**SQL Notes**

Group by is used when you have to group similar records in the table, this is generally used when you are using aggregate functions such as sum, count. You will be applying the aggregate functions to the set of elements grouped by the group by clause

Having clause is like the where clause but it acts on the aggregate function variables, you give the aggregate function values a variable name and use that variable name in the having clause.

case is when you have to create new column and this column is taking on a particular set of values depending upon the rules set.

SQL is implemented as if a query was executed in the following order:

1. FROM clause
2. WHERE clause
3. GROUP BY clause
4. HAVING clause
5. SELECT clause
6. ORDER BY clause

For most relational database systems, this order explains which names (columns or aliases) are valid because they must have been introduced in a previous step.

So in Oracle and SQL Server, you cannot use a term in the GROUP BY clause that you define in the SELECT clause because the GROUP BY is executed before the SELECT clause.

There are exceptions though: MySQL and Postgres seem to have additional smartness that allows it.