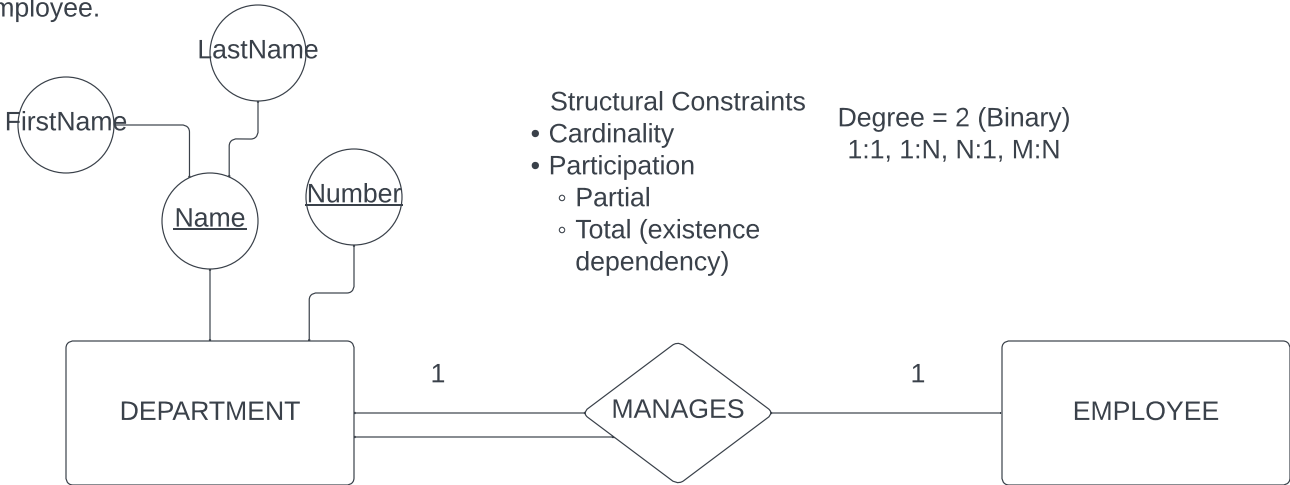


Let's review:

• The company is organized into departments (Entity). Each department has a unique name, a unique number, and a particular employee who manages the department. We keep track of the start date when that employee began managing the department. A department may have several locations. A department controls a number of projects, each of which has a unique name, a unique number, and a single location.

• The database will store each employee's name, Social Security number, address, salary, sex (gender), and birth date. An employee is assigned to one department, but may work on several projects, which are not necessarily controlled by the same department. It is required to keep track of the current number of hours per week that an employee works on each project, as well as the direct supervisor of each employee (who is another employee).

• The database will keep track of the dependents of each employee for insurance purposes, including each dependent's first name, sex, birth date, and relationship to the employee.



- Structural Constraints
- Cardinality
  - Participation
    - Partial
    - Total (existence dependency)

Degree = 2 (Binary)  
1:1, 1:N, N:1, M:N

Anatomy of UML

UML (Types (class name), Attributes, Operations)

Department.java
+ Name: + Number: int
+ hire()

- Degree
- The number of participating entity types in a relationship type R.

Min max notation

(x, y) - x is the minimum number of relationship instances that e is apart of, y is the max.

Sample exam question, take above, and model using min max notation\*

