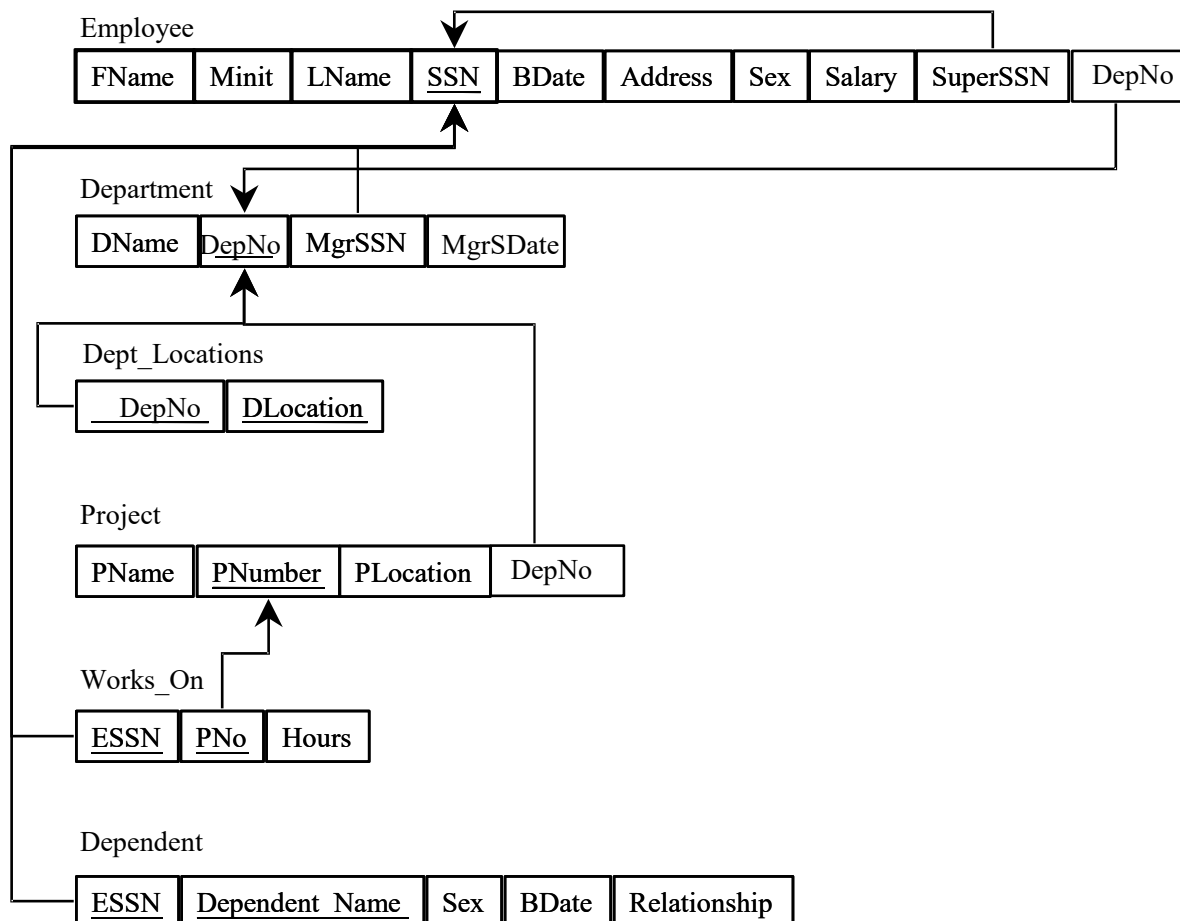


## Lab 4 SQL

### Overview:

What you need to submit is the SQL command;

The logical schema is shown below for your reference, it's especially helpful when you write multiple table queries. Note: some of you might have different table name and attribute name.



### Notes:

- SSN is social security number, it means employee's identification number.
- SuperSSN: each employee may have a supervisor, who is also an employee, to supervise their works
- FName, Minit, Lname: first name, middle name and lastname
- DepNo: department number or department id

- MgrSSN: manager's SSN; MgrSSN → SSN: because manager is just an employee in this company, they must have a SSN number which is stored in Employee table.
- MgrSDate: a date to start to be a manager
- ESSN(in Works\_On table) is just a SSN, but different name.
- The arrows → here are used to describe the relationship between these tables. Look at them to create foreign keys.
- Dependent: relation to store family members of an employee.

### Standalone Queries

1. List department number, department name, and number of employees in each department, ordered by number of employees in each department.
2. List department number, department name, and number of employees in departments that have more than 2 employees, ordered by department number.
3. List the name and location of department 1, 3, and 5.
4. List **female** employee name and project name and project number that she is working on.
5. List the name of employees who has a dependent of the same gender as the employee.
6. List the name of employees who works on project controlled by department 5.
7. List the name of employees who are not working on any projects.
8. For each department, list department number, number of employees, and average salary.
9. List the name and number of departments whose employee average salary is between 30000 and 60000.

10. List the name of employees who have no dependents.
11. List the name of employees who work on both project 3388 and project 1945.
12. List the department number and project number that are controlled by each department, ordered by project number.
13. List the total working hours of each employee. Hint: use SUM(hours)
14. List the name of employees whose supervisor does not have a supervisor.
15. List the name of employees who both lives (address) and works (department location) in Salt Lake City.
16. List the name of supervisors who starts to supervise a department before Sep 20, 1976.