Kennesaw State University

Department of Computer Science

Database Systems

Section CS:6070

Project: Hospital Management System

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Executive Overview

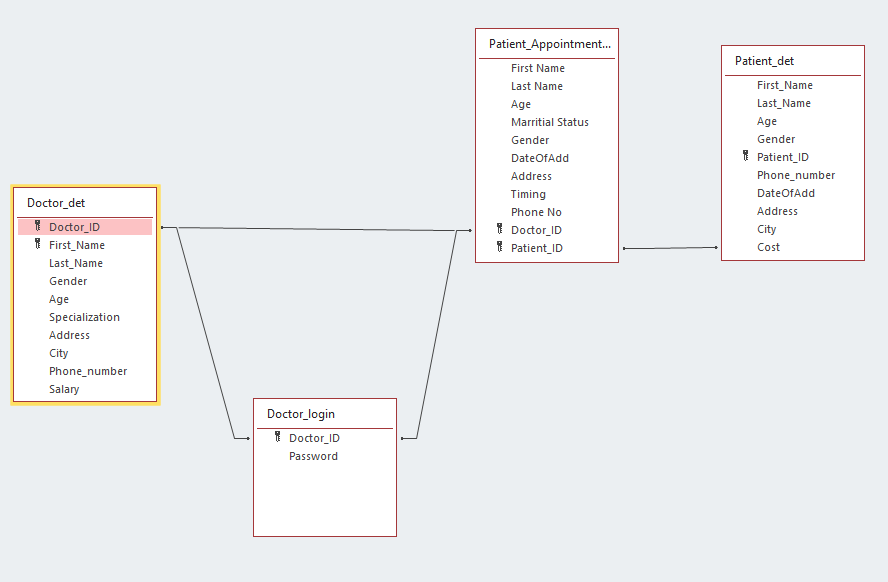
Primary Objective: To create a database for hospital management to store personal details about the patients, their contact information, appointment dates, doctor details, specializations and patients date of admission.

Client: Hospitals

Overview: The hospital management wants to have a database for storing information about patients and doctors. This database helps them to organize their schedule, when to give appointments to the patients. The database needs to have patient’s information like patient id, age, name, contact info, doctor’s information like doctor’s id, specialization, name. Lastly there also needs to be a record of the patient's date of admission.

This database is used to create appointments and to solve the inconsistencies in scheduling the appointments. I have created the databases for doctor details, patient details, appointment details. To retrieve the information from the tables different queries are created in which information like appointment date, admission date, specialization of doctors are the end results.

Entity-Relationship Diagram



Relational Schema

Doctor\_det(Doctor\_id, First\_Name, Last\_Name, Gender, Age, Specialization, Address, City, Phone\_number, Salary)

* Primary Key: Doctor\_ID

Doctor\_login(Doctor\_id, Password)

* Foreign Key: Doctor\_ID

Patient\_Appointment(First\_Name, Last\_Name, Gender, Age, Address, Phone\_number, DateOfAdd, Patient\_ID, Marital Status, Timing)

* Foreign Key: Patient\_ID
* Foreign Key: Doctor\_ID

Patient\_det(First\_Name, Last\_Name, Gender, Age, Address, Phone\_number, DateOfAdd, Patient\_ID, Cost, City)

* Primary Key: Patient\_ID

Data Dictionary

| Attributes | Table | Null | Unique | Foreign  key | Primary  key | Ref  Table | Domain |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Doctor\_ID | Doctor\_det | N | Y | N | Y | NA | Length 10 long int |
| Doctor\_ID | Doctor\_login | N | N | Y | N | Doctor\_det | Length 10 long int |
| Doctor\_ID | Patient\_Appoint  ment\_table | N | N | Y | N | Doctor\_det | Length 10 long int |
| Patient\_ID | Patient\_det | N | Y | N | Y | NA | Length 10 long int |
| Patient\_ID | Patient\_Appoint  ment\_table | N | N | Y | N | Patient\_det | Length 10 long int |
| First\_Name | Doctor\_det | N | N | N | N | NA | Character string length 20 |
| First\_Name | Patient\_det | N | N | N | N | NA | Character string length 20 |
| First\_Name | Patient\_Appoint  ment\_table | N | N | N | N | NA | Character string length 20 |
| Last\_Name | Doctor\_det | N | N | N | N | NA | Character string length 20 |
| Last\_Name | Patient\_det | N | N | N | N | NA | Character string length 20 |
| Last\_Name | Patient\_Appoint  ment\_table | N | N | N | N | NA | Character string length 20 |
| Age | Doctor\_det | Y | N | N | N | NA | Length 10 long int |
| Age | Patient\_det | Y | N | N | N | NA | Length 10 long int |
| Age | Patient\_Appoint  ment\_table | Y | N | N | N | NA | Length 10 long int |
| Gender | Doctor\_det | Y | N | N | N | NA | Character string length 20 |
| Gender | Patient\_det | Y | N | N | N | NA | Character string length 20 |
| Gender | Patient\_Appoint  ment\_table | Y | N | N | N | NA | Character string length 10 |
| Specialisation | Doctor\_det | N | N | N | N | NA | Character string length 10 |
| Address | Doctor\_det | N | N | N | N | NA | Character string length 20 |
| Address | Patient\_det | N | N | N | N | NA | Character string length 20 |
| Address | Patient\_Appoint  ment\_table | N | N | N | N | NA | Character string length 20 |
| City | Doctor\_det | N | N | N | N | NA | Character string length 10 |
| City | Patient\_det | N | N | N | N | NA | Character string length 10 |
| Phone\_Number | Doctor\_det | Y | N | N | N | NA | Length 10 long int |
| Phone\_Number | Patient\_det | Y | N | N | N | NA | Length 10 long int |
| Phone No | Patient\_Appoint  ment\_table | Y | N | N | N | NA | Length 10 long int |
| Salary | Doctor\_det | N | N | N | N | NA | Length 10 long int |
| Password | Doctor\_login | N | N | N | N | NA | Character string length 20 |
| Marital\_Status | Patient\_Appoint  ment\_table | N | N | N | N | NA | Character string length 10 |
| Timing | Patient\_Appoint  ment\_table | N | Y | N | N | NA | Length 10 long int |
| Cost | Patient\_det | Y | N | N | N | NA | Length 10 long int |
| DateOfAdd | Patient\_det | N | N | N | N | NA | Date |

CRUD Matrix

|  | Create | Read | Update | Delete |
| --- | --- | --- | --- | --- |
| Doctor\_det | C | R | U | D |
| Doctor\_login | C | R | U | D |
| Patient\_det | C | R | U | D |
| Patient\_Appoint  ment\_table | C | R | U | D |

Keys

C Create or insert a record

R Read/ Query or select a record

U Update or modify a record

D Delete a record

Table Descriptions

Doctor\_det

Gives details like Doctor\_id, First\_Name, Last\_Name, Gender, Age, Specialization, Address, City, Phone\_number, Salary

Doctor\_login

Gives details about Doctor\_id, Password

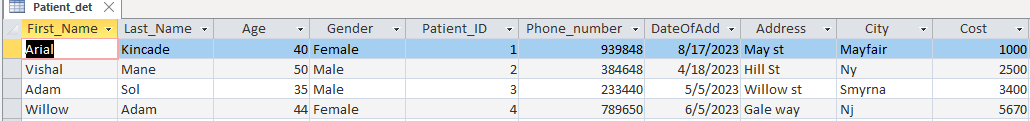
Patient\_Appointment

Gives personal information about First\_Name, Last\_Name, Gender, Age, Address, Phone\_number, DateOfAdd, Patient\_ID, Marital Status, Timing

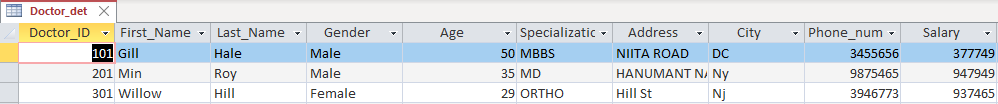
Patient\_det

Gives patient information likeFirst\_Name, Last\_Name, Gender, Age, Address, Phone\_number, DateOfAdd, Patient\_ID, Cost, City

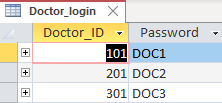
Database Tables



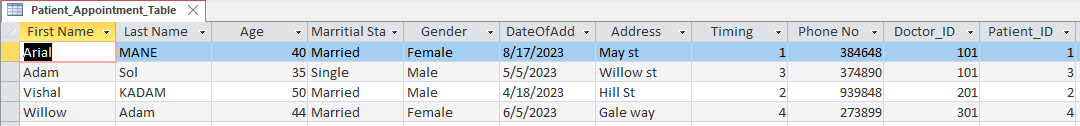
Patient details datasheet



Doctor details datasheet

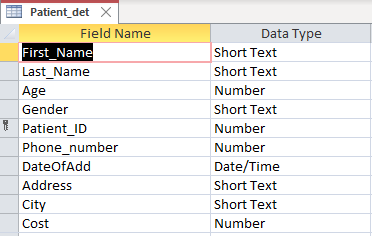


Doctor login Datasheet

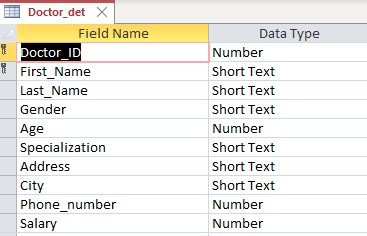


Patient Appointment Datasheet

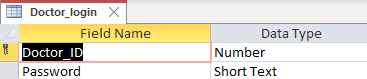
Design Tables



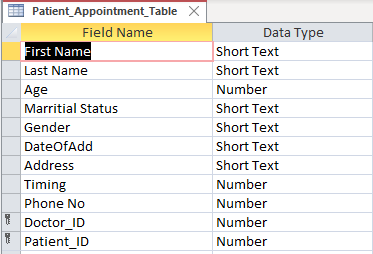
Patient\_det design



Doctor\_det design



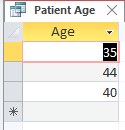
Doctor\_login design

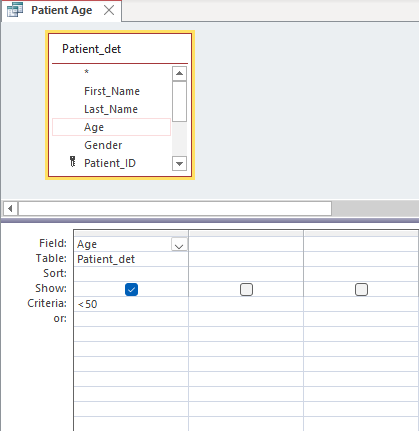


Patient\_Appointment\_Table design

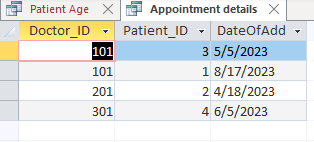
Queries

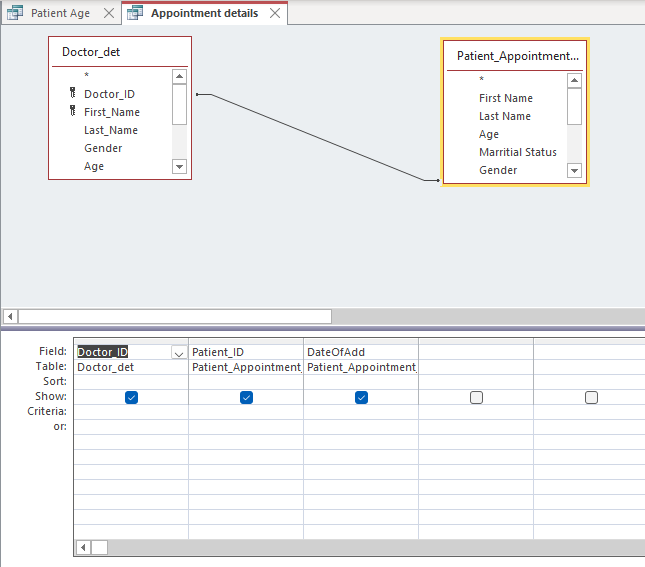
Query for Patient age as the constraint.





Date of Appointment query





Specialization of the doctor query

