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HOMEWORK 5 B

CS 457 B

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(12.28)

These operations define how various actions can be performed on the entity types within the COMPANY schema.

1. Employee
    a. Add Employee: Make a database entry when a new employee joins.
    b. Update Employee: Make changes to an employee's name, address, and other details when they move or change their details.
    c. Delete Employee: Remove the record of an employee from the database.
    d. View Employee: Get and show employee information.
    e. Assign Project: Assing an employee a project to work on.
    f. Project Removal: Remove an employee from a project.

2. Department
    a. Add Department: Create a new department inside the DB.
    b. Update Department: Change a department's name, category, and other characteristics.
    c. Delete Department: Remove the department from the DB.
    d. View Department: List all the departments and their information.
    e. Department Search: Search all departments using parameters such as manager, department name, or location.
    f. Assign management: Depending on their eligibility, assign an employee to the position of management.
    g. Employee Removal: Remove an employee from a department.

3. Project
    a. Add Project: Create a new project inside the DB.
    b. Update Project: Change an existing project's name, description, and its details.
    c. Project Delete: Remove the project from the DB.
    d. View Project: Retrieve and view all project-related information.
    e. Search Projects: Search the projects by department or status, etc.
    f. Employee Assignment: Assign an employee to a project.
    g. Employee Removal: Remove an employee from a project.

4. Dependent
    a. Add Dependent: Make an employee's new dependent record.
    b. Update Dependent: Change an existing dependent's name, relationship, or its details.
    c. Delete Dependent: Remove the dependant from the employee’s record or the DB.
    d. View Dependent: Retrieve and view the dependent-related information.
    e. Dependents Search: Look for employees' dependents using parameters like relationship or age.

(12.32)

(CHAPTER 6)

1.
```
SELECT E.Fname, E.Lname, 1.1 * E.Salary AS Increased_sal FROM EMPLOYEE AS E, WORKS_ON AS W, PROJECT AS P WHERE E.Ssn = W.Essn AND W.Pno = P.Pnumber AND P.Pname = 'ProductX';
```

Fname varchar	Lname varchar	Increased_sal newdecimal
John	Smith	37400.000
Joyce	English	31900.000

2.
```
SELECT DISTINCT Fname, Lname, Pname, Dno, Hours FROM EMPLOYEE AS E, PROJECT AS P, WORKS_ON AS W WHERE E.Dno = 5 AND P.Pname = 'ProductX' AND W.Hours >= 10 AND W.Essn = E.Ssn;
```

Fname varchar	Lname varchar	Pname varchar	Dno int	Hours newdecimal
John	Smith	ProductX	5	32.5
Franklin	Wong	ProductX	5	10.0
Joyce	English	ProductX	5	20.0
Ramesh	Narayan	ProductX	5	40.0

3.
```
SELECT Fname, Lname FROM EMPLOYEE WHERE Super_ssn = (SELECT Ssn FROM EMPLOYEE WHERE Fname = 'Franklin' AND Lname = 'Wong');
```

Fname varchar	Lname varchar
John	Smith
Joyce	English
Ramesh	Narayan

(CHAPTER 7)

1.
```
SELECT PROJECT.Pnumber, PROJECT.Dnum, EMPLOYEE.Lname, EMPLOYEE.Address, EMPLOYEE.Bdate
FROM PROJECT JOIN DEPARTMENT ON PROJECT.Dnum = DEPARTMENT.Dnumber JOIN EMPLOYEE ON
DEPARTMENT.Mgr_ssn = EMPLOYEE.Ssn WHERE PROJECT.Plocation = 'Stafford';
```

Pnumber int	Dnum int	Lname varchar	Address varchar	Bdate date
10	4	Wallace	291 Berry, Bellaire, TX	1941-06-20
30	4	Wallace	291 Berry, Bellaire, TX	1941-06-20

2.
```
SELECT EMPLOYEE.Lname, EMPLOYEE.Fname FROM EMPLOYEE JOIN (SELECT Essn, COUNT(*) AS
DependentCount FROM DEPENDENT GROUP BY Essn HAVING COUNT(*) >= 2) AS DEP_COUNT ON
EMPLOYEE.Ssn = DEP_COUNT.Essn;
```

Lname varchar	Fname varchar
Smith	John
Wong	Franklin

3.
```
.SELECT EMPLOYEE.Lname, EMPLOYEE.Fname FROM EMPLOYEE JOIN DEPARTMENT ON EMPLOYEE.Ssn =
DEPARTMENT.Mgr_ssn WHERE EMPLOYEE.Ssn IN (SELECT Essn FROM DEPENDENT);
```

Lname varchar	Fname varchar
Wong	Franklin
Wallace	Jennifer