MedPlus Online Pharmacy Database

Database Design Project

Archana Marol

11/26/2019

Table of Content

SUMMARY:

- MedPlus is an Online Pharmacy Application database.
- It can be used by the customers by registering to it with a username and a password.
- The customer who registers to the website gets a unique Customer ID.
- The application keeps track of all the users and their orders.
- Information such as of first name, last name, phone number, age, email id and so on.
- It requires the bank information that includes the Bank account number, Bank name and the Amount deducted for each order.
- Customers can purchase one or more drugs with one or more quantity of each drug. Every drug has unique drug ID.
- It also keeps record of the shipper's information like shipper name and phone number.
- Customer's order date and delivery date are also recorded.
- Moreover, if any order fails or if any item is not delivered, the customers' amount will be refunded to their respective bank account. Hence, all refund information is recorded.
- In addition, some of the drugs are applicable for discounts.
- All the information can be seen in the 6 user views in the next page.

USER VIEWS

User view 1: Order detail

The first user view is the Order Detail of customer. Customer's information is recorded after online order. Drug name and the cost of each drug are also recoded. Cost is for 1 pack, each pack has 6 tables. One Order ID has only one customer but one customer can have multiple orders.

MedPlus online pharmacy			
Customer detail			
Customer first name:	Jon	**Phone no:**	123456789
Customer last name:	Snow	**Email:**	aaaa@gmail.com
Customer ID :	122330	**Order ID :**	1001
		Order Date :	28-Oct-19

Drug ID	Drug Name	Cost
101	Lyrica	11
102	Meloxicam	11
103	Tramadol	15
104	Xanax	12

User view 2: Bank Detail

The Bank Detail is the table with the bank information of the customers. This is used to track the payment details of customers. The payment date is also recorded so that if there is any issue in the transaction, the payment can be easily tracked by comparing the order date.

Bank Account number	Bank Name	Customer ID	Order ID	Order date
134526	Bank of America	122330	1001	28-10-2019
123635	Chase	122331	1002	29-10-2019
937594	Bank of Mysore	122332	1003	30-10-2019
938579	State Bank of India	122333	1004	31-10-2019
848484	Bank of America	122334	1005	01-11-2019

User view 3: Customer detail

All the information of the customer is recorded after registering to MedPlus website. Shipping information of each order is recorded. Name and ID of the shipper associate with the orders are recorded.

Customer ID	Customer age	Address	City	Zip Code	Order ID	Shippers ID	Shipper Name
122330	34	Avalon Gates	Fairfield	6611	1001	333	Rajesh
122331	23	1551 Park avenue	Bridgeport	6555	1002	334	Suresh
122332	45	133 Church street	New York	3333	1003	335	Ramesh

Userview4: Shipper Information

Shipper report is recorded online for each delivery on MedPlus website, showing the customers who have been received the order by the shipper. Each order has only one shipper but one shipper can have many orders and many customers.

Shipper ID	Shipper name	Shipper phone	Order ID	Delivery Date	Order Cost
333	Rajesh	1234345645	1001	01-11-2019	391
334	Suresh	1234345646	1002	02-11-2019	392
335	Ramesh	1234345647	1003	03-11-2019	393
336	Rakesh	1234345648	1004	04-11-2019	394
337	Satish	1234345649	1005	05-11-2019	395

Userview5: Refund table

Refund information is recorded with the customer name and bank details.

Refund ID	Refund details	Customer ID	Customer Fname	Bank account number	Bank name
12A	Item was not delivered	122330	Jon	134526	Bank of America
13R	Item missing	122331	Will	123635	Chase
15R	Order failed	122332	Kathy	937594	Bank of Mysore
18F	Item was not delivered	122333	Harry	938579	State Bank of India
34F	Shipper not reached the location	122334	Shawn	848484	Bank of America

Userview6: Discount drug table

Drugs that have discount are recorded. Order ID that contains these drugs is listed.

Drug ID	Drug Type	Drug name	Order ID	Discount on drug in dollars
1111	Capsule	Lyrica	122344	2
1122	Tablet	Meloxicam	122345	0.3
1133	Injection	Tramadol	122346	1
1444	Capsule	Xanax	122347	0.7
1255	Tablet	Oxycodone	122348	0.4

Normalization:

Userview1: Customer

2NF

(<u>Order ID</u>, Customer ID, CustomeFname, CustomerLname, Phone number, Email, Order Date, Drug ID, Drug name, Cost)

| **3NF**

Customer (<u>Customer ID</u>, CustomeFname, CustomerLname, Phone number, Email)
Order (<u>Order ID,</u> Order Date, <u>Customer ID</u>)
Drug (<u>Drug ID</u>, Drug name)
OrderedDrugs (Order ID, <u>Drug ID</u>, Cost)

Userview2: Bank

2NF

(<u>Order ID</u>, Bank Account Num, Bank Name, Customer ID, Payment date)

| **3NF**

Bank (<u>BankAccountNum</u>, Bank Name, <u>Customer ID</u>)
Order (<u>Order ID</u>, Payment date, <u>Bank Account Num</u>)

Userview3: Customer

2NF

(<u>Order ID</u>, Customer ID, Customer Age, Address, City, Zip code, Shipper ID, Shipper name)

| **3NF**

Customer (<u>Customer ID</u>, Customer Age, Address, City, Zip Code)
Order (<u>Order ID</u>, <u>Shipper ID</u>, <u>Customer ID</u>)
Shipper (<u>Shipper ID</u>, Shipper name)

Userview4: Shipper

2NF

(Order ID, Shipper ID, Shipper name, Phone number, Email, Delivery Date, Cost)

3NF

Shipper (Shipper ID, Shipper name, Phone number)
Order (Order ID, Delivery date, Cost, Shipper ID)

Userview5: Refund
2NF
(Refund ID, Refund detail, Order ID, Customer ID, Customer Fname, Bank Account Num, Bank Name)

3NF

Refund (Refund ID, Refund detail, BankAccountNum, Order ID)
Order (Order ID, Customer ID)
Customer (Customer ID, Customer Fname)
Bank (BankAccountNum, Bank Name, Customer ID)

Userview6: Discount Drug
2NF
(Order ID , Drug ID, Drug name, Drug type, Discount)

3NF

Drug (Drug ID, Drug name, Discount)
OrderDrugs (Order ID, Drug ID)

Final Tables

1) Order (<u>Order ID</u>, Order date, Payment date, Delivery date, <u>Customer ID</u>, <u>Shipper ID</u>, <u>BankAccountNum</u>)
2) Customer (<u>Customer ID</u>, Customer Fname, Customer Lname, Phone number, Email, Age, Address, City, Zip)
3) Drug (<u>Drug ID</u>, Drug name, Discount)
4) Bank((<u>BankAccountNum</u>, Bank Name, <u>Customer ID</u>)
5) Refund (<u>Refund ID</u>, Refund detail, <u>Order ID</u>)
6) OrderedDrugs(<u>Order ID, Drug ID</u>, Cost)
7) Shipper (<u>Shipper ID</u>, Shipper name, Shipper Ph no)

Entity-Relationship Diagram