جامعة بيرزيت

BIRZEIT UNIVERSITY

Computer Science Department

Database Management Systems 333

Final Phase

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DR. YOUSEF SABAH

Summary

My client's business is a **Dental Clinic**, and he needs to collect and arrange the clinic's data, so my project is to create a database for his dental clinic by SQL DBMS.

Introduction

Our client is a doctor, his name **Yousef Najjar**, from West Bank, he wants a database system to manage his job and store data for pa ents, Doctors working with him in it, payments of pa ents, appointments, and information about clinic material in public. so, our team will help him save the clinic's data by creating a private database.

✔ Informa on About Client

Client: Viviane Clinic

Contant Person: Yousef Al Najjar

Contact Info: 0569199434

Location: West Bank

✔ Technology

- **Laptops**: Lenovo ThinkPad && HP
- **Opera ng system**: Windows
- **DBMS**: MySQL
- **Programming language**: JAVA

✔ Data Requirements:

- **Doctors** have an age, a name, an address, a Doctor_id, a phone,and an Email.
- **Patients** have a name, an age, a **Patient** _id, and a Phone.
- **Prescript** has a Release date, category, **patient** name, **patient** age Doctor name, and prescription_id.
- **Medicine** (means medical treatments inside the clinic) has a name, source, expiry date, production date, and Medicine_id.
- **Payments** have a payment ID, payment method, payment date, and payment amount.
- **The appointment** has an appointment-id, start me, end me, and appointment date.

- Each **doctor** produces one or more **prescripts** but each **prescript** is produced by **one** **doctor** inside the clinic.

- Each **doctor** treats one or more **patients** and Each **patient** may treat by one or more **doctors** inside the clinic.

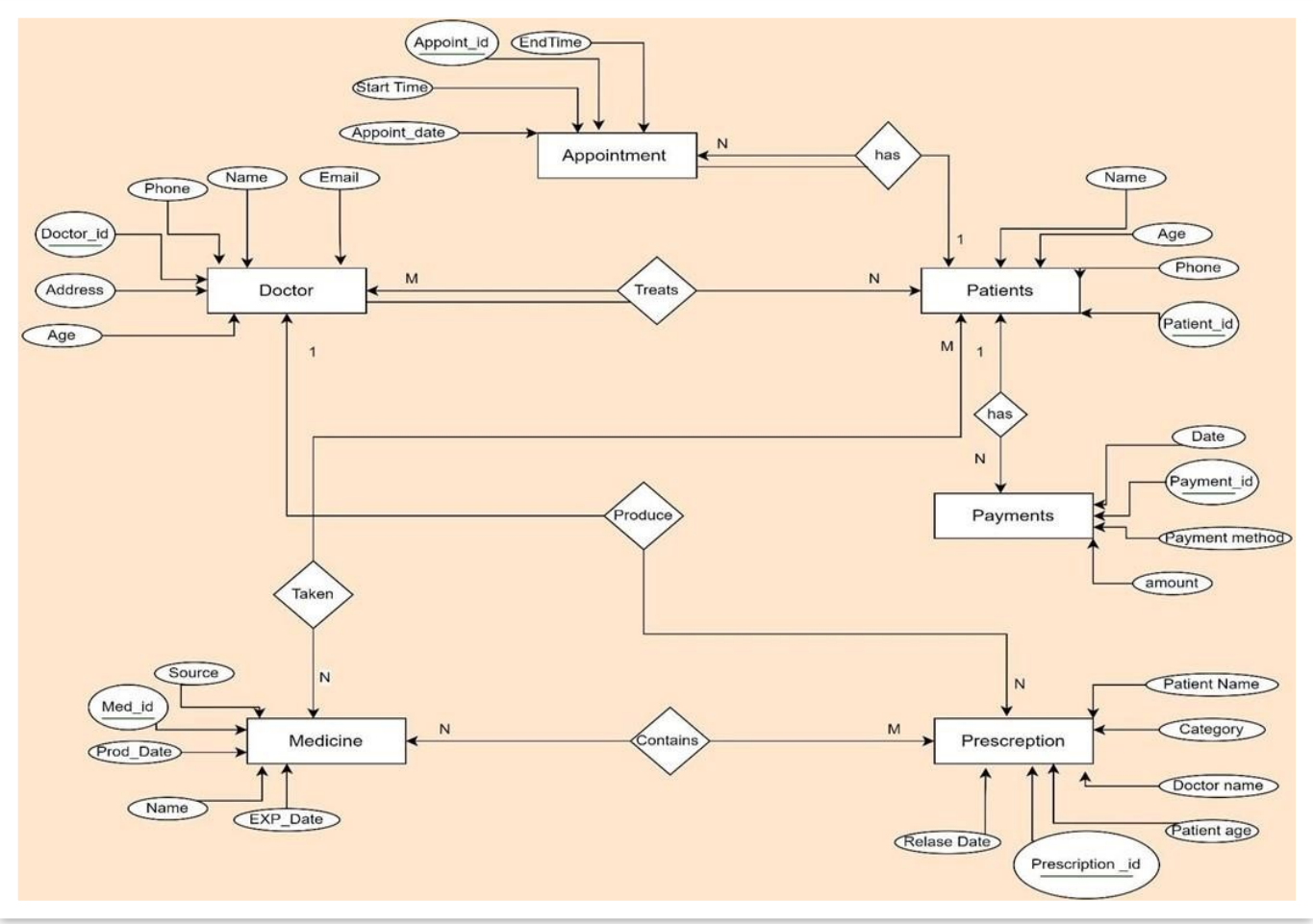
- Each **patient** has several **appointments** but each **appointment** is for one **patient** only.

- Each **patient** has several **financial payments** but each **payment** must be paid by one **patient**.

- Each **prescription** contains one or more **medicines** and each **medicine** may exist in several **prescriptions**.

- **Medicine** may be taken by several **patients** and the **patient** can take multiple **medicines** from the clinic.

ERD Diagram:


Appoint_id
EndTime
Start Time
Appoint_date
Appointment
N
has
1
Name
Phone
Email
Doctor_id
Address
Age
Doctor
M
Treats
N
Patients
Name
Age
Phone
Patient_id
1
M
1
has
N
Date
Payment_id
Payments
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amount
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Taken
N
N
Source
Med_id
Prod_Date
Name
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Medicine
N
Contains
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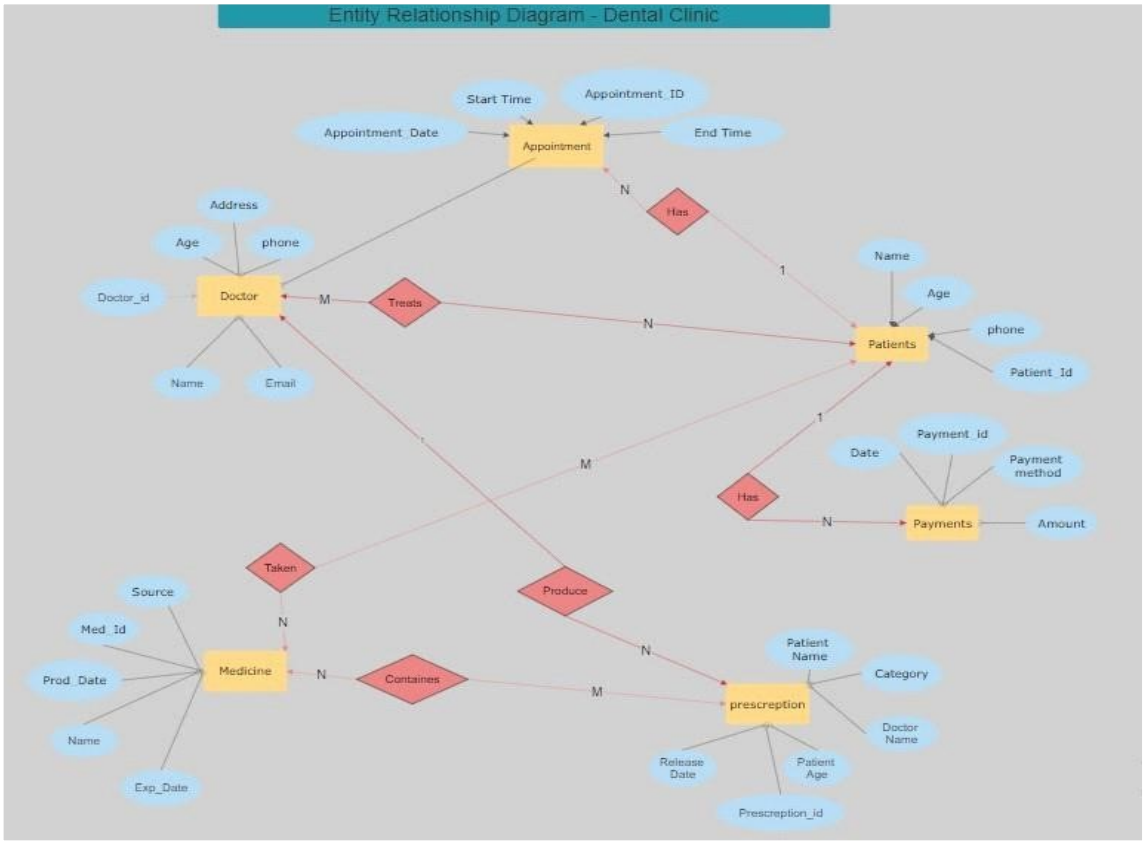
Prescreption
Patient Name
Category
Doctor name
Patient age
Relase Date
Prescription _id


Entity Relationship Diagram - Dental Clinic
Start Time
Appointment_ID
Appointment_Date
Appointment
End Time
N
Has
1
Address
Age
phone
Doctor_id
Doctor
M
Treats
N
Name
Age
phone
Patient_Id
Patients
Name
Email
1
M
Payment_id
Date
Payment method
Has
N
Payments
Amount
Taken
Produce
Source
N
Med_Id
Prod_Date
Medicine
N
Contains
M
Patient Name
Category
prescreption
Doctor Name
Name
Exp_Date
Release Date
Patient Age
Prescreption_id

Dental Clinic Database Description and Data Dictionary

Dental Clinic Database Description and Data Dictionary

Database: Dental Clinic

Purpose: To store and manage information related to a dental clinic, including doctors, patients, appointments, prescriptions, medicines, and payments.

Tables:

Doctors: Stores information about doctors, including their ID, name, age, address, phone number, and email address.

Patients: Stores information about patients, including their ID, name, age, and phone number.

Prescriptions: Stores information about prescriptions issued to patients, including the ID, release date, category, patient information, doctor information, and a reference to the doctor's ID.

Medicines: Stores information about medicines, including their ID, name, source (manufacturer), expiry date, and production date.

Payments: Stores information about patient payments, including the ID, payment method, date, amount, and a reference to the patient's ID.

Appointments: Stores information about patient appointments, including the ID, start time, end time, date, and a reference to the patient's ID.

Prescription Medicines: A many-to-many relationship table linking prescriptions and medicines. Each prescription can have multiple medicines, and each medicine can be included in multiple prescriptions.

Doctor Patient: Another many-to-many relationship table linking doctors and patients. Each doctor can have multiple patients, and each patient can see multiple doctors.

Table	Field	Data Type	Description	Foreign Keys
Doctors	id	INT	Unique identifier for the doctor	
	name	VARCHAR(25)	Doctor's name	
	age	INT	Doctor's age	
	address	VARCHAR(25)	Doctor's address	
	phone	VARCHAR(15)	Doctor's phone number	
	email	VARCHAR(50)	Doctor's email address	
Patients	id	INT	Unique identifier for the patient	
	name	VARCHAR(25)	Patient's name	
	age	INT	Patient's age	
	phone	VARCHAR(15)	Patient's phone number	
Prescriptions	id	INT	Unique identifier for the prescription	
	release_date	DATE	Date the prescription was issued	
	category	VARCHAR(25)	Category of the medication (e.g., General, Dental)	
	patient_name	VARCHAR(25)	Patient's name	
	patient_age	INT	Patient's age at the time of prescription	
	doctor_name	VARCHAR(25)	Doctor who issued the prescription	
	Doctor_id	INT	Reference to th Doctors(id)	
Payments	id	INT	Unique identifier for the payment	
	method	VARCHAR(25)	Payment method used (e.g., Cash, Credit Card)	
	date	DATE	Date the payment was made	
	amount	REAL	Amount of the payment	
	patient_id	INT	Reference to th Patients(id)	
Appointments	id	INT	Unique identifier for the appointment	
	start_time	TIME	Time the appointment starts	
	end_time	TIME	Time the appointment ends	
	date	DATE	Date of the appointment	
	patient_id	INT	Reference to th Patients(id)	
Doctor_Patient	Doctor_id	INT	Reference to th Doctors(id)	
	Patient_id	INT	Reference to th Patients(id)	
adminstrator_table	id	int	Primary key, auto-incrementing	
	adminName	varchar(30)	Name of the administrator	
	adminPass	varchar(30)	Administrator's password	
	adminEmail	varchar(30)	Administrator's email address	
	adminPhone	varchar(30)	Administrator's phone number	
	adminPhoto	BLOB	Administrator's photo	

the end

Thank you