Aggregate Function

Talent Scouting Academy - Web Developer

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Web A
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Percobaan

1. Akses mysql menggunakan command prompt

```
farlan@192 ~ % mysql
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 4
Server version: 10.7.3-MariaDB Homebrew

Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

MariaDB [(none)]>
```

2. Menggunakan database “db_polinema”

```
MariaDB [(none)]> USE db_polinema;
Reading table information for completion of table and column names
You can turn off this feature to get a quicker startup with -A

Database changed
```

3. Membuat tabel “produk”

```
MariaDB [db_polinema]> CREATE TABLE produk (
    -> id_produk INT(5) NOT NULL PRIMARY KEY AUTO_INCREMENT,
    -> nama_produk VARCHAR(25) DEFAULT NULL,
    -> harga_produk DOUBLE DEFAULT NULL,
    -> merk_produk VARCHAR(25) DEFAULT NULL
    -> );
Query OK, 0 rows affected (0.105 sec)
```

4. Membuat tabel “nilai”

```
MariaDB [db_polinema]> CREATE TABLE nilai (
    -> id_nilai INT(11) NOT NULL PRIMARY KEY,
    -> id_mahasiswa CHAR(10) DEFAULT NULL,
    -> nilai INT(11) DEFAULT NULL
    -> );
Query OK, 0 rows affected (0.095 sec)
```

5. Insert data ke dalam tabel “produk”

```
MariaDB [db_polinema]> INSERT INTO produk VALUES
    -> (1, 'Susu', 20000, 'Dancow'),
    -> (2, 'Susu', 30000, 'Milo'),
    -> (3, 'Popok', 50000, 'Makuku'),
    -> (4, 'Popok', 75000, NULL);
Query OK, 4 rows affected (0.020 sec)
Records: 4  Duplicates: 0  Warnings: 0
```

6. Insert data ke dalam tabel “nilai”

```
MariaDB [db_polinema]> INSERT INTO nilai VALUES
    -> (1, '123', 80),
    -> (2, '234', 75),
    -> (3, '456', 85),
    -> (4, '345', 65),
    -> (5, '321', 77),
    -> (6, '432', 78);
Query OK, 6 rows affected (0.005 sec)
Records: 6  Duplicates: 0  Warnings: 0
```

7. Menampilkan jumlah data di tabel “produk”

```
MariaDB [db_polinema]> SELECT COUNT(*) AS 'jumlah produk' FROM produk;
+---------------+
| jumlah produk |
+---------------+
|             4 |
+---------------+
1 row in set (0.007 sec)
```

8. Menampilkan jumlah data dengan nama “popok” pada tabel “produk”

```
MariaDB [db_polinema]> SELECT COUNT('popok') AS 'jumlah produk popok'
    -> FROM produk;
+---------------------+
| jumlah produk popok |
+---------------------+
|                   4 |
+---------------------+
1 row in set (0.003 sec)
```

9. Menampilkan jumlah harga produk pada tabel “produk”

```
MariaDB [db_polinema]> SELECT SUM(harga_produk) AS 'jumlah harga produk'
    -> FROM produk;
+---------------------+
| jumlah harga produk |
+---------------------+
|              175000 |
+---------------------+
1 row in set (0.031 sec)
```

10. Menampilkan omzet total dari tabel “produk” dengan asumsi setiap barang terjual 3 buah

```
MariaDB [db_polinema]> SELECT SUM(harga_produk * 3) AS 'omzet total'
    -> FROM produk;
+-------------+
| omzet total |
+-------------+
|      525000 |
+-------------+
1 row in set (0.003 sec)
```

11. Menampilkan id_mahasiswa dan nilainya yang memiliki nilai terendah dari tabel “nilai”

```
MariaDB [db_polinema]> SELECT id_mahasiswa, nilai FROM nilai
    -> WHERE nilai=(SELECT MIN(nilai) FROM nilai);
+---------------+-------+
| id_mahasiswa | nilai |
+---------------+-------+
| 345          |    65 |
+---------------+-------+
1 row in set (0.001 sec)
```

12. Menampilkan id_mahasiswa dan nilainya yang memiliki nilai tertinggi dari tabel “nilai”

```
MariaDB [db_polinema]> SELECT id_mahasiswa, nilai FROM nilai
    -> WHERE nilai=(SELECT MAX(nilai) FROM nilai);
+---------------+-------+
| id_mahasiswa | nilai |
+---------------+-------+
| 456          |    85 |
+---------------+-------+
1 row in set (0.001 sec)
```

13. Menampilkan rata-rata dari tabel “nilai”

```
MariaDB [db_polinema]> SELECT AVG(nilai) FROM nilai;
+-------------+
| AVG(nilai) |
+-------------+
|    76.6667 |
+-------------+
1 row in set (0.003 sec)
```

14. Menampilkan id_mahasiswa, nilai, dan nilai rata-rata dari tabel “nilai” diurutkan berdasarkan nilai terendah

```
MariaDB [db_polinema]> SELECT
    -> id_mahasiswa, nilai, (SELECT AVG(nilai) FROM nilai)
    -> FROM nilai
    -> ORDER BY nilai ASC;
+---------------+-------+-----------------------------------+
| id_mahasiswa | nilai | (SELECT AVG(nilai) FROM nilai) |
+---------------+-------+-----------------------------------+
| 345          |    65 |                           76.6667 |
| 234          |    75 |                           76.6667 |
| 321          |    77 |                           76.6667 |
| 432          |    78 |                           76.6667 |
| 123          |    80 |                           76.6667 |
| 456          |    85 |                           76.6667 |
+---------------+-------+-----------------------------------+
6 rows in set (0.001 sec)
```

Latihan Praktikum

1. Membuat dan insert data ke tabel “transaksi”

```
MariaDB [db_polinema]> CREATE TABLE transaksi (
    -> id_transakti INT NOT NULL PRIMARY KEY AUTO_INCREMENT,
    -> id_produk INT NOT NULL,
    -> bulan VARCHAR(12) NOT NULL,
    -> harga_beli INT NOT NULL,
    -> harga_jual INT NOT NULL,
    -> qty INT(3) NOT NULL
    -> );
Query OK, 0 rows affected (0.110 sec)
```

```
MariaDB [db_polinema]> INSERT INTO transaksi VALUES
    -> (1, 1, 'Januari', 10000, 13000, 2),
    -> (2, 2, 'Januari', 15000, 18000, 3),
    -> (3, 3, 'Januari', 14000, 17500, 5),
    -> (4, 1, 'Februari', 10000, 13000, 2),
    -> (5, 2, 'Februari', 15000, 18000, 2),
    -> (6, 3, 'Februari', 14000, 17500, 7),
    -> (7, 1, 'Maret', 10000, 13000, 1),
    -> (8, 2, 'Maret', 15000, 18000, 2),
    -> (9, 3, 'Maret', 14000, 17500, 8),
    -> (10, 1, 'April', 10000, 13000, 2),
    -> (11, 2, 'April', 15000, 18000, 4),
    -> (12, 3, 'April', 14000, 17500, 5);
Query OK, 12 rows affected (0.010 sec)
Records: 12  Duplicates: 0  Warnings: 0
```

2. Menampilkan keuntungan transaksi

```
MariaDB [db_polinema]> SELECT SUM((harga_jual - harga_beli) * qty) AS keuntungan
    -> FROM transaksi;
+------------+
| keuntungan |
+------------+
|     141500 |
+------------+
1 row in set (0.001 sec)
```

3. Menampilkan keuntungan transaksi tiap bulan dan diurutkan berdasarkan bulan

```
MariaDB [db_polinema]> SELECT bulan,
    -> SUM((harga_jual - harga_beli) * qty) AS keuntungan
    -> FROM transaksi
    -> GROUP BY bulan;
+----------+------------+
| bulan    | keuntungan |
+----------+------------+
| April    |      35500 |
| Februari |      36500 |
| Januari  |      32500 |
| Maret    |      37000 |
+----------+------------+
4 rows in set (0.004 sec)
```

4. Menampilkan rata-rata penjualan per-bulan

```
MariaDB [db_polinema]> SELECT bulan,
    -> AVG((harga_jual - harga_beli) * qty) AS 'rata-rata penjualan'
    -> FROM transaksi
    -> GROUP BY bulan;
+-----------+----------------------+
| bulan     | rata-rata penjualan  |
+-----------+----------------------+
| April     |           11833.3333 |
| Februari  |           12166.6667 |
| Januari   |           10833.3333 |
| Maret     |           12333.3333 |
+-----------+----------------------+
4 rows in set (0.003 sec)
```

5. Menampilkan omzet penjualan per-bulan

```
MariaDB [db_polinema]> SELECT bulan, SUM(harga_jual * qty) AS 'omzet penjualan'
    -> FROM transaksi
    -> GROUP BY bulan;
+-----------+-------------------+
| bulan     | omzet penjualan   |
+-----------+-------------------+
| April     |            185500 |
| Februari  |            184500 |
| Januari   |            167500 |
| Maret     |            189000 |
+-----------+-------------------+
4 rows in set (0.002 sec)
```

6. Menampilkan omzet penjualan total

```
MariaDB [db_polinema]> SELECT SUM(harga_jual * qty) AS 'omzet penjualan total'
    -> FROM transaksi;
+--------------------------+
| omzet penjualan total    |
+--------------------------+
|                   726500 |
+--------------------------+
1 row in set (0.002 sec)
```

7. Menampilkan nilai omzet tertinggi dalam sebulan

```
MariaDB [db_polinema]> SELECT bulan, MAX(harga_jual * qty) AS 'omzet'
    -> FROM transaksi
    -> GROUP BY bulan;
+-----------+--------+
| bulan     | omzet  |
+-----------+--------+
| April     |  87500 |
| Februari  | 122500 |
| Januari   |  87500 |
| Maret     | 140000 |
+-----------+--------+
4 rows in set (0.021 sec)
```