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# **BIS 235 Entity-Relationship Diagram Homework: The Company Database**

You have been charged with developing a database that meets the following requirements:

* The company is organized into departments. Each department has a name, number and a single employee who *currently* manages that department. Only one employee manages any given department at one time, but we want to be able to track the history of a department's managers over time. To do so, we need to keep track of the start date of the department manager. Each department must always have one and only one manager *at any given time*. A given manager can manage a given department for a time, step down for a period, and then subsequently manage a department again later on. Each manager has a name, ID, and a security clearance that the database must store.
* Each department controls a number of projects. Each project has a name, number and is located at a single location. Projects are controlled by only one department at a time.
* We store each employee’s social security number, address, salary, sex, name, and birthdate. Each employee works for one department but also may work on several projects. We keep track of the number of hours per week that an employee currently works on each project. We also keep track of the direct supervisor of each employee. Each person has one and only one direct supervisor. Every employee must be assigned to a department. Some employees, however, may have no projects. New projects may not yet have any employees working on them.
* Each employee may have a number of dependents. For each dependent, we keep track of their name, sex, birth-date, and relationship to employee. We are interested in the employee’s dependents only insomuch as the employee remains employed by the company. When the employee leaves, his or her dependents cease to be of interest here.

Using the requirements above, together with any common-sense assumptions you need to make, develop an Entity-Relationship diagram for the Company database. Please be sure to document any assumptions you make above and beyond the specification above in the form of notes included with your diagram.

Please include in your diagram appropriate entity and relationship names, attributes(indicate the primary key by underlining it) for entities, relationship attributes (if any), cardinality and participation.

You may use the software of your choice for this assignment or you may (neatly!) hand draw your ERD, take a picture of it, and paste the picture into a text document.

***Note that you MUST use the ER diagramming conventions taught in this class. Other conventions, even those in widespread use (Crow's Foot, Idef1X, etc.) will earn you a score of 0.***