Table Join & Subqueries Assignments

1. WRITE A SQL STATEMENT TO DISPLAY THE LOWEST PAID EMPLOYEE'S (NAME , SALARY , DEPARTMENT NAME)

|  |  |  |
| --- | --- | --- |
| **ENAME** | **SAL** | **DNAME** |
| **SMITH** | 800 | RESEARCH |

**SELECT \* FROM EMP WHERE SALARY = (SELECT MIN(SALARY) FROM EMP)**

1. LIST MINIMUM SALARY FOR EACH DEPARTMENT

**SELECT EMP.DEPT\_NO, MIN(EMP.SALARY) AS MIN\_SAL FROM EMP INNER JOIN DEPT ON EMP.DEPT\_NO = DEPT.ID GROUP BY EMP.DEPT\_NO**

|  |  |
| --- | --- |
| **DEPTNO** | **MIN(SAL)** |
| **10** | 1300 |
| **20** | 800 |
| **30** | 950 |

1. WRITE A QUERY BASED ON FOLLOWING RESULT

**SELECT E.ID AS EMPNO, E.NAME AS ENAME, E.ROLE AS JOB, E.SALARY AS SAL, E.DEPT\_NO, D.NAME**

**FROM EMP E JOIN DEPT D ON E.DEPT\_NO = D.ID;**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **EMPNO** | **ENAME** | **JOB** | **SAL** | **DEPTNO** | **DNAME** |
| **7369** | SMITH | CLERK | 800 | 20 | RESEARCH |
| **7900** | JAMES | CLERK | 950 | 30 | SALES |
| **7934** | MILLER | CLERK | 1300 | 10 | ACCOUNTING |

1. LIST ALL THE EMPLOYEES WHO ARE WORKING IN FORD’S DEPARTMENT.

**SELECT NAME, SALARY, DEPT\_NO FROM EMP WHERE DEPT\_NO = (SELECT ID FROM DEPT WHERE NAME = 'FORD')**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **EMPNO** | **ENAME** | **JOB** | **MGR** | **HIREDATE** | **SAL** | **DEPTNO** |
| **7369** | SMITH | CLERK | 7902 | 17-Dec-00 | 800 | 20 |
| **7566** | JONES | MANAGER | 7839 | 02-Apr-01 | 2975 | 20 |
| **7788** | SCOTT | ANALYST | 7566 | 19-Apr-07 | 3000 | 20 |
| **7876** | ADAMS | CLERK | 7788 | 23-May-07 | 1100 | 20 |
| **7902** | FORD | ANALYST | 7566 | 03-Dec-01 | 3000 | 20 |

1. LIST ALL EMPLOYEE WHO ARE WORKING IN WARD'S DEPARTMENT AND

EARNING MORE THEN MARTIN

**SELECT NAME, SALARY, DEPT\_NO, ROLE FROM EMP WHERE DEPT\_NO = (SELECT ID FROM DEPT WHERE NAME = 'WARD') AND SALARY > (SELECT SALARY FROM EMP WHERE NAME = 'MARTIN')**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **EMPNO** | **ENAME** | **JOB** | **MGR** | **HIREDATE** | **SAL** | **DEPTNO** |
| **7369** | SMITH | CLERK | 7902 | 17-Dec-00 | 800 | 20 |
| **7566** | JONES | MANAGER | 7839 | 02-Apr-01 | 2975 | 20 |
| **7788** | SCOTT | ANALYST | 7566 | 19-Apr-07 | 3000 | 20 |

1. DISPLAY EMPLOYEE NUMBER, NAME,DEPT NUMBER, DEPT NAME, AND LOCATION

**SELECT E.ID, E.NAME, E.DEPT\_NO, DEPT.NAME**

**FROM EMP E**

**LEFT OUTER JOIN DEPT**

**ON E.DEPT\_NO = DEPT.ID**

**UNION ALL**

**SELECT E.ID, E.NAME, E.DEPT\_NO, DEPT.NAME**

**FROM EMP E**

**RIGHT OUTER JOIN DEPT**

**ON E.DEPT\_NO = DEPT.ID**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **EMPNO** | **ENAME** | **DEPTNO** | **DNAME** | **LOC** |
| **7369** | SMITH | 20 | RESEARCH | DALLAS |
| **7499** | ALLEN | 30 | SALES | CHICAGO |
| **7521** | WARD | 30 | SALES | CHICAGO |
| **7566** | JONES | 20 | RESEARCH | DALLAS |
| **7654** | MARTIN | 30 | SALES | CHICAGO |
| **7698** | BLAKE | 30 | SALES | CHICAGO |
| **7782** | CLARK | 10 | ACCOUNTING | NEW YORK |
| **7788** | SCOTT | 20 | RESEARCH | DALLAS |
| **7839** | KING | 10 | ACCOUNTING | NEW YORK |
| **7844** | TURNER | 30 | SALES | CHICAGO |
| **7876** | ADAMS | 20 | RESEARCH | DALLAS |
| **7900** | JAMES | 30 | SALES | CHICAGO |
| **7902** | FORD | 20 | RESEARCH | DALLAS |
| **7934** | MILLER | 10 | ACCOUNTING | NEW YORK |

1. DISPLAY THE FOLLOWING RESULT

**SELECT DEPT.ID AS DEPTNO, DEPT.NAME AS DNAME, EMP.NAME AS ENAME FROM DEPT INNER JOIN EMP ON DEPT.ID = EMP.DEPT\_NO ORDER BY DEPT.ID**

|  |  |  |
| --- | --- | --- |
| **DEPTNO** | **DNAME** | **ENAME** |
| **10** | ACCOUNTING | CLARK |
| **10** | ACCOUNTING | KING |
| **10** | ACCOUNTING | MILLER |
| **20** | RESEARCH | JONES |
| **20** | RESEARCH | FORD |
| **20** | RESEARCH | ADAMS |
| **20** | RESEARCH | SMITH |
| **20** | RESEARCH | SCOTT |
| **30** | SALES | WARD |
| **30** | SALES | TURNER |
| **30** | SALES | ALLEN |
| **30** | SALES | JAMES |
| **30** | SALES | BLAKE |
| **30** | SALES | MARTIN |

1. LIST ALL THE EMPLOYEE WHO ARE WORKING IN NEW YORK

**SELECT E.NAME AS ENAME, DEPT.ID AS DEPTNO, DEPT.NAME AS DNAME, E.LOCATION AS LOC FROM EMP E**

**JOIN DEPT**

**ON E.DEPT\_NO = DEPT.ID WHERE E.LOCATION = 'NEWYORK'**

|  |  |  |  |
| --- | --- | --- | --- |
| **ENAME** | **DEPTNO** | **DNAME** | **LOC** |
| **CLARK** | 10 | ACCOUNTING | NEW YORK |
| **KING** | 10 | ACCOUNTING | NEW YORK |
| **MILLER** | 10 | ACCOUNTING | NEW YORK |

1. WRITE A SQL STATEMENT TO DISPLAY THE LOWEST PAID EMPLOYEE'S (NAME , SALARY , DEPARTMENT NAME) IN THE RESPECTIVE DEPARTMENT.

**SELECT E.NAME,E.SALARY,D.NAME FROM EMP E**

**JOIN DEPT D**

**ON E.DEPT\_NO =D.ID**

**WHERE E.SALARY =**

**(SELECT MIN(SALARY) FROM EMP I WHERE E.DEPT\_NO = I.DEPT\_NO);**

|  |  |  |
| --- | --- | --- |
| **ENAME** | **MIN(SAL)** | **DNAME** |
| **SMITH** | 800 | RESEARCH |
| **JAMES** | 950 | SALES |
| **MILLER** | 1300 | ACCOUNTING |

1. WRITE A SQL STATEMENT TO DISPLAY THE HIGHEST PAID EMPLOYEE'S (NAME, JOB, MANAGER NAME, SALARY AND DEPARTMENT NAME AND DEPARTMENT NO.) IN THE RESPECTIVE DEPARTMENT.

**SELECT E.NAME,E.SALARY,D.NAME AS DEPT\_NAME, M.NAME AS MANAGER**

**FROM EMP E**

**JOIN DEPT D**

**ON E.DEPT\_NO =D.ID**

**inner JOIN EMP M**

**ON e.MANAGER\_ID = M.ID**

**WHERE E.SALARY =**

**(SELECT MAX(SALARY) FROM EMP I WHERE E.DEPT\_NO = I.DEPT\_NO)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **EMPNO** | **JOB** | **MGR** | **MAX(SAL)** | **DNAME** |
| **7698** | MANAGER | 7839 | 2850 | SALES |
| **7788** | ANALYST | 7566 | 3000 | RESEARCH |
| **7839** | PRESIDENT |  | 5000 | ACCOUNTING |
| **7902** | ANALYST | 7566 | 3000 | RESEARCH |

1. WRITE A SQL STATEMENT TO DISPLAY THE EMPLOYEE NAME (BOSS) AND NUMBER OF EMPLOYEE (SUBORDINATES) DIRECTLY REPORTING TO HIM?

**SELECT MGR.NAME, COUNT(MGR.ID) AS SUBORDINATE**

**FROM EMP MGR JOIN EMP E**

**ON MGR.ID = E.MANAGER\_ID**

**GROUP BY MGR.NAME;**

|  |  |
| --- | --- |
| **BOSS** | **SUBORDINATES** |
| **JONES** | 2 |
| **FORD** | 1 |
| **CLARK** | 1 |
| **SCOTT** | 1 |
| **BLAKE** | 5 |
| **KING** | 3 |

1. DISPLAY THE NAMES, DESIGNATION AND SALARIES OF ALL EMPLOYEES WHO HAVE MANAGER ALONG WITH MANAGER'S NAME, DESIGNATION AND MANAGER'S SALARY.

(SELF-JOIN)

**SELECT E.NAME, E.ROLE, E.SALARY,**

**MGR.NAME AS MANAGER\_NAME, MGR.ROLE AS MANAGER\_DESIGNATION, MGR.SALARY AS MANAGER\_SALARY**

**FROM EMP E**

**JOIN EMP MGR**

**ON E.MANAGER\_ID = MGR.ID;**

1. Create the following tables:

My\_ORDER: {Id, OrderDate, OrderNumber}

ORDER\_ITEM: {Id, OrderId, ProductId, UnitPrice, Quantity}

PRODUCT: {Id, ProductName}

Write a query to display the following output sorted by order no:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **ORDER\_NO** | **ORDER\_DATE** | **PRODUCT\_NAME** | **QUANTITY** | **UNIT\_PRICE** |
| **7369** | 7/4/2012 12:00:00 AM | EASY-TRADING | 800 | 20 |
| **7900** | 2/10/2011 12:00:00 AM | BANK-ANYWHERE | 950 | 30 |
| **7934** | 9/23/2015 12:00:00 AM | TRIP-MANAGER | 1300 | 10 |

**SELECT O.ORDERNUMBER,**

**O.ORDERDATE AS DATE,**

**P.PRODUCTNAME, I.QUANTITY, I.UNITPRICE**

**FROM MY\_ORDER O**

**JOIN ORDER\_ITEM I ON O.ID = I.ORDERID**

**JOIN PRODUCT P ON P.ID = I.PRODUCTID**

**ORDER BY O.ORDERNUMBER**

1. Find the 2nd minimum salary of the employee.

**SELECT DISTINCT SALARY FROM EMP E1 WHERE 2 = (SELECT COUNT(DISTINCT SALARY) FROM EMP E2 WHERE E1.SALARY >= E2.SALARY);**

1. Find the max 3 salaries from employee table.

**SELECT DISTINCT SALARY FROM EMP A WHERE 3 >= (SELECT COUNT(DISTINCT SALARY) FROM EMP B WHERE A.SALARY <= B.SALARY) ORDER BY A.SALARY DESC;**

1. Display department no wise total salary where more than 2 employees exist in a department.

**SELECT dept\_no, sum(salary) As totalsal**

**FROM EMP**

**GROUP BY dept\_no**

**HAVING COUNT(id) > 2;**