

## DBMS LAB ASSIGNMENT 1 PART 1 (DBMS\_ASS\_1\_17)

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Year : 2nd

Semester : 3rd

Dept : Information Technology

### 1. Show the details of all employees.

```
SELECT *  
FROM EMP;
```

OUTPUT :

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO	PHONENO	ADDRESS
7369	SMITH	CLERK	7902	17-DEC-80	800	-	20	-	-
7499	ALLEN	SALESMAN	7698	20-FEB-81	1600	300	30	-	-
7521	WARD	SALESMAN	7698	22-FEB-81	1250	500	30	-	-
7566	JONES	MANAGER	7839	02-APR-81	2975	-	20	-	-
7654	MARTIN	SALESMAN	7698	28-SEP-81	1250	1400	30	-	-
7698	BLAKE	MANAGER	7839	01-MAY-81	2850	-	30	-	-
7782	CLARK	MANAGER	7839	09-JUN-81	2450	-	10	-	-
7788	SCOTT	ANALYST	7566	19-APR-87	3000	-	20	-	-
7839	KING	PRESIDENT	-	17-NOV-81	5000	-	10	-	-
7844	TURNER	SALESMAN	7698	08-SEP-81	1500	0	30	-	-
7876	ADAMS	CLERK	7788	23-MAY-87	1100	-	20	-	-
7900	JAMES	CLERK	7698	03-DEC-81	950	-	30	-	-
7902	FORD	ANALYST	7566	03-DEC-81	3000	-	20	-	-
7934	MILLER	CLERK	7782	23-JAN-82	1300	-	10	-	-

### 2. Show the department no. and name of all departments.

```
SELECT DEPTNO, DNAME  
FROM DEPT;
```

OUTPUT :

DEPTNO	DNAME
10	ACCOUNTING
20	RESEARCH
30	SALES
40	OPERATIONS

**3. Display the employee id, name and department no of all employees whose department no is 20.**

```
SELECT EMPNO, ENAME, DEPTNO
FROM EMP
WHERE DEPTNO = 20;
```

OUTPUT :

EMPNO	ENAME	DEPTNO
7369	SMITH	20
7566	JONES	20
7788	SCOTT	20
7876	ADAMS	20
7902	FORD	20

**4. Display the details of all employees where department no should be in descending order.**

```
SELECT *
FROM EMP
ORDER BY DEPTNO DESC;
```

OUTPUT :

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO	PHONENO	ADDRESS
7698	BLAKE	MANAGER	7839	01-MAY-81	2850	-	30	-	-
7844	TURNER	SALESMAN	7698	08-SEP-81	1500	0	30	-	-
7499	ALLEN	SALESMAN	7698	20-FEB-81	1600	300	30	-	-
7654	MARTIN	SALESMAN	7698	28-SEP-81	1250	1400	30	-	-
7521	WARD	SALESMAN	7698	22-FEB-81	1250	500	30	-	-
7900	JAMES	CLERK	7698	03-DEC-81	950	-	30	-	-
7788	SCOTT	ANALYST	7566	19-APR-87	3000	-	20	-	-
7566	JONES	MANAGER	7839	02-APR-81	2975	-	20	-	-
7369	SMITH	CLERK	7902	17-DEC-80	800	-	20	-	-
7876	ADAMS	CLERK	7788	23-MAY-87	1100	-	20	-	-
7902	FORD	ANALYST	7566	03-DEC-81	3000	-	20	-	-
7839	KING	PRESIDENT	-	17-NOV-81	5000	-	10	-	-
7934	MILLER	CLERK	7782	23-JAN-82	1300	-	10	-	-
7782	CLARK	MANAGER	7839	09-JUN-81	2450	-	10	-	-

**5. Show all available jobs in the employee table**

```
SELECT DISTINCT JOB  
FROM EMP;
```

OUTPUT :

JOB
CLERK
SALESMAN
PRESIDENT
MANAGER
ANALYST

**6. Show the name, Annual Salary and department no of employees who works as a clerk in department 20. Annual Salary = 12xSalary.**

```
SELECT ENAME, 12*SAL "ANNUAL SALARY", DEPTNO  
FROM EMP  
WHERE JOB = 'CLERK' AND DEPTNO = 20;
```

OUTPUT :

ENAME	ANNUAL SALARY	DEPTNO
SMITH	9600	20
ADAMS	13200	20

**7. Show the name and HIRED date of those employee whose name start with 'S' or second character is 'J'.**

```
SELECT ENAME, HIREDATE  
FROM EMP  
WHERE ENAME LIKE 'S%' OR ENAME LIKE '_J%';
```

OUTPUT :

ENAME	HIREDATE
SMITH	17-DEC-80
SCOTT	19-APR-87

**8. Show the name, hire date and salary of those employee who are not a manager.**

```
SELECT ENAME, HIREDATE, SAL
FROM EMP
WHERE JOB <> 'MANAGER';
```

OUTPUT :

ENAME	HIREDATE	SAL
SMITH	17-DEC-80	800
ALLEN	20-FEB-81	1600
WARD	22-FEB-81	1250
MARTIN	28-SEP-81	1250
SCOTT	19-APR-87	3000
KING	17-NOV-81	5000
TURNER	08-SEP-81	1500
ADAMS	23-MAY-87	1100
JAMES	03-DEC-81	950
FORD	03-DEC-81	3000
MILLER	23-JAN-82	1300

**9. Display all employee names in title case and length of the name**

```
SELECT INITCAP(ENAME), LENGTH(ENAME) AS LENGTH
FROM EMP;
```

OUTPUT :

INITCAP(ENAME)	LENGTH
Smith	5
Allen	5
Ward	4
Jones	5
Martin	6
Blake	5
Clark	5
Scott	5
King	4
Turner	6
Adams	5
James	5
Ford	4
Miller	6

**10. Display the name of employee(s) who get the salary between 4000 and 6000.**

```
SELECT ENAME
FROM EMP
WHERE SAL > 4000 AND SAL < 6000;
```

OUTPUT :

ENAME
KING

**11. Display the department that has no employees.**

```
SELECT *
FROM DEPT
WHERE DEPTNO NOT IN (SELECT DEPTNO FROM EMP);
```

OUTPUT :

DEPTNO	DNAME	LOC
40	OPERATIONS	BOSTON

**12. List all employees who have no manager by their name and number**

```
SELECT *
FROM EMP
WHERE MGR IS NULL;
```

OUTPUT :

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO	PHONENO	ADDRESS
7839	KING	PRESIDENT	-	17-NOV-81	5000	-	10	-	-

**13. Find all employees who joined the company before their manager.**

```
SELECT A.*
FROM EMP A, EMP B
WHERE A.MGR = B.EMPNO AND A.HIREDATE < B.HIREDATE;
```

OUTPUT :

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO	PHONENO	ADDRESS
7521	WARD	SALESMAN	7698	22-FEB-81	1250	500	30	-	-
7499	ALLEN	SALESMAN	7698	20-FEB-81	1600	300	30	-	-
7782	CLARK	MANAGER	7839	09-JUN-81	2450	-	10	-	-
7698	BLAKE	MANAGER	7839	01-MAY-81	2850	-	30	-	-
7566	JONES	MANAGER	7839	02-APR-81	2975	-	20	-	-
7369	SMITH	CLERK	7902	17-DEC-80	800	-	20	-	-

**14. Display employees who earn more than the lowest salary in department 20.**

```
SELECT *
FROM EMP
WHERE SAL > (SELECT MIN(SAL)
              FROM EMP
              WHERE DEPTNO = 20);
```

OUTPUT :

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO	PHONENO	ADDRESS
7499	ALLEN	SALESMAN	7698	20-FEB-81	1600	300	30	-	-
7521	WARD	SALESMAN	7698	22-FEB-81	1250	500	30	-	-
7566	JONES	MANAGER	7839	02-APR-81	2975	-	20	-	-
7654	MARTIN	SALESMAN	7698	28-SEP-81	1250	1400	30	-	-
7698	BLAKE	MANAGER	7839	01-MAY-81	2850	-	30	-	-
7782	CLARK	MANAGER	7839	09-JUN-81	2450	-	10	-	-
7788	SCOTT	ANALYST	7566	19-APR-87	3000	-	20	-	-
7839	KING	PRESIDENT	-	17-NOV-81	5000	-	10	-	-
7844	TURNER	SALESMAN	7698	08-SEP-81	1500	0	30	-	-
7876	ADAMS	CLERK	7788	23-MAY-87	1100	-	20	-	-
7900	JAMES	CLERK	7698	03-DEC-81	950	-	30	-	-
7902	FORD	ANALYST	7566	03-DEC-81	3000	-	20	-	-
7934	MILLER	CLERK	7782	23-JAN-82	1300	-	10	-	-

**15. Display employees who earn more than the every employee.**

```
SELECT *  
FROM EMP  
WHERE SAL = (SELECT MAX(SAL) FROM EMP);
```

OUTPUT :

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO	PHONENO	ADDRESS
7839	KING	PRESIDENT	-	17-NOV-81	5000	-	10	-	-

**16. To display the department(s) which have an average salary bill greater than department no. 30.**

```
SELECT *  
FROM DEPT  
WHERE DEPTNO IN (SELECT DEPTNO  
                  FROM EMP  
                  GROUP BY DEPTNO  
                  HAVING AVG(SAL) > (SELECT AVG(SAL)  
                                     FROM EMP  
                                     WHERE DEPTNO = 30));
```

OUTPUT :

DEPTNO	DNAME	LOC
20	RESEARCH	DALLAS
10	ACCOUNTING	NEW YORK

**17. Find the job with the highest average salary.**

```
SELECT JOB  
FROM EMP  
GROUP BY JOB  
HAVING AVG(SAL) = (SELECT MAX(AVG(SAL))  
                  FROM EMP  
                  GROUP BY JOB);
```

OUTPUT :

JOB
PRESIDENT

**18. Display the name, job, and hire date for employees whose salary is greater than the highest salary in SALES department.**

```
SELECT ENAME "NAME", JOB, HIREDATE
FROM EMP
WHERE SAL > (SELECT MAX(SAL)
              FROM EMP
              WHERE DEPTNO = (SELECT DEPTNO
                              FROM DEPT
                              WHERE DNAME = 'SALES'));
```

OUTPUT :

NAME	JOB	HIREDATE
JONES	MANAGER	02-APR-81
SCOTT	ANALYST	19-APR-87
KING	PRESIDENT	17-NOV-81
FORD	ANALYST	03-DEC-81

**19. Find the employees who earn a salary greater than the average salary for their department. Sort in department number.**

```
SELECT DISTINCT A.*
FROM EMP A, (SELECT DEPTNO, AVG(SAL) "AVG"
              FROM EMP
              GROUP BY DEPTNO) B
WHERE (A.DEPTNO = B.DEPTNO AND A.SAL > B.AVG)
ORDER BY A.DEPTNO;
```

OUTPUT :

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO	PHONENO	ADDRESS
7839	KING	PRESIDENT	-	17-NOV-81	5000	-	10	-	-
7902	FORD	ANALYST	7566	03-DEC-81	3000	-	20	-	-
7566	JONES	MANAGER	7839	02-APR-81	2975	-	20	-	-
7788	SCOTT	ANALYST	7566	19-APR-87	3000	-	20	-	-
7499	ALLEN	SALESMAN	7698	20-FEB-81	1600	300	30	-	-
7698	BLAKE	MANAGER	7839	01-MAY-81	2850	-	30	-	-



**20. Find all employees whose department is not in the DEPT table**

```
SELECT *  
FROM EMP  
WHERE DEPTNO NOT IN (SELECT DEPTNO  
                     FROM DEPT);
```

OUTPUT :  
no data found

**21. Find the employees who do not manage any one.**

```
SELECT *  
FROM EMP  
WHERE EMPNO IN (SELECT EMPNO FROM EMP  
                MINUS  
                SELECT MGR FROM EMP)
```

OUTPUT :

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO	PHONENO	ADDRESS
7369	SMITH	CLERK	7902	17-DEC-80	800	-	20	-	-
7499	ALLEN	SALESMAN	7698	20-FEB-81	1600	300	30	-	-
7521	WARD	SALESMAN	7698	22-FEB-81	1250	500	30	-	-
7654	MARTIN	SALESMAN	7698	28-SEP-81	1250	1400	30	-	-
7844	TURNER	SALESMAN	7698	08-SEP-81	1500	0	30	-	-
7876	ADAMS	CLERK	7788	23-MAY-87	1100	-	20	-	-
7900	JAMES	CLERK	7698	03-DEC-81	950	-	30	-	-
7934	MILLER	CLERK	7782	23-JAN-82	1300	-	10	-	-

**22. Find the employees who earn the highest salary in each job type sort in descending salary order.**

```
SELECT A.*
FROM EMP A, (SELECT JOB, MAX(SAL) MAXSAL
             FROM EMP
             GROUP BY JOB) B
WHERE A.JOB = B.JOB AND A.SAL = B.MAXSAL
ORDER BY SAL DESC;
```

OUTPUT:

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO	PHONENO	ADDRESS
7839	KING	PRESIDENT	-	17-NOV-81	5000	-	10	-	-
7788	SCOTT	ANALYST	7566	19-APR-87	3000	-	20	-	-
7902	FORD	ANALYST	7566	03-DEC-81	3000	-	20	-	-
7566	JONES	MANAGER	7839	02-APR-81	2975	-	20	-	-
7499	ALLEN	SALESMAN	7698	20-FEB-81	1600	300	30	-	-
7934	MILLER	CLERK	7782	23-JAN-82	1300	-	10	-	-

**23. Find the employees who earn the minimum salary for their job. Display the result in ascending order of salary.**

```
SELECT A.*
FROM EMP A, (SELECT JOB, MIN(SAL) MINSAL
             FROM EMP
             GROUP BY JOB) B
WHERE A.JOB = B.JOB AND A.SAL = B.MINSAL
ORDER BY SAL;
```

OUTPUT :

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO	PHONENO	ADDRESS
7369	SMITH	CLERK	7902	17-DEC-80	800	-	20	-	-
7521	WARD	SALESMAN	7698	22-FEB-81	1250	500	30	-	-
7654	MARTIN	SALESMAN	7698	28-SEP-81	1250	1400	30	-	-
7782	CLARK	MANAGER	7839	09-JUN-81	2450	-	10	-	-
7788	SCOTT	ANALYST	7566	19-APR-87	3000	-	20	-	-
7902	FORD	ANALYST	7566	03-DEC-81	3000	-	20	-	-
7839	KING	PRESIDENT	-	17-NOV-81	5000	-	10	-	-

**24. Find the most recently hired employees in each department. Order by hire date.**

```
SELECT A.*
FROM EMP A, (SELECT DEPTNO, MAX(HIREDATE) MAXDATE
             FROM EMP
             GROUP BY DEPTNO) B
WHERE A.DEPTNO = B.DEPTNO AND A.HIREDATE = B.MAXDATE
ORDER BY HIREDATE;
```

OUTPUT :

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO	PHONENO	ADDRESS
7900	JAMES	CLERK	7698	03-DEC-81	950	-	30	-	-
7934	MILLER	CLERK	7782	23-JAN-82	1300	-	10	-	-
7876	ADAMS	CLERK	7788	23-MAY-87	1100	-	20	-	-

**25. Display the department that has no employees (Using set operators).**

```
SELECT *
FROM DEPT
MINUS
SELECT *
FROM DEPT
WHERE DEPTNO IN (SELECT DEPTNO FROM EMP);
```

OUTPUT :

DEPTNO	DNAME	LOC
40	OPERATIONS	BOSTON