

# Research Questions

## 1- WHERE vs HAVING:

Where and having Both are used to filter data, but they have different places.

1-where used as a single row function that return one result per row.

2-Having:used as a multiple row function that return one result per group.

Let's see these examples:

```
select employee_id from employees where salary >1000
```

in this case the output will be the id for all employees that have salary greater than 1000

```
SELECT FIRST_NAME FROM Employees GROUP BY FIRST_NAME HAVING SUM(salary) > 1000;
```

In this case the output will be the names of employees whose total salary sum is greater than 1000.

---

## 2- DELETE vs TRUNCATE vs DROP:

### 1-Delete:

*Delete is used to delete specific rows from a table and it doesn't delete the table itself.*

### 2-DROP:

*Drop is used to delete a table from database.*

### 3-Truncate:

*Truncate is used to delete all rows from a table and also like delete it doesn't delete the table itself.*

---

### 3-Order of Execution:

1-first: SQL engine go to the table using the input (from...table)

2-second:where clause to define rows

3-third:Group by

4-having (it's like "where")

5-order by

5-last step:select rows that satisfy the constraints.

---

### 4-COUNT(\*) vs COUNT(Column\_Name):

1- COUNT(\*):count all rows in a table and if one row have null values they are added to the count

2-COUNT(Column\_Name): Counts only the rows where the specified column is not null and ignore null values.

### **5-char and varchar:**

Char and varchar are used to define that datatype will be string but what is the difference?

1-char:

the string size will be fixed if the length defined char(5) the string size must be 5 ,and if I entered “AB” it will be stored with 3 spaces like “AB ”.

2-varchar:string size is flexible but not greater the limit of the size for example if size define 20 ,then the string size can not be greater than 20 but if the string has only 3 characters ,then the string size will be only 3 not 20.

If I entered “ABVF” ,it will be stored “ABVF”.