ASSIGNMENT - 2
DBMS LAB

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1.Display the Name, manager Id, and hire date of all employees who are either clerk or works in dept 20. the date should be in the following format: DATE_HIRED Seventeenth December, 1980 Second April, 1981

```
SELECT ENAME, MGR, TO_CHAR(HIREDATE, 'DDSPTH MONTH,YYYY') AS HIREDATE
FROM EMP
WHERE JOB = 'CLERK'
OR DEPTNO = 20;
```

ENAME	MGR	HIREDATE
SMITH	7902	SEVENTEENTH DECEMBER ,1980
JONES	7839	SECOND APRIL ,1981
SCOTT	7566	NINETEENTH APRIL ,1987
ADAMS	7788	TWENTY-THIRD MAY ,1987
JAMES	7698	THIRD DECEMBER ,1981
FORD	7566	THIRD DECEMBER ,1981
MILLER	7782	TWENTY-THIRD JANUARY ,1982

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7 rows selected.

2. List the employee name and old salary and new increased salary by 25% and expressed as a whole number.

```
SELECT ENAME, SAL, ROUND(SAL * 1.25) AS NEW_SAL
FROM EMP;
```

	A	B	C
1	ENAME	SAL	NEW_SAL
2	SMITH	800	1000
3	ALLEN	1600	2000
4	WARD	1250	1563
5	JONES	2975	3719
6	MARTIN	1250	1563
7	BLAKE	2850	3563
8	CLARK	2450	3063
9	SCOTT	3000	3750
10	KING	5000	6250
11	TURNER	1500	1875
12	ADAMS	1100	1375
13	JAMES	950	1188
14	FORD	3000	3750
15	MILLER	1300	1625

3. List the employee name and salary where name is displayed as left justified and salary with right justified.

```
SELECT ENAME || ' ' || LPAD(SAL, 10, '0') AS SAL_FORMAT
FROM EMP;
```

	A	B
1	SAL_FORMAT	
2	SMITH 0000000800	
3	ALLEN 0000001600	
4	WARD 0000001250	
5	JONES 0000002975	
6	MARTIN 0000001250	
7	BLAKE 0000002850	
8	CLARK 0000002450	
9	SCOTT 0000003000	
10	KING 0000005000	
11	TURNER 0000001500	
12	ADAMS 0000001100	
13	JAMES 0000000950	
14	FORD 0000003000	
15	MILLER 0000001300	

4. Produce the output as follows(for all employees) ROLE OF THE EMPLOYEE Name1 () Name2 () ..... Note: Only first character of Name and job will be in uppercase.

```
SELECT UPPER(SUBSTR(ENAME, 1, 1)) || LOWER(SUBSTR(ENAME, 2)) || ' (' || UPPER(JOB) || ')' AS ROLE
FROM EMP;
```

	A	B
1	ROLE	
2	Smith (CLERK)	
3	Allen (SALESMAN)	
4	Ward (SALESMAN)	
5	Jones (MANAGER)	
6	Martin (SALESMAN)	
7	Blake (MANAGER)	
8	Clark (MANAGER)	
9	Scott (ANALYST)	
10	King (PRESIDENT)	
11	Turner (SALESMAN)	
12	Adams (CLERK)	
13	James (CLERK)	
14	Ford (ANALYST)	
15	Miller (CLERK)	

5. Give the details of an employees with job is clerk (enter the job value clerk as input).

```
SELECT *
FROM EMP
WHERE JOB = 'CLERK';
```

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO	PHONENO	ADDRESS
7369	SMITH	CLERK	7902	17-DEC-80	800	-	20	-	-
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	-	-

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4 rows selected.

6. Display each employee name with hiredate and salary review date. Assume that date is one year after hiredate. Order the output in ascending review date order.

```
SELECT ENAME, HIREDATE, ADD_MONTHS(HIREDATE,12) REVIEWDATE
FROM EMP
ORDER BY REVIEWDATE;
```

	A	B	C
1	ENAME	HIREDATE	REVIEWDATE
2	SMITH	17-DEC-80	17-DEC-81
3	ALLEN	20-FEB-81	20-FEB-82
4	WARD	22-FEB-81	22-FEB-82
5	JONES	02-APR-81	02-APR-82
6	BLAKE	01-MAY-81	01-MAY-82
7	CLARK	09-JUN-81	09-JUN-82
8	TURNER	08-SEP-81	08-SEP-82
9	MARTIN	28-SEP-81	28-SEP-82
10	KING	17-NOV-81	17-NOV-82
11	JAMES	03-DEC-81	03-DEC-82
12	FORD	03-DEC-81	03-DEC-82
13	MILLER	23-JAN-82	23-JAN-83
14	SCOTT	19-APR-87	19-APR-88
15	ADAMS	23-MAY-87	23-MAY-88

7. Find the employees(s) who earn the highest salary in each job type sort in descending salary order(Use IN operator and subqueries)

```
SELECT *
FROM EMP
WHERE (JOB,SAL) IN (SELECT JOB,max(SAL) FROM EMP GROUP BY JOB )
ORDER BY SAL;
```

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO	PHONENO	ADDRESS
7934	MILLER	CLERK	7782	23-JAN-82	1300	-	10	-	-
7499	ALLEN	SALESMAN	7698	20-FEB-81	1600	300	30	-	-
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	-	-
7839	KING	PRESIDENT	-	17-NOV-81	5000	-	10	-	-

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6 rows selected.

8. Find the most recently hired employee in each department (give number only).

```
SELECT DEPTNO, ENAME
FROM EMP
WHERE (DEPTNO,SYSDATE-HIREDATE)
IN
(SELECT DEPTNO, MIN(SYSDATE-HIREDATE) FROM EMP GROUP BY DEPTNO)
GROUP BY DEPTNO,ENAME;
```

DEPTNO	ENAME
10	MILLER
30	JAMES
20	ADAMS

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3 rows selected.

9. Show the name of the department and no of employees who works in that department. Sort in department number.

```
SELECT EMP.DEPTNO ,COUNT(EMPNO)
FROM EMP,DEPT
WHERE DEPT.DEPTNO = EMP.DEPTNO

GROUP BY EMP.DEPTNO
ORDER BY EMP.DEPTNO;
```

DEPTNO	COUNT(EMPNO)
10	3
20	5
30	6

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3 rows selected.

10. Display the Id, name, salary and the salary grade for any employee who earns the maximum salary for their department. Sort in department number.

```
SELECT EMP.EMPNO, EMP.ENAME, EMP.SAL, SALGRADE.GRADE
FROM EMP, SALGRADE
WHERE (EMP.SAL BETWEEN SALGRADE.LOSAL AND SALGRADE.HISAL)
AND
(EMP.DEPTNO, EMP.SAL) IN (SELECT DEPTNO, MAX(SAL) FROM EMP GROUP BY DEPTNO)
ORDER BY EMP.DEPTNO;
```

EMPNO	ENAME	SAL	GRADE
7839	KING	5000	5
7902	FORD	3000	4
7788	SCOTT	3000	4
7698	BLAKE	2850	4

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4 rows selected.

11. In which year did most people join the company? Display the year and number of employees.

```
SELECT YEAR, EMP_JOINED
FROM (SELECT EXTRACT(YEAR FROM HIREDATE) YEAR, COUNT(EXTRACT(YEAR FROM
HIREDATE)) EMP_JOINED FROM EMP GROUP BY EXTRACT(YEAR FROM HIREDATE))
WHERE EMP_JOINED = (SELECT MAX(COUNT(EXTRACT(YEAR FROM HIREDATE)))
EMP_JOINED FROM EMP GROUP BY EXTRACT(YEAR FROM HIREDATE));
```

YEAR	EMP_JOINED
1981	10

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12. Show the every alternate row in employee table.

```
SELECT INDX.R ROW_NUMBER,EMP.*
FROM EMP, (SELECT EMPNO, (ROW_NUMBER() OVER (ORDER BY EMPNO))-1 R FROM EMP)
INDX
WHERE (EMP.EMPNO = INDX.EMPNO) AND (REMAINDER(INDX.R,2)=0);
```

ROW_NUMBER	EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO	PHONENO	ADDRESS
0	7369	SMITH	CLERK	7902	17-DEC-80	800	-	20	-	-
2	7521	WARD	SALESMAN	7698	22-FEB-81	1250	500	30	-	-
4	7654	MARTIN	SALESMAN	7698	28-SEP-81	1250	1400	30	-	-
6	7782	CLARK	MANAGER	7839	09-JUN-81	2450	-	10	-	-
8	7839	KING	PRESIDENT	-	17-NOV-81	5000	-	10	-	-
10	7876	ADAMS	CLERK	7788	23-MAY-87	1100	-	20	-	-
12	7902	FORD	ANALYST	7566	03-DEC-81	3000	-	20	-	-

Download CSV

7 rows selected.

13. Display the total salary of all employees. Total salary = salary + commission.

```
SELECT SUM(CTC) TOTAL_SAL
FROM (SELECT EMP.*, R.CTC CTC
FROM EMP, ((SELECT SAL + COMM CTC, EMPNO
FROM EMP WHERE COMM IS NOT NULL)
UNION
(SELECT SAL CTC, EMPNO
FROM EMP WHERE COMM IS NULL)) R
WHERE R.EMPNO = EMP.EMPNO);
```

TOTAL_SAL
31225

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14. Display the department name and available jobs in that department.

```
SELECT DNAME, LISTAGG(JOB, ', ') WITHIN GROUP (ORDER BY DNAME) AVAILABLE_JOB
FROM (SELECT DISTINCT DEPT.DNAME DNAME ,EMP.JOB JOB FROM EMP, DEPT WHERE DEPT.DEPTNO = EMP.DEPTNO ORDER BY DEPT.DNAME)
GROUP BY DNAME;
```

DNAME	AVAILABLE_JOB
ACCOUNTING	CLERK, MANAGER, PRESIDENT
RESEARCH	ANALYST, CLERK, MANAGER
SALES	CLERK, MANAGER, SALESMAN

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3 rows selected.

15. Display all the available departments and the employee(s) works under it.

```
SELECT DNAME, LISTAGG(ENAME, ', ') WITHIN GROUP (ORDER BY DNAME) EMPLOYEES
 FROM (SELECT DISTINCT DEPT.DNAME DNAME, EMP.ENAME ENAME FROM EMP, DEPT WHERE EMP.DEPTNO=DEPT.DEPTNO ORDER BY DEPT.DNAME)
 GROUP BY DNAME;
```

DNAME	EMPLOYEES
ACCOUNTING	CLARK, KING, MILLER
RESEARCH	ADAMS, FORD, JONES, SCOTT, SMITH
SALES	ALLEN, BLAKE, JAMES, MARTIN, TURNER, WARD

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3 rows selected.