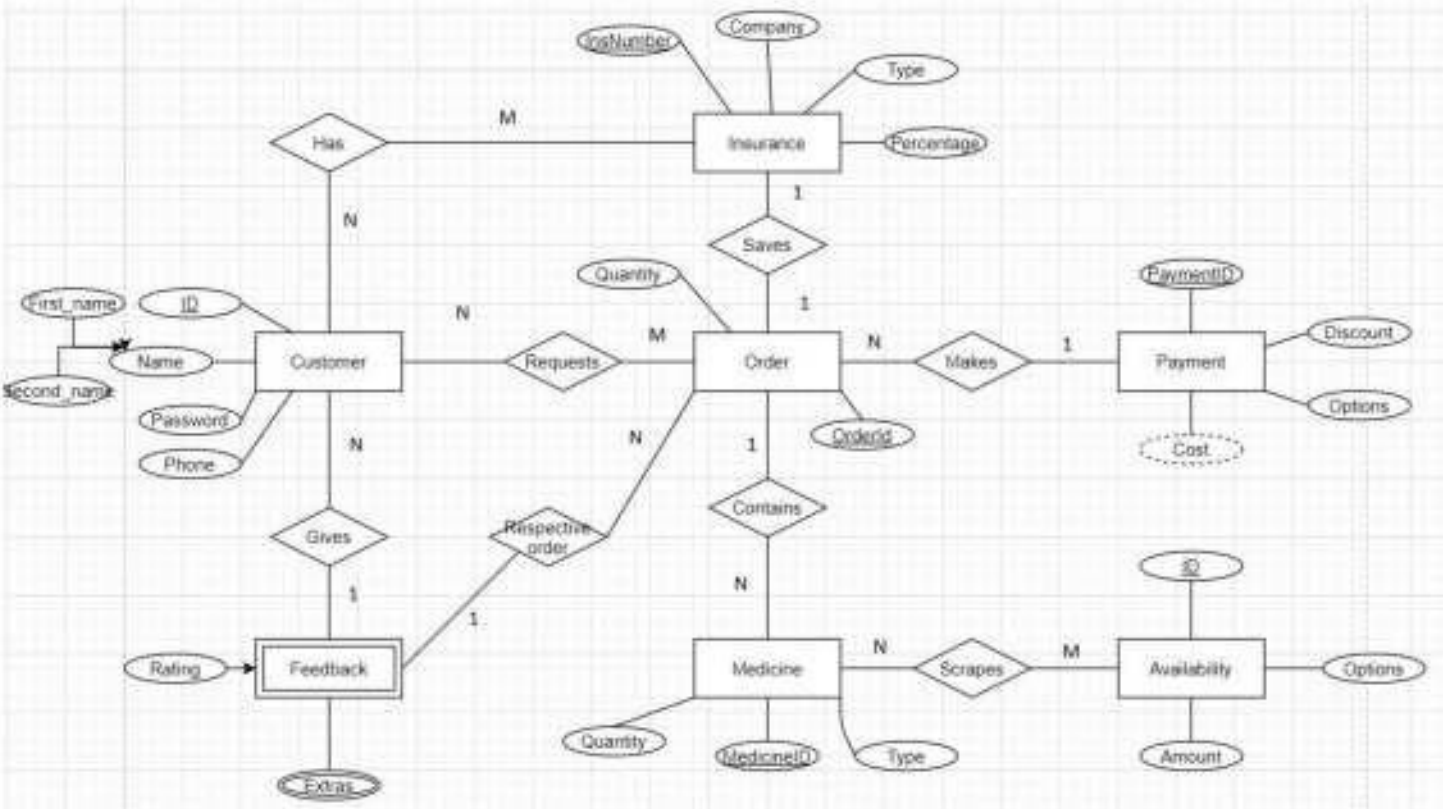
D: Ease of use:

The UI will be kept simple for a layman to understand and use.

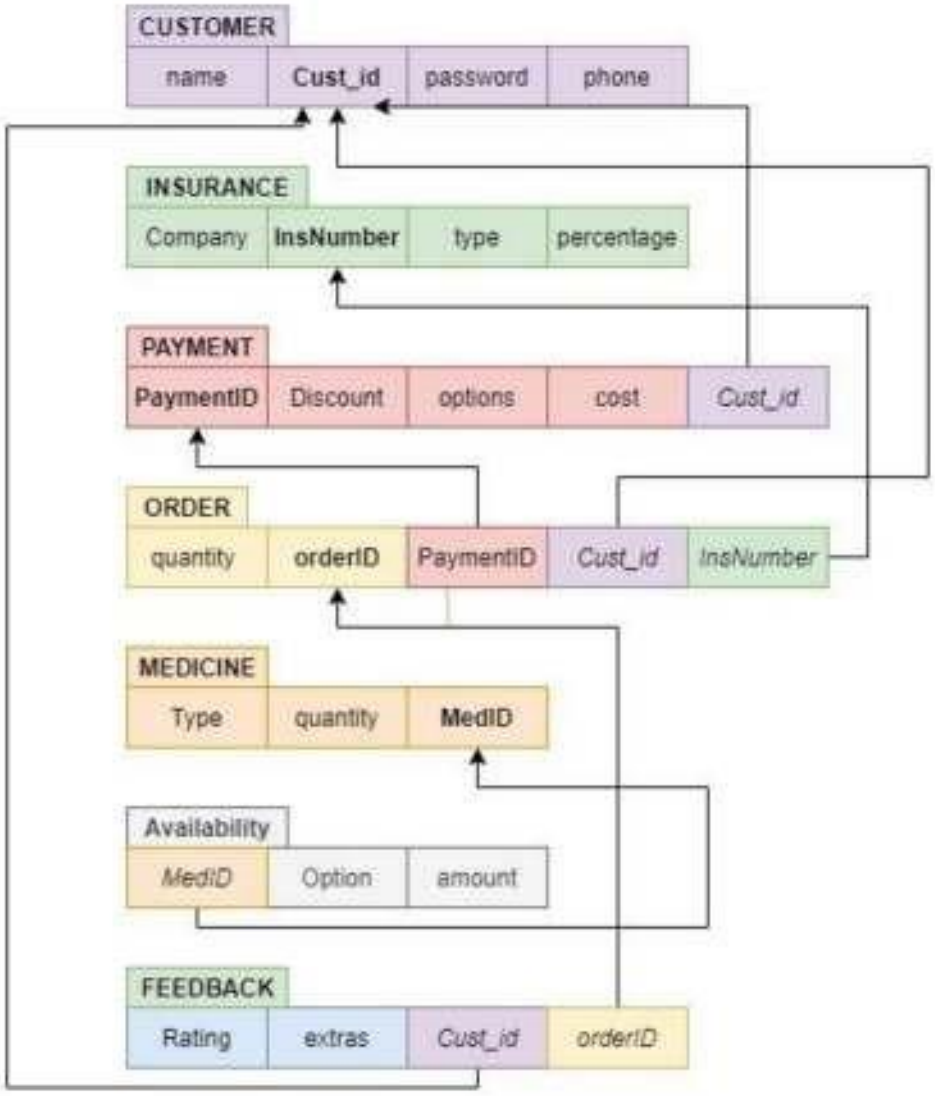
E: Design constraint:

The developed system is very well accessible through any browser

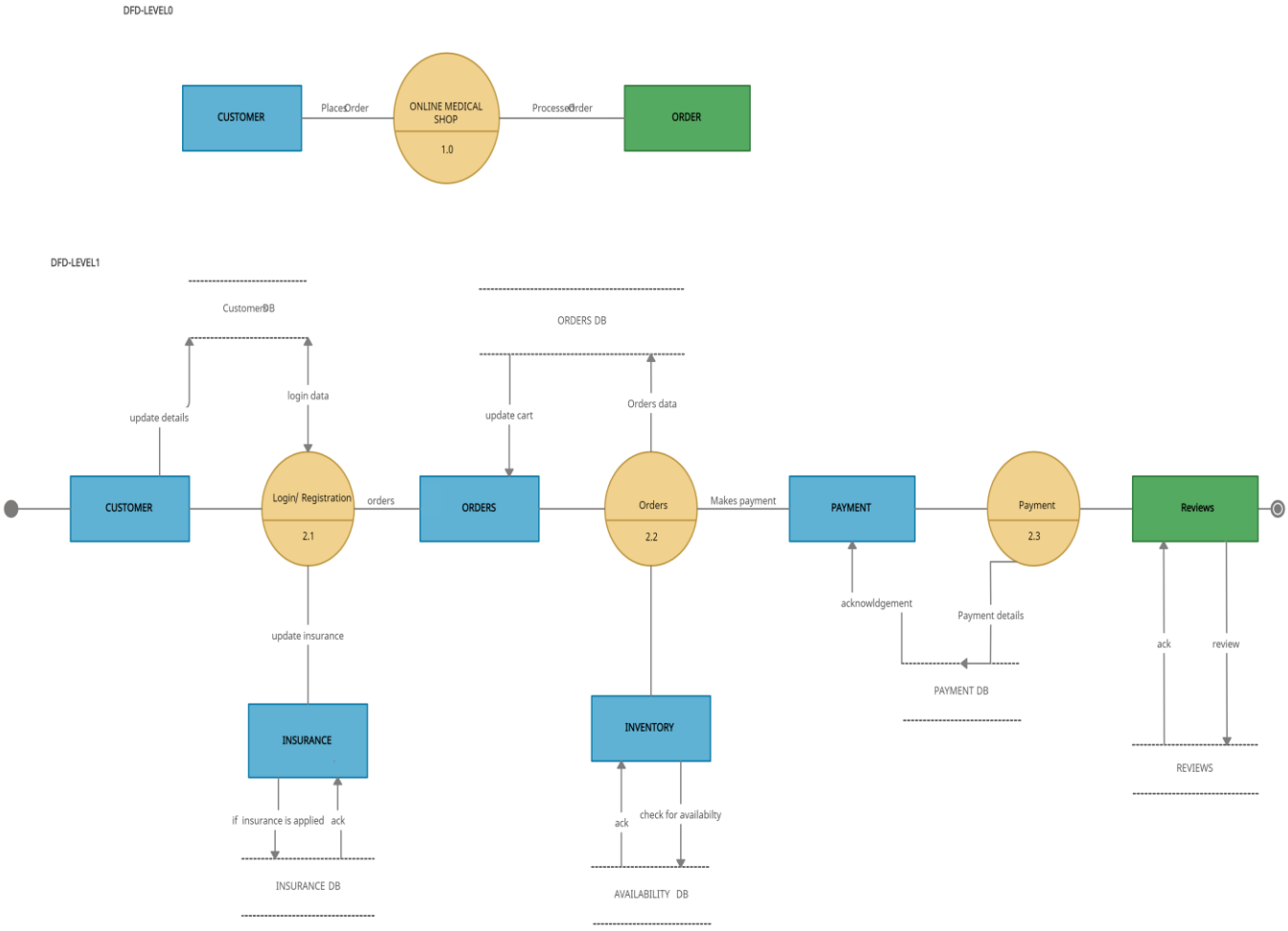
Entity Relationship Diagram



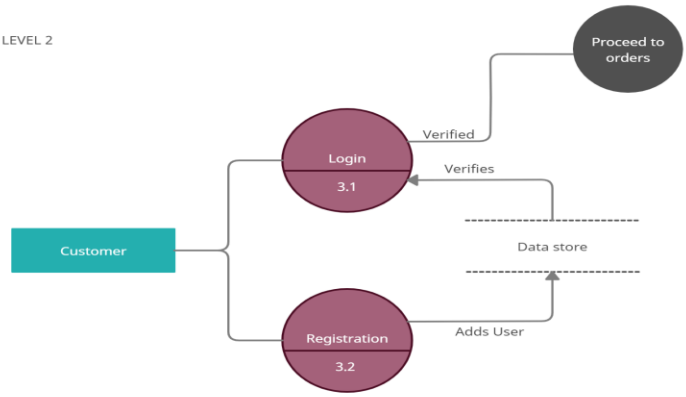
RELATIONAL SCHEMA

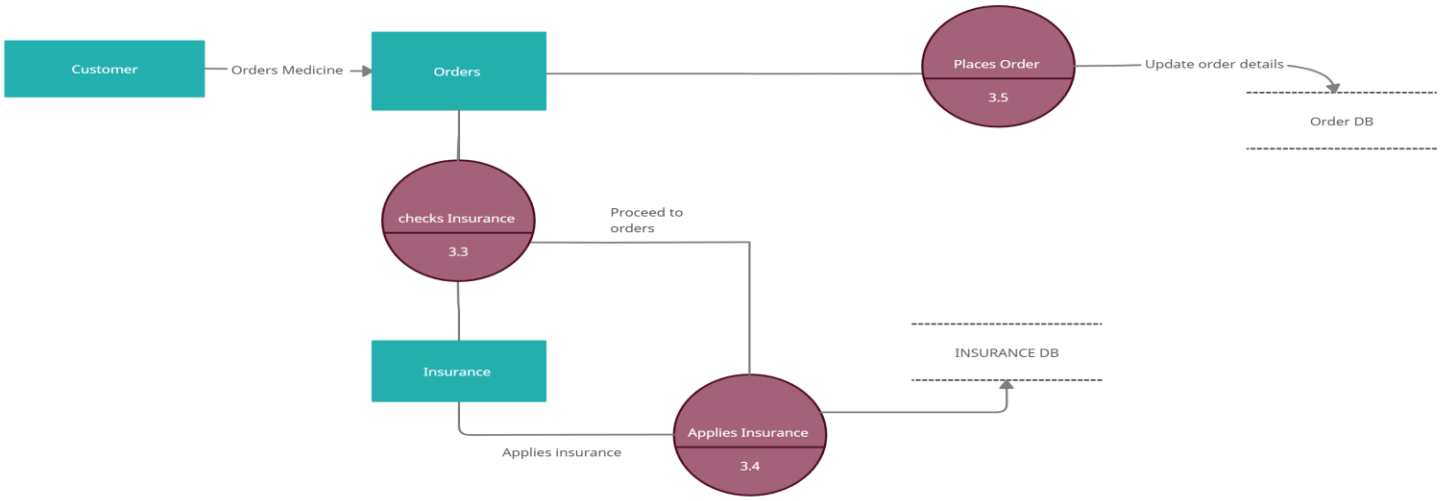


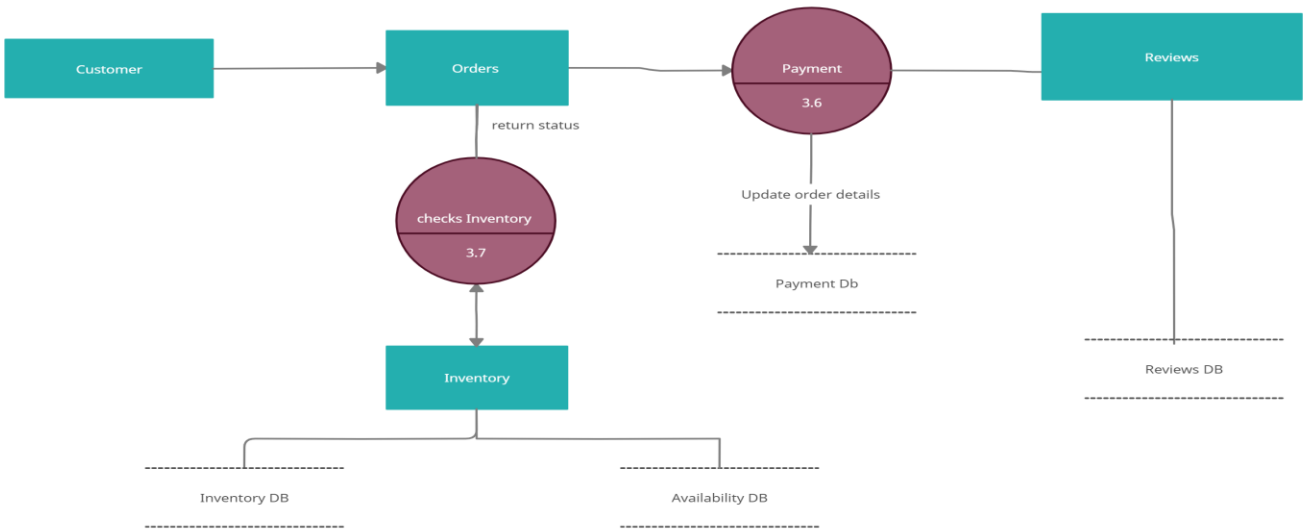
DFD – Customer



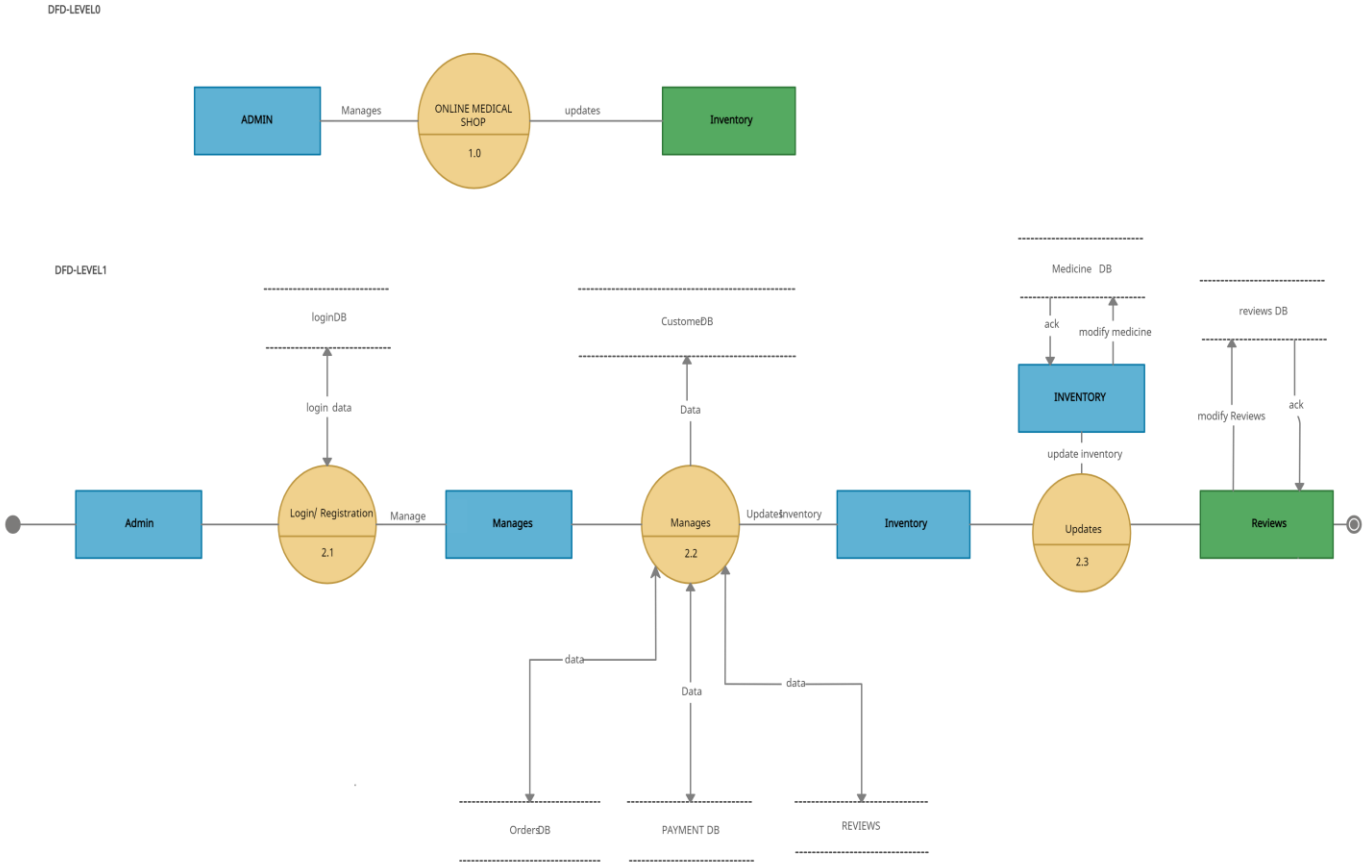
DFD LEVEL 2


Proceed to orders
Login
3.1
Verified
Verifies
Customer
Data store
Registration
3.2
Adds User


Customer
Orders Medicine
Orders
Places Order
3.5
Update order details
Order DB
checks Insurance
3.3
Proceed to orders
Insurance
INSURANCE DB
Applies Insurance
3.4
Applies insurance


Customer
Orders
Payment
3.6
Reviews
return status
checks Inventory
3.7
Update order details
Payment Db
Reviews DB
Inventory
Inventory DB
Availability DB

DFD- ADMIN


DFD-LEVEL0
ADMIN
Manages
ONLINE MEDICAL SHOP
1.0
updates
Inventory
DFD-LEVEL1
loginDB
login data
CustomeDB
Data
Medicine DB
ack
modify medicine
INVENTORY
update inventory
reviews DB
modify Reviews
ack
Admin
Login/ Registration
2.1
Manage
Manages
Manages
2.2
Updates Inventory
Inventory
Updates
2.3
Reviews
data
Data
data
OrdersDB
PAYMENT DB
REVIEWS

DFD LEVEL 2 - ADMIN