

Assignment-2

DBMS LAB

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A. CREATION OF TABLES:-

- Creation of DEPT Table-

Query:

create table DEPT

-> (DEPTNO integer (2) PRIMARY KEY,

-> DNAME varchar (20),

-> LOC varchar (20));

Insertion of data:

INSERT INTO DEPT

-> values

-> (10,'Accounting','New York'),

-> (20,'Research','Dallas'),

-> (30,'Sales','Chicago'),

-> (40,'Operations','Boston');

DEPT table after insertion of value:

DEPTNO	DNAME	LOC
10	Accounting	New York
20	Research	Dallas
30	Sales	Chicago
40	Operations	Boston

- Creation of EMP table:

Query:

CREATE TABLE EMP

- > (EMPNO integer (4) PRIMARY KEY,
- > ENAME varchar (20),
- > JOB varchar (20),
- > MGR integer (4) references EMP(EMPNO) on delete cascade,
- > HIREDATE date,
- > SAL integer (5) NOT NULL,
- > COMM integer (5),
- > DEPTNO integer (2) references DEPT(DEPTNO) on delete cascade);

Insertion of data:

INSERT into EMP

- > VALUES
- > (7839,'King','President', NULL,'1981-11-17',5000, NULL,10);

EMP table after insertion of value:

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
7369	Smith	Clerk	7902	1980-12-17	800	NULL	20
7499	Allen	Salesman	7698	1981-02-20	1600	300	30
7521	Ward	Salesman	7698	1981-02-22	1250	500	30
7566	Jones	Manager	7839	1981-04-02	2975	NULL	20
7654	Martin	Salesman	7698	1981-09-28	1250	1400	30
7698	Blake	Manager	7839	1981-05-01	2850	NULL	30
7782	Clark	Manager	7839	1981-06-09	2450	NULL	10
7788	Scott	Analyst	7566	1982-12-09	3000	NULL	20
7839	King	President	NULL	1981-11-17	5000	NULL	10
7844	Turner	Salesman	7698	1981-09-08	1500	0	30
7876	Adams	Clerk	7788	1983-01-12	1100	NULL	20
7900	James	Clerk	7698	1981-12-03	950	NULL	30
7902	Ford	Analyst	7566	1981-12-04	3000	NULL	20
7934	Miller	Clerk	7782	1982-01-23	1300	NULL	10

Remarks on Table Creation:

B. Queries and their Solutions: -

1. List the names of analysts and salesmen.

Query:

select ENAME

-> from EMP

-> where JOB in ('Analyst', 'Salesman');

Output:

```
+-----+
| ENAME |
+-----+
| Allen |
| Ward  |
| Martin|
| Scott |
| Turner|
| Ford  |
+-----+
6 rows in set (0.00 sec)
```

2. List details of employees who have joined before 30 Sep 81.

Query:

select *

-> from EMP

-> where HIREDATE<'1981-09-30';

Output:

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
7369	Smith	Clerk	7902	1980-12-17	800	NULL	20
7499	Allen	Salesman	7698	1981-02-20	1600	300	30
7521	Ward	Salesman	7698	1981-02-22	1250	500	30
7566	Jones	Manager	7839	1981-04-02	2975	NULL	20
7654	Martin	Salesman	7698	1981-09-28	1250	1400	30
7698	Blake	Manager	7839	1981-05-01	2850	NULL	30
7782	Clark	Manager	7839	1981-06-09	2450	NULL	10
7844	Turner	Salesman	7698	1981-09-08	1500	0	30

3. List names of employees who are not managers.

Query:

select ENAME

-> from EMP

-> where JOB NOT in('Manager');

Output:

ENAME
Smith
Allen
Ward
Martin
Scott
King
Turner
Adams
James
Ford
Miller

4. List the names of employees whose employee numbers are 7369, 7521, 7839, 7934, 7788.

Query:

select ENAME

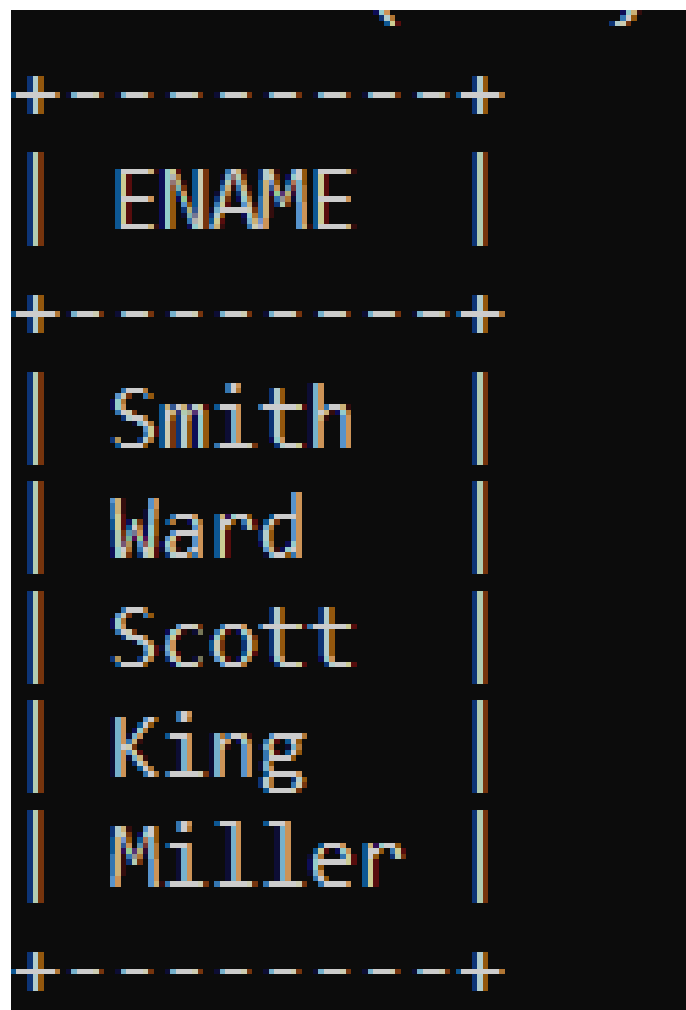
-> from EMP

-> where EMPNO

-> in

-> (7369,7521,7839,7934,7788);

Output:

A screenshot of a terminal window displaying the output of an SQL query. The output is a table with a single column titled 'ENAME'. The table contains five rows of employee names: Smith, Ward, Scott, King, and Miller. The text is displayed in a monospaced font on a dark background.

ENAME
Smith
Ward
Scott
King
Miller

5. List employees not belonging to department 30, 40 or 10.

Query:

select *

-> from emp

-> where DEPTNO NOT in (30,40,10);

Output:

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
7369	Smith	Clerk	7902	1980-12-17	800	NULL	20
7566	Jones	Manager	7839	1981-04-02	2975	NULL	20
7788	Scott	Analyst	7566	1982-12-09	3000	NULL	20
7876	Adams	Clerk	7788	1983-01-12	1100	NULL	20
7902	Ford	Analyst	7566	1981-12-04	3000	NULL	20

6. List employee names for those who have joined between 30 June and 31 Dec. '81.

Query:

```
select ENAME
```

```
-> from emp
```

```
-> where HIREDATE between '1981-06-30' AND '1981-12-31';
```

Output:

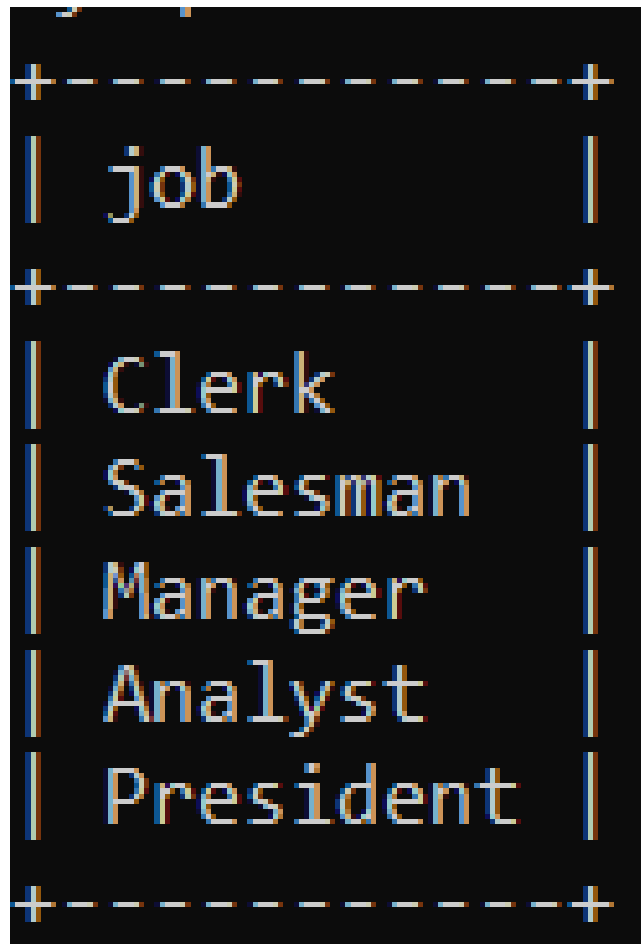
ENAME
Martin
King
Turner
James
Ford

7. List the different designations in the company.

Query:

select distinct job from emp;

Output:

A terminal window with a black background and yellow text. It displays the output of a SQL query. The output is a table with one column named 'job'. The table is enclosed in a box with dashed lines and plus signs at the corners. The data rows are: Clerk, Salesman, Manager, Analyst, and President.

job
Clerk
Salesman
Manager
Analyst
President

8. List the names of the employees who are not eligible for commission.

Query:

select ENAME from EMP where COMM is NULL;

Output:

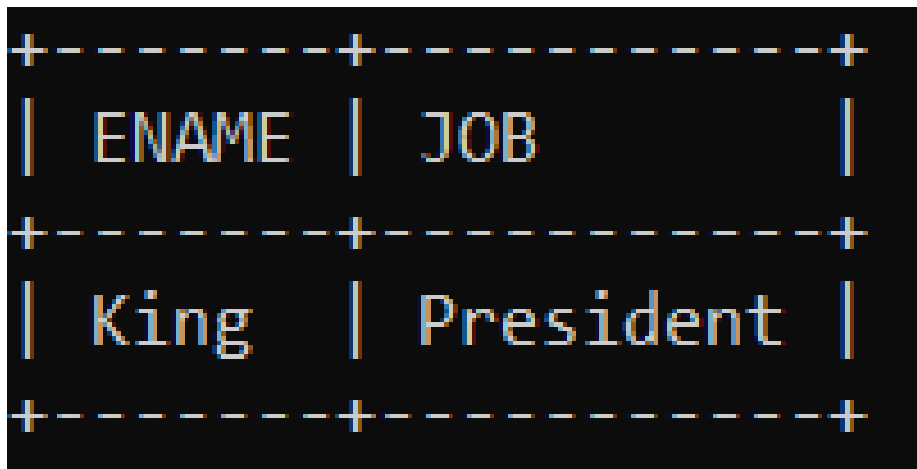
ENAME
Smith
Jones
Blake
Clark
Scott
King
Adams
James
Ford
Miller

9. List the name and designation of the employee who does not report to anybody.

Query:

```
select ENAME, JOB from EMP where MGR is NULL;
```

Output:



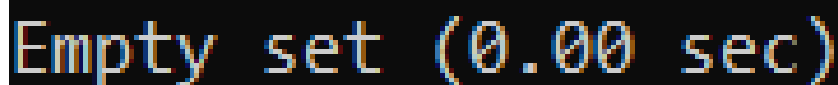
ENAME	JOB
King	President

10. List the employees not assigned to any department.

Query:

```
select ENAME from emp  
-> where DEPTNO is NULL;
```

Output:



Empty set (0.00 sec)

11. List the employees who are eligible for commission.

Query:

```
select * from emp
```

-> where COMM is NOT NULL;

Output:

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
7499	Allen	Salesman	7698	1981-02-20	1600	300	30
7521	Ward	Salesman	7698	1981-02-22	1250	500	30
7654	Martin	Salesman	7698	1981-09-28	1250	1400	30
7844	Turner	Salesman	7698	1981-09-08	1500	0	30

12. List the employees whose name either start or end with 'S'.

Query:

```
select * from emp
```

-> where ENAME like 'S%' OR '%s';

Output:

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
7369	Smith	Clerk	7902	1980-12-17	800	NULL	20
7788	Scott	Analyst	7566	1982-12-09	3000	NULL	20

13. List names of employees whose names have “i” as the second character.

Query:

```
select * from emp
```

```
-> where ENAME like '_i%';
```

Output:

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
7839	King	President	NULL	1981-11-17	5000	NULL	10
7934	Miller	Clerk	7782	1982-01-23	1300	NULL	10

14. List the number of employees working with the company.

Query:

```
select COUNT (*) from emp;
```

Output:

COUNT(*)
14

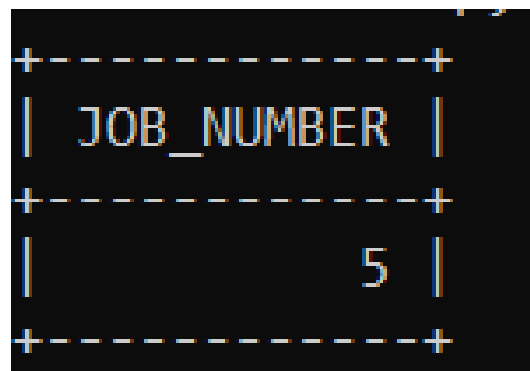
15. List the number of designations available in the EMP table.

Query:

```
select count (distinct JOB) JOB_NUMBER
```

```
-> from emp;
```

Output:



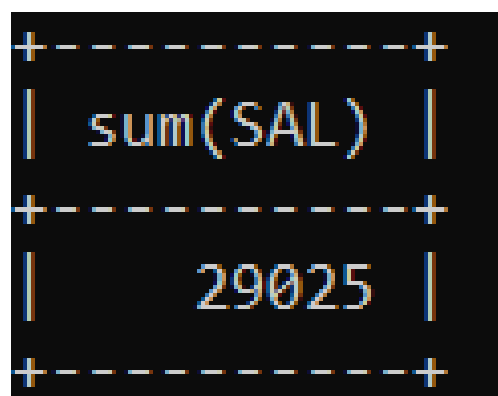
JOB_NUMBER
5

16. List the total salaries paid to the employees.

Query:

```
select sum (SAL) from EMP;
```

Output:



sum(SAL)
29025

17. List the minimum, maximum and average salary in the company.

Query:

```
select max(sal), min(sal), avg(sal)
```

```
-> from emp;
```

Output:

max(sal)	min(sal)	avg(sal)
5000	800	2073.2143

18. List the maximum salary paid to salesman.

Query:

```
select max(sal)
```

```
-> from emp
```

```
-> where JOB='Salesman';
```

Output:

max(sal)
1600