

HR DATABASE MANAGEMENT SYSTEM - SQL TASK SOLUTIONS

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Task 1: Basic SQL Queries

- SELECT statements for retrieving full/partial employee data
- ORDER BY usage for sorting by salary, name, hire_date
- DISTINCT for removing duplicates
- TOP N for limiting results (with OFFSET)
- WHERE clause with comparisons (=, <>, <, >, BETWEEN)
- ALTER TABLE and FOREIGN KEY constraint usage

Task 2: Logical & Special Operators

- AND, OR, NOT combinations
- LIKE, BETWEEN, IN, EXISTS
- Subqueries with ALL and ANY

Task 3: JOINS

- INNER JOIN to combine employees, jobs, departments
- LEFT JOIN on countries and locations
- SELF JOIN to show manager-employee relationships
- FULL OUTER JOIN with fruits/baskets
- CROSS JOIN with sales channels

Task 4: GROUP BY and HAVING

- Aggregations: COUNT, MIN, MAX, AVG, SUM
- Filtering with HAVING after GROUP BY

Task 5: Other Queries

- UNION and INTERSECT
- EXISTS and NOT EXISTS to identify dependent-linked employees
- CASE for custom classifications (salary, anniversary)
- UPDATE to sync dependent last names and correct data

Final Task: Advanced Subqueries

- Subqueries for filtering by location, salary
- Department-level aggregations (MIN, MAX, AVG)
- Comparing employee values to department/group aggregates

Full SQL code included in this project was tested and formatted for SQL Server.