

## Lab Assignment 1

### Question:

Create a database called COMPANY consisting of two tables - EMP & DEPT EMP

#### DEPT

Column name	Data type	Description
DEPTNO	Number	Department number
DNAME	Varchar	Department name
LOC	Varchar	Location of department

#### Data for DEPT table

10	Accounting	New York
20	Research	Dallas
30	Sales	Chicago
40	Operations	

### Answer:

```
CREATE TABLE SDEPT(DEPTNO NUMBER(10) NOT NULL, DNAME VARCHAR(100), LOC  
VARCHAR(100), PRIMARY KEY(DEPTNO));  
INSERT INTO SDEPT VALUES (10, 'ACCOUNTING', 'NEW YORK');  
INSERT INTO SDEPT VALUES (20, 'RESEARCH', 'DALLAS');  
INSERT INTO SDEPT VALUES (30, 'SALES', 'CHICAGO');  
INSERT INTO SDEPT VALUES (40, 'OPERATIONS', 'NULL');  
SELECT * FROM SDEPT;
```

DEPTNO	DNAME	LOC
40	OPERATIONS	NULL
10	ACCOUNTING	NEW YORK
20	RESEARCH	DALLAS
30	SALES	CHICAGO

#### EMP

Column name	Data type	Description
EMPNO	Number	Employee number
ENAME	Varchar	Employee name
JOB	Char	Designation
MGR	Number	Manager's Emp. number
HIREDATE	Date	Date of joining
SAL	Number	Basic Salary
COMM	Number	Commission
DEPTNO	Number	Department Number

Data EMP Table

7369	Smith	Clerk	7902	17/12/80	800		20
7499	Allen	Salesman	7698	20/2/81	1600	300	30
7521	Ward	Salesman	7698	22/2/81	1250	500	30
7566	Jones	Manager	7839	2/4/81	2975		20
7654	Martin	Salesman	7698	28/9/81	1250	1400	30
7698	Blake	Manager	7839	1/5/81	2850		30
7782	Clark	Manager	7839	9/6/81	2450		10
7788	Scott	Analyst	7566	9/12/82	3000		20
7839	King	President		17/11/81	5000		10
7844	Turner	Salesman	7698	8/9/81	1500	0	30
7876	Adams	Clerk	7788	12/1/83	1100		20
7900	James	Clerk	7698	3/12/81	950		30
7902	Ford	Analyst	7566	4/12/81	3000		20
7934	Miller	Clerk	7782	23/1/82	1300		10

**Answer:**

```

CREATE TABLE SEMP(EMPNO NUMBER(10) NOT NULL, ENAME VARCHAR(100), JOB
CHAR(50), MGR NUMBER(10), HIREDATE DATE, SAL NUMBER(10), COMM NUMBER(10),
DEPTNO NUMBER(10), PRIMARY KEY(EMPNO), FOREIGN KEY(DEPTNO) REFERENCES
SDEPT(DEPTNO));
INSERT INTO SEMP VALUES(7369, 'SMITH', 'CLERK', 7902, '17-DEC-80', 800, NULL, 20);
INSERT INTO SEMP VALUES(7499, 'ALLEN', 'SALESMAN', 7698, '20-FEB-81', 1600, 300, 30);
INSERT INTO SEMP VALUES(7521, 'WARD', 'SALESMAN', 7698, '22-FEB-81', 1250, 500, 30);
INSERT INTO SEMP VALUES(7566, 'JONES', 'MANAGER', 7839, '02-APR-81', 2975, NULL, 20);
INSERT INTO SEMP VALUES(7654, 'MARTIN', 'SALESMAN', 7698, '28-SEP-81', 1250, 1400,
30);
INSERT INTO SEMP VALUES(7698, 'BLAKE', 'MANAGER', 7839, '01-MAY-81', 2850, NULL, 30);
INSERT INTO SEMP VALUES(7782, 'CLARK', 'MANAGER', 7839, '09-JUN-81', 2450, NULL, 10);
INSERT INTO SEMP VALUES(7788, 'SCOTT', 'ANALYST', 7566, '09-DEC-82', 3000, NULL, 20);
INSERT INTO SEMP VALUES(7839, 'KING', 'PRESIDENT', NULL, '17-NOV-81', 5000, NULL, 10);
INSERT INTO SEMP VALUES(7844, 'TURNER', 'SALESMAN', 7698, '08-SEP-81', 1500, 0, 30);
INSERT INTO SEMP VALUES(7876, 'ADAMS', 'CLERK', 7788, '12-JAN-83', 1100, NULL, 20);
INSERT INTO SEMP VALUES(7900, 'JAMES', 'CLERK', 7698, '03-DEC-81', 950, NULL, 30);
INSERT INTO SEMP VALUES(7902, 'FORD', 'ANALYST', 7566, '04-DEC-81', 3000, NULL, 20);
INSERT INTO SEMP VALUES(7934, 'MILLER', 'CLERK', 7782, '23-JAN-82', 1300, NULL, 10);
SELECT * FROM SEMP;

```

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
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	09-DEC-82	3000	-	20
7902	FORD	ANALYST	7566	04-DEC-81	3000	-	20
7839	KING	PRESIDENT	-	17-NOV-81	5000	-	10
More than 10 rows available. Increase rows selector to view more rows.							

### **Question:**

Perform the following queries on the tables just created :

1. List the names of analysts and salesmen.

➤ SELECT ENAME FROM SEMP WHERE JOB IN ('SALESMAN', 'ANALYST');

ENAME
ALLEN
WARD
MARTIN
SCOTT
FORD
TURNER

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

➤ SELECT \* FROM SEMP WHERE HIREDATE < '30-SEP-81';

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
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
7844	TURNER	SALESMAN	7698	08-SEP-81	1500	0	30

3. List names of employees who are not managers.

➤ SELECT ENAME FROM SEMP WHERE JOB <> 'MANAGER';

ENAME
SMITH
ALLEN
WARD
MARTIN
SCOTT
FORD
KING
TURNER
ADAMS
JAMES
More than 10 rows available. Increase rows selector to view more rows.

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

➤ SELECT ENAME FROM SEMP WHERE EMPNO IN (7369, 7521, 7839, 7934, 7788);

ENAME
SMITH
WARD
SCOTT
KING
MILLER

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

➤ SELECT \* FROM SEMP WHERE DEPTNO NOT IN (10, 30, 40);

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
7369	SMITH	CLERK	7902	17-DEC-80	800	-	20
7566	JONES	MANAGER	7839	02-APR-81	2975	-	20
7788	SCOTT	ANALYST	7566	09-DEC-82	3000	-	20
7902	FORD	ANALYST	7566	04-DEC-81	3000	-	20
7876	ADAMS	CLERK	7788	12-JAN-83	1100	-	20

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

➤ SELECT ENAME FROM SEMP WHERE HIREDATE > '30-JUN-81' AND HIREDATE < '31-DEC-81';

ENAME
MARTIN
FORD
KING
TURNER
JAMES

7. List the different designations in the company.

➤ SELECT UNIQUE JOB FROM SEMP;

JOB
ANALYST
MANAGER
SALESMAN
PRESIDENT
CLERK

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

➤ SELECT ENAME FROM SEMP WHERE COMM IS NULL;

ENAME
SMITH
JONES
BLAKE
CLARK
SCOTT
FORD
KING
ADAMS
JAMES
MILLER

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

➤ SELECT ENAME, JOB FROM SEMP WHERE MGR IS NULL;

ENAME	JOB
KING	PRESIDENT

10. List the employees not assigned to any department.

➤ SELECT \* FROM SEMP WHERE DEPTNO IS NULL;

no data found

11. List the employees who are eligible for commission.

➤ SELECT ENAME FROM SEMP WHERE COMM IS NOT NULL;

ENAME
ALLEN
WARD
MARTIN
TURNER

12. List employees whose names either start or end with "S".

➤ SELECT ENAME FROM SEMP WHERE ENAME LIKE 'S%' OR ENAME LIKE '%S';

ENAME
SMITH
JONES
SCOTT
ADAMS
JAMES

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

➤ SELECT ENAME FROM SEMP WHERE ENAME LIKE '\_I%';

ENAME
KING
MILLER

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

➤ SELECT COUNT(DISTINCT EMPNO) FROM SEMP;

COUNT(DISTINCT EMPNO)
14

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

➤ SELECT COUNT(DISTINCT JOB) FROM SEMP;

COUNT(DISTINCT JOB)
5

16. List the total salaries paid to the employees.

➤ SELECT SUM(SAL) FROM SEMP;

SUM(SAL)
29025

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

➤ SELECT MAX(SAL), MIN(SAL), AVG(SAL) FROM SEMP;

MAX(SAL)	MIN(SAL)	AVG(SAL)
5000	800	2073.21428571428571428571428571428571429

18. List the maximum salary paid to a salesman.

➤ SELECT MAX(SAL) FROM SEMP WHERE JOB = 'SALESMAN';

MAX(SAL)
1600