Project Management Exercise

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BASIC QUERY Simple Queries

1. Find employees working in a department with ID 4.
2. Find employees with a salary above 30,000.
3. Find employees with a salary above 25,000 in a department with ID 4 or employees with a salary above 30,000 in a department with ID 5.
4. Provide the full names of employees in Ho Chi Minh City.
5. Provide the full names of employees whose last names start with the letter 'N.'
6. Provide the birthdate and address of the employee Dinh Tien Toi.
7. Provide employees born before the year 1975.
8. Provide employees born before April 30, 1975.
9. Provide employees born before April 30, 1975, or living in Ho Chi Minh City, or working in room number 4.

Queries Using Joins

10. For each department, provide the department name and location.
11. Find the names of department heads for each department.
12. Find PROJECTNAME, PROJECT_ID, PROJECTLOCATION, DEPARTMENT, DEPARTMENT_NAME, DEPARTMENT_ID, DEPARTMENT_HEAD, APPOINTMENT_DATE.
13. Find the names and addresses of all employees in the "Research" department.
14. Find the names of female employees and the names of their relatives.
15. For every project in "Ha Noi," list the project code (PROJECT_ID), the department code in charge of the project (DEPARTMENT_ID), the name of the department head (LASTNAME, MIDDLENAME, FIRSTNAME), as well as their address (HOUSEADDRESS) and date of birth (BIRTHDAY).
16. For each employee, provide the employee's name and the name of their direct supervisor.
17. For each employee, provide the employee's name and the name of the department head of the department where the employee works.
18. Find the names of employees in department 5 who are involved in the project "Product X" and are directly managed by "Nguyen Thanh Tung."
19. Provide the full name of the employee (LASTNAME, MIDDLENAME, FIRSTNAME) and the names of the projects that the employee is involved in, if any.

Grouping Queries

20. For each project, list the project name (PROJECTNAME) and the total number of hours worked per week by all employees participating in that project.

21. For each employee, provide the employee's full name and the number of relatives they have.
22. For each department, list the department name (DEPARTMENT_NAME) and the average salary of employees working for that department.
23. The average salary of all female employees.
24. For departments with an average salary above 30,000, list the department name and the number of employees in that department.
25. Provide the number of projects each employee is involved in.

Nested Queries

26. Provide a list of project codes (PROJECT_ID) where either the workforce has the last name (LASTNAME) 'Dinh' or the project is led by a department head with the last name (LASTNAME) 'Dinh'.
27. List the names of employees (LASTNAME, MIDDLENAME, FIRSTNAME) who have more than 2 relatives.
28. List the names of employees (LASTNAME, MIDDLENAME, FIRSTNAME) who have no relatives.
29. List the names of department heads (LASTNAME, MIDDLENAME, FIRSTNAME) who have at least one relative.
30. Find the last names (HONV) of department heads who are not married.
31. Provide the names of employees (LASTNAME, MIDDLENAME, FIRSTNAME) with a salary above the average salary of the "Research" department.
32. Provide the department name and the names of department heads for the department with the most employees.
33. Provide a list of project codes that employees with code 009 have not worked on.
34. Provide a list of job titles in the project Product X' that employees with code 009 have not worked on.
35. Find the full names (HONV, TENLOT, TENNV) and addresses (DCHI) of employees working on a project in 'TP HCM' but whose department is not located in the city of 'TP HCM'.
36. Generalizing question 16, find the full names and addresses of employees working on a project in one city but whose department is not located in the same city.

Division Queries

37. List the employees (LASTNAME, MIDDLENAME, FIRSTNAME) working on all projects of the company.
38. List the employees (LASTNAME, MIDDLENAME, FIRSTNAME) assigned to all projects led by department number 4.
39. Find the employees (LASTNAME, MIDDLENAME, FIRSTNAME) assigned to all projects that employee Dinh Ba Tien works on.
40. Provide the employees assigned to all tasks in the project "Product X."