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DataBase Design

1. **Enterprise** **Description**
2. **Functional** **Requirements**
3. **Conceptual** **Schema**
   1. E-R Diagram

# Insert an attribute free E-R Diagram

* 1. Tables
     1. **Product Table**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **SKU** | **Name** | **Department** | **IsPrescription** | **Price** | **Stock** |
| 037000141303 | Head & Shoulders Men Refresh Dandruff Shampoo 700 ml | Personal Care | 0 | 12.99 | 7 |
| 064541319809 | Tylenol Childrens Acetaminophen Suspension Usp Cherry 100 ml | Everyday Medicines and First Aid | 0 | 6.96 | 3 |
| 056100074816 | Vicks Nyquil Base Cough/Cold Cherry | Everyday Medicines and First Aid | 0 | 9.99 | 6 |
| 7501098605229 | SEROQUEL XR (QUETEAPINA)30TAB 300MG | Drugs | 1 | 126.65 | 2 |
| 628791051713 | Plan B Emergency Contraception 2 Tablets | Sexual Wellbeing | 1 | 44.49 | 4 |
| 067981100907 | Durex Maximum 12 Condoms | Sexual Wellbeing | 0 | 19.49 | 12 |
| 683702100072 | Iron Kids Gummies Omega-3s for Smart Kids 60 Gummies | Vitamins and Supplements | 0 | 9.99 | 0 |
| 20080403191042 | Lithium Carbonate - 250mg (100 Capsules) | Drugs | 1 | 12.30 | 7 |
| 050200560002 | Sunny D Citrus Drink | Groceries | 0 | 3.99 | 22 |

The **Product** table describes the products within the pharmacy which includes prescription and non-prescription items. The *Stock Keeping Unit* (*SKU*) uniquely identifies each item which is followed by the *Name* of the product and the *Department* where it is found. The value *IsPrescription* determines whether the item requires a prescription to purchase, where the value 1 means that that product requires a prescription and 0 means it does not. Finally each product will have its *Price* and *Stock* level.

* + 1. **Sales Table**

|  |  |  |
| --- | --- | --- |
| **ID** | **Timestamp** | **Name** |
| 1 | 2014-11-14-12.12.23.00 | Debra |
| 2 | 2014-11-14-13.05.23.00 | Craig |
| 3 | 2014-11-14-15.22.23.00 | Faheed |

The **Sales** table describes sales; specifically who performed a sales transaction and records the time it was performed and who did it. The first attribute *ID* uniquely identifies each sale performed, the second attribute records the time (*Timestamp*) that that sale was performed and the third attribute records which employee (*Name*) performed the sale.

* + 1. **Prescription Table**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **ID** | **Customer** | **Doctor** | **DateOrdered** | **DateDelivered** | **isFulfilled** |
| 1 | John | House | 2014-11-13-12.00.23.00 | 2014-11-14-15.22.23.00 | 1 |
| 2 | Mary | Chase | 2014-11-13-12.00.23.00 | Null | 0 |

The **Prescription** table describes prescriptions; specifically the *Customer* who was prescribed the product, the *Doctor* who prescribed it and the *DateOrdered* and *DateDelivered*. The value *Null* identifies that the prescription has not been ordered or has not been delivered. The *isFulfilled* attribute determines whether the prescription has been filled, where 1 means that the prescription has been filled, and 0 means it has not been filled.

* + 1. **SaleProduct Table**

|  |  |  |  |
| --- | --- | --- | --- |
| **ID** | **Sale** | **Product** | **Quantity** |
| 1 | 1 | 037000141303 | 2 |
| 2 | 1 | 067981100907 | 3 |
| 3 | 2 | 064541319809 | 1 |
| 4 | 2 | 056100074816 | 1 |
| 5 | 2 | 683702100072 | 1 |
| 6 | 2 | 050200560002 | 8 |
| 7 | 3 | 7501098605229 | 1 |
| 8 | 3 | 20080403191042 | 1 |

The **SaleProduct** table describes the relationship between the products and the sales; specifically who sold what product and the amount that was sold. This table has one primary key unique identifier *ID* and two foreign keys *Sale* and *Product* which correspond to other tables within the database. The first foreign key *Sale* references the *ID* in the **Sales** table. The second foreign key *Product* references the *SKU* in the **Product** table. And finally the *Quantity* is the amount of that product sold by that employee.

* + 1. **PrescriptionProduct Table**

|  |  |  |  |
| --- | --- | --- | --- |
| **ID** | **Prescription** | **Product** | **Quantity** |
| 1 | 1 | 7501098605229 | 1 |
| 2 | 1 | 20080403191042 | 2 |
| 3 | 2 | 628791051713 | 1 |

The **PrescriptionProduct** table outlines the relationship between the prescription and the associated prescription product being prescribed. It has a unique identifier *ID* and two foreign keys Prescription and Product. The first foreign key *Prescription* references the *ID* in the **Prescription** table. The second foreign key Product references the *SKU* in the **Product** table. The last attribute is the *Quantity* of the prescribed product.

1. **Data** **Dictionary**

User Manual

1. **User** **Manual**
   1. Installation

To run the Pharmacy Database you must have the following files and directories in the current directory which you are in:

#Screenshot

Required files in the current working directory:

* DB2Run *(Shell script)*
* DB2Pharmacy *(Shell script)*
* DB2files *(Directory)*

Within the directory *DB2Files* Directory there must be the following shell scripts within it:

#Screenshot

The Scripts that must be present in the DB2Files directory:

* DB2Admin
* DB2Employee
* DB2Create
* DB2Customer
* DB2Drop
* DB2MainMenu
* DB2Pharmacist
* DB2Populate

Once you have confirmed that all of the files are within the current working directory you are ready to run the Pharmacy database.

#Screenshot

Open a terminal and cd into the directory containing the files DB2Run *(Shell script),* DB2Pharmacy *(Shell script),* DB2files *(Directory)*. Run the following command:

chmod 755 DB2Run

#Screenshot

Now that the appropriate files have been given the proper rights it is now time to run the database. Now within the terminal run the command:

./DB2Run

#screenshot

This will initiate the script *DB2Run* and will require you to enter your my.ryerson.ca password twice to start the database. The first allows the transfer of all needed files to the turing server and the second enters the turing server.

#insert screenshot

Once you have entered your password correctly you should see this within your terminal. If the above image is what you currently see then you have correctly installed the database. You are now ready to start using the pharmacy database! Please refer to the ***How to Use*** section on instructions on how to use the database.

#note chmod inDB2RUN of DB2Pharmacy

* 1. How to Use

System

1. **Source** **Code**
   1. Create Tables
   2. Populate Tables
   3. Drop Tables
   4. Main Menu
   5. Submenus
      1. Administrator
      2. Pharmacist
      3. Employee
      4. Customer
      5. Transaction
   6. Miscellaneous Scripts

**NOTE**: The scripts within this section are used to start up the database and to perform all the actions necessary to initialize and run the database. These scripts do not contain any relevant SQL and is only meant to transfer and run the necessary files required by the pharmacy database.