Hospital Database

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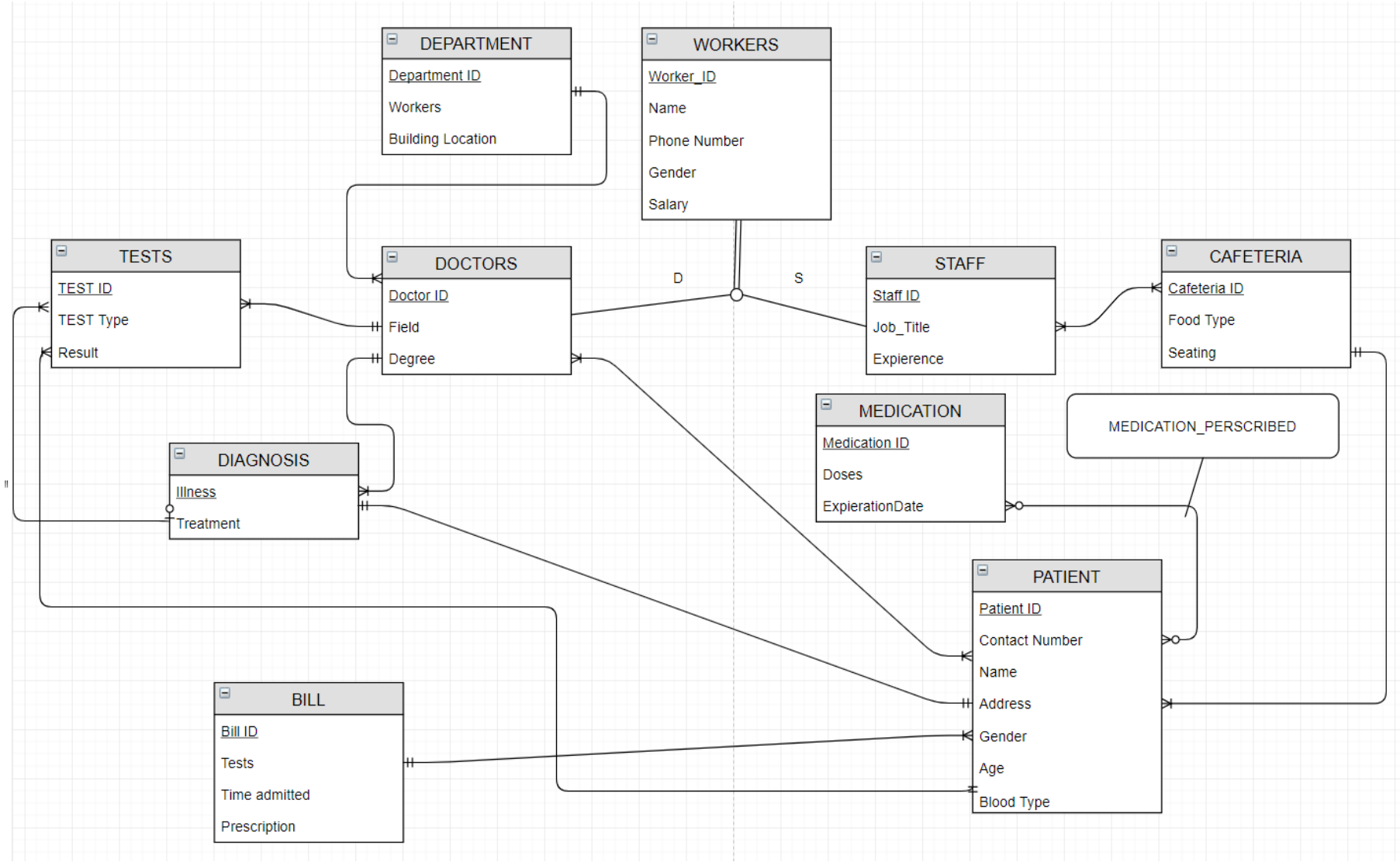
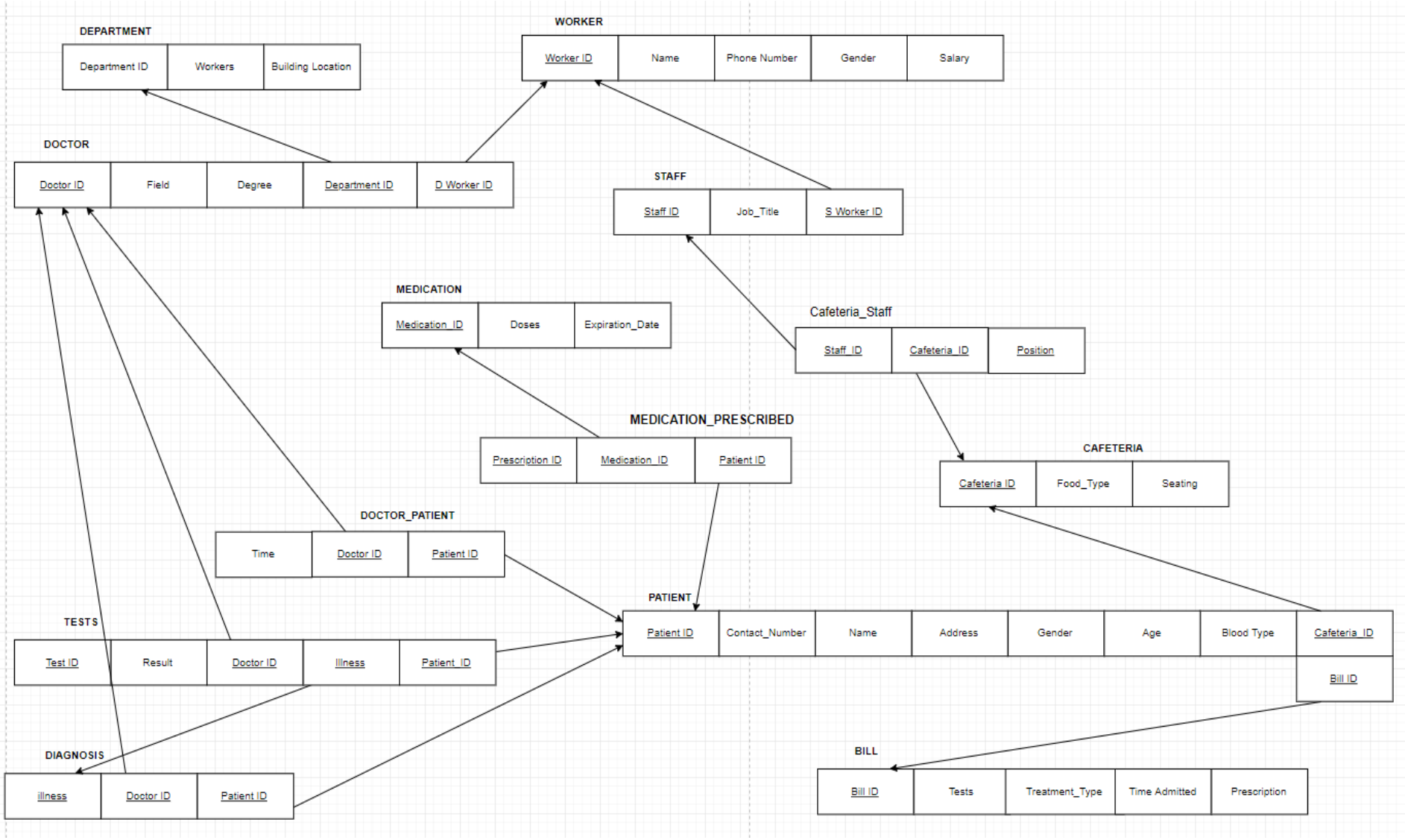
Why a Hospital Database?

We created this database for a Hospital to allow workers at the Hospital to retrieve information about the patients such as their age, blood type, condition, the treatment they need, and the amount of doses they take. It allows the workers to know what they need to do for their patients at all time to avoid any further problems for our patients.

ERD


DEPARTMENT
Department ID
Workers
Building Location
WORKERS
Worker_ID
Name
Phone Number
Gender
Salary
TESTS
TEST ID
TEST Type
Result
DOCTORS
Doctor ID
Field
Degree
D
S
STAFF
Staff ID
Job_Title
Expierence
CAFETERIA
Cafeteria ID
Food Type
Seating
MEDICATION
Medication ID
Doses
ExpierationDate
MEDICATION_PERSCRIBED
DIAGNOSIS
Illness
Treatment
PATIENT
Patient ID
Contact Number
Name
Address
Gender
Age
Blood Type
BILL
Bill ID
Tests
Time admitted
Prescription

Relational Model (EERD)



Sample DDL

```
DROP TABLE IF EXISTS WORKER;
DROP TABLE IF EXISTS DEPARTMENT;

# Checked
CREATE TABLE DEPARTMENT (
                Department_ID                   varchar(15) NOT NULL,
                Workers                         INT,
                Building_Location               VARCHAR(15),
        CONSTRAINT Department_PK PRIMARY KEY (Department_ID)
);

# Checked
CREATE TABLE WORKER (
                Worker_ID                       INT NOT NULL,
                fname                           VARCHAR(10),
                lname                           VARCHAR(10),
                Gender                          CHAR(1),
                telephone                       VARCHAR(14),
                Salary                          INT,
        CONSTRAINT Worker_PK PRIMARY KEY (Worker_ID)
);

INSERT INTO Department VALUES ('ICU', '20', 'Dobson');
INSERT INTO Department VALUES ('Pediatric', '26', 'Wheeler');
INSERT INTO Department VALUES ('ER', ' 32', 'Dobson');
INSERT INTO Department VALUES ('Burn Center', '15', 'Campbell');
INSERT INTO Department VALUES ('Pharmacy', '8', 'Wheeler');

INSERT INTO Worker VALUES (' 119275 ', ' Henry ', ' Fuller ', ' M ', ' (978)123-1234 ', ' 127000 ');
INSERT INTO Worker VALUES (' 122842 ', ' Zack ', ' Futa ', ' M ', ' (123)436-1236 ', ' 122000 ');
INSERT INTO Worker VALUES (' 197531 ', ' Cam ', ' Ryder ', ' M ', ' (543)753-1327 ', ' 72000 ');
INSERT INTO Worker VALUES (' 128575 ', ' Janet ', ' Grosmen ', ' F ', ' (617)355-7684 ', ' 150000 ');
INSERT INTO Worker VALUES (' 124865 ', ' Michelle ', ' Haverhill ', ' F ', ' (631)125-1235 ', ' 125000 ');
INSERT INTO Worker VALUES (' 118467 ', ' Oliver ', ' Mansman ', ' M ', ' (934)126-6421 ', ' 49000 ');
INSERT INTO Worker VALUES (' 195538 ', ' Lisa ', ' Perez ', ' F ', ' (682)165-8523 ', ' 64000 ');
```

4 Simple Queries (Lecture 6)

```
SELECT fname, lname
FROM worker
WHERE gender = 'F'
```

fname	lname
Tilda	White
Michelle	Haverhill
Janet	Grosmen
Lisa	Perez

Output = Female Workers

```
SELECT Salary
FROM worker
WHERE Salary BETWEEN 70000 AND 180000
ORDER BY Salary DESC
```

Salary ▼ 1
180000
150000
127000
125000
122000
100000
72000

Output = Salaries of workers between 70000 and 180000 (in decreasing order)

```
SELECT Doses
FROM medication
WHERE Doses is NOT null
```

Doses
40
10
80

Output = the number of doses

```
SELECT Address
FROM patient
Vancouver Way
WHERE Address LIKE '%Vancouver Way%'
```

Address
63 Vancouver Way

Output = Address of patient who live at

3 Intermediate Queries (Lecture 7)

```
SELECT sum(Salary)
FROM worker
```

sum(Salary)
1041000

Output = the sum of all the workers combined

```
SELECT Department_ID ,
COUNT(*) as count
FROM Doctor
GROUP BY Department_ID
ORDER BY count DESC;
```

Department_ID	count ▼ 1
ER	2
Burn Center	1
ICU	1
Pediatric	1
Pharmacy	1

Output = # of Doctors that work for in each department

```
SELECT Degree,
COUNT(*) AS COUNT
FROM doctor
GROUP BY Degree
HAVING COUNT(Degree) > 2
Order BY COUNT ASC
```

Degree	COUNT
PHD	4

Output = the degree that more than 2 doctors have

3 Advanced Queries (Lecture 8)

```
SELECT fname, lname, Age, Gender, Blood_Type, Illness
FROM patient p, diagnosis d
WHERE d.Patient_ID = p.Patient_ID AND illness is not null
ORDER BY Age DESC
```

fname	lname	Age ▼ 1	Gender	Blood_Type	Illness
Benjamin	Dover	72	M	B-	Heart Attack
Mike	Lock	41	M	A+	Skin Cancer
Harry	Sax	21	M	O-	Diabetes
Jenny	Tayla	19	F	AB+	Multiple Sclerosis

```
SELECT d.Doctor_ID, w.lname, w.Gender
FROM worker w, doctor d
WHERE w.Worker_ID = d.D_Worker_ID
```

+ Options

Doctor_ID	lname	Gender
67891	Fuller	M
15642	Futa	M
51235	White	F
12365	McGuiyver	M
14263	Haverhill	F
15235	Grosmen	F

```
SELECT d.Doctor_ID, t.Test_ID, t.Result, t.Illness, t.Patient_ID
FROM doctor d left JOIN tests t
ON t.Doctor_ID = d.Doctor_ID;
```

+ Options

Doctor_ID	Test_ID	Result	Illness	Patient_ID
51235	1631	1	Heart Attack	497598
12365	4512	1	Multiple Sclerosis	193258
15642	5123	1	Skin Cancer	589215
15235	7231	1	Diabetes	975913
67891	*NULL*	*NULL*	*NULL*	*NULL*
14263	*NULL*	*NULL*	*NULL*	*NULL*