

5.1

Aggregate Functions

Aggregate Functions

- Aggregate functions are synonymous with column functions.
- A summary query uses at least one column function.
- AVG, SUM return numeric values.
- MIN, MAX, COUNT can return numeric, date, or string values
- All values are included in aggregate functions by default unless you specify the DISTINCT keyword
- Duplicate rows are excluded in all aggregate functions with the exception of COUNT(*)
- ***** IF YOU CODE AN AGGREGATE FUNCTION IN THE SELECT STATEMENT, YOU CANNOT ALSO INCLUDE NON-AGGREGATE FUNCTIONS IN THE SELECT STATEMENT UNLESS THOSE NON-AGGREGATE COLUMNS ARE INCLUDED IN A GROUP BY CLAUSE

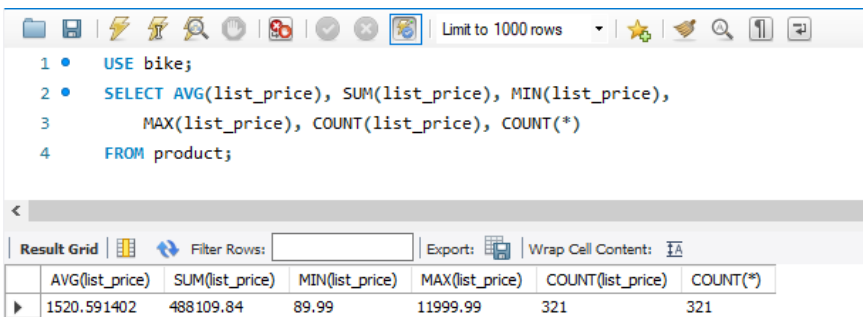
Table 1. Aggregate Functions List

Aggregate Function	Output data-type	Result
AVG([DISTINCT] column_values)	numeric	The average of the non-null columns in the expression
SUM([DISTINCT] column_values)	numeric	The total of the non-null columns in the expression
MIN([DISTINCT] column_values)	numeric, date, string	The lowest value off the non-null columns in the expression
MAX([DISTINCT] column_values)	numeric, date, string	The highest value of the non-null columns in the expression
COUNT([DISTINCT] column_values)	numeric	The number of the non-null columns in the expression
COUNT(*)	numeric	The number of rows returned by the query

Code Sample:

```
USE bike;
SELECT AVG(list_price), SUM(list_price),
MIN(list_price),
      MAX(list_price), COUNT(list_price), COUNT(*)
FROM product;
```

Output:

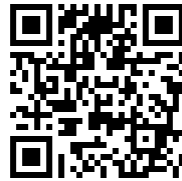
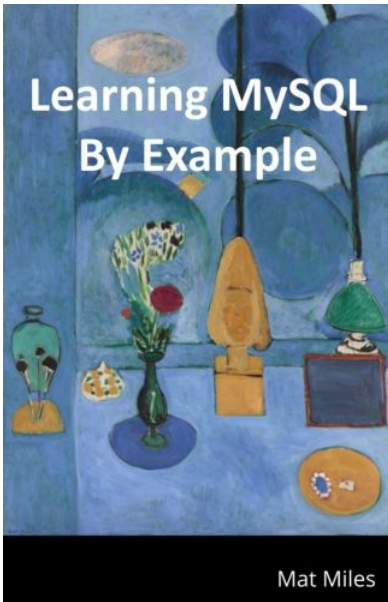


The screenshot shows a MySQL IDE interface. The top toolbar includes icons for file operations, search, and execution. The main area displays the following SQL query:

```
1 • USE bike;
2 • SELECT AVG(list_price), SUM(list_price), MIN(list_price),
3     MAX(list_price), COUNT(list_price), COUNT(*)
4 • FROM product;
```

Below the query editor, the 'Result Grid' is visible. It shows the following data:

AVG(list_price)	SUM(list_price)	MIN(list_price)	MAX(list_price)	COUNT(list_price)	COUNT(*)
1520.591402	488109.84	89.99	11999.99	321	321



Miles, M. (2021). *Learning MySQL By Example*. EdTech Books. https://edtechbooks.org/learning_mysql