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Database project for CS 4318

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Project Name: Recommendation of medication

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**Abstract**

When sick, a trip to the drug store is an unpleasant endeavor. Even knowing your illness, choosing the best medication to alleviate your symptoms can be difficult due to the large number of options available. This project would make this choice, and therefore the trip, much simpler. By imputing a list of symptoms, the database will cross reference and recommend the best medication for your symptoms. Medication is ranked based on its effectiveness for a symptom based on an ever growing list of surveys. These symptoms would include: headaches, toothaches, stomachaches, allergies, etc.

**Introduction**

This project is meant to help regular people choose the best medication for certain minor illnesses. The concept is done in a database where user have to input the kind of illness that they are having. From there, based on research and feedback from customers and medical documentation, we give you the best over the counter pills to take to stop the pain. The application will use several tables and several databases which will have several tables which are index. Each database will be tied to other with the index id to quicken the queries. Once queries are tied with other tables or database that contains medicine descriptions and ranking based on reviews that we gather and scientific documentations, queries will return top medicines for that specific illness along with their description and rank. All of these results will be presented in a nice user interface and pleasing to the eyes. Users will be able to see drop down menus for medicine descriptions and ranking. Users will also have the choices to write reviews and might affect the ranking of that medicine.

**Database Description**

This database will be on medical uses for most people to select the best drug that will work for some sickness. Our intent is to provide the best rated medicine for small sickness that you do not need to go to a doctor to take or have as first aid. Within our ER diagram, we have included preliminary Primary keys and all references this project will have. This might change as we progress further into development and architecting a more consistence system that can make suggestion, rating and reviews more acceptable and efficient towards the system. Different users will have different views based on what they can do. For example, an administrator will be able to create, add, or delete rows based on the circumstances such as adding new medicine, archiving old medicine that is not useful to people or one that has horrible rating, or updating reviews and rating based on clients reviews and their own. As for non-administrators, they can view medicines, they can rate medicine as well as write feedbacks. However, they are not able to create or change their own views.

**Database Functionalities**

The following database will have tables and functions such as:

1. Table for clients which will be based on Index ID, username, password, name, last name, age, sex.
2. Another table that will hold medicine which will be linked to the clients’ table by IDs as primary keys, and the rest will have foreign keys. As for medicines, they will have several rows that holds the names of medicines
3. A third table that will hold all of the sicknesses that someone might have without the need to see a physician or doctor. These will have a description field where they will be linked to other tables such as medicine and which client have claimed to experience this sickness before.
4. A rating and review table which will be linked to client, medicine, and sickness by indexed ids as well. The remaining fields will have foreign keys for faster access to information.
5. Administrator will be able to update all the fields, create new fields, update rows, and change rating based on requirement and accommodation of clients reviews.
6. Administrator will be able to delete rows based on relevant information that have been given or recorded on the database
7. Users will have to log in by using username and password.
8. Users will be able to write reviews, rate medicine, and also give suggestion.

**Relationships between Tables**

* Client and medicine table will be both linked based on IDs which will be the primary key. The rest will be foreign keys
* Medicine table will be linked with sickness table, each medicine will become a member of a sickness which will hold description of that sickness and the medicine most mentioned to take care of it.
* Rate and reviews will be linked to sickness and medicine tables, it is based on how many reviews they will get from clients as well which will be linked to clients based on clients reviews, they will have 1 to 10 stars filled from 10 being the best and 1 being the worst.
* Updating will go to targeted field based on customer ID, then sickness table and detect which medicine will be given a review and rated based on the review. The average of rating from 1 to 10 will be display towards top bar of the page.
  + Two different type of client: regular user and administrator
  + Administrator can make changes towards core database
  + User can only update information and rating systems, they can also do reviews.

E/R Diagram