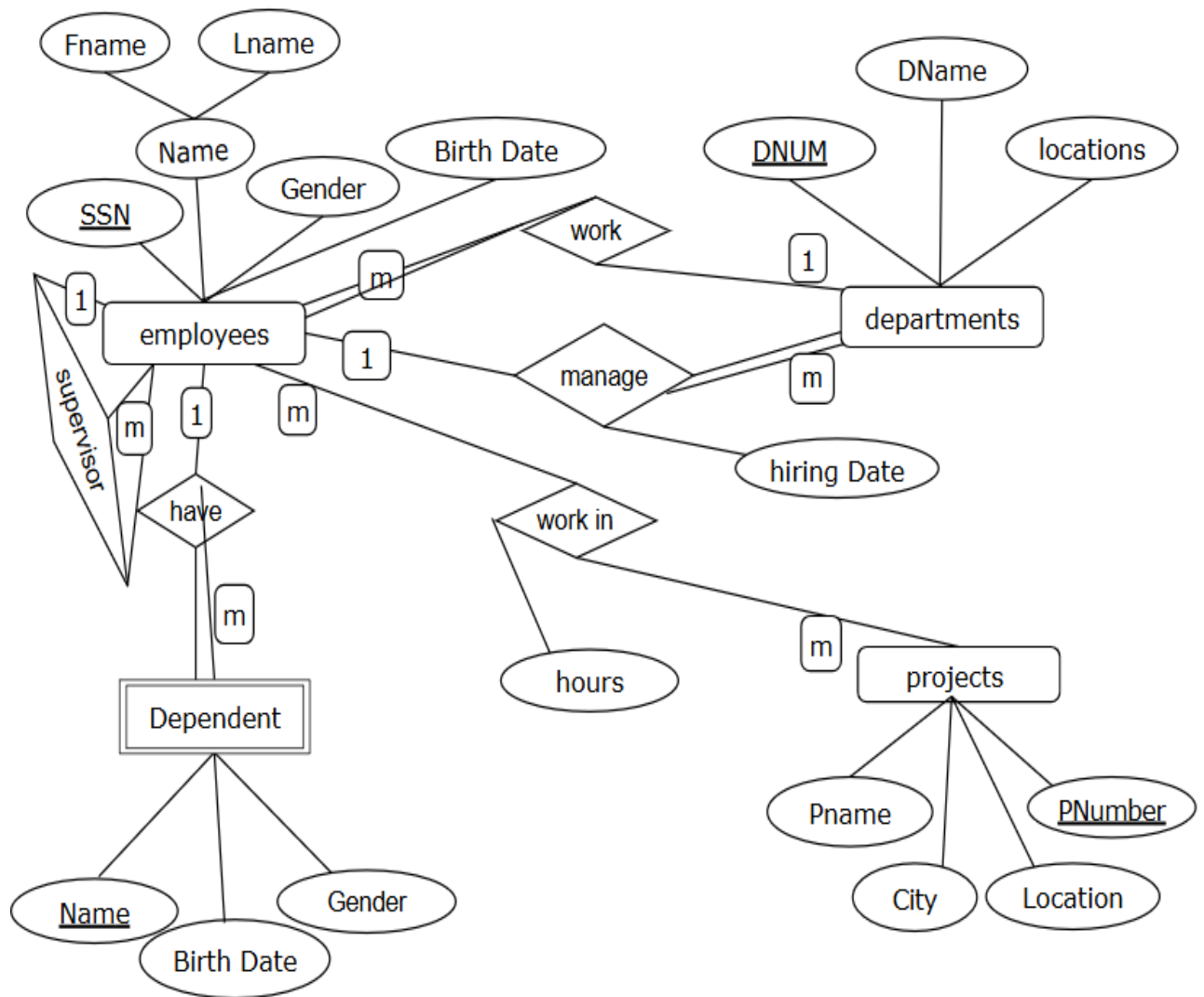


Case 1

A big company has decided to store information about its projects and employees in a database. The company has wisely chosen to hire you as a database designer. Prepare an E-R diagram for this Company according to The following Description:

- The company has a number of **employees** each employee has **SSN, Birth Date, Gender and Name** which represented as **Fname and Lname**.
- The company has a set of **departments** each department has a set of attributes **.0DName, DNUM (unique) and locations**.
- Employees work in several **projects** each project has **Pname, PNumber as an identifier, Location and City**.
- Each employee may have a set of **dependent**; each dependent has **Dependent Name (unique), Gender, and Birth Date**.
Note: if the employee left the company no needs to store his dependents info
- For each Department, there is always one employee assigned **to manage** that Department and each manager has a **hiring Date**
- Department may have employees but employee must work on Only One department
- Each department may have a set of projects and each project must assigned to one department
- Employees work in several projects and each project has several employees and each employee has a number of working hours in each project
- Each employee has a supervisor

- ❖ Solution Case (2)



Case 2

ITI has decided to store information about its Students and curriculums in a database. ITI has wisely chosen to hire you as a database designer. Prepare an E-R diagram for ITI that describes its activities according to The following Description:

- ITI has a number of students in different departments(tracks), each student has St_id(unique),studentName(Fname,Lname),St_age,st_address
- Each department has dept_id(unique), dep_name
- Students takes many Courses, each course has crs_id, crs_name, crs_duration and crs_Description
- Student has a grade in each course
- Each department contains a set of instructor and each instructor is located in one department, each instructor has ins_id, ins_name, ins_salary, ins_hourRate, ins_bouns,ins_address
- For each Department, there is always one instructor assigned to manage that Department and each manager has a hiring Date
- Instructor may teach many courses and each course may be conducted by many instructors, each instructor has evaluation in each course
- Course is classified under one topic, each topic may have many courses, and each topic has top_name and top_id

❖ Solution Case (2)

