

Pharmacy Database

Group 115

Adam Gallina and Iain Moncrief

Feedback by Peer Reviewers

You-Jin Lim

Does the overview describe what problem is to be solved by a website with DB back end?

Yes! I can fully understand about their database overview. They will record and update their prescription on their website.

Does the overview list specific facts?

Yes! They describes number of customers, medication and staff.

Are at least four entities described and does each one represent a single idea to be stored as a list?

Yes, I can see Customers, Prescription_Status, Prescriptions, Pharmacists and Medications. There is more than four entities.

Does the outline of entity details describe the purpose of each, list attribute datatypes and constraints and describe relationships between entities?

Yes. All of entity has their ID and listed necessary information for each entity. They also has a description of entity. That helps me to understand each of them.

Are 1:M relationships correctly formulated? Is there at least one M:M relationship? Does the ERD present a logical view of the database?

I think it looks correctly formulated and There is two M:M relationship in entities. It presents a logical view of database.

Is there consistency in a) naming between overview and entity/attributes b) entities plural, attributes singular c) use of capitalization for naming?

Yes it is consistency naming between overview entity/attributes. I think overall of this draft is really good for me!

Gyllian Dela Rosa

Does the overview describe what problem is to be solved by a website with DB back end?

I think the need for a DB could have been fleshed out better. I realize group 115 stated that this is a busy pharmacy but I feel like they should have also stressed the importance of keeping track of medication and their customers.

Does the overview list specific facts?

Yes, the overview lists specific facts about the amount of customers the pharmacy caters to, the amount of different medications, and the size of the staff.

Are at least four entities described and does each one represent a single idea to be stored as a list?

Yes, there are at least 4 entities and each one represents a single idea.

Does the outline of entity details describe the purpose of each, list attribute datatypes and constraints and describe relationships between entities?

Yes, the purpose of each entity is described well.

Pharmacists contains attributes relating to each pharmacist like id, first and last name, as well as address and phone number. However I'm not sure why job title is included, since I'm assuming all the pharmacists in this database have the same pharmacist title.

Prescription_Status is used as intersection table for the M:M relationship between Pharmacists and Prescriptions.

I think Prescriptions, Customers, and Medication entities also look good.

I do want to note, some attributes are their constraints, like "not NULL" or the varchar() values.

Are 1:M relationships correctly formulated? Is there at least one M:M relationship? Does the ERD present a logical view of the database?

Yes, the 1:M relationships are correctly formulated.

There is at least 1 M:M relationship between Pharmacists and Prescriptions.

Is there consistency in a) naming between overview and entity/attributes b) entities plural, attributes singular c) use of capitalization for naming?

Naming between overview and entity is consistent, same with entities being plural and attributes being singular.

I did notice a typo in the Customers outline that the attribute 'customerI_id' has an 'I' typo.

Christine Kuran

Hi Group 115,

Here is my review per the assignment questions:

· Does the overview describe what problem is to be solved by a website with DB back end?

Yes, it is outlined that the problem is a need to track prescriptions and medication inventory.

· Does the overview list specific facts?

Yes, we get an idea of how many customers, medications, and staff are part of this pharmacy.

· Are at least four entities described and does each one represent a single idea to be stored as a list?

Yes, the entities are Pharmacists, Customers, Prescriptions, Prescription_Status, and Medications. I am curious as to why Pharmacists have a phone number and address associated with them – I was under the impression that they are all part of the same pharmacy, and if so, how are those attributes relevant to the problem?

· Does the outline of entity details describe the purpose of each, list attribute datatypes and constraints and describe relationships between entities?

Attributes have consistent naming, and details are clearly filled out. I think some clarification is needed for the M:M between Pharmacists and Prescriptions. A pharmacist can fill out many

prescriptions, but how does a prescription get filled by multiple pharmacists? Or is a prescription filled by one pharmacist, but then can be managed by others? Based on current info, this seems like 1:M relationship, with the Prescription_Status as a category table for Prescriptions.

· Are 1:M relationships correctly formulated? Is there at least one M:M relationship? Does the ERD present a logical view of the database?

See my comment for the previous question. For the ERD, I like that the entities are color-coded and neatly laid out.

· Is there consistency in a) naming between overview and entity/attributes b) entities plural, attributes singular c) use of capitalization for naming?

Yes, everything is consistent and standardized.

Steven Nelson

The overview describes the problem well in a concise manner and gets the problem across to the reader. It also lists numbers involved with the size of the pharmacy and the workflow. One thing is maybe specific if the 2,000 customers are the script volume or just customers that frequent the pharmacy on a weekly / monthly basis. The draft has five entities that all relate to the pharmacy's business so it hits that checkmark on the project requirements. Also each entity has a short description letting the reader know what will be accomplished by each of them. There is also the M:M requirement being handled by the Prescription Status between Pharmacists and Prescriptions so that requirement is being met for the project too. Also the consistency across the naming of the entities and the attributes looks good to me, everything is either plural or singular based on if it's an entity or attribute. Below are just a few minor things I noticed that I might change / adjust.

I noticed in the attribute under dosage 'dosage: int, not NULL', there are certain medications that have a decimal like an example would be Lisinopril has a 2.5 mg strength or how thyroid medications are in micrograms so you could put a decimal milligram. So maybe change int to decimal to include medications that have a decimal in the strength. I also noticed, I wasn't sure if under 'customerI_id int, auto_increment, unique, not NULL, PK' you wanted it to say

'customer_id' or with the extra I in 'customerI_id' as a small typo. It looks really good though, its very clean and well organized.

Actions Based on Feedback

Fixed typo in Customers table (customerI_id -> customer_id)

Clarified use of Prescription_Status table

The dosage field for prescriptions changed to decimal(4,2)

We decided to keep the address/phone number fields in the pharmacist table, those were intended to be used as personal contact information for individual pharmacists, rather than describing the area they work in. We'll instead ensure that the meaning of those fields is clear in the web application.

Upgrades to Draft Version

No updates required

Overview

This application will be a pharmacist facing database that allows the pharmacist to track prescriptions and medication inventory. The website will record *Pharmacists* filling *Prescriptions* for *Customers*. They will update prescription status information, as the state of the prescription changes, from the time of drop off, to pick up. This is a busy pharmacy, so they have over 2000 frequent customers, a selection of about 500 different medications, and a staff size of about 20. This database is specific for tracking prescriptions, so it neglects information about changes in staff and their personal information.

Database Outline

Pharmacists: A list of employees

- pharmacist_id: int, auto_increment, unique, not NULL, PK
- job_title: varchar
- first_name: varchar, not NULL
- last_name: varchar, not NULL
- address: varchar
- phone_number: varchar, not NULL

- Relationships: A M:M relationship with prescriptions is handled by the PrescriptionStatus table containing a pharmacistID FK

Prescriptions: A list of current prescriptions and their refill frequency

- prescription_id: int, auto_increment, unique, not NULL, PK
- customer_id: int, not NULL, FK
- medication_id: int, not NULL, FK
- dosage: decimal(4,2), not NULL
- refill_count: int
 - How many refills for the prescription
- refill_frequency: int
 - Days between refills
 - Relationships:
 - A M:1 relationship with prescriptions is implemented by the Prescription entry containing a medication FK
 - A M:1 relationship with customers is implemented by the Prescription entry containing a customer FK
 - A M:M relationship with Pharmacists is implemented by the PrescriptionStatus table containing a prescription FK

Prescription_Status: A log of status updates of customers prescriptions

- prescription_id: int, not NULL, FK
- pharmacist_id: int, not NULL, FK
- status: varchar, not NULL
 - Description of the status of the prescription, e.g. “filled”, “picked up”
- update_date: date, not NULL
 - Relationships: Handles a M:M relationship by storing FKs from the Prescription and Pharmacist tables

Customers: Records information about customers

- customer_id int, auto_increment, unique, not NULL, PK
- first_name: varchar, not NULL
- last_name: varchar, not NULL
- address: varchar
- phone_number: varchar, not NULL
 - Relationships: A 1:M relationship is handled by the Prescription table storing a customerID as a FK

Medications: Records information about medications and current inventory

- medication_id: int, auto_increment, unique, not NULL, PK

- name: varchar, not NULL
- description: varchar
- quantity: varchar, not NULL
 - Amount and unit of measurement
- stock: int, not NULL
- drug_class: varchar
 - How controlled the substance is
 - Relationships: a 1:M relationship is handled by the Prescription table storing a medicationID as a FK

Entity-Relationship Diagram:

