-- UNIVERSITY OF MASSACHUSETTS - LOWELL
-- COMP3090 DATABASE I
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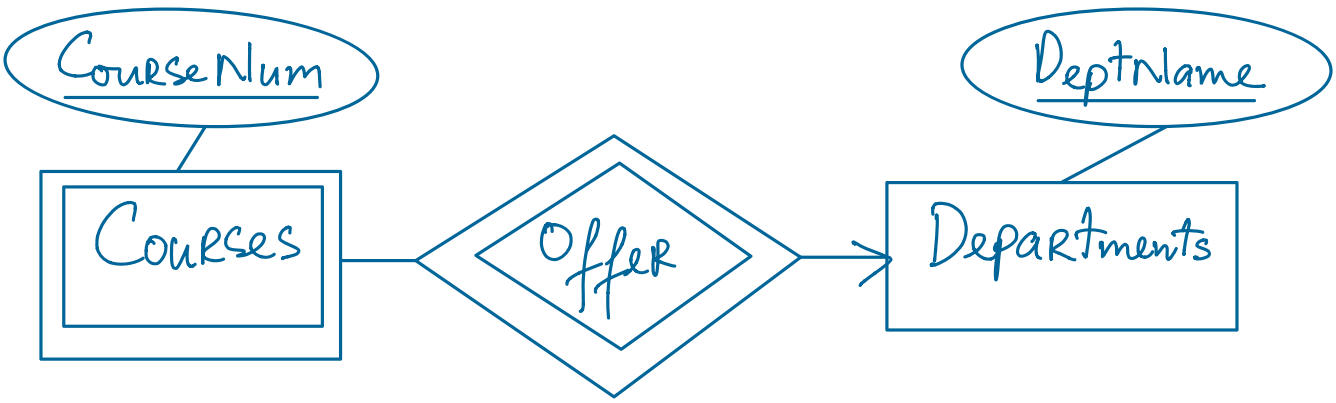
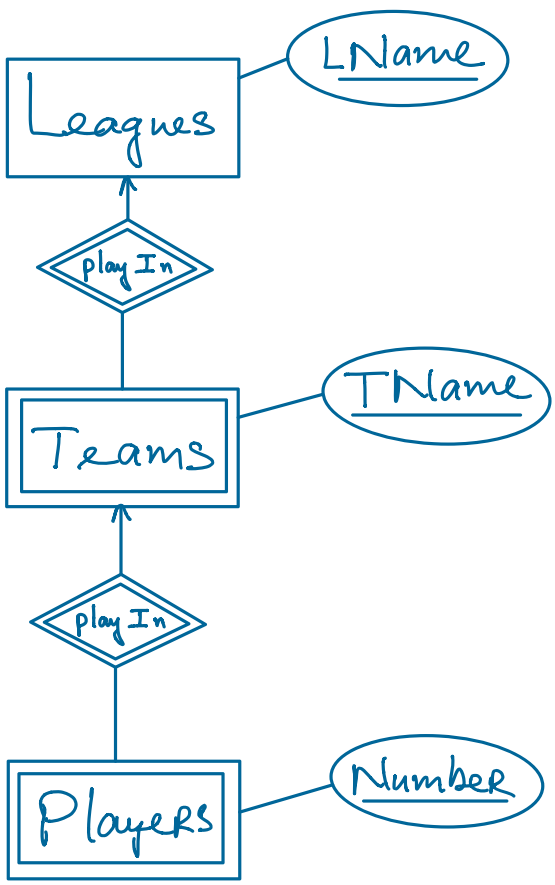
-- HOMEWORK 8

Exercise 4.4.4: Draw E/R diagrams for the following situations involving weak entity sets. In each case indicate keys for entity sets.
a) Entity sets Courses and Departments. A course is given by a unique department, but its only attribute is its number. Different departments can offer courses with the same number. Each department has a unique name.



! b) Entity sets Leagues, Teams, and Players. League names are unique. No league has two teams with the same name. No team has two players with the same number. However, there can be players with the same number of different teams, and there can be teams with the same name in different leagues.



Exercise 4.5.1: Convert the E/R diagram of Fig. 4.29 to a relational database schema.

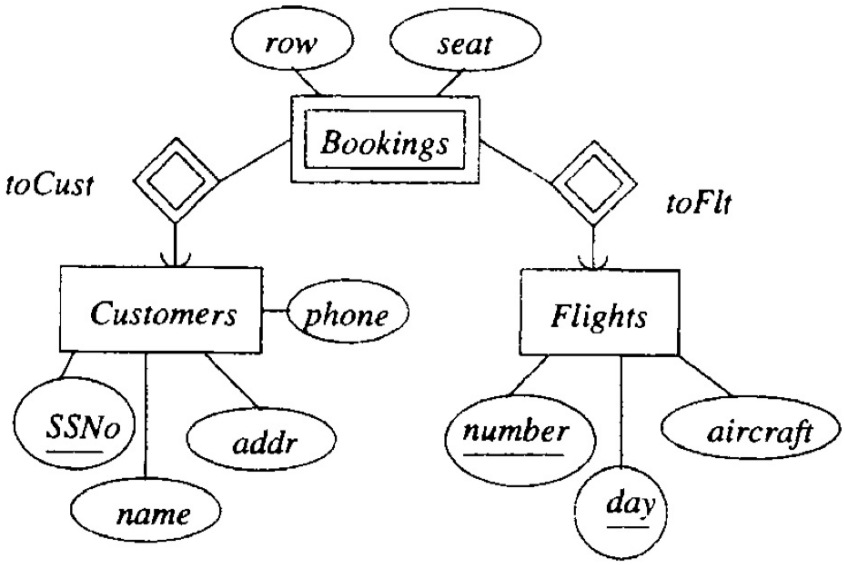


Figure 4.29: An E/R diagram about airlines

Customers (SSNo, name, addr, phone)
Flights (number, day, aircraft)
Bookings (SSNo, number, day, row, seat)

Exercise 4.6.1: Convert the E/R diagram of Fig. 4.32 to a relational database schema, using each of the following approaches:
a) The straight-E/R method.
b) The object-oriented method.
c) The nulls method.

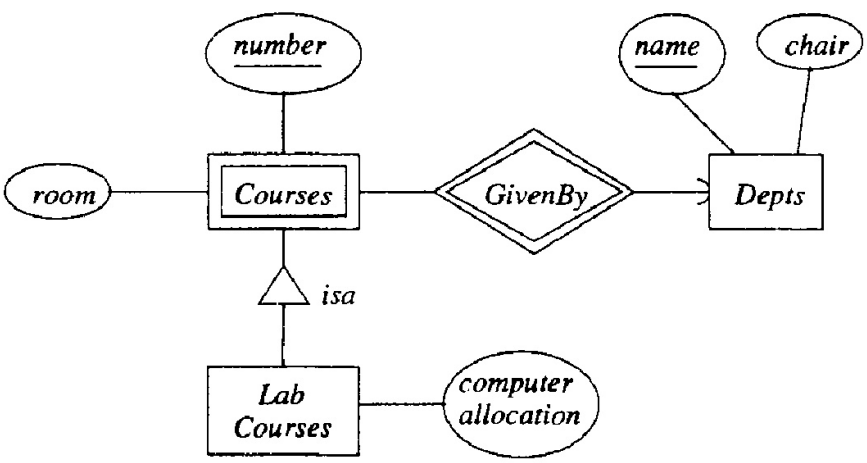


Figure 4.32: E/R diagram for Exercise 4.6.1

a) The straight-E/R method.

Depts(name, chair)
Courses(courseNumber, room)
GivenBy(courseNumber, deptName)
LabCourse(courseNumber, computerAllocation)

b) The object-oriented method.

Depts(name, chair)
Courses(courseNumber, room)
GivenBy(courseNumber, deptName)
LabCourse(courseNumber, computerAllocation)
CoursesLabCourses(courseNum, room, computerAllocation)

c) The nulls method.

Depts(name, chair)
Courses(courseNumber, room)
GivenBy(courseNumber, deptName)
LabCourse(courseNumber, computerAllocation)