# Hospital Database

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
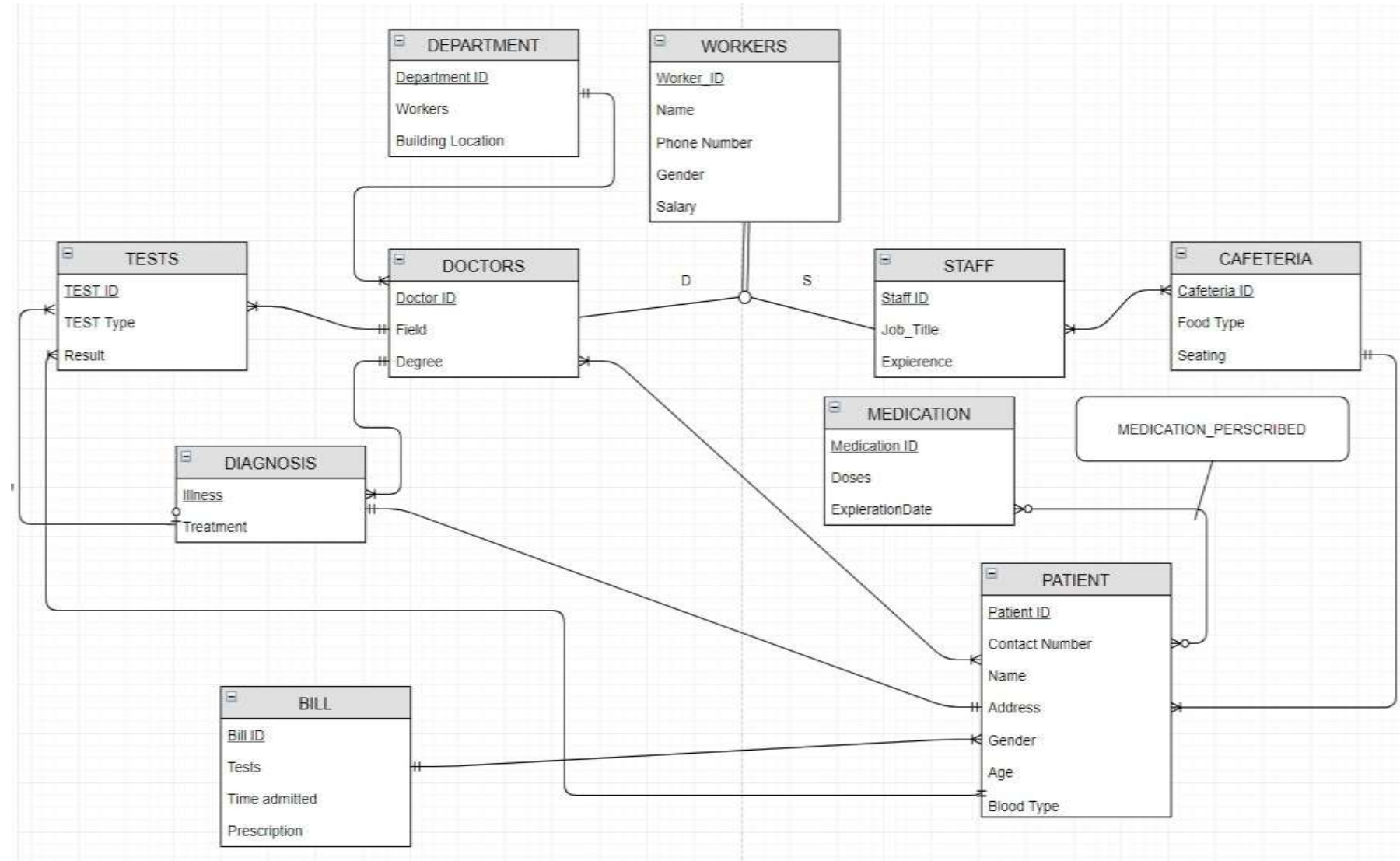
Relational Model (EERD)
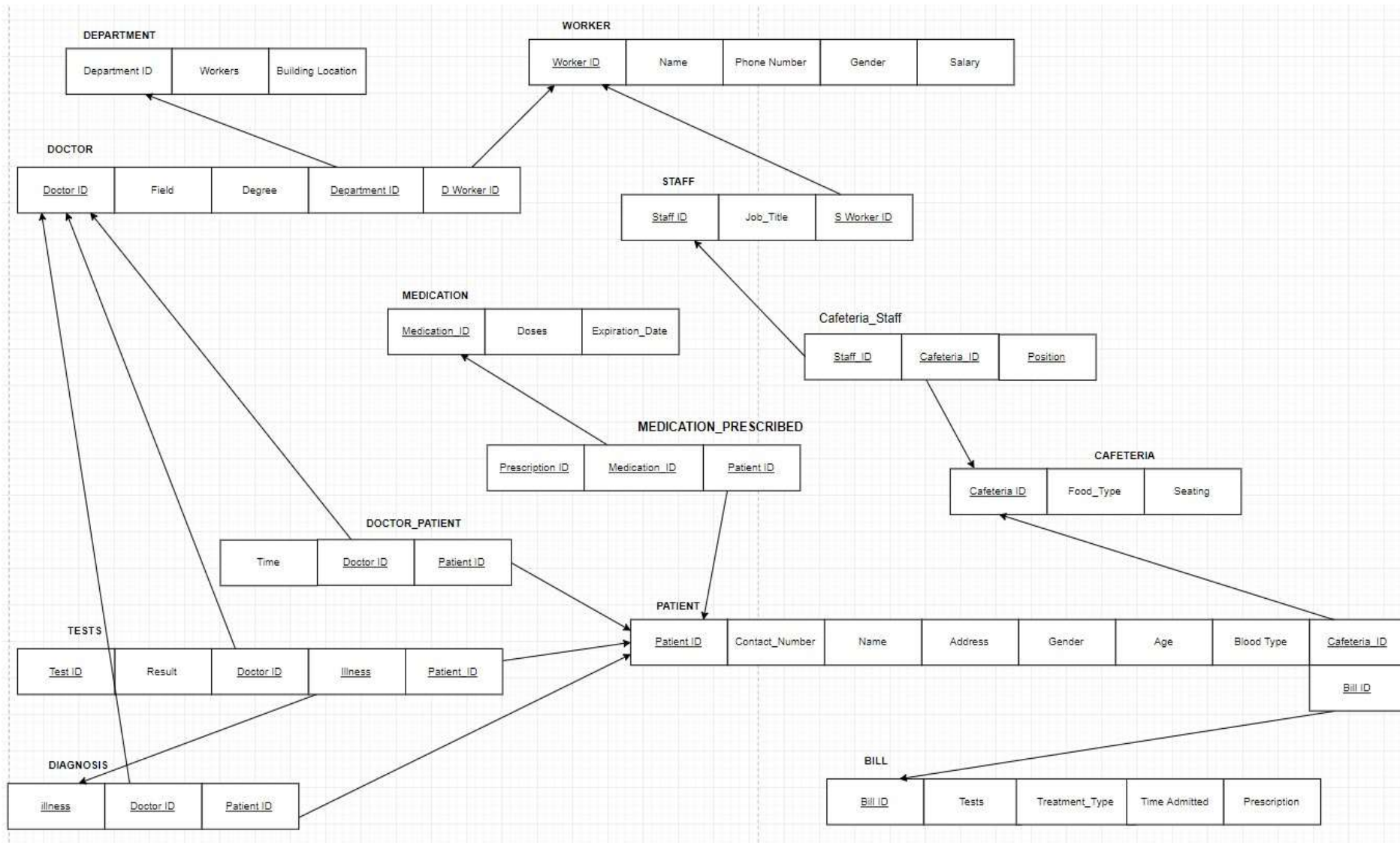
Sample DDL

```
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