

Chapter 2 Review Answers

Due: Sunday October 4, 2020 @ 11.59pm

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1. What is the difference between a database schema and a database state?

Ans- Database schema is the description of the database that includes the descriptions of the database structure, database types and the constraints on the database. Whereas, database state refers to the content of a database at a moment in time.

2. Choose a database application with which you are familiar. Design a schema and show a sample database for that application, using the notation of Figures 1.2 and 2.1. What types of additional information and constraints would you like to represent in the schema? Think of several users of your database and design a view for each.

Ans:

Hospital management system

- Schema:**

HOSPITAL

Name	Location
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PATIENT

Patient_Id	Name	Insurance	Date Admitted	Gender	Phone_Number
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DOCTOR

Doctor_Id	Name	Specialization
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TEST

Test_Id	Name	Patient_Id	Doctor_Id	Date_performed
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ACCOUNTANT

Accountant_Id	Name	Patient_Id	Date_of_Payment	Amount
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MEDICINE

Name	Price	Company
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- **Database:**

HOSPITAL

Name	Location
Arlington Central Hospital	Arlington, TX, 76010, USA
Mavericks Hospital	Los Angeles, CA, 76034, USA
Magar Private Hospital	Buffalo, NY, 77643, USA

PATIENT

Patient_Id	Name	Insurance	Date Admitted	Gender	Phone_Number
12345	Suman Thapa	Molina	10-04-2019	Male	9841078409
12346	Sreeja Khayal	Blue Cross	10-06-2018	Male	9841799963
12347	Pratik Mahiro	Ambetter	03-23-2019	Female	9860893434
12348	Mahesh Magar	Molina	01-23-2020	Male	8945958459
12349	Gunjan Gurung	Ambetter	03-06-2020	Female	6823454544

DOCTOR

Doctor_Id	Name	Specialization
12356	Sunil Thapa	Cardiologist
12457	Simon Magar	Surgeon
13458	Rudra Shrestha	Dermatologist
23459	Albina Chhetri	Dentist

TEST

Test_Id	Name	Patient_Id	Doctor_Id	Date_formed
33445	Autopsy	12345	123345	11-10-2019
12346	Biopsy	12346	123435	09-04-2018
12356	Endoscopy	12347	123567	01-02-2010
99545	Colposcopy	12349	123954	13-05-2020

ACCOUNTANT

Accountant_Id	Name	Patient_Id	Date_of_Payment	Amount
11234	Shreeya Chopra	12348	01-20-2020	\$537.00
12343	Susman Gutrf	12347	03-03-2020	\$234.00
14333	Rajesh Hamal	12345	05-17-2020	\$123.00
15243	Korora Thapa	12346	02-12-2020	\$987.00

MEDICINE

Name	Price	Company
Lisinopril	\$23.00	Curology
Losartan	\$98.97	Chaudhary
Amlodipine	\$21.09	Nikola

Hospital Management System

- HOSPITAL (Name, Location)
 - PATIENT (Patient_Id, Name, Insurance, Date Admitted, Gender, Phone_Number)
 - DOCTOR (Doctor_Id, Name, Specialization)
 - TEST (Test_Id, Name, Patient_Id, Doctor_Id, Date_performed)
 - ACCOUNTANT (Accountant_Id, Name, Patient_Id, Date of Payment, Amount)
 - MEDICINE (Name, Price, Company)
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- ***Constraints:***
 - The Name filed in all the tables should be a string
 - The ID of all the personnel should be restricted to five digit integer
 - Dates must be in the format mm-dd-yyyy.