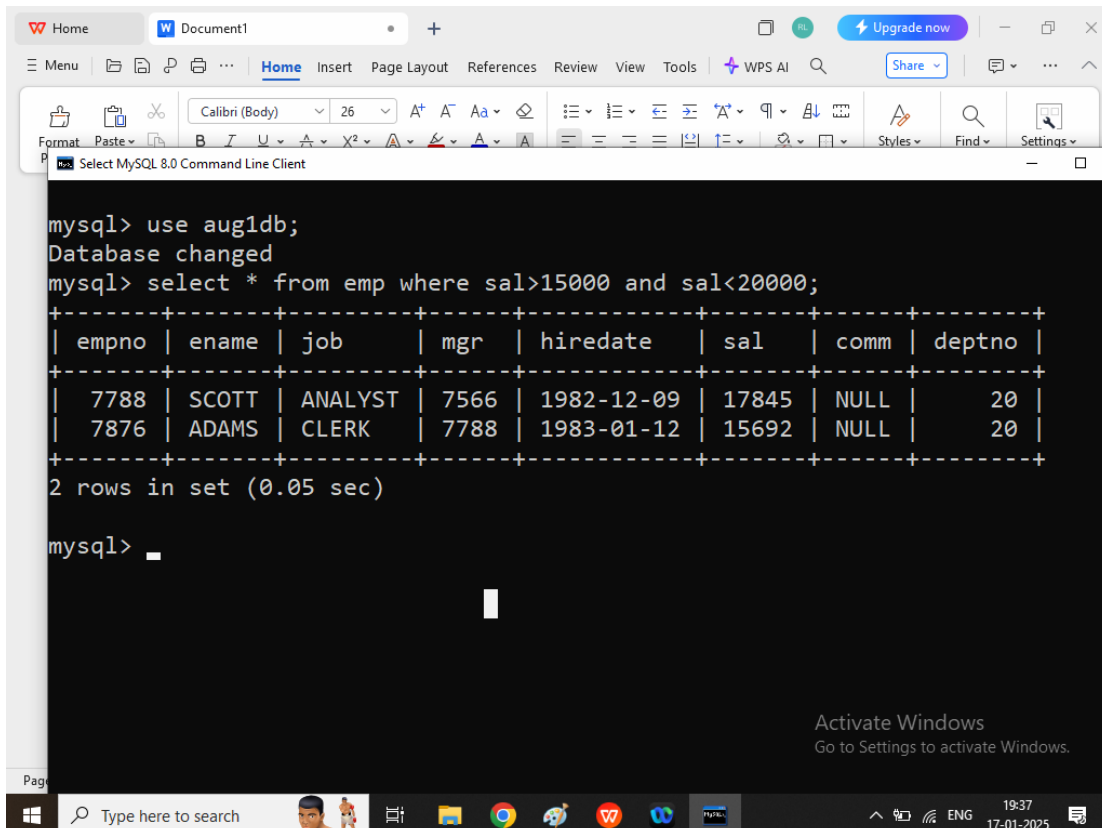


Q1. Write a SQL Query to print data of all employee whose salary is greater than 15000 and less than 20000?



```
mysql> use aug1db;
Database changed
mysql> select * from emp where sal>15000 and sal<20000;
+-----+-----+-----+-----+-----+-----+-----+-----+
| empno | ename  | job      | mgr  | hiredate | sal   | comm  | deptno |
+-----+-----+-----+-----+-----+-----+-----+-----+
| 7788  | SCOTT  | ANALYST  | 7566 | 1982-12-09 | 17845 | NULL  | 20     |
| 7876  | ADAMS  | CLERK    | 7788 | 1983-01-12 | 15692 | NULL  | 20     |
+-----+-----+-----+-----+-----+-----+-----+-----+
2 rows in set (0.05 sec)

mysql>
```

Q2. Explain Between operator in SQL?

Ans: The Between operator in sql is used to filter the result set based on range of values. It is inclusive of both ranges

Syntax:

Select column list from tablename
where column between value1 and
value2;

Example:

Select * from emp where sal between
15000 and 20000;

```
mysql> Select * from emp where sal between 10000 and 21500;
```

empno	ename	job	mgr	hiredate	sal	comm	deptno
7499	ALLEN	SALESMAN	7698	1981-02-20	21500	150	30
7521	WARD	SALESMAN	7698	1981-02-22	10000	500	30
7566	JONES	MANAGER	7839	1981-04-02	11512	NULL	20
7654	MARTIN	SALESMAN	7698	1981-09-28	12789	1400	30
7782	CLARK	MANAGER	7839	1981-06-09	10365	NULL	10
7788	SCOTT	ANALYST	7566	1982-12-09	17845	NULL	20
7839	KING	PRESIDENT	NULL	1981-11-17	10234	NULL	10
7844	TURNER	SALESMAN	7698	1981-09-08	11552	0	30
7876	ADAMS	CLERK	7788	1983-01-12	15692	NULL	20
7900	JAMES	CLERK	7698	1981-12-03	21212	NULL	30
7902	FORD	ANALYST	7566	1981-12-03	13652	NULL	20
7934	MILLER	CLERK	7782	1982-01-23	14892	NULL	10

```
mysql> Select * from emp where sal not between 10000 and 21500;
+-----+-----+-----+-----+-----+-----+-----+-----+
| empno | ename  | job          | mgr  | hiredate   | sal   | comm  | deptno |
+-----+-----+-----+-----+-----+-----+-----+-----+
| 7369   | SMITH  | CLERK        | 7902 | 1980-12-17 | 800   | NULL  | 20     |
| 7698   | BLAKE  | MANAGER      | 7839 | 1981-05-01 | 21563 | NULL  | 30     |
| 7935   | AMAN   | JAVA DEVELOPER | 7698 | 2024-01-01 | 23000 | 150   | 30     |
+-----+-----+-----+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)

mysql>
```

Q2. Write a SQL query to print data of all employee whose deptno is 10 or 20 or 30?

MySQL 8.0 Command Line Client

Database changed

```
mysql> select * from emp where deptno=10 or deptno=20 or deptno=30;
```

empno	ename	job	mgr	hiredate	sal	comm
7369	SMITH	CLERK	7902	1980-12-17	800	NULL
7499	ALLEN	SALESMAN	7698	1981-02-20	21500	150
7521	WARD	SALESMAN	7698	1981-02-22	10000	500
7566	JONES	MANAGER	7839	1981-04-02	11512	NULL
7654	MARTIN	SALESMAN	7698	1981-09-28	12789	1400
7698	BLAKE	MANAGER	7839	1981-05-01	21563	NULL
7782	CLARK	MANAGER	7839	1981-06-09	10365	NULL
7788	SCOTT	ANALYST	7566	1982-12-09	17845	NULL
7839	KING	PRESIDENT	NULL	1981-11-17	10234	NULL
7844	TURNER	SALESMAN	7698	1981-09-08	11552	0
7876	ADAMS	CLERK	7788	1983-01-12	15692	NULL
7900	JAMES	CLERK	7698	1981-12-03	21212	NULL
7902	FORD	ANALYST	7566	1981-12-03	13652	NULL
7934	MILLER	CLERK	7782	1982-01-23	14892	NULL
7935	AMAN	JAVA DEVELOPER	7698	2024-01-01	23000	150

15 rows in set (0.00 sec)

Q2. Explain In operator in SQL?

Ans: The In Operator in SQL is used to filter records where a specified column matches any value provide in the list

This is shortcut of multiple or conditions

Syntax:

Select column list from tablename where column name in(value1,value2,value3.....);

Example

Write a SQL query to print data of all employee whose deptno is 10 or 20 or 30?

```
mysql> select * from emp where deptno in(10,20,30);
```

empno	ename	job	mgr	hiredate	sal	comm
7369	SMITH	CLERK	7902	1980-12-17	800	NULL
7499	ALLEN	SALESMAN	7698	1981-02-20	21500	150
7521	WARD	SALESMAN	7698	1981-02-22	10000	500
7566	JONES	MANAGER	7839	1981-04-02	11512	NULL
7654	MARTIN	SALESMAN	7698	1981-09-28	12789	1400
7698	BLAKE	MANAGER	7839	1981-05-01	21563	NULL
7782	CLARK	MANAGER	7839	1981-06-09	10365	NULL
7788	SCOTT	ANALYST	7566	1982-12-09	17845	NULL
7839	KING	PRESIDENT	NULL	1981-11-17	10234	NULL
7844	TURNER	SALESMAN	7698	1981-09-08	11552	0
7876	ADAMS	CLERK	7788	1983-01-12	15692	NULL
7900	JAMES	CLERK	7698	1981-12-03	21212	NULL
7902	FORD	ANALYST	7566	1981-12-03	13652	NULL
7934	MILLER	CLERK	7782	1982-01-23	14892	NULL
7935	AMAN	JAVA DEVELOPER	7698	2024-01-01	23000	150

15 rows in set (0.00 sec)

Q2. write a SQL query to print data of all employee whose job is CLERK, MANAGER or SALESMAN?

Q3.write a SQL query to print data of all employee whose job is not CLERK, MANAGER or SALESMAN?

```
MySQL 8.0 Command Line Client
15 rows in set (0.00 sec)

mysql> select * from emp where job in('clerk','manager','salesman');
+-----+-----+-----+-----+-----+-----+-----+-----+
| 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 | 21500 | 150   | 30      |
| 7521 | WARD   | SALESMAN | 7698 | 1981-02-22 | 10000 | 500   | 30      |
| 7566 | JONES  | MANAGER  | 7839 | 1981-04-02 | 11512 | NULL  | 20      |
| 7654 | MARTIN | SALESMAN | 7698 | 1981-09-28 | 12789 | 1400  | 30      |
| 7698 | BLAKE  | MANAGER  | 7839 | 1981-05-01 | 21563 | NULL  | 30      |
| 7782 | CLARK  | MANAGER  | 7839 | 1981-06-09 | 10365 | NULL  | 10      |
| 7844 | TURNER | SALESMAN | 7698 | 1981-09-08 | 11552 | 0     | 30      |
| 7876 | ADAMS  | CLERK    | 7788 | 1983-01-12 | 15692 | NULL  | 20      |
| 7900 | JAMES  | CLERK    | 7698 | 1981-12-03 | 21212 | NULL  | 30      |
| 7934 | MILLER | CLERK    | 7782 | 1982-01-23 | 14892 | NULL  | 10      |
+-----+-----+-----+-----+-----+-----+-----+-----+
11 rows in set (0.00 sec)

mysql> select * from emp where job not in('clerk','manager','salesman');
+-----+-----+-----+-----+-----+-----+-----+-----+
| empno | ename  | job      | mgr  | hiredate | sal   | comm  | deptno |
+-----+-----+-----+-----+-----+-----+-----+-----+
| 7788 | SCOTT  | ANALYST  | 7566 | 1982-12-09 | 17845 | NULL  | 20      |
| 7839 | KING   | PRESIDENT | NULL | 1981-11-17 | 10234 | NULL  | 10      |
| 7902 | FORD   | ANALYST  | 7566 | 1981-12-03 | 13652 | NULL  | 20      |
+-----+-----+-----+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)
```

Q3. Explain like Operator in SQL?

Ans: The Like operator in SQL is used in where clause to search specific pattern in a column

There are two special / wildcard characters used with like operators

1. %: Represent zero,one or more characters

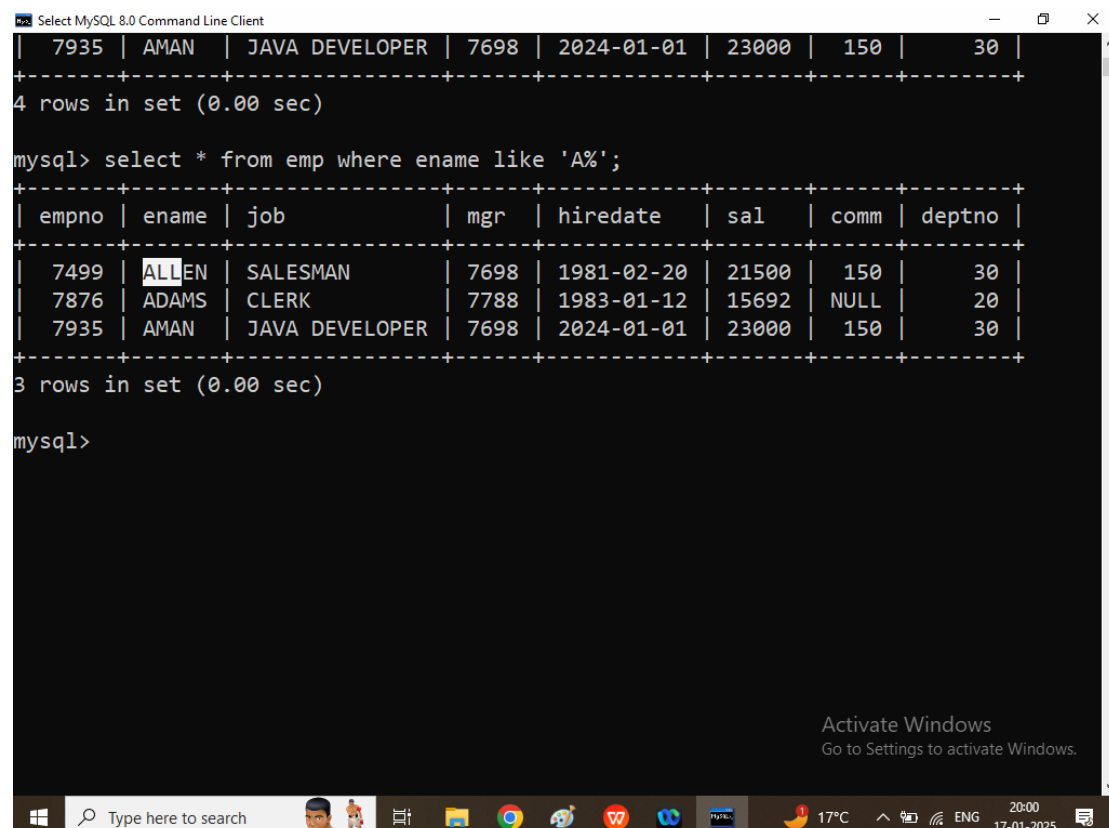
2. `_` : The underscore sign represent single character

Syntax:

Select column list from tablename
where column like 'pattern';

Example:

Write a SQL Query to print data of all employee whose name startsWith **A**?



The screenshot shows a MySQL Command Line Client window with the following content:

```
Select MySQL 8.0 Command Line Client
```

7935	AMAN	JAVA DEVELOPER	7698	2024-01-01	23000	150	30
------	------	----------------	------	------------	-------	-----	----

4 rows in set (0.00 sec)

```
mysql> select * from emp where ename like 'A%';
```

empno	ename	job	mgr	hiredate	sal	comm	deptno
7499	ALLEN	SALESMAN	7698	1981-02-20	21500	150	30
7876	ADAMS	CLERK	7788	1983-01-12	15692	NULL	20
7935	AMAN	JAVA DEVELOPER	7698	2024-01-01	23000	150	30

3 rows in set (0.00 sec)

```
mysql>
```

At the bottom of the window, there is a Windows taskbar with the search bar, task icons, and system tray showing the date and time (20:00, 17-01-2025).

Q3. Write a SQL query to print data of all employee whose name last character is N?

```
Select MySQL 8.0 Command Line Client

mysql> select * from emp where ename like '%N';
+-----+-----+-----+-----+-----+-----+-----+-----+
| empno | ename  | job          | mgr  | hiredate | sal   | comm  | deptno |
+-----+-----+-----+-----+-----+-----+-----+-----+
| 7499  | ALLEN  | SALESMAN     | 7698 | 1981-02-20 | 21500 | 150   | 30     |
| 7654  | MARTIN | SALESMAN     | 7698 | 1981-09-28 | 12789 | 1400  | 30     |
| 7935  | AMAN   | JAVA DEVELOPER | 7698 | 2024-01-01 | 23000 | 150   | 30     |
+-----+-----+-----+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)

mysql> _
```

Q3. Write a SQL query to print data of all employee whose name second character must be L?


```
MySQL 8.0 Command Line Client
+-----+-----+-----+-----+-----+-----+-----+-----+
| empno | ename  | job          | mgr | hiredate | sal   | comm  | deptno |
+-----+-----+-----+-----+-----+-----+-----+-----+
| 7499 | ALLEN  | SALESMAN     | 7698 | 1981-02-20 | 21500 | 150   | 30     |
| 7654 | MARTIN | SALESMAN     | 7698 | 1981-09-28 | 12789 | 1400  | 30     |
| 7935 | AMAN   | JAVA DEVELOPER | 7698 | 2024-01-01 | 23000 | 150   | 30     |
+-----+-----+-----+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)

mysql> select * from emp where ename like '_L%';
+-----+-----+-----+-----+-----+-----+-----+-----+
| empno | ename  | job          | mgr | hiredate | sal   | comm  | deptno |
+-----+-----+-----+-----+-----+-----+-----+-----+
| 7499 | ALLEN  | SALESMAN     | 7698 | 1981-02-20 | 21500 | 150   | 30     |
| 7698 | BLAKE  | MANAGER      | 7839 | 1981-05-01 | 21563 | NULL  | 30     |
| 7782 | CLARK  | MANAGER      | 7839 | 1981-06-09 | 10365 | NULL  | 10     |
+-----+-----+-----+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)

mysql> 
```

Q3. Write a SQL query to print data of all employee whose name second Last character must be **E**?

```
Select MySQL 8.0 Command Line Client
16 rows in set (0.00 sec)

mysql> select * from emp where ename like '%E_';
+-----+-----+-----+-----+-----+-----+-----+-----+
| empno | ename  | job      | mgr  | hiredate | sal   | comm  | deptno |
+-----+-----+-----+-----+-----+-----+-----+-----+
| 7499  | ALLEN  | SALESMAN | 7698 | 1981-02-20 | 21500 | 150   | 30     |
| 7566  | JONES  | MANAGER  | 7839 | 1981-04-02 | 11512 | NULL  | 20     |
| 7844  | TURNER | SALESMAN | 7698 | 1981-09-08 | 11552 | 0     | 30     |
| 7900  | JAMES  | CLERK    | 7698 | 1981-12-03 | 21212 | NULL  | 30     |
| 7934  | MILLER | CLERK    | 7782 | 1982-01-23 | 14892 | NULL  | 10     |
+-----+-----+-----+-----+-----+-----+-----+-----+
5 rows in set (0.00 sec)

mysql>
```

Q3. write a SQL query to print data of all employee whose joining in month of **02**?

```
W Home JAVA_SQL_DAYS_JAN.docx Upgrade now
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Format Painter Calibri (Body) 20 A+ A- Aa B I U A X² A A Styles Find Settings

MySQL 8.0 Command Line Client
mysql> select * from emp where hiredate like '%02%';
+-----+-----+-----+-----+-----+-----+-----+-----+
| empno | ename  | job      | mgr  | hiredate | sal   | comm  | deptno |
+-----+-----+-----+-----+-----+-----+-----+-----+
| 7499  | ALLEN  | SALESMAN | 7698 | 1981-02-20 | 21500 | 150   | 30     |
| 7521  | WARD   | SALESMAN | 7698 | 1981-02-22 | 10000 | 500   | 30     |
| 7566  | JONES  | MANAGER  | 7839 | 1981-04-02 | 11512 | NULL  | 20     |
| 7935  | AMAN   | JAVA DEVELOPER | 7698 | 2024-01-01 | 23000 | 150   | 30     |
+-----+-----+-----+-----+-----+-----+-----+-----+
4 rows in set (0.00 sec)

mysql> select * from emp where hiredate like '__-%02-%';
+-----+-----+-----+-----+-----+-----+-----+-----+
| empno | ename  | job      | mgr  | hiredate | sal   | comm  | deptno |
+-----+-----+-----+-----+-----+-----+-----+-----+
| 7499  | ALLEN  | SALESMAN | 7698 | 1981-02-20 | 21500 | 150   | 30     |
| 7521  | WARD   | SALESMAN | 7698 | 1981-02-22 | 10000 | 500   | 30     |
+-----+-----+-----+-----+-----+-----+-----+-----+
2 rows in set (0.00 sec)
```

Q1. Explain Group by clause in SQL?

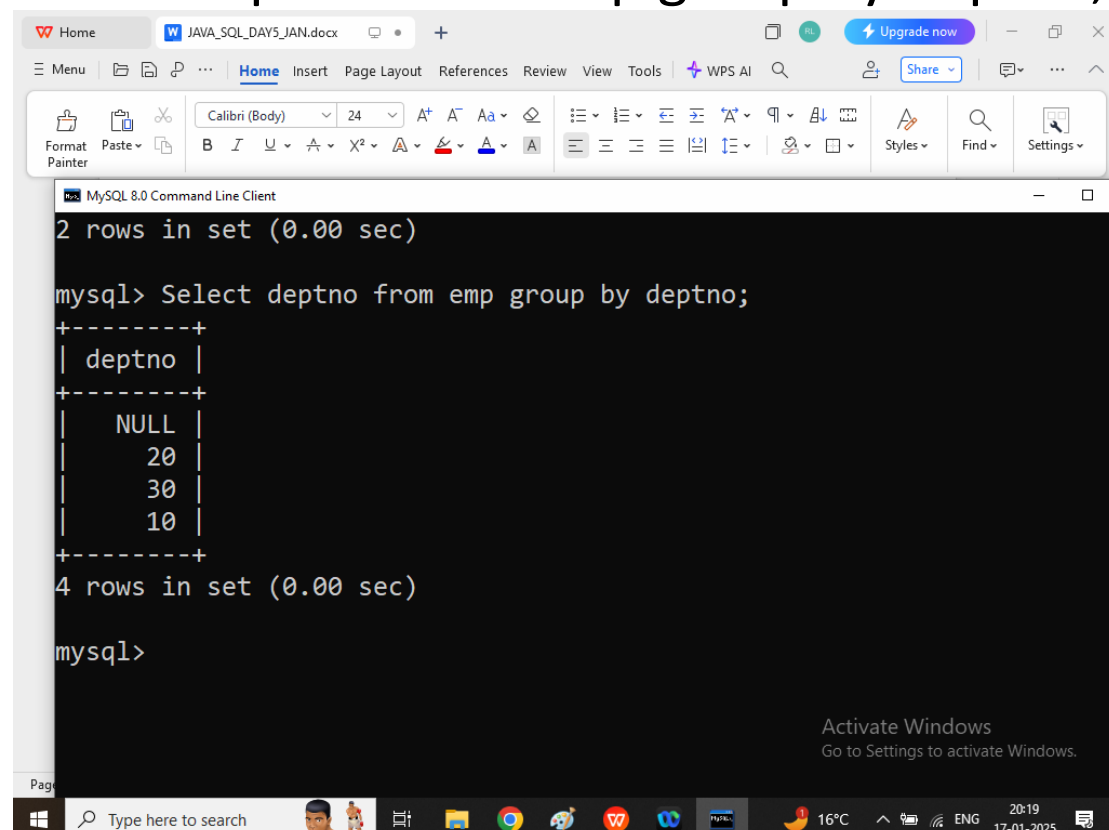
Ans: The Group by clause in SQL is used to groups rows in a tables on the basis of same values

It is also used sometimes with aggregate functions

Syntax:

Select column name from tablename
group by column;

Select deptno from emp group by deptno;



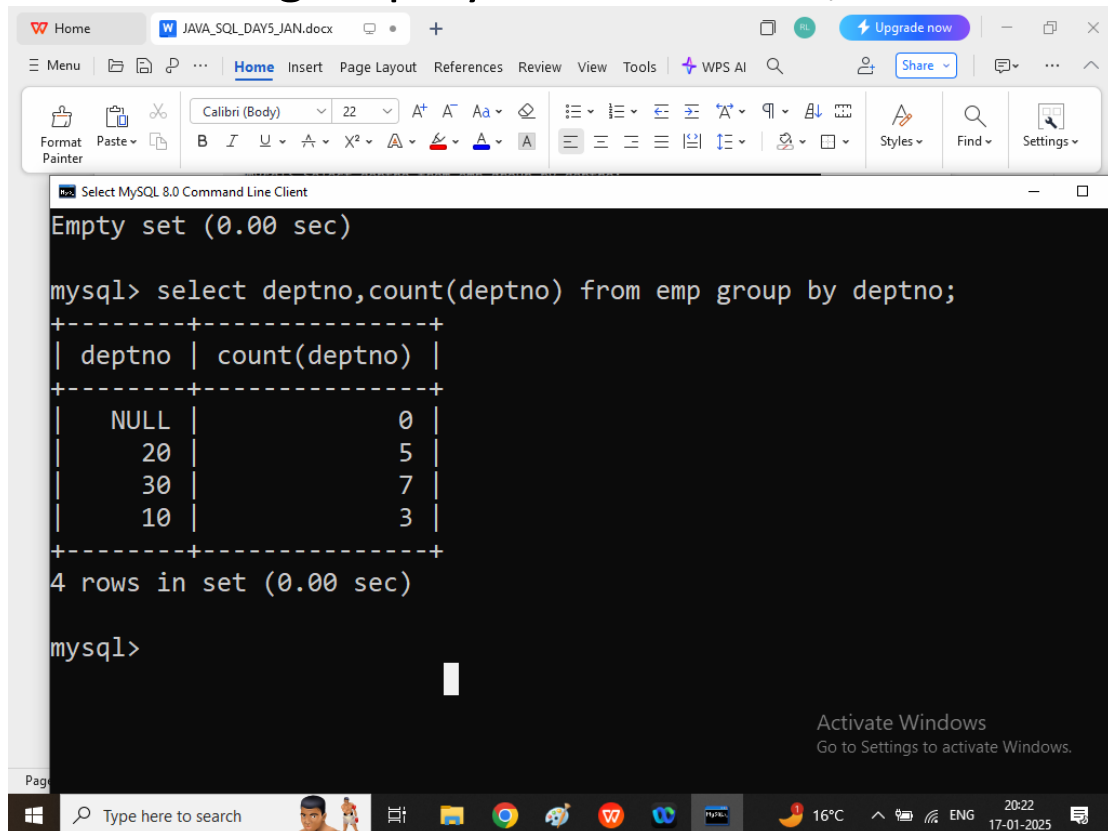
The screenshot shows a Windows desktop with a WPS Office window at the top and a MySQL 8.0 Command Line Client window below it. The MySQL window displays the output of the query 'Select deptno from emp group by deptno;'. The output shows 2 rows in the set, with deptno values NULL, 20, 30, and 10. The MySQL prompt 'mysql>' is visible at the bottom of the window.

```
mysql> Select deptno from emp group by deptno;
+-----+
| deptno |
+-----+
| NULL   |
| 20     |
| 30     |
| 10     |
+-----+
4 rows in set (0.00 sec)

mysql>
```

Syntax:

Select column name, aggregate_function from
tablename group by column name;



```
mysql> select deptno, count(deptno) from emp group by deptno;
```

deptno	count(deptno)
NULL	0
20	5
30	7
10	3

```
mysql>
```

Q2. Write a SQL Query to print number of
employee in each job?

Ans:

```
mysql> select job,count(job) from emp group by job;
+-----+-----+
| job          | count(job) |
+-----+-----+
| NULL         | 0          |
| CLERK        | 4          |
| SALESMAN     | 4          |
| MANAGER      | 3          |
| ANALYST      | 2          |
| PRESIDENT    | 1          |
| JAVA DEVELOPER | 1          |
+-----+-----+
7 rows in set (0.00 sec)

mysql>
```

Q2. write a SQL query to count number of Male and Female Candidate?

Select gender,count(*) from emp group by gender;