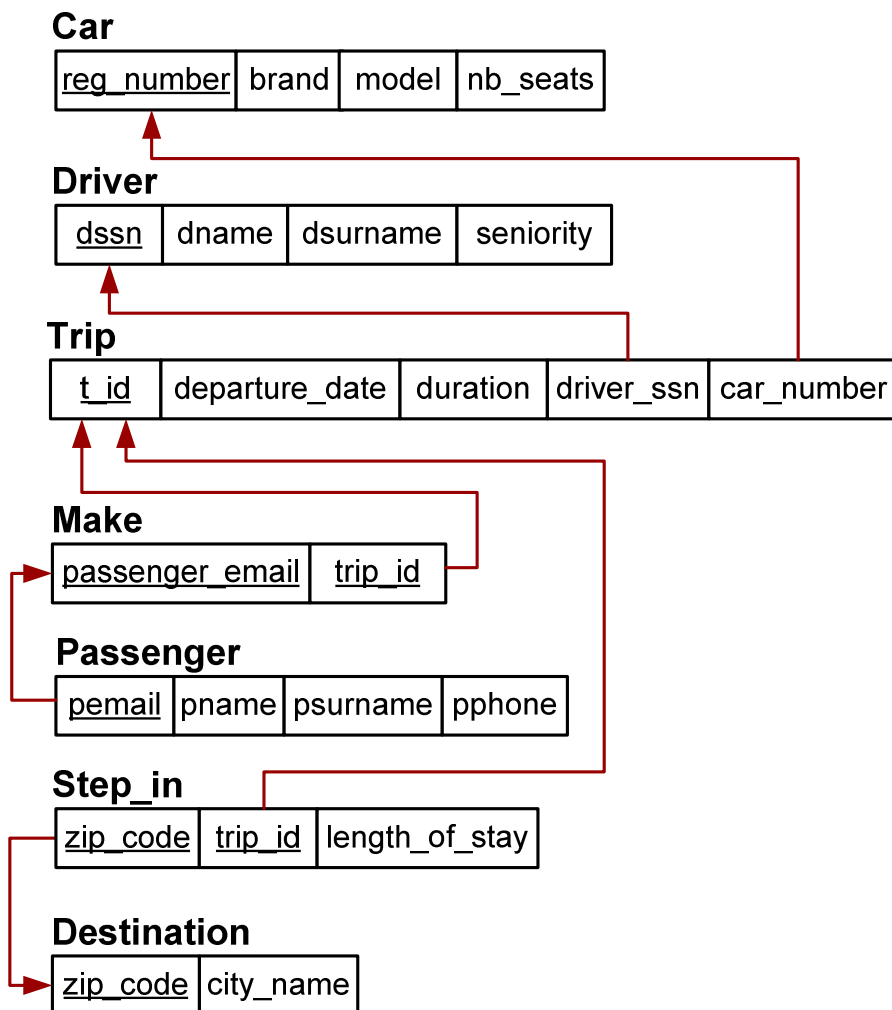


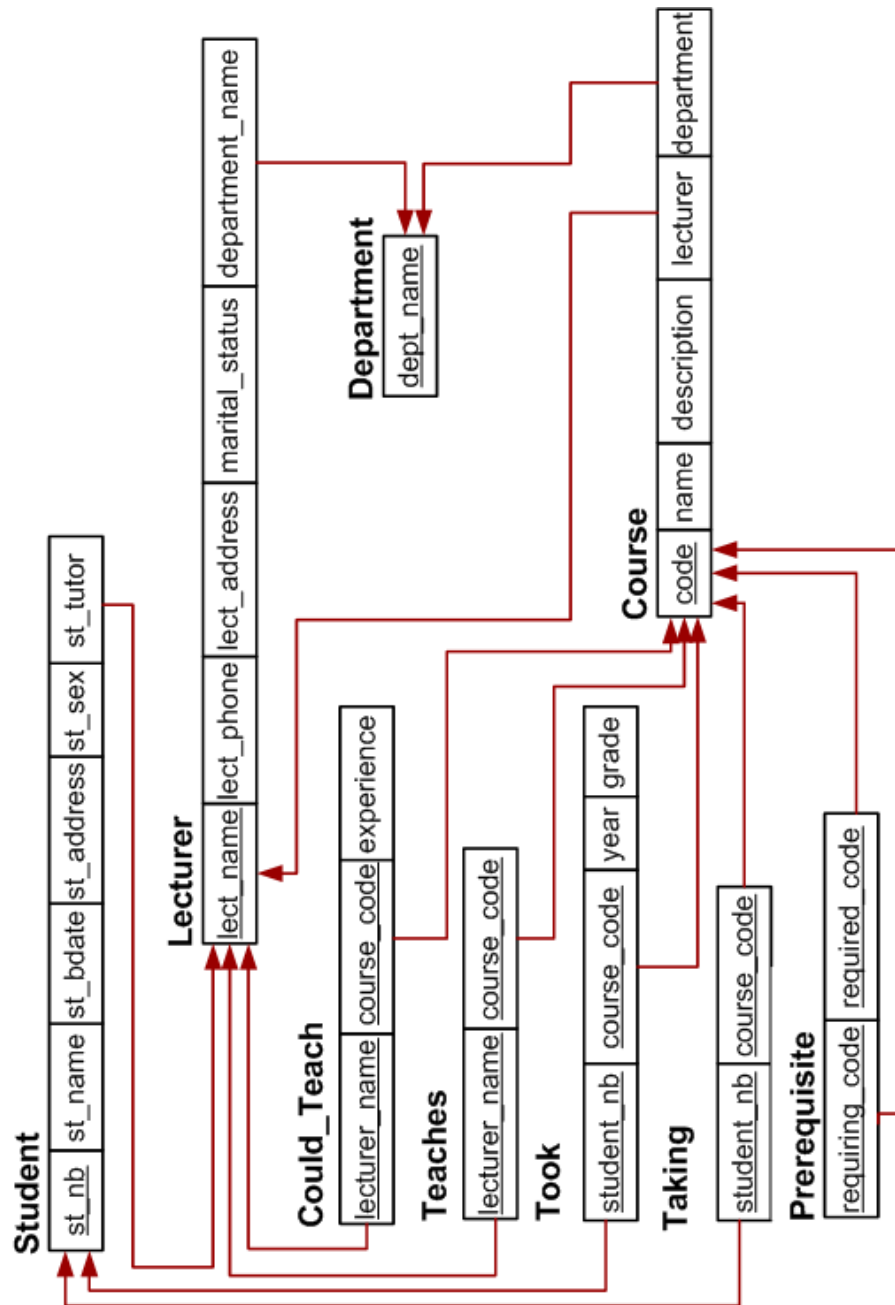
EXERCISES – ER-to-Relational Mapping

| | |
|-------------------------------------|--|
| <i>Department: Computer Science</i> | <i>Instructor: Dr. Mohamed-Foued Sriti</i> |
| <i>Course Number: CS370</i> | <i>Course Title: Introduction to Databases</i> |

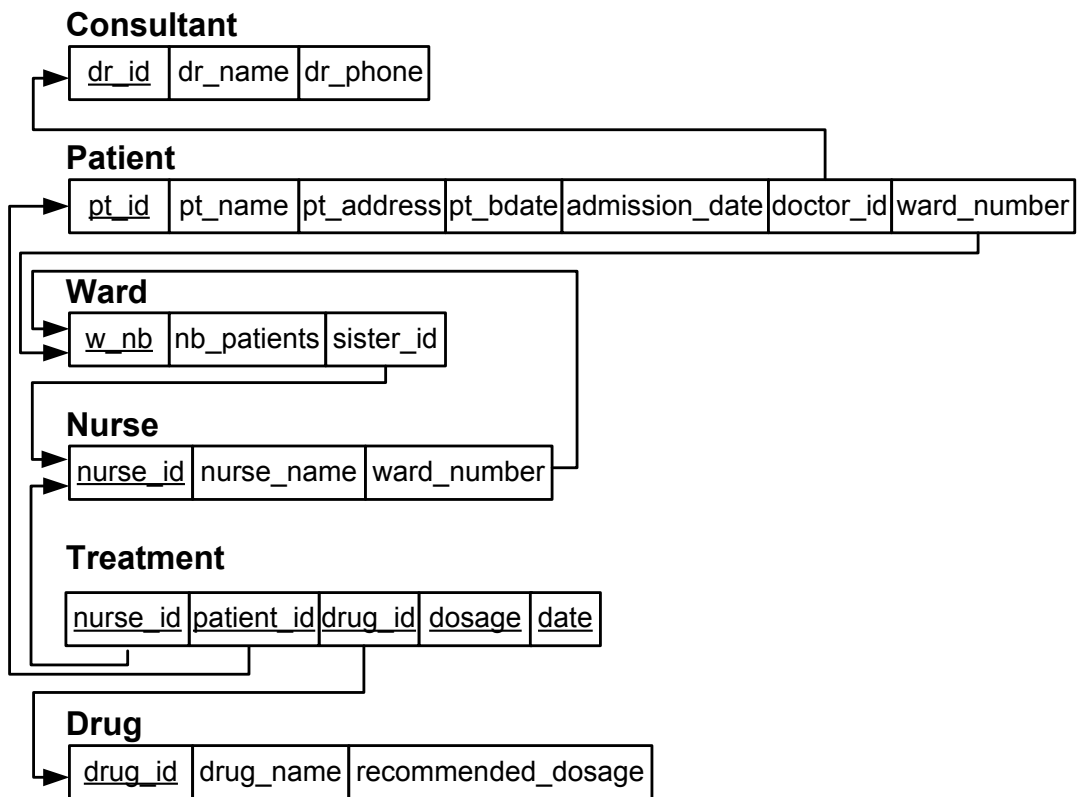
Exercise 1: Travel Agency



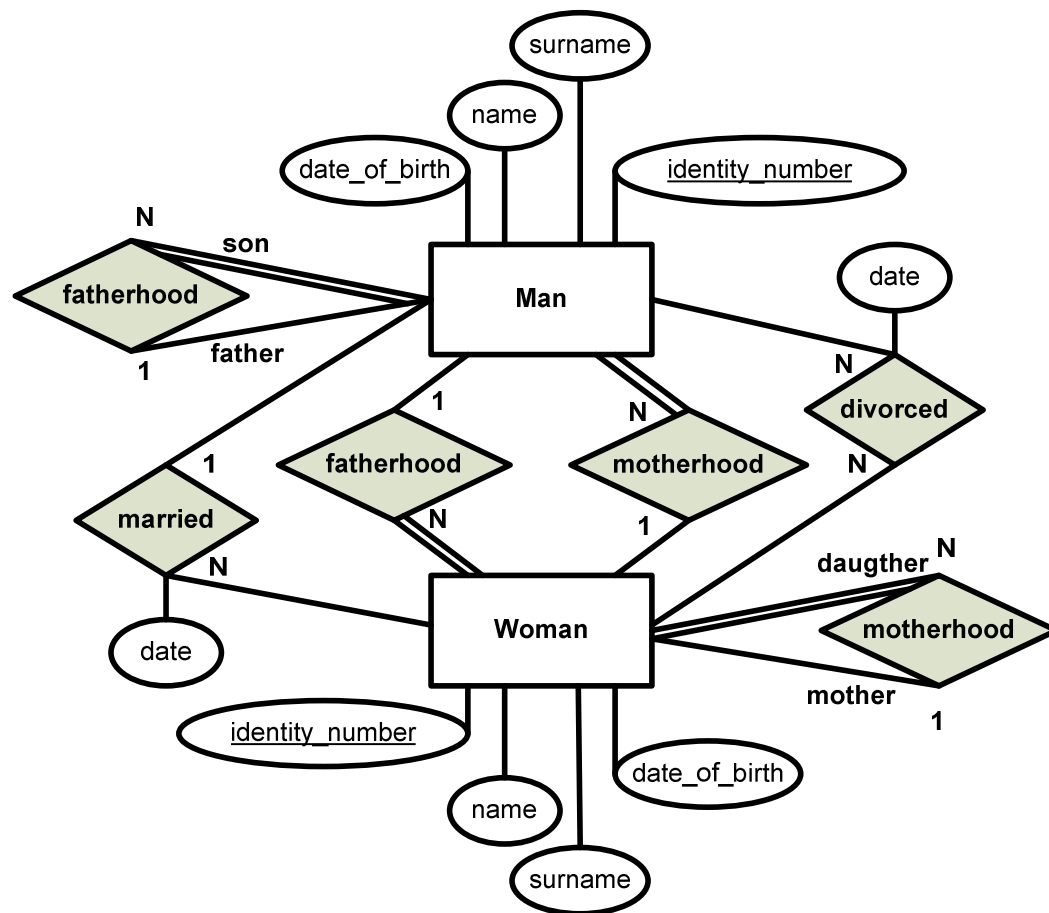
Exercise 2: University Database



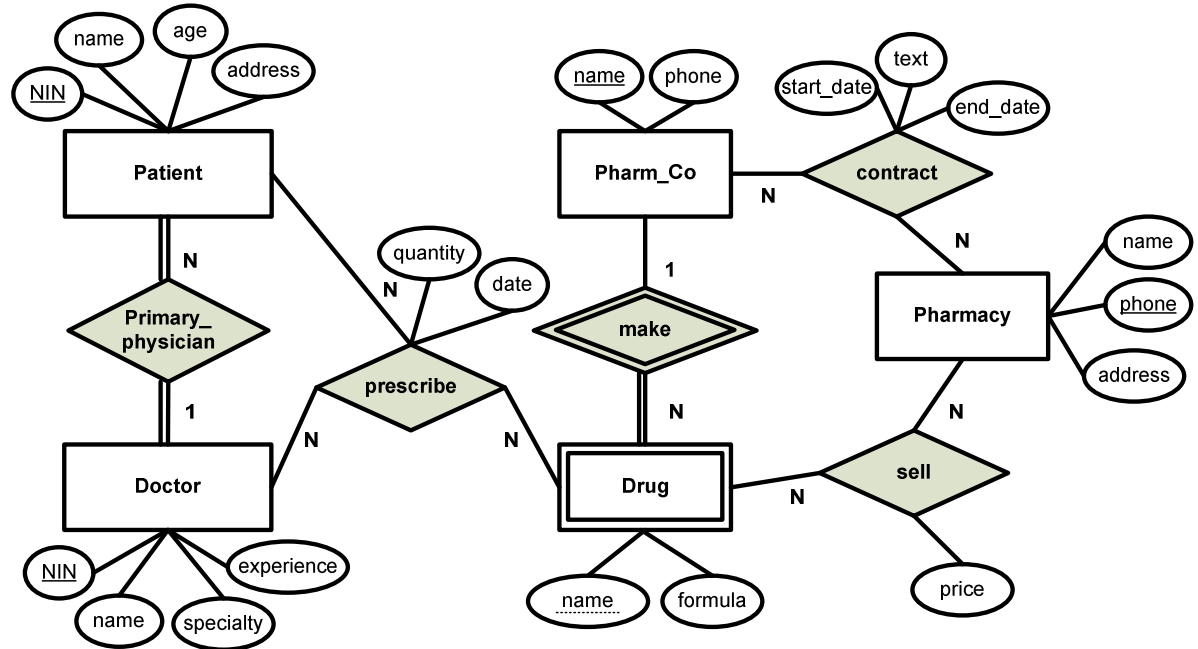
Exercise 3: Hospital Database



Exercise 4: Family Database



Exercise 5: Medical Prescriptions



Exercise 6: Company Database

Consider the following state of the Company database.

| DEPARTEMENT | | EMPLOYEE | | | | | |
|-------------|------|----------|-----------|----------|------------------|--------|------|
| NUMBER | NAME | SSN | FIRSTNAME | LASTNAME | ADDRESS | SALARY | DNUM |
| 1 | DEV | 111 | Ali | Othmany | Olaya St. Riyadh | 5000 | 2 |
| 2 | RES | 222 | Zaid | Zaidy | Imam St. Riyadh | 3500 | 1 |
| | | 333 | Omar | Basry | Oroba St. Riyadh | 2000 | 2 |
| | | | | | | | |

Among the following rows there is only one row that can be inserted in Employee table, which one (answer yes)? And tell why the other rows cannot be inserted into Employee table?

| | Row to be inserted | Answer |
|---|---|--|
| 1 | < NULL, "Mostafa", "Rajab", "Makkah St. Jeddah", 4000, 1> | No. Primary Key cannot be NULL (0.5 mark) |
| 2 | < 4444, "Mostafa", "Makkah St. Jeddah", 4000, 1> | No. The number of attributes is not right (LASTNAME is missed) (0.5 mark) |
| 3 | < 4444, "Mostafa", "Rajab", "Makkah St. Jeddah", 4000, 1> | Yes (0.5 mark) |
| 4 | < 4444, "Mostafa", "Rajab", "Makkah St. Jeddah", 4000, 3> | No. Foreign Key reference to an inexistent Primary Key (department that have the number 3 doesn't exist in DEPARTEMENT table) (0.5 mark) |