

DBMS Practical 3

1. Using emp table, perform the following queries:

- Display the details of all employees.

```
SQL> select * from EMP;
```

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
7839	KING	PRESIDENT		17-NOV-81	5000		10
7698	BLAKE	MANAGER	7839	01-MAY-81	2850		30
7782	CLARK	MANAGER	7839	09-JUN-81	2450		10
7566	JONES	MANAGER	7839	02-APR-81	2975		20
7788	SCOTT	ANALYST	7566	19-APR-87	3000		20
7902	FORD	ANALYST	7566	03-DEC-81	3000		20
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	TUENER	SALESMAN	7698	08-SEP-81	1500	0	30
7876	ADAMS	CLERK	7788	23-MAY-81	1100		20
7900	JAMES	CLERK	7698	03-DEC-81	950		30
7934	MILLER	CLERK	7782	23-JAN-82	1300		10

14 rows selected.

- Display the name and job for all employees.

```
SQL> select ENAME, JOB FROM EMP;
```

ENAME	JOB
KING	PRESIDENT
BLAKE	MANAGER
CLARK	MANAGER
JONES	MANAGER
SCOTT	ANALYST
FORD	ANALYST
SMITH	CLERK
ALLEN	SALESMAN
WARD	SALESMAN
MARTIN	SALESMAN
TUENER	SALESMAN
ADAMS	CLERK
JAMES	CLERK
MILLER	CLERK

14 rows selected.

- Display name and salary for all employees.

```
SQL> select ENAME, SAL FROM EMP;
```

ENAME	SAL
KING	5000
BLAKE	2850
CLARK	2450
JONES	2975
SCOTT	3000
FORD	3000
SMITH	800
ALLEN	1600
WARD	1250
MARTIN	1250
TUENER	1500
ADAMS	1100
JAMES	950
MILLER	1300

14 rows selected.

- Display the details of all employees who are earning salary greater than 2000.

```
SQL> select * FROM EMP
2 where sal>2000;
```

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
7839	KING	PRESIDENT		17-NOV-81	5000		10
7698	BLAKE	MANAGER	7839	01-MAY-81	2850		30
7782	CLARK	MANAGER	7839	09-JUN-81	2450		10
7566	JONES	MANAGER	7839	02-APR-81	2975		20
7788	SCOTT	ANALYST	7566	19-APR-87	3000		20
7902	FORD	ANALYST	7566	03-DEC-81	3000		20

6 rows selected.

- Display the details of all employees who are working as Manager.

```
SQL> select * FROM EMP
2 where JOB='MANAGER';
```

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
7698	BLAKE	MANAGER	7839	01-MAY-81	2850		30
7782	CLARK	MANAGER	7839	09-JUN-81	2450		10
7566	JONES	MANAGER	7839	02-APR-81	2975		20

- Display the names of all employees who are working in department number 10.

```
SQL> Run SQL Command Line

SQL> select ENAME from EMP
2  where DEPTNO=10;

ENAME
-----
KING
CLARK
MILLER
```

- Display the names of all employees working as clerk and drawing a salary more than 3000.

```
SQL> select ENAME from EMP
2  where JOB='CLERK' or SAL>3000;

ENAME
-----
KING
SMITH
ADAMS
JAMES
MILLER
```

- Display employee number and names for employees who earn commission.

```
SQL> select EMPNO, ENAME from EMP
2  where COMM IS NOT NULL;

EMPNO ENAME
-----
7499 ALLEN
7521 WARD
7654 MARTIN
7844 TUENER
```

- Display names of employees who do not earn any commission.

```
SQL> select ENAME from EMP
2  where COMM IS NULL;
```

ENAME

KING
BLAKE
CLARK
JONES
SCOTT
FORD
SMITH
ADAMS
JAMES
MILLER

10 rows selected.

- Display the names of employees who are working as clerk, salesman or analyst and drawing a salary more than 2000.

```
SQL> select ENAME from EMP
2  where JOB='CLERK' OR JOB='SALESMAN' OR JOB= 'ANALYST' OR SAL>2000;
```

ENAME

KING
BLAKE
CLARK
JONES
SCOTT
FORD
SMITH
ALLEN
WARD
MARTIN
TUENER
ADAMS
JAMES
MILLER

- Display the names of employees who are working as clerk, salesman or analyst.

```
SQL> select ENAME from EMP
2  where JOB='CLERK' OR JOB='SALESMAN' OR JOB= 'ANALYST';
```

ENAME

SCOTT

FORD

SMITH

ALLEN

WARD

MARTIN

TUENER

ADAMS

JAMES

MILLER

10 rows selected.

- Display the names of employees working in department number 10 or 20 or 30.

```
SQL> select ENAME from EMP
2  where DEPTNO=10 OR DEPTNO=20 OR DEPTNO=30;
```

ENAME

KING

BLAKE

CLARK

JONES

SCOTT

FORD

SMITH

ALLEN

WARD

MARTIN

TUENER

ADAMS

JAMES

MILLER

14 rows selected.

- Display the details of employees whose salary lies in the range of 1000 and 2000.

```
SQL> select * from EMP
2 where SAL between 1000 and 2000;
```

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
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	TUENER	SALESMAN	7698	08-SEP-81	1500	0	30
7876	ADAMS	CLERK	7788	23-MAY-81	1100		20
7934	MILLER	CLERK	7782	23-JAN-82	1300		10

6 rows selected.

- List the employees in the ascending order of their salaries.

```
Run SQL Command Line
```

```
SQL> select * from EMP
2 ORDER BY SAL ASC;
```

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
7369	SMITH	CLERK	7902	17-DEC-80	800		20
7900	JAMES	CLERK	7698	03-DEC-81	950		30
7876	ADAMS	CLERK	7788	23-MAY-81	1100		20
7654	MARTIN	SALESMAN	7698	28-SEP-81	1250	1400	30
7521	WARD	SALESMAN	7698	22-FEB-81	1250	500	30
7934	MILLER	CLERK	7782	23-JAN-82	1300		10
7844	TUENER	SALESMAN	7698	08-SEP-81	1500	0	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
7902	FORD	ANALYST	7566	03-DEC-81	3000		20
7788	SCOTT	ANALYST	7566	19-APR-87	3000		20
7839	KING	PRESIDENT		17-NOV-81	5000		10

14 rows selected.

- List the Empno, Ename, Sal of all emps working for Mgr 7369.

```
SQL> select EMPNO, ENAME, SAL from EMP
2 where MGR=7369;
```

no rows selected

- List the employees who are either 'CLERK' or 'ANALYST' in the Desc order.

```
SQL> select * from EMP
2 where JOB='CLERK' OR JOB='ANALYST'
3 ORDER BY JOB DESC;
```

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
7369	SMITH	CLERK	7902	17-DEC-80	800		20
7900	JAMES	CLERK	7698	03-DEC-81	950		30
7934	MILLER	CLERK	7782	23-JAN-82	1300		10
7876	ADAMS	CLERK	7788	23-MAY-81	1100		20
7902	FORD	ANALYST	7566	03-DEC-81	3000		20
7788	SCOTT	ANALYST	7566	19-APR-87	3000		20

6 rows selected.

- List the employees who are working in Deptno 10 or 20.

```
SQL> select * from EMP
2 where DEPTNO=10 OR DEPTNO=20;
```

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
7839	KING	PRESIDENT		17-NOV-81	5000		10
7782	CLARK	MANAGER	7839	09-JUN-81	2450		10
7566	JONES	MANAGER	7839	02-APR-81	2975		20
7788	SCOTT	ANALYST	7566	19-APR-87	3000		20
7902	FORD	ANALYST	7566	03-DEC-81	3000		20
7369	SMITH	CLERK	7902	17-DEC-80	800		20
7876	ADAMS	CLERK	7788	23-MAY-81	1100		20
7934	MILLER	CLERK	7782	23-JAN-82	1300		10

8 rows selected.

- List the employees whose name have a character set 'll' together.

```
SQL> select * from EMP
2 where ENAME LIKE '%LL%';
```

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
7499	ALLEN	SALESMAN	7698	20-FEB-81	1600	300	30
7934	MILLER	CLERK	7782	23-JAN-82	1300		10

- List the employees in ascending order of their names.

```
SQL> select * from EMP
2 ORDER BY ENAME ASC;
```

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

14 rows selected.

- List the employees in descending order of their names.

```
SQL> select * from EMP
2 ORDER BY ENAME DESC;
```

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

14 rows selected.

- List the employees who do not belong to Deptno 20.

```
SQL> select * from EMP
2 where DEPTNO NOT IN(20);
```

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
7839	KING	PRESIDENT		17-NOV-81	5000		10
7698	BLAKE	MANAGER	7839	01-MAY-81	2850		30
7782	CLARK	MANAGER	7839	09-JUN-81	2450		10
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	TUENER	SALESMAN	7698	08-SEP-81	1500	0	30
7900	JAMES	CLERK	7698	03-DEC-81	950		30
7934	MILLER	CLERK	7782	23-JAN-82	1300		10

9 rows selected.

- List all the employees except PRESIDENT and MANAGER.

```
SQL> select * from EMP
2 where JOB NOT IN ('PRESIDENT','MANAGER');
```

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
7788	SCOTT	ANALYST	7566	19-APR-87	3000		20
7902	FORD	ANALYST	7566	03-DEC-81	3000		20
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	TUENER	SALESMAN	7698	08-SEP-81	1500	0	30
7876	ADAMS	CLERK	7788	23-MAY-81	1100		20
7900	JAMES	CLERK	7698	03-DEC-81	950		30
7934	MILLER	CLERK	7782	23-JAN-82	1300		10

10 rows selected.

- List the employees whose name starts with A.


```
SQL> select * from EMP
2 where ENAME LIKE 'A%';
```

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
7499	ALLEN	SALESMAN	7698	20-FEB-81	1600	300	30
7876	ADAMS	CLERK	7788	23-MAY-81	1100		20

- List all the Clerks of Deptno 20.

Run SQL Command Line

```
SQL> select * from EMP
2 where JOB='CLERK' and DEPTNO=20;
```

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
7369	SMITH	CLERK	7902	17-DEC-80	800		20
7876	ADAMS	CLERK	7788	23-MAY-81	1100		20

- List the employees whose names ends with S.

```
SQL> select * from EMP
2 where ENAME LIKE '%S';
```

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
7566	JONES	MANAGER	7839	02-APR-81	2975		20
7876	ADAMS	CLERK	7788	23-MAY-81	1100		20
7900	JAMES	CLERK	7698	03-DEC-81	950		30

- List the employees who has name of exactly 4 characters.

```
SQL> select * from EMP
2 where ENAME LIKE '____';
```

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
7839	KING	PRESIDENT		17-NOV-81	5000		10
7902	FORD	ANALYST	7566	03-DEC-81	3000		20
7521	WARD	SALESMAN	7698	22-FEB-81	1250	500	30

- List the names of the employees who are working as MANAGER in department 10.

```
SQL> select ENAME from EMP
2 where JOB='MANAGER' and DEPTNO=10;
```

```
ENAME
-----
CLARK
```

- List the total salary of employees working as ANALYST.

```
SQL> select SUM(SAL) from EMP
2  where JOB='ANALYST';
```

SUM(SAL)
6000

- List the minimum, maximum and average salary of the employees.

```
SQL> select AVG(SAL), MAX(SAL), MIN(SAL) from EMP;
```

AVG(SAL)	MAX(SAL)	MIN(SAL)
2073.21429	5000	800

- List the total number of employees working in department 10.

```
SQL> select COUNT(*) from EMP
2  where DEPTNO=10;
```

COUNT(*)
3

2. Answer the following queries:

- Display the total salary of employees department wise.

```
SQL> select DEPTNO, SUM(SAL) FROM EMP
2  GROUP BY DEPTNO;
```

DEPTNO	SUM(SAL)
30	9400
20	10875
10	8750

- Display the total salary of employees job wise in ascending order of job.

```
SQL> select JOB, SUM(SAL) FROM EMP
2  GROUP BY JOB
3  ORDER BY JOB ASC;
```

JOB	SUM(SAL)
ANALYST	6000
CLERK	4150
MANAGER	8275
PRESIDENT	5000
SALESMAN	5600

- Display the total number of employees with specific job.

```
SQL> SELECT JOB, COUNT(*) FROM EMP
2  GROUP BY JOB;
```

JOB	COUNT(*)
CLERK	4
SALESMAN	4
PRESIDENT	1
MANAGER	3
ANALYST	2

- Display the total number of employees working in each department.

```
SQL> SELECT DEPTNO, COUNT(*) FROM EMP
2  GROUP BY DEPTNO;
```

DEPTNO	COUNT(*)
30	6
20	5
10	3

- Display the total salary of employees specific to job and department in ascending order of job.

```
SQL> select JOB, DEPTNO, SUM(SAL) FROM EMP
2  GROUP BY JOB, DEPTNO
3  ORDER BY JOB ASC;
```

JOB	DEPTNO	SUM(SAL)
ANALYST	20	6000
CLERK	10	1300
CLERK	20	1900
CLERK	30	950
MANAGER	10	2450
MANAGER	20	2975
MANAGER	30	2850
PRESIDENT	10	5000
SALESMAN	30	5600

- Display the total salary of the employees specific to job when employee count is greater than 1.

```
SQL> select JOB, SUM(SAL), COUNT(*) FROM EMP
2  GROUP BY JOB
3  HAVING COUNT(JOB)>1;
```

JOB	SUM(SAL)	COUNT(*)
CLERK	4150	4
SALESMAN	5600	4
MANAGER	8275	3
ANALYST	6000	2

- Display unique jobs of employees.

```
SQL> SELECT DISTINCT JOB FROM EMP;
```

JOB
CLERK
SALESMAN
PRESIDENT
MANAGER
ANALYST