FAJRIYAH MAYZURA AGUSTIN
DTS TSA WEB B

LAPORAN

HANDOUTS AGGREGATE FUNCTION

PERCOBAAN

1. Buka prompt

```
C:\Users\User>cd C:\xampp1\mysql\bin

C:\xampp1\mysql\bin>mysql -u root -p
Enter password:
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 16
Server version: 10.4.20-MariaDB mariadb.org binary distribution

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

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

2. Buat table produk

```
MariaDB [dts_tsa]> create table produk (
    -> id_produk int(5) not null auto_increment,
    -> nama_produk varchar(25) default null,
    -> harga_produk double default null,
    -> merk_produk varchar(25) default null,
    -> primary key(id_produk));
Query OK, 0 rows affected (0.959 sec)
```

3. Buat tabel nilai

```
MariaDB [dts_tsa]> create table nilai (
    -> id_nilai int(11) not null,
    -> id_mahasiswa char(10) default null,
    -> nilai int(11) default null,
    -> primary key (id_nilai));
Query OK, 0 rows affected (0.561 sec)
```

SOAL

1. Memasukkan data ke tabel produk

   Query :

```
MariaDB [dts_tsa]> insert into produk values
    -> (1, 'Susu', 20000, 'Dancow'),
    -> (2, 'Susu', 30000, 'Milo'),
    -> (3, 'Popok', 50000, 'Makuku'),
    -> (4, 'Popok', 75000, '');
Query OK, 4 rows affected (0.445 sec)
Records: 4  Duplicates: 0  Warnings: 0
```

   Hasil :

```
MariaDB [dts_tsa]> select * from produk;
+-----------+-------------+--------------+-------------+
| id_produk | nama_produk | harga_produk | merk_produk |
+-----------+-------------+--------------+-------------+
|         1 | Susu        |        20000 | Dancow      |
|         2 | Susu        |        30000 | Milo        |
|         3 | Popok       |        50000 | Makuku      |
|         4 | Popok       |        75000 |             |
+-----------+-------------+--------------+-------------+
4 rows in set (0.297 sec)
```

2. Memasukkan data pada tabel nilai

   Query :

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```
MariaDB [dts_tsa]> 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 (0.173 sec)
Records: 6  Duplicates: 0  Warnings: 0
```

Hasil :

```
MariaDB [dts_tsa]> select * from nilai
    -> ;
+----------+--------------+-------+
| id_nilai | id_mahasiswa | nilai |
+----------+--------------+-------+
|        1 | 123          |    80 |
|        2 | 234          |    75 |
|        3 | 456          |    85 |
|        4 | 345          |    65 |
|        5 | 321          |    77 |
|        6 | 432          |    78 |
+----------+--------------+-------+
6 rows in set (0.001 sec)
```

3. Jumlah data yang ada pada tabel produk dengan nama alisa jumlah_produk

```
MariaDB [dts_tsa]> select count(nama_produk) as jumlah_produk from produk;
+---------------+
| jumlah_produk |
+---------------+
|             4 |
+---------------+
1 row in set (0.000 sec)
```

4. Jumlah data pada tabel produk dengan nama produk popok dan di beri nama alias jumlah produk popok

```
MariaDB [dts_tsa]> select count(nama_produk) as jumlah_produk_popok from produk where nama_produk='popok';
+--------------------+
| jumlah_produk_popok |
+--------------------+
|                  2 |
+--------------------+
1 row in set (0.001 sec)
```

5. Tampikan jumlah harga produk pada tabel produk dengan nama alias jumlah_harga_produk

```
MariaDB [dts_tsa]> select sum(harga_produk) as jumlah_harga_produk from produk;
+---------------------+
| jumlah_harga_produk |
+---------------------+
|              175000 |
+---------------------+
1 row in set (0.001 sec)
```

6. Tampilkan omzet total pada tabel produk jika diasumsikan setiap barang terjual 3 dengan nama alias omzet_total

```
MariaDB [dts_tsa]> select nama_produk, sum(harga_produk * 3) as omzet_total from produk group by nama_produk;
+-------------+-------------+
| nama_produk | omzet_total |
+-------------+-------------+
| Popok       |      375000 |
| Susu        |      150000 |
+-------------+-------------+
2 rows in set (0.000 sec)
```

```
MariaDB [dts_tsa]> select sum(harga_produk * 3) as omzet_total from produk;
+-------------+
| omzet_total |
+-------------+
|      525000 |
+-------------+
```

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7. Tampilkan id_mahasiswa beserta nilainya yang memiliki nilai paling rendah dari tabel nilai

```
MariaDB [dts_tsa]> select id_mahasiswa, min(nilai) from nilai
+--------------+------------+
| id_mahasiswa | min(nilai) |
+--------------+------------+
| 345          |         65 |
+--------------+------------+
1 row in set (0.116 sec)
```

8. Tampilkan id_mahasiswa beserta nilainya yang memiliki nilai paling tinggi dari tabel nilai

```
MariaDB [dts_tsa]> select id_mahasiswa, max(nilai) from nilai
+--------------+------------+
| id_mahasiswa | max(nilai) |
+--------------+------------+
| 456          |         85 |
+--------------+------------+
1 row in set (0.001 sec)
```

9. Tampilkan rata-rata dari tabel nilai

```
MariaDB [dts_tsa]> select avg(nilai) from nilai;
+------------+
| avg(nilai) |
+------------+
|    76.6667 |
+------------+
1 row in set (0.020 sec)
```

10. Tampilkan id_mahasiswa, nilai dan nilai rata-rata dari tabel nilai urutkan berdasarkan nilai terendah.

```
MariaDB [dts_tsa]> select id_mahasiswa, nilai, avg(nilai) as nilai_rata from nilai group by nilai;
+--------------+-------+------------+
| id_mahasiswa | nilai | nilai_rata |
+--------------+-------+------------+
| 345          |    65 |    65.0000 |
| 234          |    75 |    75.0000 |
| 321          |    77 |    77.0000 |
| 432          |    78 |    78.0000 |
| 123          |    80 |    80.0000 |
| 456          |    85 |    85.0000 |
+--------------+-------+------------+
6 rows in set (0.002 sec)
```

TUGAS

1. Buatlah tabel transaksi beserta isinya seperti pada contoh

```
MariaDB [dts_tsa]> create table transaksi (
    -> id_transaksi int primary key,
    -> id_produk int, foreign key fk1(id_produk) references produk(id_produk),
    -> bulan varchar(20),
    -> harga_beli double default null,
    -> harga_jual double default null,
    -> qty int);
Query OK, 0 rows affected (0.342 sec)

MariaDB [dts_tsa]> desc transaksi;
+--------------+-------------+------+-----+---------+-------+
| Field        | Type        | Null | Key | Default | Extra |
+--------------+-------------+------+-----+---------+-------+
| id_transaksi | int(11)     | NO   | PRI | NULL    |       |
| id_produk    | int(11)     | YES  | MUL | NULL    |       |
| bulan        | varchar(20) | YES  |     | NULL    |       |
| harga_beli   | double      | YES  |     | NULL    |       |
| harga_jual   | double      | YES  |     | NULL    |       |
| qty          | int(11)     | YES  |     | NULL    |       |
+--------------+-------------+------+-----+---------+-------+
6 rows in set (0.014 sec)
```

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Isi pada tabel :

```
MariaDB [dts_tsa]> 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 (0.180 sec)
Records: 12  Duplicates: 0  Warnings: 0
```

```
MariaDB [dts_tsa]> select * from transaksi;
+--------------+-----------+----------+------------+------------+------+
| id_transaksi | id_produk | bulan    | harga_beli | harga_jual | qty  |
+--------------+-----------+----------+------------+------------+------+
|            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 |
+--------------+-----------+----------+------------+------------+------+
12 rows in set (0.000 sec)
```

2. Buat query untuk menunjukkan keuntungan dengan rumus: (harga jual - harga beli) dikali kuantitas. (screen shoot query dan outputnya)

```
MariaDB [dts_tsa]> select sum((harga_jual - harga_beli) * qty) as keuntungan from transaksi group by id_transaksi;
+------------+
| keuntungan |
+------------+
|       6000 |
|       9000 |
|      17500 |
|       6000 |
|       6000 |
|      24500 |
|       3000 |
|       6000 |
|      28000 |
|       6000 |
|      12000 |
|      17500 |
+------------+
12 rows in set (0.000 sec)
```

3. Buat query untuk menunjukkan keuntungan tiap bulan, urutkan berdasarkan bulan (screen shoot query dan outputnya).

```
MariaDB [dts_tsa]> select bulan, sum((harga_jual - harga_beli) * qty) as keuntungan from transaksi group by bulan order
by bulan asc;
+----------+------------+
| bulan    | keuntungan |
+----------+------------+
| April    |      35500 |
| Februari |      36500 |
| Januari  |      32500 |
| Maret    |      37000 |
+----------+------------+
4 rows in set (0.000 sec)
```

4. Buat query untuk menunjukkan rata-rata penjualan perbulan (screen shoot query dan outputnya).

```
MariaDB [dts_tsa]> select bulan, avg(harga_jual * qty) as rata_rata from transaksi group by bulan order by bulan asc;
+----------+-------------------+
| bulan    | rata_rata         |
+----------+-------------------+
| April    | 61833.333333333336 |
| Februari |              61500 |
| Januari  | 55833.333333333336 |
| Maret    |              63000 |
+----------+-------------------+
4 rows in set (0.001 sec)
```

5. Buat query untuk menunjukkan omzet penjualan perbulan (screen shoot query dan outputnya).

```
MariaDB [dts_tsa]> select bulan, sum(harga_jual * qty) as omzet from transaksi group by bulan order by bulan asc;
+----------+--------+
| bulan    | omzet  |
+----------+--------+
| April    | 185500 |
| Februari | 184500 |
| Januari  | 167500 |
| Maret    | 189000 |
+----------+--------+
4 rows in set (0.000 sec)
```

6. Buat query yang menunjukkan omzet penjualan total (screen shoot query dan outputnya).

```
MariaDB [dts_tsa]> select sum(harga_jual * qty) as omzet_total from transaksi;
+-------------+
| omzet_total |
+-------------+
|      726500 |
+-------------+
1 row in set (0.001 sec)
```

7. Buat query yang menunjukkan nilai omzet tertinggi dalam sebulan (screen shoot query dan outputnya).

```
MariaDB [dts_tsa]> 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 (0.001 sec)
```

```
MariaDB [dts_tsa]> select max(harga_jual * qty) as omzet_tertinggi from transaksi;
+-----------------+
| omzet_tertinggi |
+-----------------+
|          140000 |
+-----------------+
1 row in set (0.001 sec)
```