SQL CLASS ASSIGNMENT- II

Two tables to be created in the database that may be used for the following exercises. Their structure is as follows:

EMP(empno, ename, job, mgr-id, hiredate, sal, comm., deptno)

DEPT(deptno, dname, loc)

These tables have the following data:

EMPNO	ENAME	JOB	MGR-Id	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	19-APR-87	3000		20
7839	KING	PRESIDENT		17-NOV-81	5000		10
7844	TURNER	SALESMAN	7698	08-SEP-81	1500	0	30
7876	ADAMS	CLERK	7788	23-MAY-87	1100		20
7900	JAMES	CLERK	7698	03-DEC-81	950		30
7902	FORD	ANALYST	7566	03-DEC-81	3000		20
7934	MILLER	CLERK	7782	23-JAN-82	1300		10

DEPT

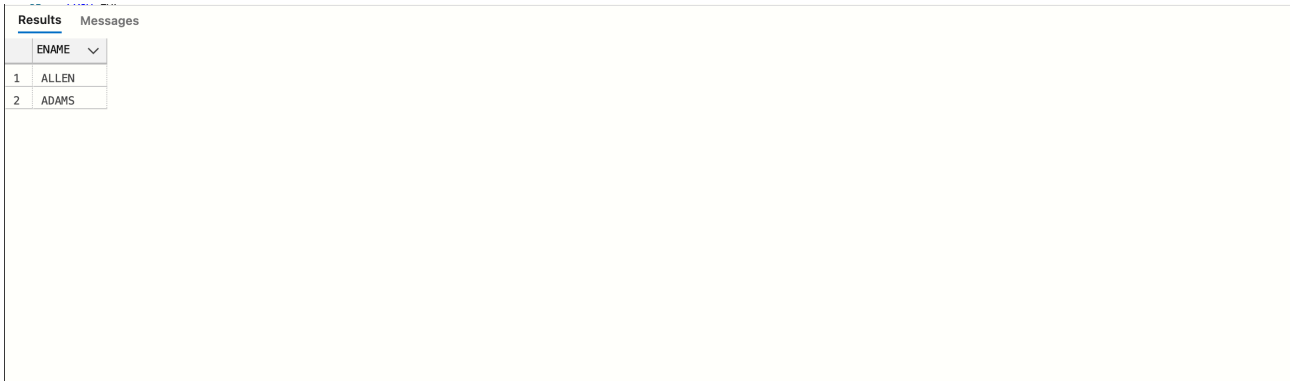
DEPTNO	DNAME	LOC
10	ACCOUNTING	NEW YORK
20	RESEARCH	DALLAS
30	SALES	CHICAGO
40	OPERATIONS	BOSTON

-- Set I Queries

OUTPUT:

-- 1. List all employees whose name begins with ‘A'.

```
SELECT ENAME FROM EMP WHERE ENAME LIKE ‘A%';
```

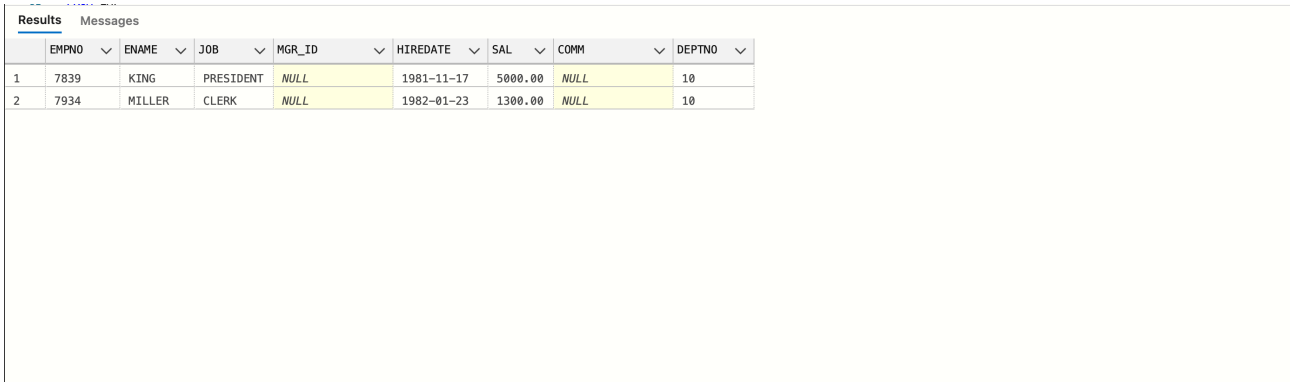


Results Messages

	ENAME
1	ALLEN
2	ADAMS

-- 2. Select all those employees who don't have a manager.

```
SELECT * FROM EMP WHERE MGR_ID IS NULL;
```

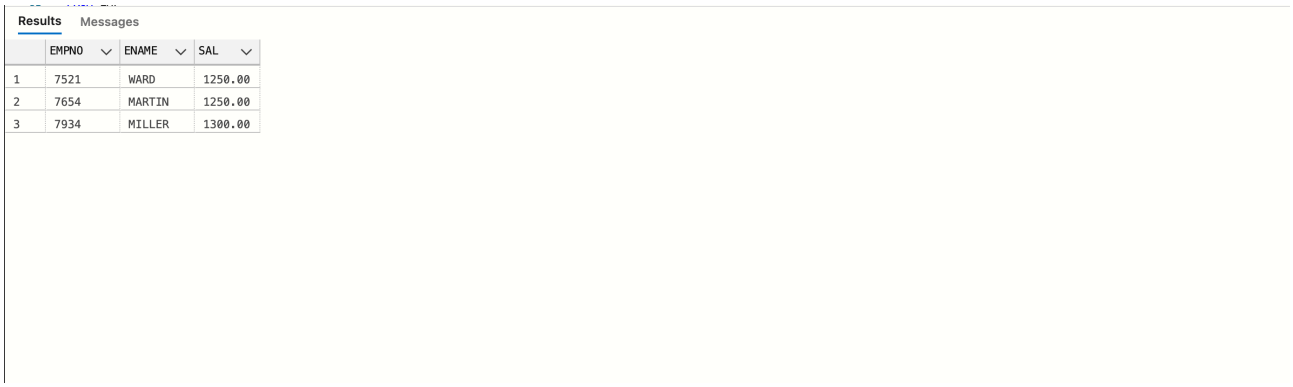


Results Messages

	EMPNO	ENAME	JOB	MGR_ID	HIREDATE	SAL	COMM	DEPTNO
1	7839	KING	PRESIDENT	*NULL*	1981-11-17	5000.00	*NULL*	10
2	7934	MILLER	CLERK	*NULL*	1982-01-23	1300.00	*NULL*	10

-- 3. List employee name, number, and salary for those employees who earn in the range 1200 to 1400.

```
SELECT EMPNO, ENAME, SAL FROM EMP WHERE SAL BETWEEN 1200 AND 1400;
```



Results Messages

	EMPNO	ENAME	SAL
1	7521	WARD	1250.00
2	7654	MARTIN	1250.00
3	7934	MILLER	1300.00

-- 4. Give all the employees in the RESEARCH department a 10% pay rise.
-- Verify that this has been done by listing all their details before and after the rise.

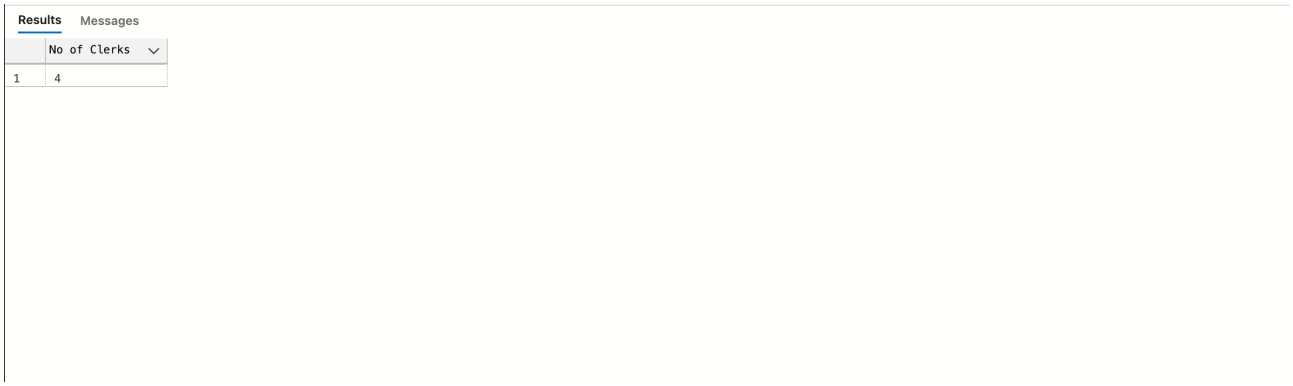
```
SELECT EMPNO, ENAME, JOB, SAL AS Current_Salary,
       SAL * 1.10 AS [New Salary]
FROM EMP
WHERE DEPTNO = (SELECT DEPTNO FROM DEPT WHERE DNAME = 'RESEARCH');
```

Results Messages

	EMPNO	ENAME	JOB	Current_Salary	New Salary
1	7369	SMITH	CLERK	800.00	880.0000
2	7566	JONES	MANAGER	2975.00	3272.5000
3	7788	SCOTT	ANALYST	3000.00	3300.0000
4	7876	ADAMS	CLERK	1100.00	1210.0000
5	7902	FORD	ANALYST	3000.00	3300.0000

-- 5. Find the number of CLERKS employed. Give it a descriptive heading.
SELECT COUNT(*) AS "No of Clerks" FROM EMP WHERE JOB = ‘CLERK’;

```
SELECT COUNT(*) AS "No of Clerks" FROM EMP WHERE JOB = 'CLERK';
```

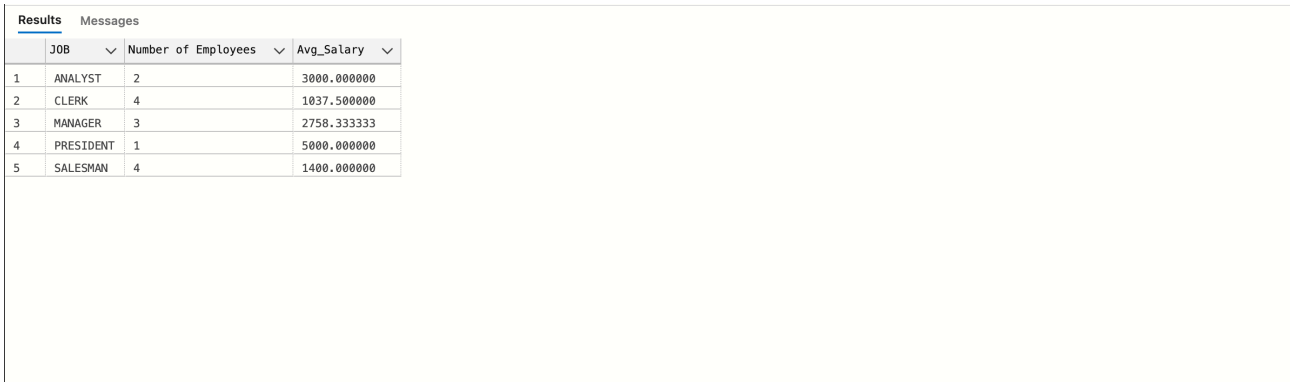


Results Messages

	No of Clerks
1	4

-- 6. Find the average salary for each job type and the number of people employed in each job.

```
SELECT JOB, COUNT(*) AS [Number of Employees], AVG(SAL) AS
Avg_Salary
FROM EMP
GROUP BY JOB;
```

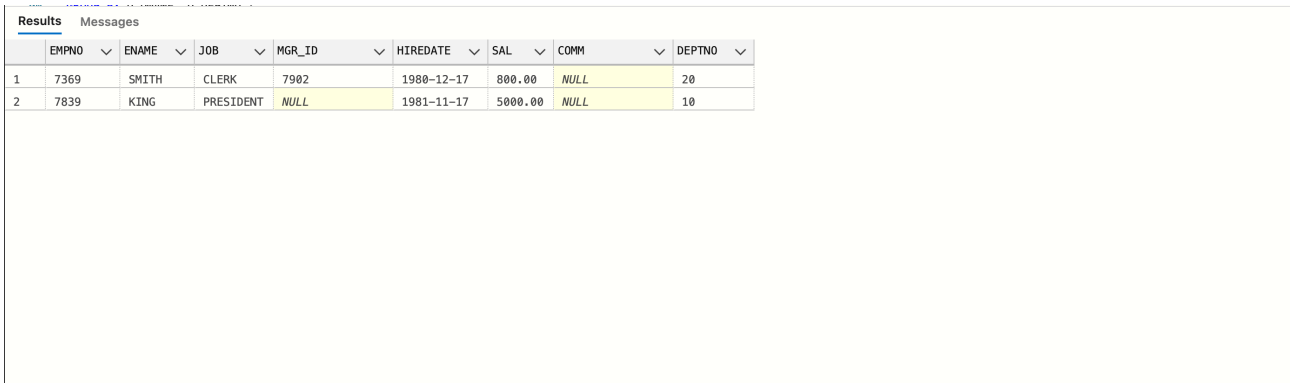


Results Messages

	JOB	Number of Employees	Avg_Salary
1	ANALYST	2	3000.000000
2	CLERK	4	1037.500000
3	MANAGER	3	2758.333333
4	PRESIDENT	1	5000.000000
5	SALESMAN	4	1400.000000

-- 7. List the employees with the lowest and highest salary.

```
SELECT * FROM EMP WHERE SAL = (SELECT MIN(SAL) FROM EMP)
UNION
SELECT * FROM EMP WHERE SAL = (SELECT MAX(SAL) FROM EMP);
```

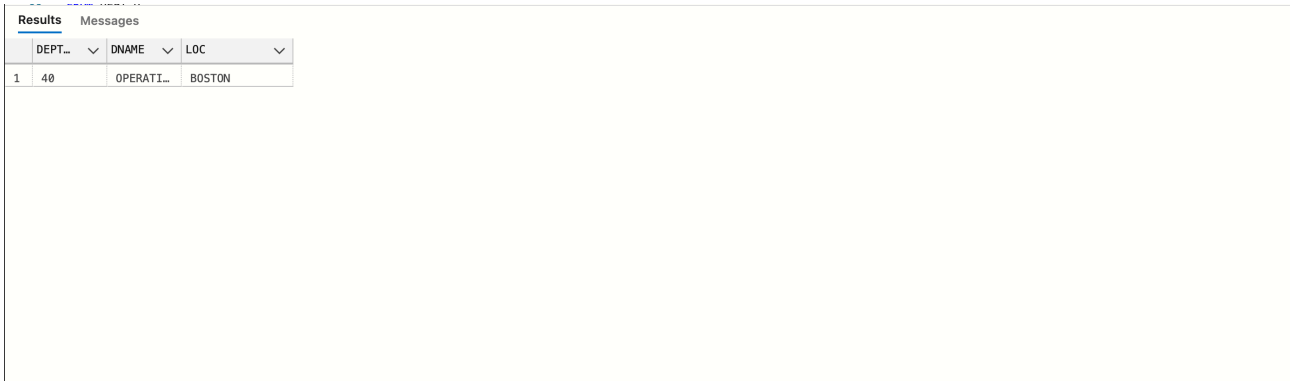


Results Messages

	EMPNO	ENAME	JOB	MGR_ID	HIREDATE	SAL	COMM	DEPTNO
1	7369	SMITH	CLERK	7902	1980-12-17	800.00	*NULL*	20
2	7839	KING	PRESIDENT	*NULL*	1981-11-17	5000.00	*NULL*	10

-- 8. List full details of departments that don't have any employees.

```
SELECT * FROM DEPT WHERE DEPTNO NOT IN (SELECT DISTINCT DEPTNO
FROM EMP);
```

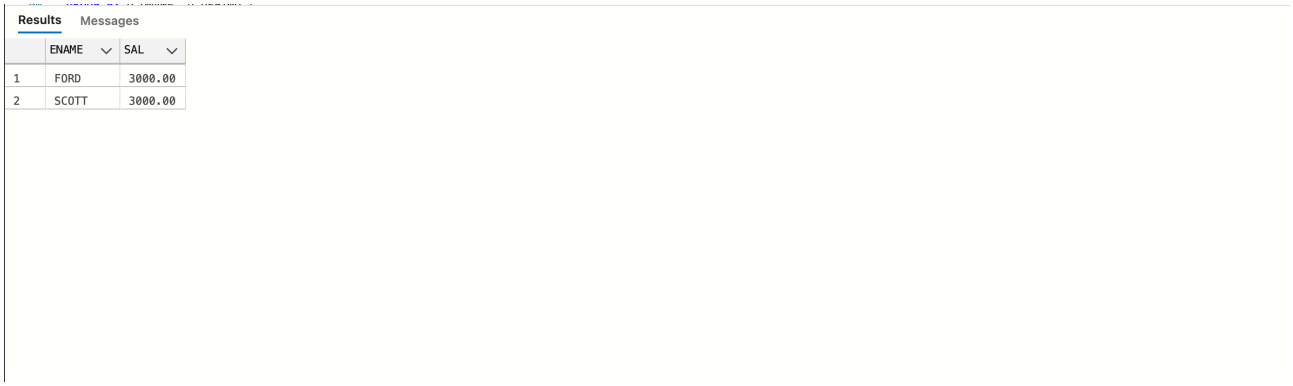


Results Messages

	DEPT…	DNAME	LOC
1	40	OPERATI…	BOSTON

-- 9. Get the names and salaries of all the analysts earning more than 1200 who are based in department 20.
-- Sort the answer by ascending order of name.

```
SELECT ENAME, SAL FROM EMP
WHERE JOB = 'ANALYST' AND SAL > 1200 AND DEPTNO = 20
ORDER BY ENAME ASC;
```

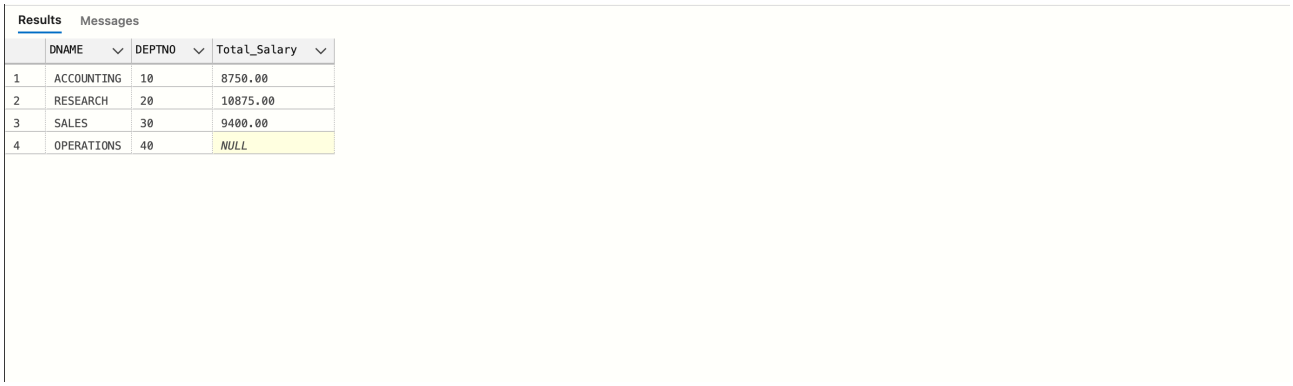


Results Messages

	ENAME	SAL
1	FORD	3000.00
2	SCOTT	3000.00

-- 10. For each department, list its name and number together with the total salary paid to employees in that department.

```
SELECT D.DNAME, D.DEPTNO, SUM(E.SAL) AS Total_Salary
FROM DEPT D
LEFT JOIN EMP E  ON D.DEPTNO = E.DEPTNO
GROUP BY D.DNAME, D.DEPTNO ;
```

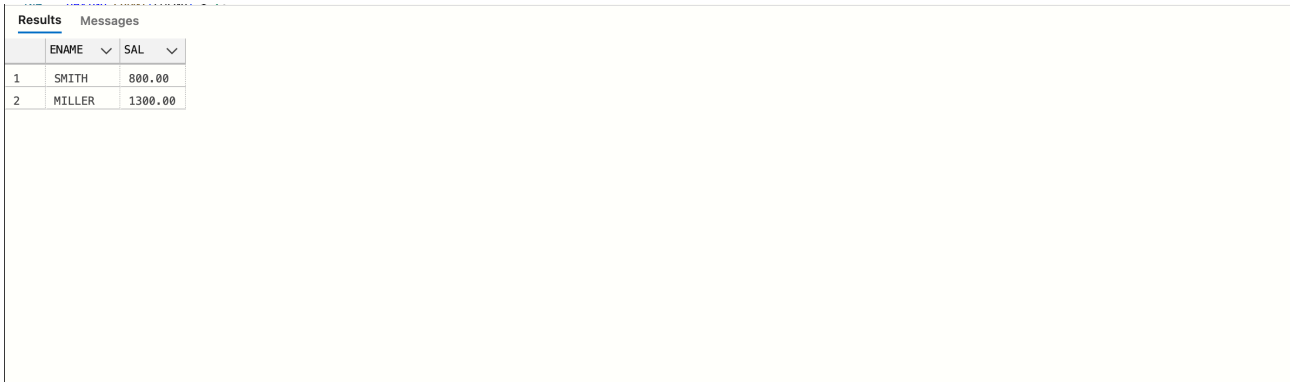


Results Messages

	DNAME	DEPTNO	Total_Salary
1	ACCOUNTING	10	8750.00
2	RESEARCH	20	10875.00
3	SALES	30	9400.00
4	OPERATIONS	40	*NULL*

-- 11. Find out salary of both MILLER and SMITH.

```
SELECT ENAME, SAL FROM EMP WHERE ENAME IN ('MILLER', 'SMITH');
```

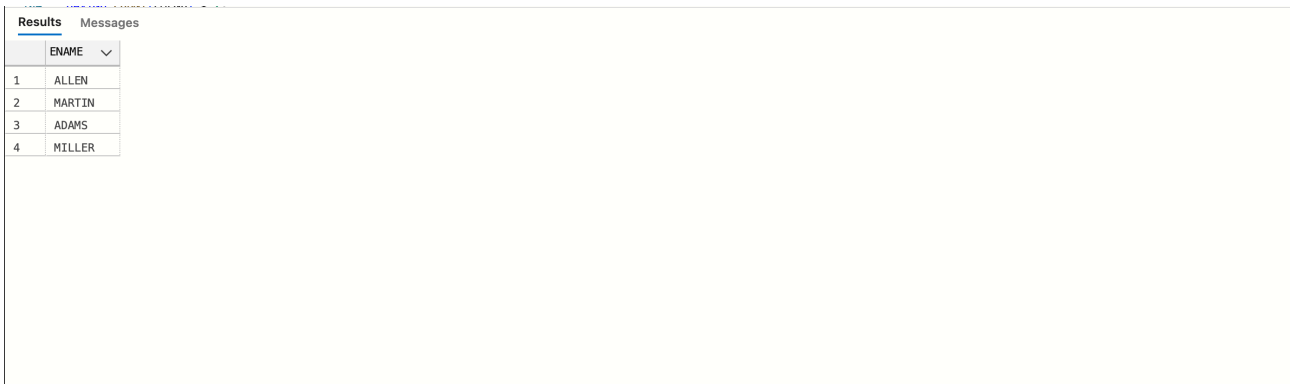


Results Messages

	ENAME	SAL
1	SMITH	800.00
2	MILLER	1300.00

-- 12. Find out the names of the employees whose name begin with 'A' or ‘M'.

```
SELECT ENAME FROM EMP WHERE ENAME LIKE 'A%' OR ENAME LIKE 'M%';
```

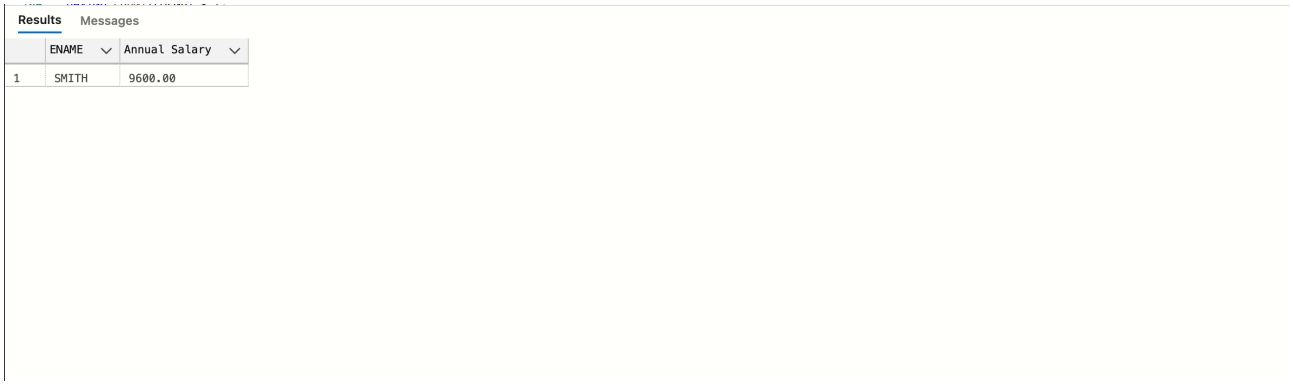


Results Messages

	ENAME
1	ALLEN
2	MARTIN
3	ADAMS
4	MILLER

-- 13. Compute yearly salary of SMITH.

```
SELECT ENAME, SAL * 12 AS [Annual Salary] FROM EMP WHERE ENAME =
'SMITH';
```

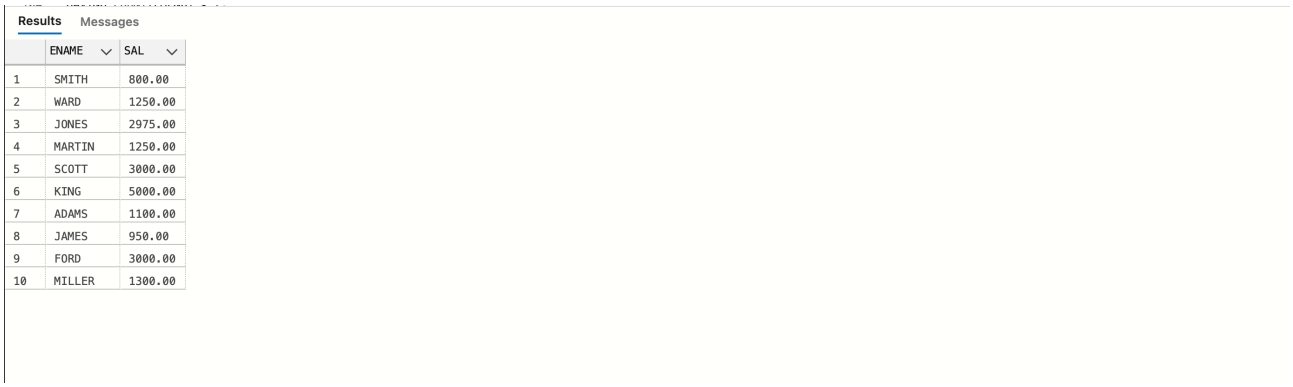


Results Messages

	ENAME	Annual Salary
1	SMITH	9600.00

-- 14. List the name and salary for all employees whose salary is not in the range of 1500 and 2850.

```
SELECT ENAME, SAL FROM EMP WHERE SAL NOT BETWEEN 1500 AND 2850;
```

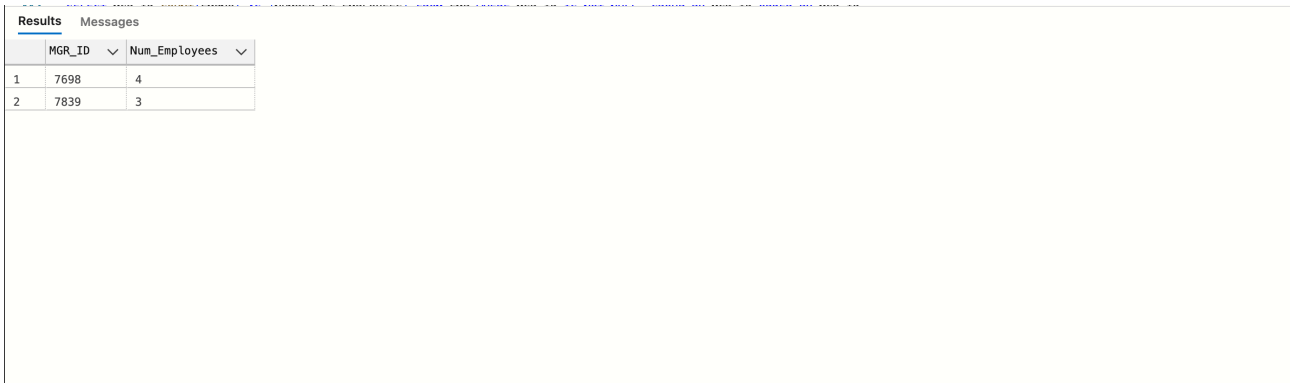


Results Messages

	ENAME	SAL
1	SMITH	800.00
2	WARD	1250.00
3	JONES	2975.00
4	MARTIN	1250.00
5	SCOTT	3000.00
6	KING	5000.00
7	ADAMS	1100.00
8	JAMES	950.00
9	FORD	3000.00
10	MILLER	1300.00

-- 15. Find all managers who have more than 2 employees reporting to them.

```
SELECT MGR_ID, COUNT(EMPNO) AS Num_Employees
FROM EMP
WHERE MGR_ID IS NOT NULL
GROUP BY MGR_ID
HAVING COUNT(EMPNO) > 2;
```



Results Messages

	MGR_ID	Num_Employees
1	7698	4
2	7839	3