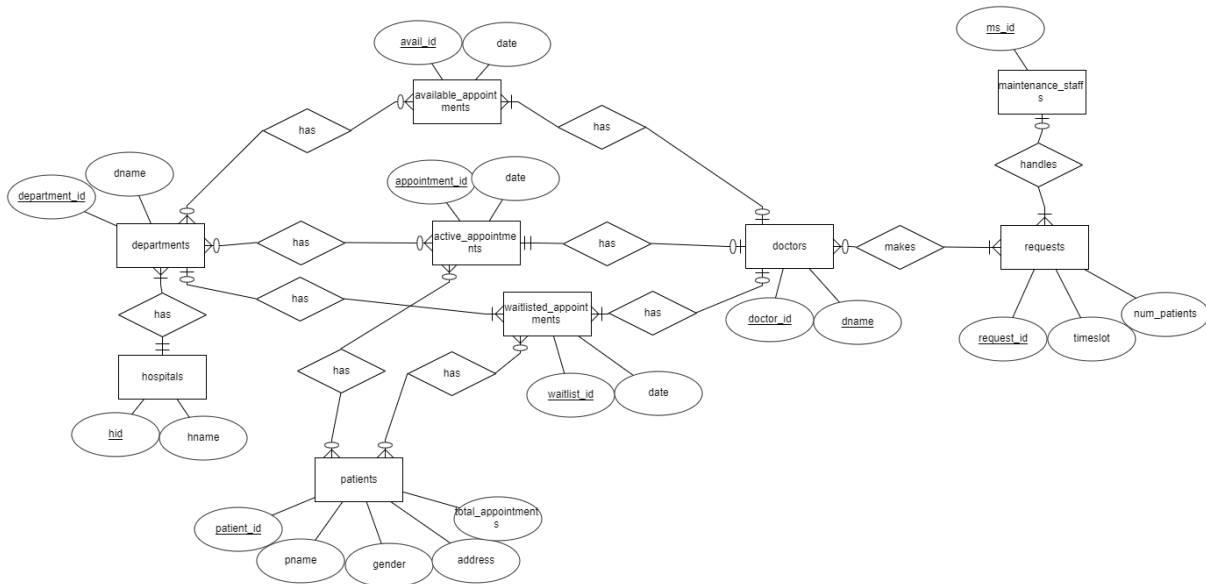


ER Diagram

Standalone image is also provided in the .zip



Explanation

Legend

Table

Attribute

Foreign Attribute

Hospital Management:

1. Given a department ID, get the active appointments for the week.

active_appointments has **department_id**

2. Given a department ID and a date, find (i) the available appointments, (ii) the active appointments, (iii) the list of patients who made appointments on that given date.

i) **available_appointments** has **department_id**, **date**

ii) **active_appointments** has **department_id**, **date**

iii) **active_appointments** has **patient_id**, **date**

3. Given a doctor name and a date, list all the available appointments of the doctor for the given date.

- **available_appointments** has **date**, **doctor_id**

- **doctor_id** can be found because **doctors** has a **name** attribute

Assumption: doctor names are unique

4. Given a patient ID, retrieve the patient details (Name, Age, Gender, Address, Total number of appointments to the hospital, etc.).

`patients` have `name, age, gender, address`. Total appointments can be calculated by selecting from `active_appointments`.¹

5. Given a department ID and a patient ID, list all the appointments (active or past) made by the patient in that department.

`active_appointments` have `department_id, patient_id`.¹

6. Given a maintenance staff ID, list all the requests addressed by the staff.

`requests` has `ms_id`

Hospital Maintenance Staff:

1. Given a date range, list all the appointments (past or active) made by a given patient ID.

`active_appointments` has `patient_id`

2. Given a doctor name, list all maintenance requests made by the doctor.

The `doctors/requests junction table` has `doctor_id, request_id`

3. After a maintenance request is addressed, make necessary entries showing the available appointments for that doctor of the department.

`available_appointments` can be modified (insert into and select) through code.

Patients:

1. Given a hospital name, find the specialized departments in the hospital.

We can find a `hid` from `hospitals` (assuming hospital names are unique).

Departments has a foreign key of `hid`.

2. Given a hospital name and a specialized department name, find all the doctors whose appointments are available on the week.

`available_appointments` have foreign keys of `department_id` and `doctor_id`.

3. Given an appointment number, find the appointment details (time slot, doctor name, department, etc.)

`active_appointments` have attributes `date`, foreign keys `doctor_id`, `department_id`, etc.

4. Make an appointment for a doctor of a department: - Get on the waitlist for an appointment if the chosen doctor has no available slots in the week.

If we have an entry in `available_appointments`, we can move it to `active_appointments`.

Otherwise, we can insert into `waitlisted_appointments`.

Doctors:

1. Make a maintenance request with a list of available appointments (time slot, department name, number of patients per hour, etc.).

Can insert information into `requests` table.

Notes

1. Past appointments can be found by selecting `active_appointments < current_date`.

Work Breakdown

Both group members worked on the ER diagram and explanation.