

Q1. Explain having clause in sql?

Ans: The having clause in SQL is used to filter the result of a group by operations based on aggregate functions.

It is similar with where clause, but is is specially used to filter group data

Points:

1. Having work with the aggregate function(sum,avg,max,min,count)
2. It is applied after group by
3. While where filters rows before grouping, having filters groups after grouping

Syntax:

Select column,aggregate(column) from tableName

Group by column name

Having condition

Example:

Q1. Write a SQL Query to deptno who have at least 5 employee in the dept.

Select deptno,count(deptno) from emp group by deptno having count(deptno)>=5;

```
MySQL 8.0 Command Line Client
+-----+-----+
2 rows in set (0.00 sec)

mysql> Select deptno,count(deptno) from emp group by deptno having count(deptno)>=5;
+-----+-----+
| deptno | count(deptno) |
+-----+-----+
|      20 |              5 |
|      30 |              7 |
+-----+-----+
2 rows in set (0.00 sec)

mysql>
```

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Windows taskbar: Type here to search, icons for File Explorer, Chrome, Paint, Word, Excel, MySQL, and a task view button. System tray shows network, volume, and date/time (19:52, 18-01-2025).

Q4. Write a SQL Query to print job who as at most 3 employee in each job?

```
MySQL 8.0 Command Line Client
+-----+-----+
2 rows in set (0.00 sec)

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> select job,count(*) from emp group by job having count(*)<=3;
+-----+-----+
| job          | count(*) |
+-----+-----+
| NULL         | 1        |
| MANAGER      | 3        |
| ANALYST      | 2        |
| PRESIDENT    | 1        |
| JAVA DEVELOPER | 1        |
+-----+-----+
5 rows in set (0.00 sec)

mysql> _
```

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Windows taskbar: Search, File Explorer, Chrome, VS Code, MySQL, Brea..., 19:57, 18-01-2025

Q1. write a SQL Query to print deptno who have sum salary at least 50000.

```
MySQL 8.0 Command Line Client
-> having sum(sal)>=50000;
ERROR 1054 (42S22): Unknown column 'deptno' in 'group statement'
mysql> select deptno,sum(sal) from emp group by deptno
-> having sum(sal)>50000;
+-----+-----+
| deptno | sum(sal) |
+-----+-----+
|      20 |    59501 |
|      30 |   121616 |
+-----+-----+
2 rows in set (0.00 sec)

mysql>
```

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20 | 59501 |

Windows taskbar: Search, File Explorer, Chrome, VS Code, MySQL, 19°C, 20:04, 18-01-2025

Q3. Write a SQL Query to count number of Male Candidate in each department?

```
mysql> select deptno,count(*) from emp
-> where gender='M' group by deptno;
ERROR 1054 (42S22): Unknown column 'gender' in 'where clause'
mysql> desc dept;
```

Field	Type	Null	Key	Default	Extra
deptno	int	NO	PRI	NULL	
dname	varchar(45)	YES		NULL	
loc	varchar(45)	YES		NULL	

3 rows in set (0.02 sec)

```
mysql> select * from dept;
```

deptno	dname	loc
10	CS	BHOPAL
20	Finance	INDORE
30	Agriculture	JABALPUR
40	PHARAMA	UJJAIN

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Q1. Explain SQL Joins?

Ans: It is used to combine rows from multiple tables based on a related column between them.

There are three types join

1. Inner Join
2. Left Outer Join
3. Right outer Join
4. Corss join

Q1. Explain Inner Join?

Ans: The Inner Join keyword select records that have matching values in both table

Inner Join

emp	dept
deptno 10	deptno 10
20	20
30	30
NULL	40

16 rows
Table1

4 rows
Table1

Syntax of Inner Join

```
select column list from tablename1
inner join tablename2
on table1.common_column=table2.common_column;
```

Example:

```
select * from emp
inner join dept
on emp.deptno=dept.deptno;
```

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```
+-----+-----+-----+-----+-----+-----+-----+-----+
--          +-----+
```

```
mysql> select * from emp
-> inner join dept
-> on emp.deptno=dept.deptno;
```

