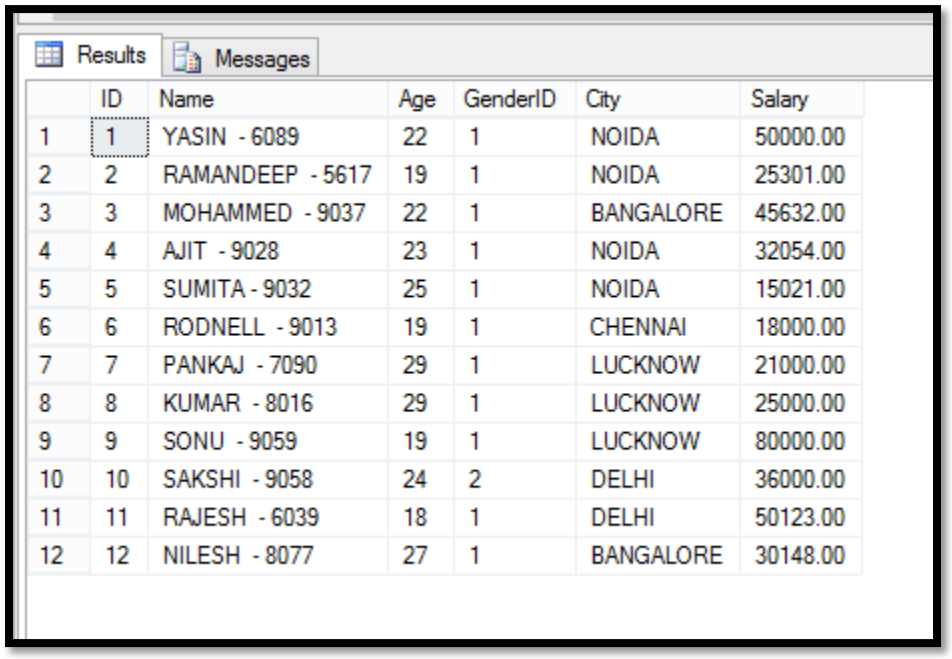
CLAUSES

SQL Server provides with the following clauses that can be used in the SELECT statements:

- WHERE
- GROUP BY
- HAVING
- ORDER BY

The complete syntax of the SELECT statement looks as following:

SELECT <select_list> FROM <tname>
[WHERE search_condition]
[GROUP BY group_by_expression]
[HAVING search_condition]
[ORDER BY order_expression [ASC | DESC]]



Results | Messages

	ID	Name	Age	GenderID	City	Salary
1	1	YASIN - 6089	22	1	NOIDA	50000.00
2	2	RAMANDEEP - 5617	19	1	NOIDA	25301.00
3	3	MOHAMMED - 9037	22	1	BANGALORE	45632.00
4	4	AJIT - 9028	23	1	NOIDA	32054.00
5	5	SUMITA - 9032	25	1	NOIDA	15021.00
6	6	RODNELL - 9013	19	1	CHENNAI	18000.00
7	7	PANKAJ - 7090	29	1	LUCKNOW	21000.00
8	8	KUMAR - 8016	29	1	LUCKNOW	25000.00
9	9	SONU - 9059	19	1	LUCKNOW	80000.00
10	10	SAKSHI - 9058	24	2	DELHI	36000.00
11	11	RAJESH - 6039	18	1	DELHI	50123.00
12	12	NILESH - 8077	27	1	BANGALORE	30148.00

WHERE Clause:

The WHERE clause is a filter that defines the conditions each row in the source tables must meet to qualify for the SELECT. Only rows that meet the conditions contribute data to the result set. Data from rows that do not meet the conditions is not used.

Select * from tblPersone Where City='Delhi'

Select * from tblPersone Where ID=5

GROUP BY Clause:

Create Table

```
Create table EMP
(
ID int primary key,
Name char(30),
Sal money,
Deptno int,
Job char(50)
)
```

The GROUP BY clause partitions the result set into groups based on the values in the columns of the group_by_list.

For example, the Emp table has 3 values in Deptno column. A GROUP BY Deptno clause partitions the result set into 3 groups, one for each value of Deptno.

Ex-1: How to find the highest salaries for each department.

Sol:

SELECT DEPTNO, MAX (SAL) FROM EMP

GROUP BY DEPTNO

Ex-2: How to find the highest salaries for each job.

Sol: SELECT JOB, MAX (SAL) FROM EMP GROUP BY JOB

Ex-3: How to find the highest salaries for each department in it for each job.

Sol: SELECT DEPTNO, JOB, MAX (SAL) FROM EMP GROUP BY DEPTNO, JOB

NOTE: While using the GROUP by clause the select list of the query should contain only the following:

Group Functions or Aggregate Functions

Columns used in the Group by Clause

Constants.

Ex-4: How to find the number of employees working for each department.

Sol: SELECT DEPTNO, COUNT (*) FROM EMP GROUP BY DEPTNO

Ex-5: How to find the number of employees working for each department only if the number is greater than 3.

Sol: SELECT DEPTNO, COUNT (*) FROM EMP GROUP BY DEPTNO HAVING COUNT (*)>3

HAVING Clause:

The HAVING clause is an additional filter that is applied to the result set. Logically, the HAVING clause filters rows from the intermediate result set built from applying any FROM, WHERE, or GROUP BY clauses in the SELECT statement. HAVING clauses are typically used with a GROUP BY clause.

Ex-6: How to find the number of Analysist working for each department.

Sol: SELECT DEPTNO, COUNT (*) FROM EMP WHERE JOB='Analysist' GROUP BY DEPTNO

Ex-7: How to find the number of Analysist working for each department only if the count is greater than 1.

Sol: SELECT DEPTNO, COUNT (*) FROM EMP WHERE JOB='Analysist' GROUP BY DEPTNO HAVING COUNT (*)>1

ORDER BY clause:

The ORDER BY clause defines the order in which the rows in the result set are sorted. order_list specifies the result set columns that make up the sort list. The ASC and DESC keywords are used to specify if the rows are sorted in an ascending or descending sequence.

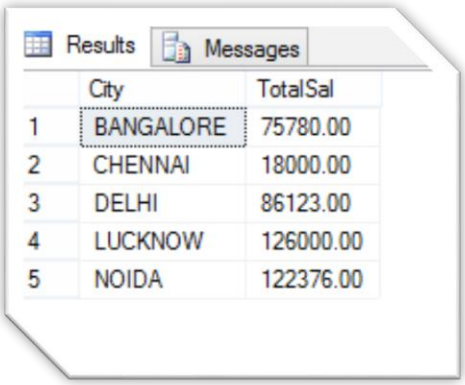
ORDER BY order_list[ASC | DESC]

SELECT * FROM tblPerson ORDER BY SAL

SELECT * FROM tblPerson ORDER BY SAL DESC

Question

1. Display total Salary from tblPerson Groupby City



	City	TotalSal
1	BANGALORE	75780.00
2	CHENNAI	18000.00
3	DELHI	86123.00
4	LUCKNOW	126000.00
5	NOIDA	122376.00

2. Display total Salary from tblPerson Groupby City with GenderID and sorting by City

Results | Messages

	City	GenderID	TotalSal
1	BANGALORE	1	75780.00
2	CHENNAI	1	18000.00
3	DELHI	1	50123.00
4	DELHI	2	36000.00
5	LUCKNOW	1	126000.00
6	NOIDA	1	122376.00

3. Display total Salary from tblPerson Groupby City with GenderID and sorting by City. With total number of employee in a separate column

Results | Messages

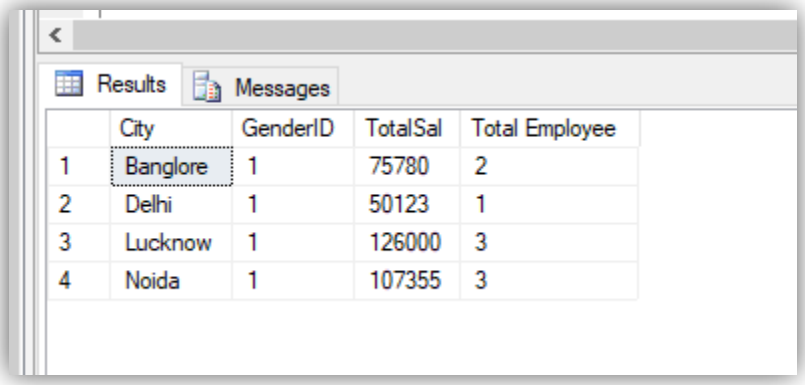
	City	GenderID	TotalSal	Total Employee
1	BANGALORE	1	75780.00	2
2	CHENNAI	1	18000.00	1
3	DELHI	1	50123.00	1
4	DELHI	2	36000.00	1
5	LUCKNOW	1	126000.00	3
6	NOIDA	1	122376.00	4

4. Write a query display the total salary and employee count with city name, genderID only GenderID = 1 means (only male candidate)

Results | Messages

	City	GenderID	TotalSal	Total Employee
1	BANGALORE	1	75780.00	2
2	CHENNAI	1	18000.00	1
3	DELHI	1	50123.00	1
4	LUCKNOW	1	126000.00	3
5	NOIDA	1	122376.00	4

5. Write a query display the total salary greater than 50000 and employee count with city name, genderID only GenderID = 1 means (only male candidate)



Results | Messages

	City	GenderID	TotalSal	Total Employee
1	Banglore	1	75780	2
2	Delhi	1	50123	1
3	Lucknow	1	126000	3
4	Noida	1	107355	3

What is the difference between WHERE & HAVING

- WHERE clause can be used with – Select, insert and update statements where as HAVING clause can only be used with Select Statement.
- WHERE filters rows before aggregation (GROUPING), whereas, Having filter groups, after the aggregation are performed
- Aggregate function cannot be used in the WHERE clauses, unless it is in a sub query contained in HAVING clause, whereas, aggregate function can be used in the HAVING clauses