Experiment No. : 4

Title: Write a program to display records using aggregate functions.

Objectives:

1. To learn SQL aggregate functions.

Key Concepts: min, max, sum, avg

Theory:

Aggregate Functions

An aggregate function summarizes the results of an expression over a number of rows, returning a single value. The general syntax for most of the aggregate functions is as follows:

aggregate_function([DISTINCT | ALL] expression)

The syntax elements are:

aggregate_function

Gives the name of the function. e.g., SUM, COUNT, AVG, MAX, MIN

DISTINCT

Specifies that the aggregate function should consider only distinct values of the argument expression.

ALL

Specifies that the aggregate function should consider all values, including all duplicate values, of the argument expression. The default is ALL.

expression

Specifies a column, or any other expression, on which you want to perform the aggregation.

SQL MIN( )

Returns the minimum value in an expression.

SELECT department, min(salary) as "Minimum Salary" from employees group by Department;

SQL MAX( )

Returns the maximum value in an expression.

SELECT department, max(salary) as "Maximum Salary" from employees group by Department;

SQL AVG( )

Returns the average of numeric column.

SELECT department, avg(salary) as "Average Salary" from employees group by Department;

SQL SUM( )

Returns the sum of numeric column.

SELECT department, sum(salary) as "Sum of Salary" from employees group by Department;

SQL COUNT( )

Returns the count of rows.

SELECT count(employee_id) as "Count of Employee" from employees;

Algorithm:

1. Start
2. Create table by taking field information from user
3. Insert data into above created table.
4. Write SQL query to demonstrate use of aggregate functions- max, min, sum, avg, count
5. Execute SQL queries through java program.
6. Stop.