DBMS ASSIGNMENT 3

Name : Aman Seervi

Roll No : 21CSB0B01

Section : B

1. Select all information of various tables

1.1 Salgrade

	GRADE	LOSAL	HISAL
1	1	700	1200
2	2	1201	1400
3	3	1401	2000
4	4	2001	3000
5	5	3001	9999

1.2 EMP

	EMP_NO	EMP_NAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
1	7369	SMITH	CLERK	7902	17-12-80	800	(null)	20
2	7499	ALLEN	SALESMAN	7698	20-02-81	1600	300	30
3	7521	WARD	SALESMAN	7698	22-02-81	1250	500	30
4	7566	JONES	MANAGER	7839	02-04-81	2975	(null)	20
5	7654	MARTIN	SALESMAN	7698	28-09-81	1250	1400	30
6	7698	BLAKE	MANAGER	7839	01-05-81	2850	(null)	30
7	7782	CLARK	MANAGER	7839	09-06-81	2450	(null)	10
8	7788	SCOTT	ANALYST	7566	19-04-87	3000	(null)	20
9	7839	KING	PRESIDENT	(null)	17-11-81	5000	(null)	10
10	7844	TURNER	SALESMAN	7698	08-09-81	1500	0	30
11	7876	ADAMS	CLERK	7788	23-05-87	1100	(null)	20
12	7900	JAMES	CLERK	7698	03-12-81	950	(null)	30
13	7902	FORD	ANALYST	7566	03-12-81	3000	(null)	20
14	7934	MILLER	CLERK	7782	23-01-82	1300	(null)	10

1.3 Dept

	DEPTNO	DNAME	LOC
1	10	ACCOUNTING	NEW YORK
2	20	RESEARCH	DALLAS
3	30	SALES	CHICAGO
4	40	OPERATIONS	BOSTON

2. See the structure of the above tables.

We use the **'Describe keyword for this'**

Here is an example :

```
DESCRIBE dept;
```

Salgrade :

```
Name  Null? Type
----- ----- ----------
GRADE       NUMBER(38)
LOSAL       NUMBER(38)
HISAL       NUMBER(38)
```

EMP:

```
Name     Null? Type
-------- ----- ------------
EMP_NO         NUMBER(38)
EMP_NAME       VARCHAR2(25)
JOB            VARCHAR2(25)
MGR            NUMBER(38)
HIREDATE       VARCHAR2(25)
SAL            NUMBER(38)
COMM           NUMBER(38)
DEPTNO         NUMBER(38)
```

DEPT:

```
Name   Null? Type
------ ----- ------------
DEPTNO       NUMBER(38)
DNAME        VARCHAR2(20)
LOC          VARCHAR2(20)
```

3. List all information whose salary is in between 1000 and 3000. Use the EMP table.

Code :

```
SELECT * from emp where sal>=1000 AND sal<=3000;
```

Output :

	EMP_NO	EMP_NAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
1	7499	ALLEN	SALESMAN	7698	20-02-81	1600	300	30
2	7521	WARD	SALESMAN	7698	22-02-81	1250	500	30
3	7566	JONES	MANAGER	7839	02-04-81	2975	(null)	20
4	7654	MARTIN	SALESMAN	7698	28-09-81	1250	1400	30
5	7698	BLAKE	MANAGER	7839	01-05-81	2850	(null)	30
6	7782	CLARK	MANAGER	7839	09-06-81	2450	(null)	10
7	7788	SCOTT	ANALYST	7566	19-04-87	3000	(null)	20
8	7844	TURNER	SALESMAN	7698	08-09-81	1500	0	30
9	7876	ADAMS	CLERK	7788	23-05-87	1100	(null)	20
10	7902	FORD	ANALYST	7566	03-12-81	3000	(null)	20
11	7934	MILLER	CLERK	7782	23-01-82	1300	(null)	10

4. List name and salary only of employees. Use EMP table.

Code :

```
SELECT emp_name,sal from emp ;
```

Output :

	EMP_NAME	SAL
1	SMITH	800
2	ALLEN	1600
3	WARD	1250
4	JONES	2975
5	MARTIN	1250
6	BLAKE	2850
7	CLARK	2450
8	SCOTT	3000
9	KING	5000
10	TURNER	1500
11	ADAMS	1100
12	JAMES	950
13	FORD	3000
14	MILLER	1300

5. List the above in sorted order. Sort by name. Use EMP table.

Code :

```
SELECT emp_name,sal
from emp
order by emp_name asc;
```

Output :

	EMP_NAME	SAL
1	ADAMS	1100
2	ALLEN	1600
3	BLAKE	2850
4	CLARK	2450
5	FORD	3000
6	JAMES	950
7	JONES	2975
8	KING	5000
9	MARTIN	1250
10	MILLER	1300
11	SCOTT	3000
12	SMITH	800
13	TURNER	1500
14	WARD	1250

6. List all employee names and dept no who are in dept 10 and 30. Use EMP table.

Code :

```
SELECT emp_name,dname from emp
join dept on emp.deptno=dept.deptno
where dept.deptno=10 or dept.deptno=30;
```

Output :

	EMP_NAME	DNAME
1	ALLEN	SALES
2	WARD	SALES
3	MARTIN	SALES
4	BLAKE	SALES
5	CLARK	ACCOUNTING
6	KING	ACCOUNTING
7	TURNER	SALES
8	JAMES	SALES
9	MILLER	ACCOUNTING

7. List name ,job of all clerks in dept 20 . Use EMP table.

Code :

```
SELECT emp_name,job from emp
join dept on emp.deptno=dept.deptno
where dept.deptno=20 and emp.job='CLERK';
```

Output :

	EMP_NAME	JOB
1	SMITH	CLERK
2	ADAMS	CLERK

8. List name,job of all clerks in dept 20 and 30. Use EMP table.

Code :

```
SELECT emp_name,job from emp
join dept on emp.deptno=dept.deptno
where (dept.deptno=20 or dept.deptno=30) and emp.job='CLERK';
```

Output :

	EMP_NAME	JOB
1	SMITH	CLERK
2	ADAMS	CLERK
3	JAMES	CLERK

9. Display all employees whose name starts with ‘S’. Use EMP table.

Code :

```
SELECT emp_name from emp
where emp_name like 'S%';
```

Output :

	EMP_NAME
1	SMITH
2	SCOTT

10. Display all employees whose name has four characters only. Use EMP table.

Code :

```
SELECT emp_name from emp
where emp_name like '____';
```

Output :

	EMP_NAME
1	WARD
2	KING
3	FORD

11. Display all employees whose name ends with ‘L’. Use EMP table.

Code :

```
SELECT emp_name from emp
where emp_name like '%L';
```

Output :

EMP_NO	EMP_NAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO

Empty , cause none of the employees have a name ending with a **‘L’**.

12.List all employees who have a manager. Use EMP table.

Code :

```
select * from emp
where mgr is not null;
```

Output :

	EMP_NO	EMP_NAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
1	7369	SMITH	CLERK	7902	17-12-80	800	(null)	20
2	7499	ALLEN	SALESMAN	7698	20-02-81	1600	300	30
3	7521	WARD	SALESMAN	7698	22-02-81	1250	500	30
4	7566	JONES	MANAGER	7839	02-04-81	2975	(null)	20
5	7654	MARTIN	SALESMAN	7698	28-09-81	1250	1400	30
6	7698	BLAKE	MANAGER	7839	01-05-81	2850	(null)	30
7	7782	CLARK	MANAGER	7839	09-06-81	2450	(null)	10
8	7788	SCOTT	ANALYST	7566	19-04-87	3000	(null)	20
9	7844	TURNER	SALESMAN	7698	08-09-81	1500	0	30
10	7876	ADAMS	CLERK	7788	23-05-87	1100	(null)	20
11	7900	JAMES	CLERK	7698	03-12-81	950	(null)	30
12	7902	FORD	ANALYST	7566	03-12-81	3000	(null)	20
13	7934	MILLER	CLERK	7782	23-01-82	1300	(null)	10

13.List all employees who do not have a manager. Use EMP table.

Code :

```
select * from emp
where mgr is  null;
```

Output :

	EMP_NO	EMP_NAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
1	7839	KING	PRESIDENT	(null)	17-11-81	5000	(null)	10

14. List name and Total of salary i.e sal+commission. Use EMP table.

Code :

```
--Q14
select emp_name,COALESCE(sal+comm,sal) from emp;
```

	EMP_NAME	COALESCE(SAL+COMM,SAL)
1	SMITH	800
2	ALLEN	1900
3	WARD	1750
4	JONES	2975
5	MARTIN	2650
6	BLAKE	2850
7	CLARK	2450
8	SCOTT	3000
9	KING	5000
10	TURNER	1500
11	ADAMS	1100
12	JAMES	950
13	FORD	3000
14	MILLER	1300

15.List name and Annual Salary i.e sal*12. Use EMP table.

Code :

```
--Q15
select emp_name, sal*12 from emp;
```

Output :

	EMP_NAME	SAL*12
1	SMITH	9600
2	ALLEN	19200
3	WARD	15000
4	JONES	35700
5	MARTIN	15000
6	BLAKE	34200
7	CLARK	29400
8	SCOTT	36000
9	KING	60000
10	TURNER	18000
11	ADAMS	13200
12	JAMES	11400
13	FORD	36000
14	MILLER	15600

16. List all employees who joined in the year 1991. Use EMP table.

Code :

```
--Q16
select * from emp
where hiredate like '%91';
```

Output :

EMP_NO	EMP_NAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO

No Employee joined in the year 1991.

17. Display data as who , what ,when and how much display should look like

Eg: SMITH HAS HELD THE POSITION OF CLERK IN DEPARTMENT 20 SINCE '12-OCT-1990'AND EARNS 1500.

Code :

```
--Q17
select emp_name || ' HAS HELD THE POSITION OF ' || job || ' IN DEPARTMENT ' || deptno ||
' SINCE ' || hiredate || ' AND EARNS ' || sal from emp;
```

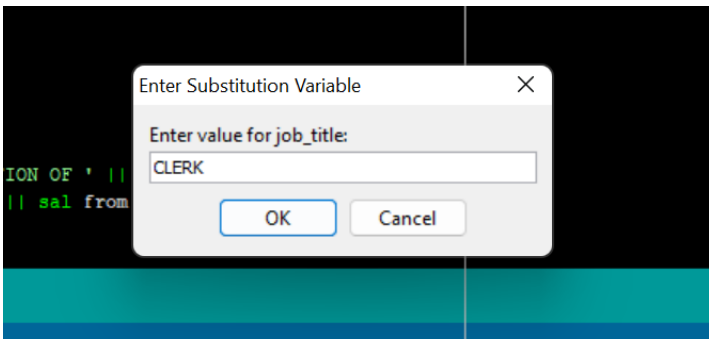
Output :

	EMP_NAME||'HASHELDTHEPOSITIONOF'||JOB||'INDEPARTMENT'||DEPTNO||'SINCE'||HIREDATE||'ANDEARNS'||SAL
1	SMITH HAS HELD THE POSITION OF CLERK IN DEPARTMENT 20 SINCE 17-12-80 AND EARNS 800
2	ALLEN HAS HELD THE POSITION OF SALESMAN IN DEPARTMENT 30 SINCE 20-02-81 AND EARNS 1600
3	WARD HAS HELD THE POSITION OF SALESMAN IN DEPARTMENT 30 SINCE 22-02-81 AND EARNS 1250
4	JONES HAS HELD THE POSITION OF MANAGER IN DEPARTMENT 20 SINCE 02-04-81 AND EARNS 2975
5	MARTIN HAS HELD THE POSITION OF SALESMAN IN DEPARTMENT 30 SINCE 28-09-81 AND EARNS 1250
6	BLAKE HAS HELD THE POSITION OF MANAGER IN DEPARTMENT 30 SINCE 01-05-81 AND EARNS 2850
7	CLARK HAS HELD THE POSITION OF MANAGER IN DEPARTMENT 10 SINCE 09-06-81 AND EARNS 2450
8	SCOTT HAS HELD THE POSITION OF ANALYST IN DEPARTMENT 20 SINCE 19-04-87 AND EARNS 3000
9	KING HAS HELD THE POSITION OF PRESIDENT IN DEPARTMENT 10 SINCE 17-11-81 AND EARNS 5000
10	TURNER HAS HELD THE POSITION OF SALESMAN IN DEPARTMENT 30 SINCE 08-09-81 AND EARNS 1500
11	ADAMS HAS HELD THE POSITION OF CLERK IN DEPARTMENT 20 SINCE 23-05-87 AND EARNS 1100
12	JAMES HAS HELD THE POSITION OF CLERK IN DEPARTMENT 30 SINCE 03-12-81 AND EARNS 950
13	FORD HAS HELD THE POSITION OF ANALYST IN DEPARTMENT 20 SINCE 03-12-81 AND EARNS 3000
14	MILLER HAS HELD THE POSITION OF CLERK IN DEPARTMENT 10 SINCE 23-01-82 AND EARNS 1300

18. Supply values at runtime and display all employees in the user specified job title.

Code :

```
--Q18
select * from emp
where job='&job_title';
```



Output :

	EMP_NO	EMP_NAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
1	7369	SMITH	CLERK	7902	17-12-80	800	(null)	20
2	7876	ADAMS	CLERK	7788	23-05-87	1100	(null)	20
3	7900	JAMES	CLERK	7698	03-12-81	950	(null)	30
4	7934	MILLER	CLERK	7782	23-01-82	1300	(null)	10

19. Find all employees joined on a specified date entered by the user.

Code :

```
--Q19
select * from emp
where hiredate='&date';
```

Output :

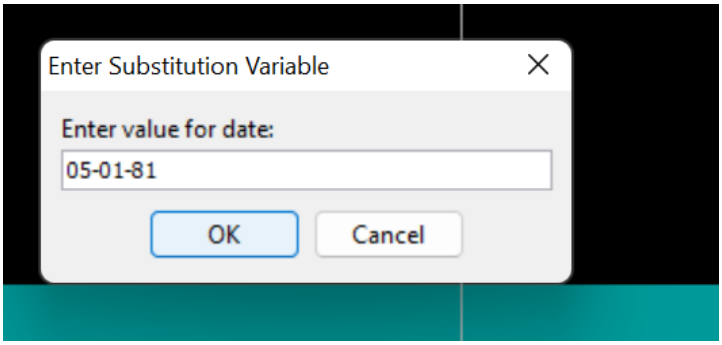
	EMP_NO	EMP_NAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
1	7900	JAMES	CLERK	7698	03-12-81	950	(null)	30
2	7902	FORD	ANALYST	7566	03-12-81	3000	(null)	20

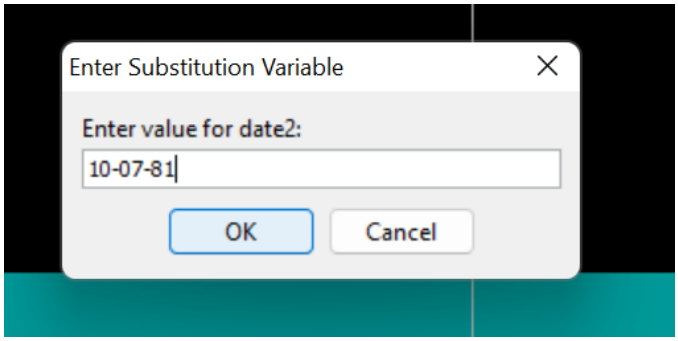
20. Generate a query that accepts two dates i.e. the joining dates of EMP(range) at runtime and gives the output. Rerun it and then change the substitution variables with && and return it twice.

Code :

```
select * from emp
where hiredate between '&date' AND '&date2';
```

Output :





	EMP_NO	EMP_NAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
1	7499	ALLEN	SALESMAN	7698	20-02-81	1600	300	30
2	7521	WARD	SALESMAN	7698	22-02-81	1250	500	30
3	7566	JONES	MANAGER	7839	02-04-81	2975	(null)	20
4	7698	BLAKE	MANAGER	7839	01-05-81	2850	(null)	30
5	7782	CLARK	MANAGER	7839	09-06-81	2450	(null)	10

21. Define one variable i.e the REM= 'sal*12+NVL(comm.,0)

Use the variable to find all employees who earn $10000 a year or more.

Code :

```
define rem=sal*12+nvl(comm,0);
select * from emp where &rem>=10000;
```

Output :

	EMP_NO	EMP_NAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
1	7499	ALLEN	SALESMAN	7698	20-02-81	1600	300	30
2	7521	WARD	SALESMAN	7698	22-02-81	1250	500	30
3	7566	JONES	MANAGER	7839	02-04-81	2975	(null)	20
4	7654	MARTIN	SALESMAN	7698	28-09-81	1250	1400	30
5	7698	BLAKE	MANAGER	7839	01-05-81	2850	(null)	30
6	7782	CLARK	MANAGER	7839	09-06-81	2450	(null)	10
7	7788	SCOTT	ANALYST	7566	19-04-87	3000	(null)	20
8	7839	KING	PRESIDENT	(null)	17-11-81	5000	(null)	10
9	7844	TURNER	SALESMAN	7698	08-09-81	1500	0	30
10	7876	ADAMS	CLERK	7788	23-05-87	1100	(null)	20
11	7900	JAMES	CLERK	7698	03-12-81	950	(null)	30
12	7902	FORD	ANALYST	7566	03-12-81	3000	(null)	20
13	7934	MILLER	CLERK	7782	23-01-82	1300	(null)	10

22. Create a EMP10 table which has the following fields

Empno NUMBER(2)

Ename VARCHAR2(25)

Date_join DATE

Deptno NUMBER(2)

Salary NUMBER(10,2)

Job VARCHAR2(10)

Comm NUMBER(7,2)

Code :

```
--Q22
create table emp10(empno number(2),
    ename varchar2(25),
    date_join date,
    deptno number(2),
    salary number(10,2),
    job varchar2(10),
    comm number(7,2)
);
```

Output :

```
Table EMP10 created.
```

```
Name      Null? Type
--------- ----- ------------
EMPNO           NUMBER(2)
ENAME           VARCHAR2(25)
DATE_JOIN       DATE
DEPTNO          NUMBER(2)
SALARY          NUMBER(10,2)
JOB             VARCHAR2(10)
COMM            NUMBER(7,2)
```

23. Create another table with the following constraints

Empno NUMBER(2)

Ename VARCHAR2(25)

Date_join DATE

Deptno NUMBER(2)

Salary NUMBER(10,2)
Job VARCHAR2(10)
Comm NUMBER(7,2)

Code :

```
create table another(empno number(2),
    ename varchar2(25),
    date_join date,
    deptno number(2),
    salary number(10,2),
    job varchar2(10),
    comm number(7,2)
);

describe another;
```

Output :

```
Table ANOTHER created.

Name      Null? Type
--------- ----- ------------
EMPNO           NUMBER(2)
ENAME           VARCHAR2(25)
DATE_JOIN       DATE
DEPTNO          NUMBER(2)
SALARY          NUMBER(10,2)
JOB             VARCHAR2(10)
COMM            NUMBER(7,2)
```

24. Give different field names to the table. Create a table emp20 with only name, sal and job from EMP table with employees of department 20.

Code :

```
--Q24
create table emp20 as
select emp_name as name,job as e_job, sal as e_sal from emp
where deptno=20;
```

Output :

```
Table EMP20 created.
```

—----------X—----------X—----------X—----------