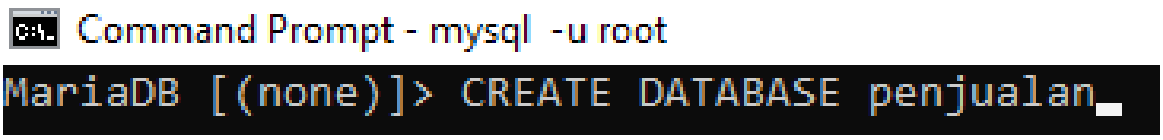
TUGAS IMPLEMENTASI TRIGGER PADA BASIS DATA PENJUALAN

NAMA ANGGOTA KELOMPOK:

- Dzakiyya Puteri Aulia
- Vasya Thabarani

1. MEMBUAT DATABASE:



2.MEMBUAT TABEL

MEMBUAT TABEL tbl_beli_barang:

```
MariaDB [penjualan]> create table tbl_beli_barang (nofak_beli int(11) auto_increment primary key, tgl_beli date, kode_barang varchar(255), jumlah_beli int(11
), harga_beli int(11), harga_jual int(11), user_id int(11));
Query OK, 0 rows affected (0.075 sec)
```

MEMBUAT TABEL xtb_jenis_barang:

```
MariaDB [penjualan]> create table xtb_jenis_barang (id_jenis int(11) auto_increment primary key, jenis_barang varchar(255));
Query OK, 0 rows affected (0.048 sec)
```

MEMBUAT TABEL xtb_barang:

```
MariaDB [penjualan]> create table xtb_barang (kode_barang varchar(255) primary key, nama_barang varchar(255), satuan varchar(255), stok int(11), harga_jual i
nt(11), id_jenis int(11), barang_user_id int(11));
Query OK, 0 rows affected (0.056 sec)
```

MEMBUAT TABEL tbl_jual_barang:

```
MariaDB [penjualan]> create table tbl_jual_barang (nofak_jual int(11) auto_increment primary key, tgl_jual date, kode_barang varchar(255), jumlah_jual int(11
), harga_jual int(11), user_id int(11));
Query OK, 0 rows affected (0.051 sec)
```

3.MENGISI TABEL

MENGISI TABEL tbl_beli_barang:

```
MariaDB [penjualan]> insert into tbl_beli_barang values
    -> ('1','2023-08-20','1','50','5000','10000','123'),
    -> ('2','2023-08-20','2','50','7000','15000','234'),
    -> ('3','2023-08-20','3','25','10000','20000','345'),
    -> ('4','2023-08-21','4','25','15000','25000','456'),
    -> ('5','2023-08-21','5','30','17000','27000','567'),
    -> ('6','2023-08-21','6','30','20000','30000','678'),
    -> ('7','2023-08-22','7','40','25000','35000','789'),
    -> ('8','2023-08-22','8','40','30000','40000','891'),
    -> ('9','2023-08-22','9','45','33000','43000','910'),
    -> ('10','2023-08-22','10','45','35000','45000','101');
Query OK, 10 rows affected (0.094 sec)
Records: 10  Duplicates: 0  Warnings: 0
```

```
MariaDB [penjualan]> select * from tbl_beli_barang;
+-----------+-----------+------------+------------+-----------+-----------+---------+
| nofak_beli | tgl_beli  | kode_barang | jumlah_beli | harga_beli | harga_jual | user_id |
+-----------+-----------+------------+------------+-----------+-----------+---------+
|          1 | 2023-08-20 | 1          |         50 |      5000 |     10000 |     123 |
|          2 | 2023-08-20 | 2          |         50 |      7000 |     15000 |     234 |
|          3 | 2023-08-20 | 3          |         25 |     10000 |     20000 |     345 |
|          4 | 2023-08-21 | 4          |         25 |     15000 |     25000 |     456 |
|          5 | 2023-08-21 | 5          |         30 |     17000 |     27000 |     567 |
|          6 | 2023-08-21 | 6          |         30 |     20000 |     30000 |     678 |
|          7 | 2023-08-22 | 7          |         40 |     25000 |     35000 |     789 |
|          8 | 2023-08-22 | 8          |         40 |     30000 |     40000 |     891 |
|          9 | 2023-08-22 | 9          |         45 |     33000 |     43000 |     910 |
|         10 | 2023-08-22 | 10         |         45 |     35000 |     45000 |     101 |
+-----------+-----------+------------+------------+-----------+-----------+---------+
10 rows in set (0.001 sec)
```

MENGISI TABEL xtb_jenis_barang:

```
Command Prompt - mysql  -u root
MariaDB [penjualan]> insert into xtb_jenis_barang values
    -> ('1','kosmetik'),
    -> ('2','perabotan'),
    -> ('3','elektronik'),
    -> ('4','furnitur'),
    -> ('5','alat olahraga'),
    -> ('6','alat sekolah'),
    -> ('7','alat kebersihan'),
    -> ('8','fashion'),
    -> ('9','kendaraan'),
    -> ('10','aksesoris');
Query OK, 10 rows affected (0.007 sec)
Records: 10  Duplicates: 0  Warnings: 0
```

```
MariaDB [penjualan]> select * from xtb_jenis_barang;
+----------+-----------------+
| id_jenis | jenis_barang    |
+----------+-----------------+
|        1 | kosmetik        |
|        2 | perabotan       |
|        3 | elektronik      |
|        4 | furnitur        |
|        5 | alat olahraga   |
|        6 | alat sekolah    |
|        7 | alat kebersihan |
|        8 | fashion         |
|        9 | kendaraan       |
|       10 | aksesoris       |
+----------+-----------------+
10 rows in set (0.000 sec)
```

MENGISI TABEL xtb_barang:

```
MariaDB [penjualan]> insert into xtb_barang values
    -> ('1','lipstik','pcs','100','2000','1','123'),
    -> ('2','panci','pcs','100','3000','2','234'),
    -> ('3','laptop','pcs','100','8000','3','345'),
    -> ('4','gordeng','pcs','100','10000','4','456'),
    -> ('5','bola','pcs','100','9000','5','567'),
    -> ('6','buku','pcs','100','10000','6','678'),
    -> ('7','sapu','pcs','100','8000','7','789'),
    -> ('8','baju','pcs','100','10000','8','891'),
    -> ('9','motor','pcs','100','9000','9','910'),
    -> ('10','kalung','pcs','100','10000','10','101');
Query OK, 10 rows affected (0.006 sec)
Records: 10  Duplicates: 0  Warnings: 0
```

```
MariaDB [penjualan]> select * from xtb_barang;
+-------------+-------------+--------+------+-----------+----------+----------------+
| kode_barang | nama_barang | satuan | stok | harga_jual | id_jenis | barang_user_id |
+-------------+-------------+--------+------+-----------+----------+----------------+
| 1           | lipstik     | pcs    | 100  |      2000 |        1 |            123 |
| 10          | kalung      | pcs    | 100  |     10000 |       10 |            101 |
| 2           | panci       | pcs    | 100  |      3000 |        2 |            234 |
| 3           | laptop      | pcs    | 100  |      8000 |        3 |            345 |
| 4           | gordeng     | pcs    | 100  |     10000 |        4 |            456 |
| 5           | bola        | pcs    | 100  |      9000 |        5 |            567 |
| 6           | buku        | pcs    | 100  |     10000 |        6 |            678 |
| 7           | sapu        | pcs    | 100  |      8000 |        7 |            789 |
| 8           | baju        | pcs    | 100  |     10000 |        8 |            891 |
| 9           | motor       | pcs    | 100  |      9000 |        9 |            910 |
+-------------+-------------+--------+------+-----------+----------+----------------+
10 rows in set (0.001 sec)
```

MENGISI TABEL tbl_jual_barang:

```
MariaDB [penjualan]> insert into tbl_jual_barang values
    -> ('1','2023-08-10','1','50','10000','123'),
    -> ('2','2023-08-10','2','50','15000','234'),
    -> ('3','2023-08-11','3','25','20000','345'),
    -> ('4','2023-08-11','4','25','25000','456'),
    -> ('5','2023-08-12','5','30','27000','567'),
    -> ('6','2023-08-12','6','30','30000','678'),
    -> ('7','2023-08-13','7','40','35000','789'),
    -> ('8','2023-08-13','8','40','40000','890'),
    -> ('9','2023-08-14','9','45','43000','910'),
    -> ('10','2023-08-14','10','45','45000','101');
Query OK, 10 rows affected (0.007 sec)
```

```
MariaDB [penjualan]> select * from tbl_jual_barang;
+-----------+-----------+------------+------------+-----------+---------+
| nofak_jual | tgl_jual  | kode_barang | jumlah_jual | harga_jual | user_id |
+-----------+-----------+------------+------------+-----------+---------+
|          1 | 2023-08-10 | 1          |         50 |     10000 |     123 |
|          2 | 2023-08-10 | 2          |         50 |     15000 |     234 |
|          3 | 2023-08-11 | 3          |         25 |     20000 |     345 |
|          4 | 2023-08-11 | 4          |         25 |     25000 |     456 |
|          5 | 2023-08-12 | 5          |         30 |     27000 |     567 |
|          6 | 2023-08-12 | 6          |         30 |     30000 |     678 |
|          7 | 2023-08-13 | 7          |         40 |     35000 |     789 |
|          8 | 2023-08-13 | 8          |         40 |     40000 |     890 |
|          9 | 2023-08-14 | 9          |         45 |     43000 |     910 |
|         10 | 2023-08-14 | 10         |         45 |     45000 |     101 |
+-----------+-----------+------------+------------+-----------+---------+
10 rows in set (0.001 sec)
```

4. QUERY MENAMPILKAN DATA

a. pencarian menurut jenis barang:

kode_barang, nama_barang, stok, harga_jual, jenis_barang

```
MariaDB [penjualan]> SELECT
    -> B.kode_barang,
    -> B.nama_barang,
    -> B.stok,
    -> B.harga_jual,
    -> J.jenis_barang
    -> FROM
    -> xtb_barang AS B
    -> INNER JOIN
    -> xtb_jenis_barang AS J ON B.id_jenis = J.id_jenis;
+-------------+-------------+------+-----------+-----------------+
| kode_barang | nama_barang | stok | harga_jual | jenis_barang    |
+-------------+-------------+------+-----------+-----------------+
| 1           | lipstik     |  100 |       2000 | kosmetik        |
| 10          | kalung      |  100 |      10000 | aksesoris       |
| 2           | panci       |  100 |       3000 | perabotan       |
| 3           | laptop      |  100 |       8000 | elektronik      |
| 4           | gordeng     |  100 |      10000 | furnitur        |
| 5           | bola        |  100 |       9000 | alat olahraga   |
| 6           | buku        |  100 |      10000 | alat sekolah    |
| 7           | sapu        |  100 |       8000 | alat kebersihan |
| 8           | baju        |  100 |      10000 | fashion         |
| 9           | motor       |  100 |       9000 | kendaraan       |
+-------------+-------------+------+-----------+-----------------+
10 rows in set (0.001 sec)
```

b. seluruh pembelian barang :

Nofak_beli, kode_barang, nama_barang, jumlah_beli, harga_beli

```
Command Prompt - mysql  -u root
MariaDB [penjualan]> SELECT
    -> bb.nofak_beli,
    -> bb.kode_barang,
    -> xb.nama_barang,
    -> bb.jumlah_beli,
    -> bb.harga_beli
    -> FROM
    -> tbl_beli_barang bb
    -> JOIN
    -> xtb_barang xb ON bb.kode_barang = xb.kode_barang;
+-----------+-------------+-------------+------------+-----------+
| nofak_beli | kode_barang | nama_barang | jumlah_beli | harga_beli |
+-----------+-------------+-------------+------------+-----------+
|          1 | 1           | lipstik     |         50 |       5000 |
|          2 | 2           | panci       |         50 |       7000 |
|          3 | 3           | laptop      |         25 |      10000 |
|          4 | 4           | gordeng     |         25 |      15000 |
|          5 | 5           | bola        |         30 |      17000 |
|          6 | 6           | buku        |         30 |      20000 |
|          7 | 7           | sapu        |         40 |      25000 |
|          8 | 8           | baju        |         40 |      30000 |
|          9 | 9           | motor       |         45 |      33000 |
|         10 | 10          | kalung      |         45 |      35000 |
+-----------+-------------+-------------+------------+-----------+
10 rows in set (0.001 sec)
```

c. pertangggal pembelian barang :

Nofak_beli, kode_barang, nama_barang, jumlah_beli, harga_beli

```
MariaDB [penjualan]> SELECT tb.nofak_beli, tb.kode_barang, xb.nama_barang, tb.jumlah_beli, tb.harga_beli
    -> FROM tbl_beli_barang tb
    -> INNER JOIN xtb_barang xb ON tb.kode_barang = xb.kode_barang
    -> ;
+-----------+-------------+-------------+------------+-----------+
| nofak_beli | kode_barang | nama_barang | jumlah_beli | harga_beli |
+-----------+-------------+-------------+------------+-----------+
|          1 | 1           | lipstik     |         50 |       5000 |
|          2 | 2           | panci       |         50 |       7000 |
|          3 | 3           | laptop      |         25 |      10000 |
|          4 | 4           | gordeng     |         25 |      15000 |
|          5 | 5           | bola        |         30 |      17000 |
|          6 | 6           | buku        |         30 |      20000 |
|          7 | 7           | sapu        |         40 |      25000 |
|          8 | 8           | baju        |         40 |      30000 |
|          9 | 9           | motor       |         45 |      33000 |
|         10 | 10          | kalung      |         45 |      35000 |
+-----------+-------------+-------------+------------+-----------+
```

d. rekap pembelian barang perbulan :

Jenis_barang, total_beli, bulan, tahun

Command Prompt - mysql -u root

```
MariaDB [penjualan]> SELECT
    -> xtb_jenis_barang.jenis_barang AS jenis_barang,
    -> SUM(tbl_beli_barang.jumlah_beli) AS total_beli,
    -> MONTH(tbl_beli_barang.tgl_beli) AS bulan,
    -> YEAR(tbl_beli_barang.tgl_beli) AS tahun
    -> FROM
    -> tbl_beli_barang
    -> JOIN
    -> xtb_barang ON tbl_beli_barang.kode_barang = xtb_barang.kode_barang
    -> JOIN
    -> xtb_jenis_barang ON xtb_barang.id_jenis = xtb_jenis_barang.id_jenis
    -> GROUP BY
    -> xtb_jenis_barang.jenis_barang,
    -> MONTH(tbl_beli_barang.tgl_beli),
    -> YEAR(tbl_beli_barang.tgl_beli)
    -> ORDER BY
    -> tahun, bulan;
+----------------+------------+-------+-------+
| jenis_barang   | total_beli | bulan | tahun |
+----------------+------------+-------+-------+
| alat kebersihan |         40 |     8 |  2023 |
| fashion        |         40 |     8 |  2023 |
| kendaraan      |         45 |     8 |  2023 |
| kosmetik       |         50 |     8 |  2023 |
| aksesoris      |         45 |     8 |  2023 |
| perabotan      |         50 |     8 |  2023 |
| elektronik     |         25 |     8 |  2023 |
| furnitur       |         25 |     8 |  2023 |
| alat olahraga  |         30 |     8 |  2023 |
| alat sekolah   |         30 |     8 |  2023 |
+----------------+------------+-------+-------+
10 rows in set (0.001 sec)
```

e. seluruh penjualan barang :

Nofak_jual, kode_barang, nama_barang, jumlah_jual, harga_jual, total

Command Prompt - mysql -u root

```
MariaDB [penjualan]>
MariaDB [penjualan]> SELECT
    -> tb.nofak_jual,
    -> tb.kode_barang,
    -> xb.nama_barang,
    -> tb.jumlah_jual,
    -> tb.harga_jual,
    -> (tb.jumlah_jual * tb.harga_jual) AS total
    -> FROM tbl_jual_barang AS tb
    -> JOIN xtb_barang AS xb ON tb.kode_barang = xb.kode_barang;
+-----------+-------------+-------------+-------------+------------+---------+
| nofak_jual | kode_barang | nama_barang | jumlah_jual | harga_jual | total   |
+-----------+-------------+-------------+-------------+------------+---------+
|          1 | 1           | lipstik     |          50 |      10000 |  500000 |
|          2 | 2           | panci       |          50 |      15000 |  750000 |
|          3 | 3           | laptop      |          25 |      20000 |  500000 |
|          4 | 4           | gordeng     |          25 |      25000 |  625000 |
|          5 | 5           | bola        |          30 |      27000 |  810000 |
|          6 | 6           | buku        |          30 |      30000 |  900000 |
|          7 | 7           | sapu        |          40 |      35000 | 1400000 |
|          8 | 8           | baju        |          40 |      40000 | 1600000 |
|          9 | 9           | motor       |          45 |      43000 | 1935000 |
|         10 | 10          | kalung      |          45 |      45000 | 2025000 |
+-----------+-------------+-------------+-------------+------------+---------+
10 rows in set (0.001 sec)
```

f. pertanggal penjualan barang :

Nofak_jual, kode_barang, nama_barang, jumlah_jual, harga_jual, total

Command Prompt - mysql -u root

```
MariaDB [penjualan]>
MariaDB [penjualan]> SELECT
    -> j.nofak_jual,
    -> j.tgl_jual,
    -> j.kode_barang,
    -> b.nama_barang,
    -> j.jumlah_jual,
    -> b.harga_jual,
    -> (j.jumlah_jual * b.harga_jual) AS total
    -> FROM
    -> tbl_jual_barang j
    -> JOIN
    -> xtb_barang b ON j.kode_barang = b.kode_barang;
+------------+------------+-------------+-------------+------------+------------+--------+
| nofak_jual | tgl_jual   | kode_barang | nama_barang | jumlah_jual | harga_jual | total  |
+------------+------------+-------------+-------------+------------+------------+--------+
|          1 | 2023-08-10 | 1           | lipstik     |          50 |       2000 | 100000 |
|          2 | 2023-08-10 | 2           | panci       |          50 |       3000 | 150000 |
|          3 | 2023-08-11 | 3           | laptop      |          25 |       8000 | 200000 |
|          4 | 2023-08-11 | 4           | gordeng     |          25 |      10000 | 250000 |
|          5 | 2023-08-12 | 5           | bola        |          30 |       9000 | 270000 |
|          6 | 2023-08-12 | 6           | buku        |          30 |      10000 | 300000 |
|          7 | 2023-08-13 | 7           | sapu        |          40 |       8000 | 320000 |
|          8 | 2023-08-13 | 8           | baju        |          40 |      10000 | 400000 |
|          9 | 2023-08-14 | 9           | motor       |          45 |       9000 | 405000 |
|         10 | 2023-08-14 | 10          | kalung      |          45 |      10000 | 450000 |
+------------+------------+-------------+-------------+------------+------------+--------+
10 rows in set (0.001 sec)
```

g. Rekap pembelian barang per bulan :

jenis_barang, total_harga_penjualan, bulan, tahun

Command Prompt - mysql -u root

```
MariaDB [penjualan]> SELECT
    -> xtb_jenis_barang.jenis_barang AS jenis_barang,
    -> SUM(tbl_jual_barang.jumlah_jual * tbl_jual_barang.harga_jual) AS total_harga_penjualan,
    -> YEAR(tbl_jual_barang.tgl_jual) AS tahun,
    -> MONTH(tbl_jual_barang.tgl_jual) AS bulan
    -> FROM
    -> tbl_jual_barang
    -> INNER JOIN
    -> xtb_barang ON tbl_jual_barang.kode_barang = xtb_barang.kode_barang
    -> INNER JOIN
    -> xtb_jenis_barang ON xtb_barang.id_jenis = xtb_jenis_barang.id_jenis
    -> GROUP BY
    -> xtb_jenis_barang.jenis_barang,
    -> YEAR(tbl_jual_barang.tgl_jual),
    -> MONTH(tbl_jual_barang.tgl_jual)
    -> ORDER BY
    -> tahun, bulan, jenis_barang;
+-----------------+-----------------------+-------+-------+
| jenis_barang    | total_harga_penjualan | tahun | bulan |
+-----------------+-----------------------+-------+-------+
| aksesoris       |               2025000 |  2023 |     8 |
| alat kebersihan |               1400000 |  2023 |     8 |
| alat olahraga   |                810000 |  2023 |     8 |
| alat sekolah    |                900000 |  2023 |     8 |
| elektronik      |                500000 |  2023 |     8 |
| fashion         |               1600000 |  2023 |     8 |
| furnitur        |                625000 |  2023 |     8 |
| kendaraan       |               1935000 |  2023 |     8 |
| kosmetik        |                500000 |  2023 |     8 |
| perabotan       |                750000 |  2023 |     8 |
+-----------------+-----------------------+-------+-------+
10 rows in set (0.001 sec)
```

5. Implementasikan trigger (after Insert, after update, after delete)

a. After Insert

Command Prompt - mysql -u root

```
MariaDB [penjualan]> DELIMITER //
MariaDB [penjualan]>
MariaDB [penjualan]> CREATE TRIGGER after_insert_tbl_jual_barang
    -> AFTER INSERT ON tbl_jual_barang
    -> FOR EACH ROW
    -> BEGIN
    ->     DECLARE v_stok INT;
    ->
    ->     -- Ambil stok saat ini dari xtb_barang
    ->     SELECT stok INTO v_stok
    ->     FROM xtb_barang
    ->     WHERE kode_barang = NEW.kode_barang;
    ->
    ->     -- Kurangi stok sesuai dengan jumlah penjualan
    ->     SET v_stok = v_stok - NEW.jumlah_jual;
    ->
    ->     -- Update stok baru ke dalam xtb_barang
    ->     UPDATE xtb_barang
    ->     SET stok = v_stok
    ->     WHERE kode_barang = NEW.kode_barang;
    -> END;
    -> //
Query OK, 0 rows affected (0.009 sec)
```

b. After Update

Command Prompt - mysql -u root

```
MariaDB [penjualan]>
MariaDB [penjualan]> DELIMITER //
MariaDB [penjualan]>
MariaDB [penjualan]> CREATE TRIGGER after_update_tbl_jual_barang
    -> AFTER UPDATE ON tbl_jual_barang
    -> FOR EACH ROW
    -> BEGIN
    ->     DECLARE v_stok_awal INT;
    ->     DECLARE v_stok_baru INT;
    ->
    ->     -- Ambil stok awal dari xtb_barang
    ->     SELECT stok INTO v_stok_awal
    ->     FROM xtb_barang
    ->     WHERE kode_barang = OLD.kode_barang;
    ->
    ->     -- Ambil stok baru dari xtb_barang
    ->     SELECT stok INTO v_stok_baru
    ->     FROM xtb_barang
    ->     WHERE kode_barang = NEW.kode_barang;
    ->
    ->     -- Hitung selisih stok
    ->     SET v_stok_awal = v_stok_awal + OLD.jumlah_jual;
    ->     SET v_stok_baru = v_stok_baru - NEW.jumlah_jual;
    ->
    ->     -- Update stok awal
    ->     UPDATE xtb_barang
    ->     SET stok = v_stok_awal
    ->     WHERE kode_barang = OLD.kode_barang;
    ->
    ->     -- Update stok baru
    ->     UPDATE xtb_barang
    ->     SET stok = v_stok_baru
    ->     WHERE kode_barang = NEW.kode_barang;
    -> END;
    -> //
Query OK, 0 rows affected (0.028 sec)
```

C.After Delete

Command Prompt - mysql -u root

```
MariaDB [penjualan]>
MariaDB [penjualan]> DELIMITER //
MariaDB [penjualan]>
MariaDB [penjualan]> CREATE TRIGGER after_delete_tbl_jual_barang
    -> AFTER DELETE ON tbl_jual_barang
    -> FOR EACH ROW
    -> BEGIN
    ->     DECLARE v_stok INT;
    ->
    ->     -- Ambil stok saat ini dari xtb_barang
    ->     SELECT stok INTO v_stok
    ->     FROM xtb_barang
    ->     WHERE kode_barang = OLD.kode_barang;
    ->
    ->     -- Tambahkan jumlah yang dihapus dari stok
    ->     SET v_stok = v_stok + OLD.jumlah_jual;
    ->
    ->     -- Update stok baru ke dalam xtb_barang
    ->     UPDATE xtb_barang
    ->     SET stok = v_stok
    ->     WHERE kode_barang = OLD.kode_barang;
    -> END;
    -> //
Query OK, 0 rows affected (0.011 sec)
```