**EXPERIMENT 9**

**AIM:** Study and use of group by, having, order by features of SQL.

**Introduction:**

**HAVING:**

Having Clause is basically like the aggregate function with the GROUP BY clause. The HAVING clause is used instead of **WHERE** with aggregate functions. It is used for applying some extra conditions to the query.

**GROUP BY:**

The GROUP BY clause is often used with aggregate functions (MAX, SUM, AVG) to group the results by one or more columns or In simple words, we can say that The GROUP BY clause is used in collaboration with the SELECT statement to arrange required data into groups.

SELECT function(column\_1), column\_2

FROM Table\_Name

WHERE condition

GROUP BY column\_1

ORDER BY column\_1

**ORDER BY:**

Order by keyword sort the result-set either in ascending or in descending order. This clause sorts the result-set in ascending order by default. In order to sort the result-set in descending order DESC keyword is used.

SELECT column\_1...........

FROM TABLE

ORDER BY column\_1 ASC|DESC…..;

**Use Cases for our schema:**

|  |  |  |  |
| --- | --- | --- | --- |
|  | Ishan | Khush | Alister |
| **ORDER BY** | **SELECT** Customer\_ID,Tag\_ID  **FROM** Band\_tag  **WHERE** Vessel\_TagID **IS NOT NULL** **AND** Vessel\_weight >= 3;  **ORDER BY** Vessel\_weight **ASC**, In\_Time **DESC**; |  |  |
| **HAVING** | **SELECT** Grocery.Item\_name, **COUNT**(Grocery.item\_restock\_date) **AS** NumberOfOrdersPlaced  **FROM** Analysis\_Gdata  **INNER JOIN** Grocery **ON** Analysis\_Gdata.G\_ID = Grocery.G\_ID  **GROUP BY** LastName  **HAVING COUNT**(Grocery.item\_quantity) <100; |  |  |
| **GROUP BY** | **SELECT** Medicines.item\_name, **COUNT**(Analysis\_Mdata.true\_positives) **AS** Actual purchases  **FROM** Analysis\_Mdata  **INNER JOIN** Medicines **ON** Analysis\_Mdata.M\_ID = Medicines.M\_ID  **WHERE** Item\_category = 'Analgesics' **OR** Item\_category = 'Antihistaminesr'  **GROUP BY** Item\_category; |  |  |