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-- Purpose: Assignment 1 - DBS311
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-- Question 1 Display employees hired in May or November of any year
-- Q1 SOLUTION --
SELECT
    employee_id,
    SUBSTR(last_name || ', ' || first_name, 1, 25) AS FullName,
    job_id,
    TO_CHAR(LAST_DAY(hire_date), '"["fmMonth ddth "of" yyyy"]"') AS "Start Date"
FROM employees
WHERE
    EXTRACT(year FROM hire_date) NOT IN (2015, 2016) AND
    EXTRACT(month FROM hire_date) IN (5, 11)
ORDER BY hire_date DESC;

-- Question 2 List all employees whose monthly earning is outside the range $6,500 to $11,500 and who are employed as Vice Presidents or
Managers
-- Q2 SOLUTION --
SELECT
    'Emp# ' || employee_id || ' named ' ||
    first_name || ' ' || last_name || ' who is ' ||
    job_id || ' will have a new salary of ' ||
    TO_CHAR(salary * (1 + increaseRate), 'fm$99999')
    AS "Employees with increased Pay"
FROM
    (SELECT
        employee_id,
        first_name,
        last_name,
        job_id,
        salary,
        0.25 AS increaseRate
    FROM employees
    WHERE
        salary NOT BETWEEN 6500 AND 11500 AND
        UPPER(job_id) LIKE '%VP'
    UNION ALL
    SELECT
        employee_id,
        first_name,
        last_name,
        job_id,
        salary,
        0.18
    FROM employees
    WHERE
        salary NOT BETWEEN 6500 AND 11500 AND
        (UPPER(job_id) LIKE '%MAN' OR UPPER(job_id) LIKE '%MGR'))
ORDER BY salary DESC;

-- Question 3 Annual Income
-- Q3 SOLUTION --
SELECT
    last_name,
    salary,
    job_id,
    NVL(TO_CHAR(e.manager_id), 'None') AS Manager#,
    TO_CHAR((salary + salary * NVL(commission_pct, 0)) * 12 + 1000, '$999,999.99') AS "Total Income"
FROM employees e
    JOIN departments d ON e.department_id = d.department_id
WHERE
    commission_pct IS NULL OR
    (UPPER(department_name) = 'SALES' AND
    salary + salary * NVL(commission_pct, 0) + 1000 > 15000)
ORDER BY "Total Income" DESC;

-- Question 4 Lowest Dept/Job Pay
-- Q4 SOLUTION --
SELECT
    e.department_id,
    job_id,
    MIN(salary) AS "Lowest Dept/Job Pay"
FROM employees e
    JOIN departments d ON e.department_id = d.department_id
WHERE
    UPPER(job_id) NOT LIKE '%REP' AND
    UPPER(department_name) NOT IN ('IT', 'SALES')
GROUP BY
    e.department_id,
    job_id
HAVING MIN(salary) BETWEEN 6500 AND 16800
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ORDER BY
    department_id,
    job_id;

-- Question 5 employees who earn more than all lowest paid employees outside US
-- Q5 SOLUTION --
SELECT
    last_name,
    salary,
    job_id
FROM employees
WHERE
    UPPER(job_id) NOT LIKE '%PRES' AND
    UPPER(job_id) NOT LIKE '%VP' AND
    salary > ALL (
        SELECT MIN(salary)
        FROM employees e
            JOIN departments d ON e.department_id = d.department_id
            JOIN locations l ON d.location_id = l.location_id
        WHERE UPPER(country_id) != 'US'
        GROUP BY e.department_id)
ORDER BY job_id;

-- Question 6 in IT or MARKETING department and earn more than the worst paid person in the ACCOUNTING department
-- Q6 SOLUTION --
SELECT
    last_name,
    salary,
    job_id
FROM employees
WHERE
    department_id IN (
        SELECT department_id
        FROM departments
        WHERE
            UPPER(department_name) = 'IT' OR
            UPPER(department_name) = 'MARKETING')
    AND
    salary > (
        SELECT MIN(salary)
        FROM employees
        WHERE department_id = (
            SELECT department_id
            FROM departments
            WHERE UPPER(department_name) = 'ACCOUNTING')
    )
ORDER BY last_name;

-- Question 7 employee who earns less than the best paid unionized employee
-- Q7 SOLUTION --
SELECT
    SUBSTR(first_name || ' ' || last_name, 1, 24) AS Employee,
    job_id,
    LPAD(TO_CHAR(salary, '$99,999'), 15, '=') AS Salary,
    department_id
FROM employees
WHERE
    salary < (
        SELECT MAX(salary)
        FROM employees
        WHERE
            UPPER(job_id) NOT LIKE '%PRES' AND
            UPPER(job_id) NOT LIKE '%VP' AND
            UPPER(job_id) NOT LIKE '%MAN' AND
            UPPER(job_id) NOT LIKE '%MGR')
    AND
    department_id IN (
        SELECT department_id
        FROM departments
        WHERE UPPER(department_name) IN ('SALES', 'MARKETING'))
ORDER BY Employee;

-- Question 8 Display department name, city and number of different jobs in each department
-- Q8 SOLUTION --
SELECT
    department_name,
    SUBSTR(NVL(city, 'Not Assigned Yet'), 1, 22) AS City,
    COUNT(DISTINCT job_id) AS "# of Jobs"
FROM employees e
    LEFT JOIN departments d ON e.department_id = d.department_id
    FULL JOIN locations l ON d.location_id = l.location_id
GROUP BY department_name, city
ORDER BY
    "# of Jobs" DESC,
    department_name;
```