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CS442 A

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## Convert ER Diagrams to Relational Tables

Small community hospital

~~Hospital Room (unique Integer room#, designated usage (char[40]))~~

Hospital Room  $\rightarrow$  room#, designated usage

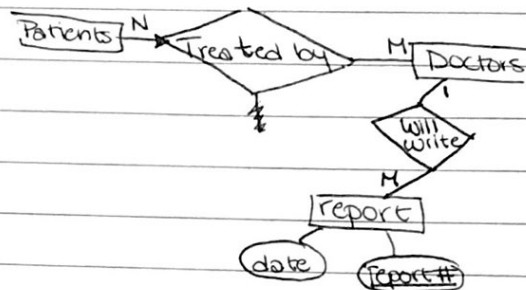
Patient  $\rightarrow$  patient#, name

4 Patient assigned to 1 room

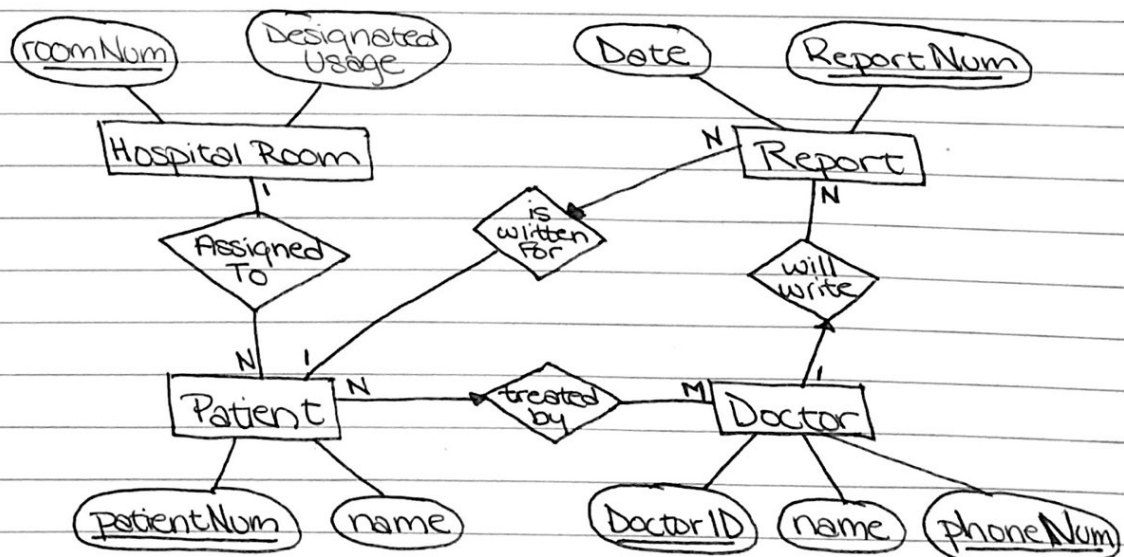
Multiple Patients to single room



Doctor  $\rightarrow$  doctorID, name, phone#



### ER Diagram



## SQL

```
CREATE TABLE Room ( roomNum integer,  
Des Usage char[40],  
PRIMARY KEY (roomNum));
```

```
CREATE TABLE Patient ( patientNum integer,  
name char[40],  
PRIMARY KEY (patientNum));
```

```
CREATE TABLE Doctor ( doctorID integer,  
name char[20],  
phoneNum char[10],  
PRIMARY KEY (doctorID));
```

```
CREATE TABLE AssignedTo ( patientNum integer,  
roomNum integer,  
PRIMARY KEY (patientNum, roomNum),  
FOREIGN KEY (patientNum) REFERENCES Patient,  
FOREIGN KEY (roomNum) REFERENCES Room);
```

```
CREATE TABLE Treatment ( patientNum integer,  
doctorID integer,  
PRIMARY KEY (patientNum, doctorID),  
FOREIGN KEY (patientNum) REFERENCES Patient,  
FOREIGN KEY (doctorID) REFERENCES Doctor);
```

```
CREATE TABLE Report ( reportNum integer,  
                        date date,  
                        patientNum integer,  
                        doctorID integer,  
                        PRIMARY KEY (reportNum),  
                        FOREIGN KEY (patientNum) REFERENCES Patient,  
                        FOREIGN KEY (doctorID) REFERENCES Doctor);
```