ER Diagram

Draw the ER Diagram for the following scenarios .

Requirements: Problem 1

• Both Patients & doctors are identified by an Adhaar number, and their names, addresses, and ages must be documented.

• For each doctor, along with basic details, specialty, and years of experience must be included.

• Each pharmaceutical company is identified by name and has a phone number.

• For each drug, the trade name and formula must be recorded. Each drug is sold by a given pharmaceutical company, and the trade name identifies a drug uniquely from among the products of that company.

• Each pharmacy has a name, address, and phone number.

• Every patient has a primary physician. Every doctor has at least one patient.

• Each pharmacy sells several drugs and has a price for each. A drug could be sold at several pharmacies, and the price could vary from one pharmacy to another.

• Doctors prescribe drugs for patients. A doctor could prescribe one or more drugs for several patients, and a patient could obtain prescriptions from several doctors. Each prescription has a date and a quantity associated with it.

• Pharmaceutical companies have long-term contracts with pharmacies. A pharmaceutical company can contract with several pharmacies, and a pharmacy can contract with several pharmaceutical companies. For each contract, you have to store a start date, an end date, and the text of the contract.

• Pharmacies appoint a supervisor for each contract. There must always be a supervisor for each contract, but the contract supervisor can change over the lifetime of the contract.

Requirements: Problem 2

Every airplane has a registration number, and each airplane is of a specific model.

□ The airport accommodates a number of airplane models, and each model is identified by a model number (e.g., DC-10) and has a capacity and a weight.

□ A number of technicians work at the airport. You need to store the name, SSN, address, phone number, and salary of each technician.

□ Each technician is an expert on one or more plane models(s), and his or her expertise may overlap with that of other technicians. This information about technicians must also be recorded.

□ Traffic controllers must have an annual medical examination. For each traffic controller, you must store the date of the most recent exam.

□ All airport employees (including technicians) belong to a union. You must store the union membership number of each employee. You can assume that each employee is uniquely identified by a social security number.

□ The airport has a number of tests that are used periodically to ensure that airplanes are still airworthy. Each test has a Federal Aviation Administration (FAA) test number, a name, and a maximum possible score.

□ The FAA requires the airport to keep track of each time a given airplane is tested by a given technician using a given test. For each testing event, the information needed is the date, the number of hours the technician spent doing the test, and the score the airplane received on the test

Requirements: Problem 3

The Library Management System database keeps track of readers with the following considerations –

- The system keeps track of the staff with a single point authentication system comprising login Id and password.
- Staff maintains the book catalog with its ISBN, Book title, price(in INR), category(novel, general, story), edition, author Number and details.
- A publisher has publisher Id, Year when the book was published, and name of the book.
- Readers are registered with their user_id, email, name (first name, last name), Phone no (multiple entries allowed), communication address. The staff keeps track of readers.
- Readers can return/reserve books that stamps with issue date and return date. If not returned within the prescribed time period, it may have a due date too.

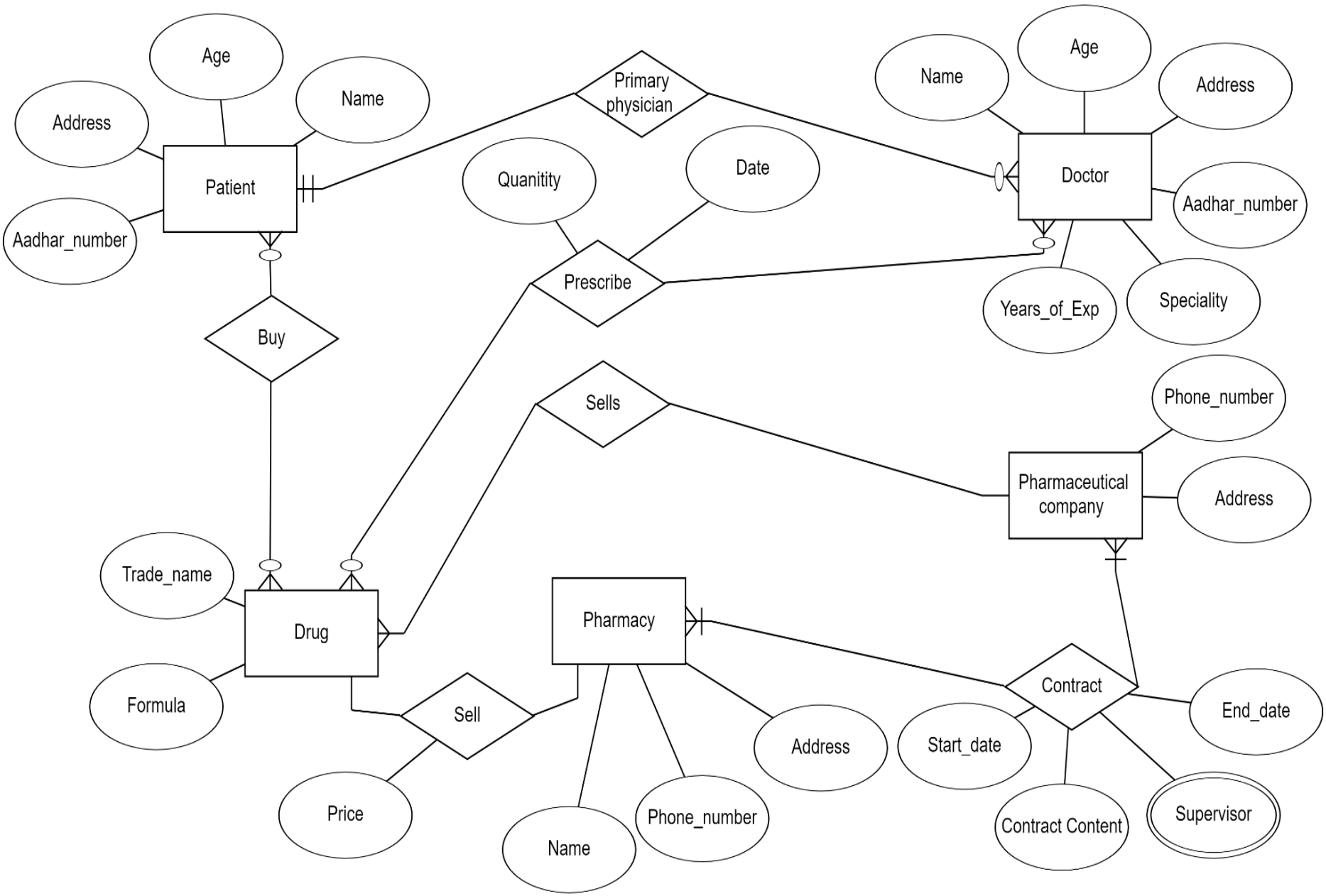
- Staff also generate reports that has readers id, registration no of report, book no and return/issue info.

Requirements: Problem 4

A health care organization keeps track of its doctors and outpatient locations. • For each doctor it keeps track of the DoctorID (unique), DoctorName, and Doctor YearOfMDGraduation. • For each outpatient location it keeps track of the OLID (unique) and OLName, and the following additional requirement: a) Each doctor works at exactly one outpatient location, and each outpatient location can have between none (rehab and minor health issues only) and many doctors working at it. b) Each doctor works at either one outpatient location or at none (strictly working in the main hospital), and each outpatient location must have at least one but can have many doctors working at it. c) Each doctor works at exactly one outpatient location, and each outpatient location must have at least one but can have many doctors working at it. d) Each doctor works at either one outpatient location or at none (strictly working in the main hospital), and each outpatient location can have between none (rehab and minor health issues only) and many doctors working at it. e) Each doctor manages between zero and one outpatient locations, and each outpatient location has exactly one doctor managing it.

PROBLEM 5:

EER Diagram for Shopping Mall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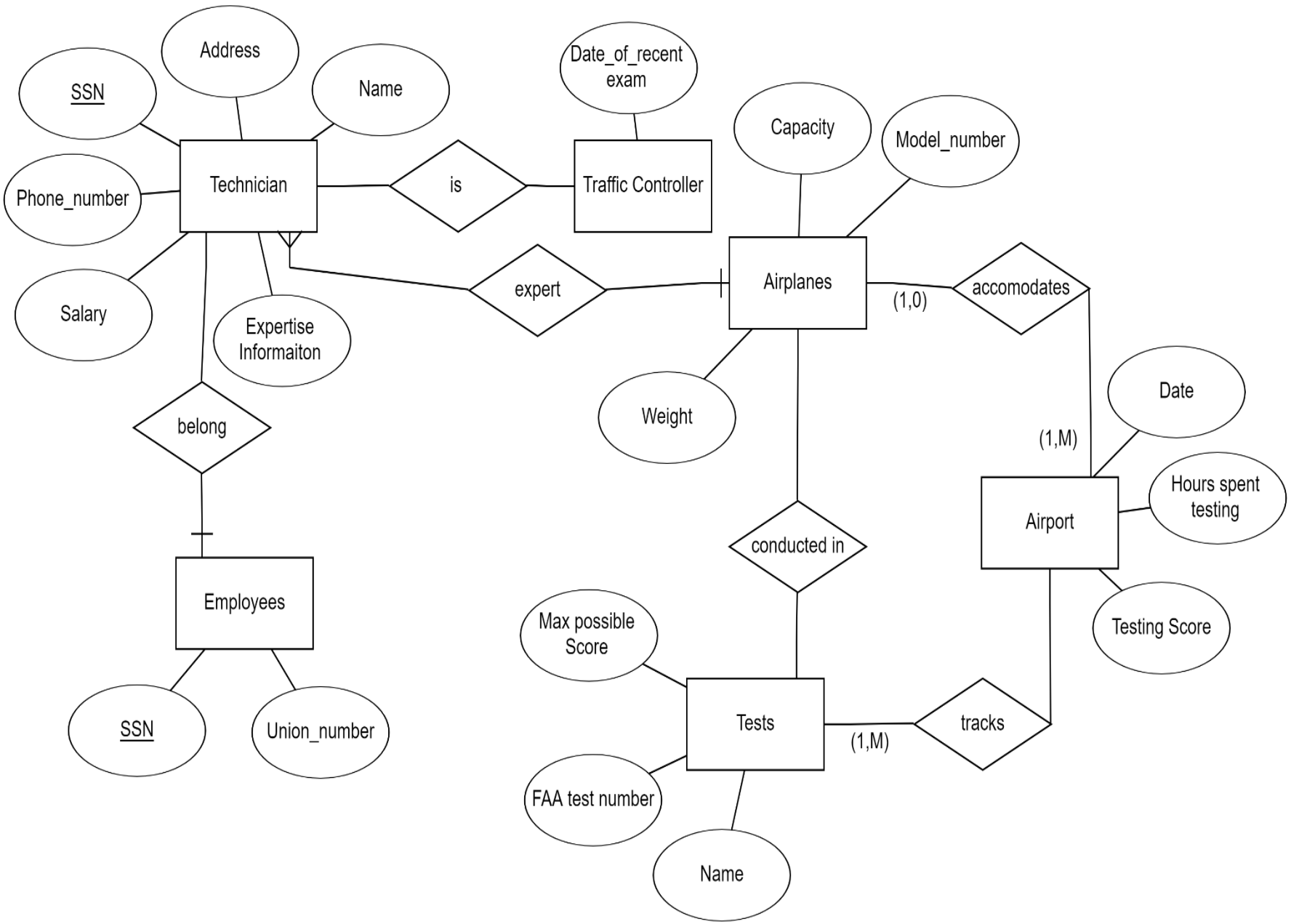
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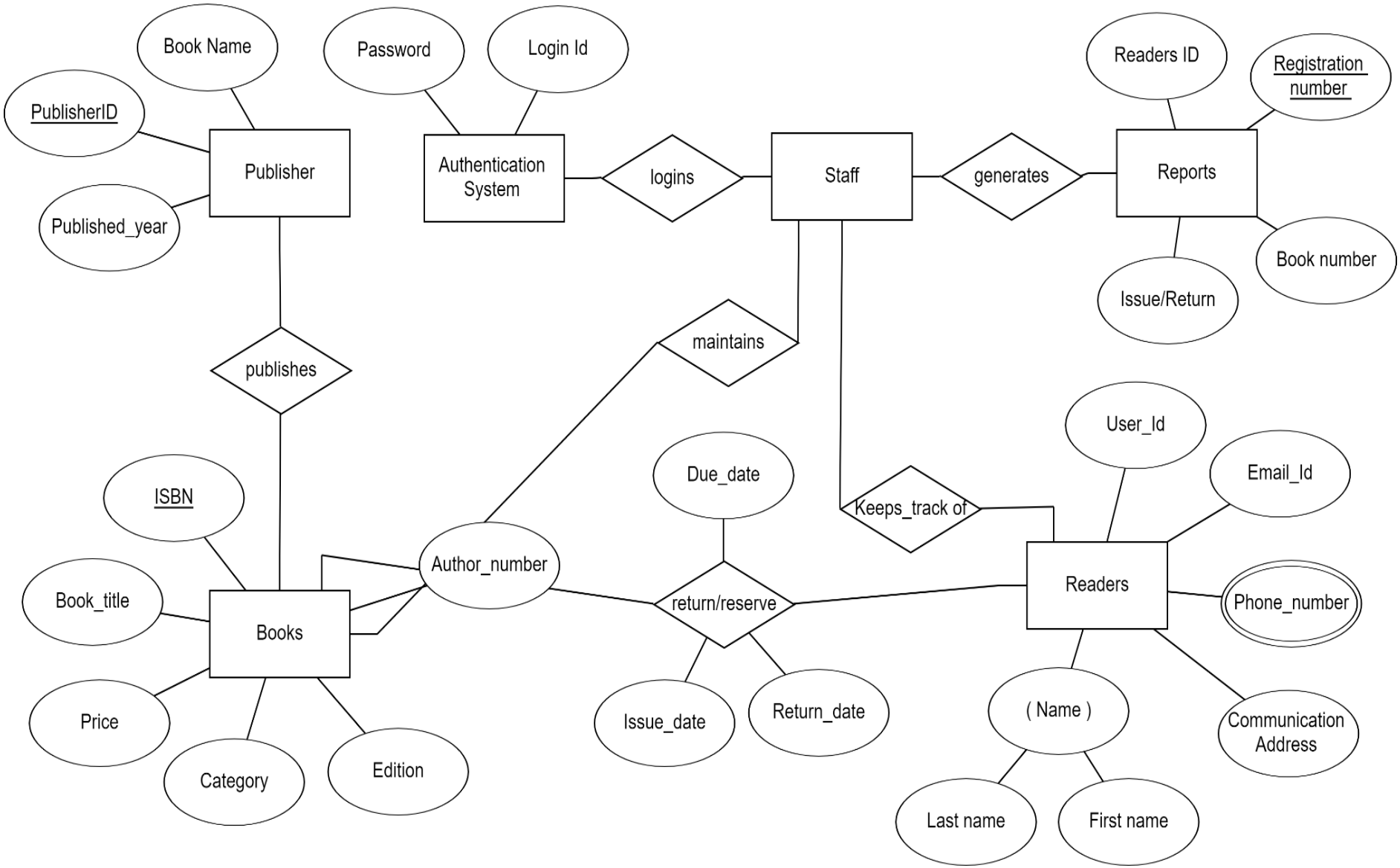
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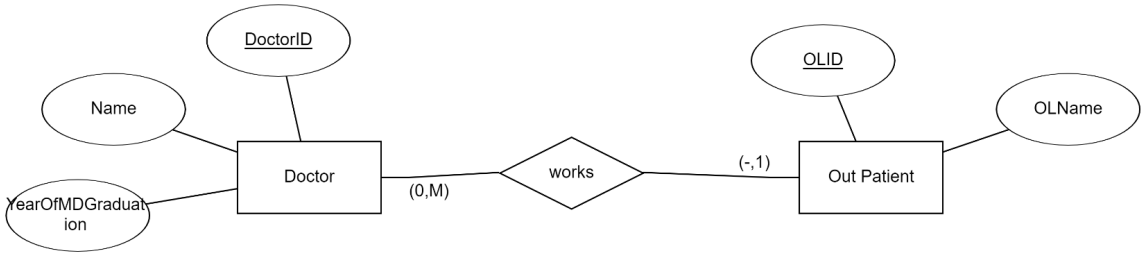
A)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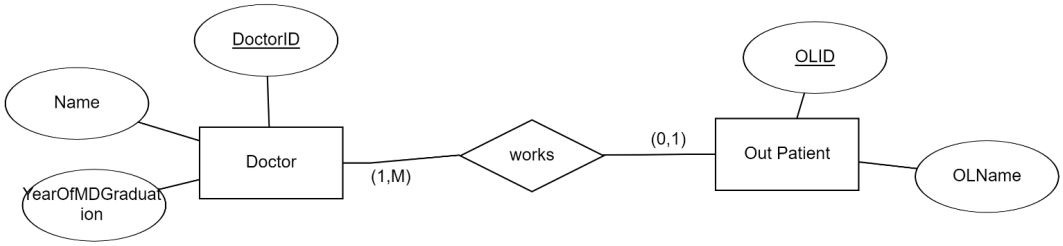
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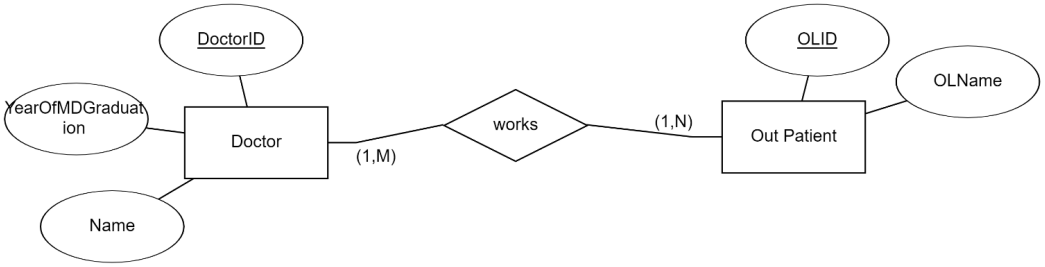
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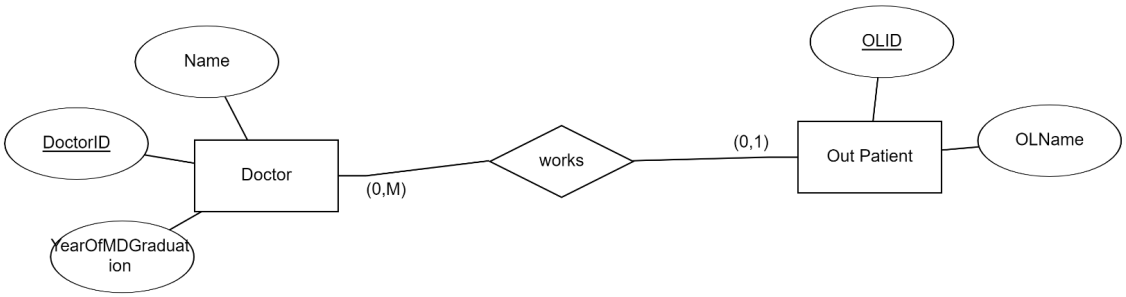
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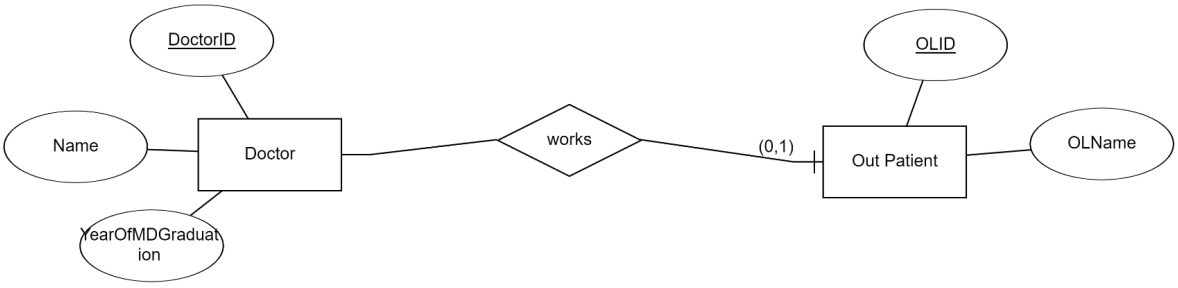
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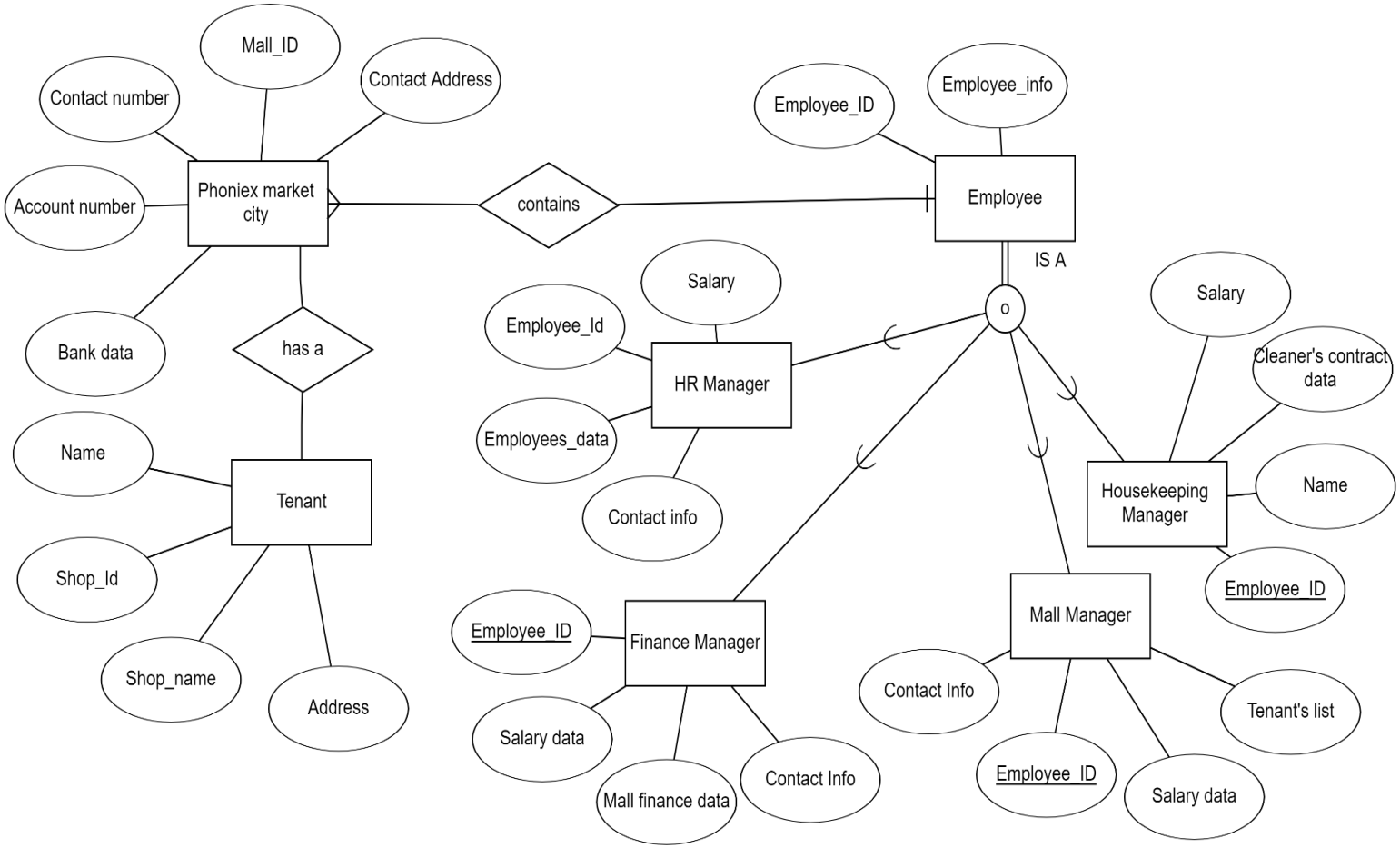
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