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# Hospital

## Description

Our project is about a Hospital which is located in Riyadh. It has more than one section, for each department there is a medical staff. The hospital goal is to treat every patient with the most respect.

The hospital will consist of multiple department. The department will have a medical staff and operation rooms. The hospital Accept All Patients. The hospital offers two types of payment either insurance or cash. The hospital record the medical history of the patient. A patient has to make an appointment when needing to visit a doctor.

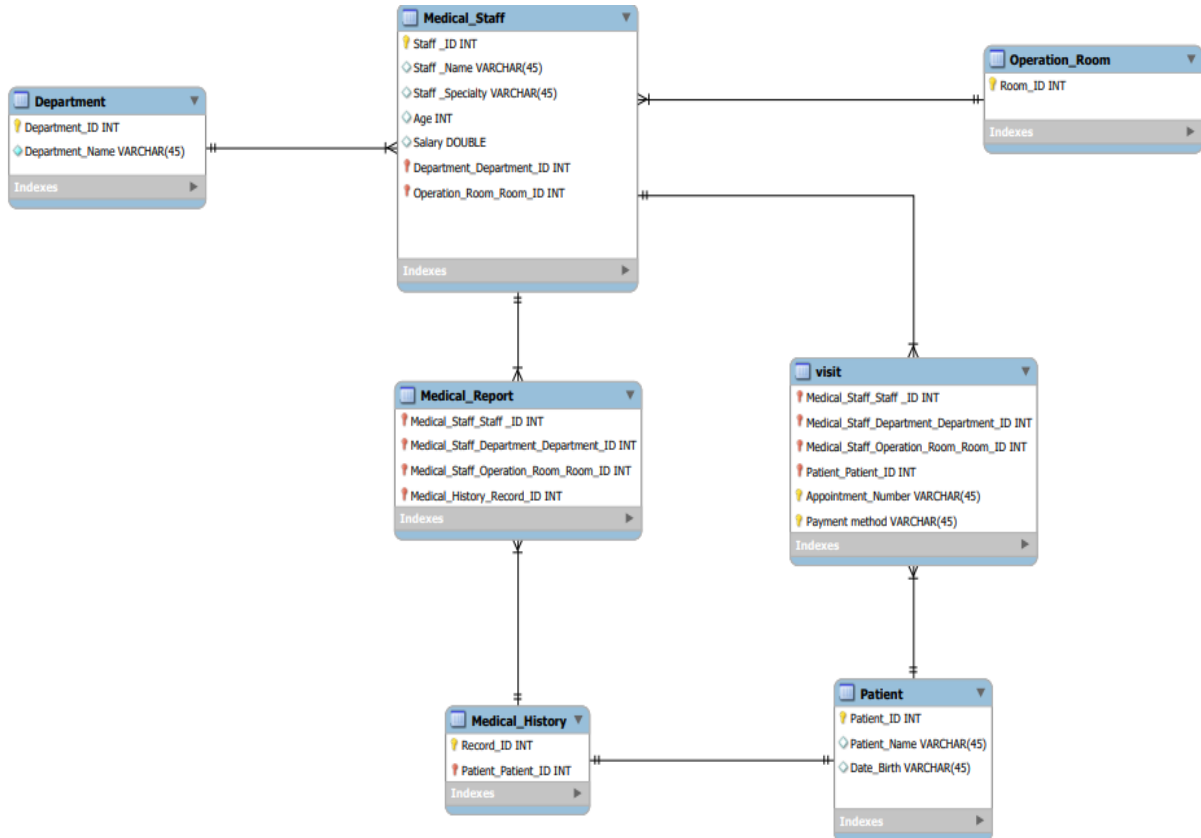
### **Entity:**

- Department: Department\_ID (primary key), Department\_Name.
- Medical\_Staff: Staff\_ID (primary key), Staff\_Name, Staff\_Specialty, Age, Salary.
- Patient: Patient\_ID (primary key), Patient\_Name, Date\_Birth.
- Medical\_History: Record\_ID (primary key).
- Operation\_Room: Room\_ID (primary key).

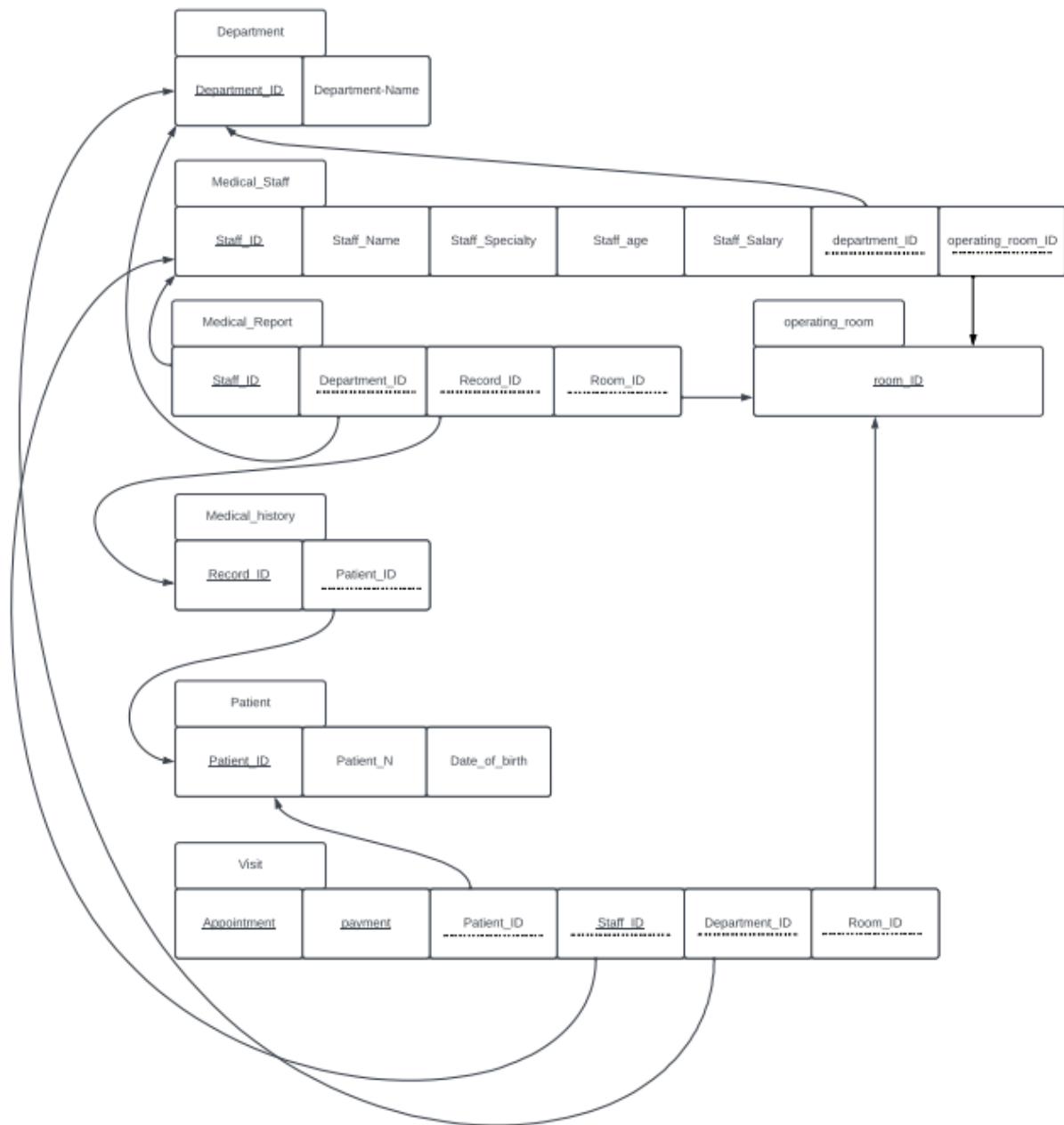
### **Relationship:**

- Department can have one or more medical staff, medical staff belong to one department.
- Medical staff must have one supervisor, supervisor can supervise one or more medical staff.
- Operating room may be assigned by one or more medical staff, Medical staff may belong to operating room.
- Medical history can be written by one or more medical staff, Medical staff can wright one or more medical history.
- Medical history must belong to one patient, patient must have one medical history.
- Medical staff may have many patients, patient can have one or more medical staff.
- Appointment number and a payment method is an attribute between medical staff and patient.

# EER Diagram:



# Database Logical Design



## Code:

```
mysql> use hospital;
Database changed
mysql> show tables;
+-----+
| Tables_in_hospital |
+-----+
| department          |
| medical_history      |
| medical_report       |
| medical_staff        |
| operation_room       |
| patient             |
| visit               |
+-----+
7 rows in set (0.00 sec)
```

```
mysql> Select * from medical_staff;
+-----+-----+-----+-----+-----+-----+-----+
| Staff_ID | Staff_Name | Staff_Specialty | Age | Salary | Department_Department_ID | Operation_Room_Room_ID |
+-----+-----+-----+-----+-----+-----+-----+
| 111 | khalid | Joint replacement | 27 | 50000 | 1 | 5 |
| 222 | rian | Forensic | 20 | 60000 | 3 | 1 |
| 333 | khaled | Pathology | 21 | 70000 | 2 | 2 |
+-----+-----+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)
```

```
mysql> select Staff_Name, Salary from medical_staff order by salary desc;
+-----+-----+
| Staff_Name | Salary |
+-----+-----+
| khaled | 70000 |
| rian | 60000 |
| khalid | 50000 |
+-----+-----+
3 rows in set (0.00 sec)
```

```
mysql> select avg(salary) as Average from Medical_staff;
+-----+
| Average |
+-----+
| 60000 |
+-----+
1 row in set (0.00 sec)
```

```
mysql> Select * From patient;
+-----+-----+-----+
| Patient_ID | Patient_Name | Date_Birth |
+-----+-----+-----+
| 1 | Saeed | 09/12/2001 |
| 2 | Hadi | 06/11/1990 |
| 3 | Soliman | 04/04/2000 |
+-----+-----+-----+
3 rows in set (0.00 sec)
```

```
mysql> select count(*) as Count from patient;
+-----+
| Count |
+-----+
| 3 |
+-----+
1 row in set (0.01 sec)
```

```
mysql> select count(*) as count, Payment from visit group by payment order by payment;
+-----+-----+
| count | Payment |
+-----+-----+
| 1 | ApplePay |
| 1 | Cash |
| 1 | Visa |
+-----+-----+
3 rows in set (0.00 sec)
```

```
mysql> Select * from medical_report;
```

Medical_Staff_Staff_ID	Medical_Staff_Department_Department_ID	Medical_Staff_Operation_Room_Room_ID	Medical_History_Record_ID
111	1	5	11111
333	2	2	22222
222	3	1	33333

```
3 rows in set (0.00 sec)
```

```
mysql> select * from medical_report where Medical_Staff_Operation_Room_Room_ID=5;
```

Medical_Staff_Staff_ID	Medical_Staff_Department_Department_ID	Medical_Staff_Operation_Room_Room_ID	Medical_History_Record_ID
111	1	5	11111

```
1 row in set (0.00 sec)
```

```
mysql> select staff_name, staff_specialty from medical_staff;
```

staff_name	staff_specialty
khalid	Joint replacement
rian	Forensic
khaled	Pathology

```
3 rows in set (0.00 sec)
```