TUGAS 4

PERINTAH SQL

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Kelas : SI-F

A. Penambahan Primary Key, Foreign Key, dan Menu Designer PHP myAdmin

1. Primary Key
   - Penambahan Primary Key

```
MariaDB [db_warnet]> ALTER TABLE admin
    -> ADD PRIMARY KEY (id_admin);
Query OK, 0 rows affected (0.069 sec)
Records: 0  Duplicates: 0  Warnings: 0

MariaDB [db_warnet]> desc admin;
+------------+-------------+------+-----+---------+-------+
| Field      | Type        | Null | Key | Default | Extra |
+------------+-------------+------+-----+---------+-------+
| id_admin   | int(11)     | NO   | PRI | NULL    |       |
| id_pegawai | int(11)     | YES  |     | NULL    |       |
| nama_admin | varchar(50) | YES  |     | NULL    |       |
+------------+-------------+------+-----+---------+-------+
3 rows in set (0.024 sec)

MariaDB [db_warnet]>
```

```
ALTER TABLE admin
  -> ADD PRIMARY KEY (id_admin);
```

   - Penghapusan Primary Key

```
MariaDB [db_warnet]> ALTER TABLE admin
    -> DROP PRIMARY KEY;
Query OK, 2 rows affected (0.082 sec)
Records: 2  Duplicates: 0  Warnings: 0

MariaDB [db_warnet]> desc admin;
+------------+-------------+------+-----+---------+-------+
| Field      | Type        | Null | Key | Default | Extra |
+------------+-------------+------+-----+---------+-------+
| id_admin   | int(11)     | NO   |     | NULL    |       |
| id_pegawai | int(11)     | YES  |     | NULL    |       |
| nama_admin | varchar(50) | YES  |     | NULL    |       |
+------------+-------------+------+-----+---------+-------+
3 rows in set (0.020 sec)

MariaDB [db_warnet]>
```

```
ALTER TABLE admin
  -> DROP PRIMARY KEY;
```

2. Foreign Key
    - Penambahan Foreign Key

```
MariaDB [db_warnet]> ALTER TABLE pc
    -> ADD CONSTRAINT id_admin FOREIGN KEY (id_admin)
    -> REFERENCES admin (id_admin),
    -> ADD CONSTRAINT id_member FOREIGN KEY (id_member)
    -> REFERENCES member (id_member);
Query OK, 3 rows affected (0.107 sec)
Records: 3  Duplicates: 0  Warnings: 0

MariaDB [db_warnet]> desc pd;
ERROR 1146 (42S02): Table 'db_warnet.pd' doesn't exist
MariaDB [db_warnet]> desc pc;
+---------------+-------------+------+-----+---------+-------+
| Field         | Type        | Null | Key | Default | Extra |
+---------------+-------------+------+-----+---------+-------+
| id_pc         | int(11)     | NO   | PRI | NULL    |       |
| id_admin      | int(11)     | YES  | MUL | NULL    |       |
| id_member     | int(11)     | YES  | MUL | NULL    |       |
| tipe_pc       | varchar(50) | YES  |     | NULL    |       |
| spesifikasi_pc | varchar(50) | YES  |     | NULL    |       |
+---------------+-------------+------+-----+---------+-------+
5 rows in set (0.026 sec)

MariaDB [db_warnet]>
```

```
MariaDB [db_warnet]> ALTER TABLE pc
  -> ADD CONSTRAINT id_admin FOREIGN KEY (id_admin)
  -> REFERENCES admin (id_admin),
  -> ADD CONSTRAINT id_member FOREIGN KEY (id_member)
  -> REFERENCES member (id_member);
```

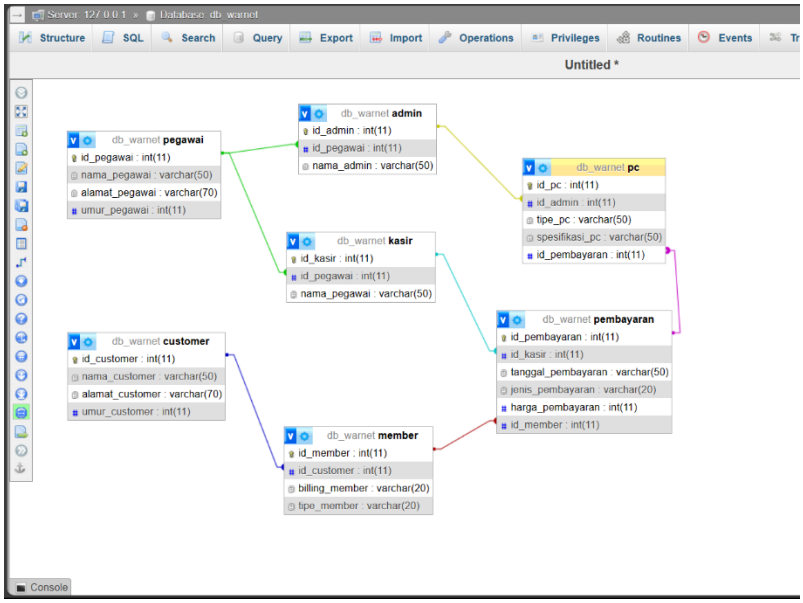
- Penghapusan Foreign Key

```
MariaDB [db_warnet]> ALTER TABLE admin
    -> DROP FOREIGN KEY fk_id_pegawai;
Query OK, 0 rows affected (0.025 sec)
Records: 0  Duplicates: 0  Warnings: 0

MariaDB [db_warnet]> desc admin;
+------------+-------------+------+-----+---------+-------+
| Field      | Type        | Null | Key | Default | Extra |
+------------+-------------+------+-----+---------+-------+
| id_admin   | int(11)     | NO   | PRI | NULL    |       |
| id_pegawai | int(11)     | YES  | MUL | NULL    |       |
| nama_admin | varchar(50) | YES  |     | NULL    |       |
+------------+-------------+------+-----+---------+-------+
3 rows in set (0.023 sec)
```

```
ALTER TABLE admin
  -> DROP FOREIGN KEY fk_id_pegawai;
```

3. Menu Designer PHP myAdmin



B. Penambahan Perintah SQL Lanjutan

1. SELECT ALL ==> Data pada table yang diakses semua

```
MariaDB [db_warnet]> SELECT * FROM pegawai;
+-------------+---------------+-------------------+--------------+
| id_pegawai | nama_pegawai  | alamat_pegawai    | umur_pegawai |
+-------------+---------------+-------------------+--------------+
|       1001 | Rudi Ahmad    | Jalan Kesini No.1 |           18 |
|       1002 | William Akmal | Jalan Kesana No.5 |           21 |
|       1003 | Michael Udin  | Jalan Kesitu No.4 |           20 |
+-------------+---------------+-------------------+--------------+
3 rows in set (0.051 sec)

MariaDB [db_warnet]>
```

```
SELECT * FROM pegawai;
```

2. SELECT DISTINCT ==> Data pada tabel yang diakses bersyarat

```
MariaDB [db_warnet]> SELECT DISTINCT tipe_pc, spesifikasi_pc
    -> FROM pc;
+-----------+----------------+
| tipe_pc   | spesifikasi_pc |
+-----------+----------------+
| Mid-Range | GTX            |
| Top-Range | RTX            |
+-----------+----------------+
2 rows in set (0.001 sec)

MariaDB [db_warnet]>
```

```
SELECT DISTINCT tipe_pc, spesifikasi_pc
  -> FROM pc;
```

3. SELECT INTO/INSERT INTO

- Buatlah table baru yang dimana columb dan typedata nya sama dengan table lama

```
MariaDB [db_warnet]> create table memberNew(
    -> id_member int(11),
    -> id_customer int(11),
    -> billing_member varchar(20),
    -> tipe_member varchar(20),
    -> PRIMARY KEY(id_member));
Query OK, 0 rows affected (0.029 sec)

MariaDB [db_warnet]> desc memberNew;
+---------------+-------------+------+-----+---------+-------+
| Field         | Type        | Null | Key | Default | Extra |
+---------------+-------------+------+-----+---------+-------+
| id_member     | int(11)     | NO   | PRI | NULL    |       |
| id_customer   | int(11)     | YES  |     | NULL    |       |
| billing_member | varchar(20) | YES  |     | NULL    |       |
| tipe_member   | varchar(20) | YES  |     | NULL    |       |
+---------------+-------------+------+-----+---------+-------+
4 rows in set (0.026 sec)

MariaDB [db_warnet]>
```

- Kemudian gunakan INSERT INTO untuk memasukkan data table lama ke table baru

```
MariaDB [db_warnet]> INSERT INTO memberNew
    -> select * from member;
Query OK, 3 rows affected (0.013 sec)
Records: 3  Duplicates: 0  Warnings: 0

MariaDB [db_warnet]> SELECT * FROM memberNew;
+------------+--------------+-----------------+--------------+
| id_member | id_customer | billing_member | tipe_member |
+------------+--------------+-----------------+--------------+
|      1201 |        1101 | 02:00          | Reguler     |
|      1202 |        1102 | 02:00          | Sultan      |
|      1203 |        1103 | 04;00          | Sultan      |
+------------+--------------+-----------------+--------------+
3 rows in set (0.001 sec)

MariaDB [db_warnet]>
```

```
INSERT INTO memberNew
  -> select * from member;
```

4. SELECT WHERE

```
MariaDB [db_warnet]> select * from pembayaran;
+---------------+----------+-------------------+-----------------+-----------------+-----------+
| id_pembayaran | id_kasir | tanggal_pembayaran | jenis_pembayaran | harga_pembayaran | id_member |
+---------------+----------+-------------------+-----------------+-----------------+-----------+
|          1701 |     1601 | 17 Agustus 2023    | Tunai           |           20000 |      1201 |
|          1702 |     1601 | 18 Agustus 2023    | QRIS            |           35000 |      1202 |
|          1703 |     1601 | 19 Agustus 2023    | Kredit          |           65000 |      1203 |
+---------------+----------+-------------------+-----------------+-----------------+-----------+
3 rows in set (0.001 sec)

MariaDB [db_warnet]> SELECT * FROM pembayaran
    -> WHERE harga_pembayaran > 30000;
+---------------+----------+-------------------+-----------------+-----------------+-----------+
| id_pembayaran | id_kasir | tanggal_pembayaran | jenis_pembayaran | harga_pembayaran | id_member |
+---------------+----------+-------------------+-----------------+-----------------+-----------+
|          1702 |     1601 | 18 Agustus 2023    | QRIS            |           35000 |      1202 |
|          1703 |     1601 | 19 Agustus 2023    | Kredit          |           65000 |      1203 |
+---------------+----------+-------------------+-----------------+-----------------+-----------+
2 rows in set (0.000 sec)

MariaDB [db_warnet]>
```

```
SELECT * FROM pembayaran
  -> WHERE harga_pembayaran > 30000;
```

Perintah Where terdapat beberapa bagian kecil didalamnya, contohnya :

- BETWEEN ==> Untuk menyortir diantara nilai

```
MariaDB [db_warnet]> SELECT * FROM pembayaran
    -> WHERE harga_pembayaran BETWEEN 30000 AND 60000;
+---------------+----------+-------------------+-----------------+-----------------+-----------+
| id_pembayaran | id_kasir | tanggal_pembayaran | jenis_pembayaran | harga_pembayaran | id_member |
+---------------+----------+-------------------+-----------------+-----------------+-----------+
|          1702 |     1601 | 18 Agustus 2023    | QRIS            |           35000 |      1202 |
+---------------+----------+-------------------+-----------------+-----------------+-----------+
1 row in set (0.001 sec)

MariaDB [db_warnet]>
```

```
SELECT * FROM pembayaran
  -> WHERE harga_pembayaran BETWEEN 30000 AND 60000;
```

- LIKE ==> Untuk menyortir Kalimat

```
MariaDB [db_warnet]> SELECT * FROM pembayaran
    -> WHERE jenis_pembayaran LIKE 'QRIS' OR tanggal_pembayaran LIKE '17%';
+---------------+----------+--------------------+------------------+------------------+-----------+
| id_pembayaran | id_kasir | tanggal_pembayaran | jenis_pembayaran | harga_pembayaran | id_member |
+---------------+----------+--------------------+------------------+------------------+-----------+
|          1701 |     1601 | 17 Agustus 2023    | Tunai            |            20000 |      1201 |
|          1702 |     1601 | 18 Agustus 2023    | QRIS             |            35000 |      1202 |
+---------------+----------+--------------------+------------------+------------------+-----------+
2 rows in set (0.000 sec)

MariaDB [db_warnet]>
```

```
SELECT * FROM pembayaran
  -> WHERE jenis_pembayaran LIKE 'QRIS' OR tanggal_pembayaran LIKE '17%';
```

5. SELECT GROUP BY ==> Mengelompokkan baris dengan nilai yang sama

```
MariaDB [db_warnet]> SELECT tanggal_pembayaran
    -> FROM pembayaran
    -> GROUP BY tanggal_pembayaran;
+--------------------+
| tanggal_pembayaran |
+--------------------+
| 17 Agustus 2023    |
| 18 Agustus 2023    |
| 19 Agustus 2023    |
+--------------------+
3 rows in set (0.001 sec)

MariaDB [db_warnet]>
```

```
SELECT tanggal_pembayaran
-> FROM pembayaran
-> GROUP BY tanggal_pembayaran
```

Perintah GROUP BY memiliki agregat yaitu SUM, COUNT, MAX, MIN, AVG.

- Contoh salah satunya yaitu SUM

```
MariaDB [db_warnet]> SELECT SUM(harga_pembayaran), id_member
    -> FROM pembayaran
    -> GROUP BY id_member;
+----------------------+-----------+
| SUM(harga_pembayaran) | id_member |
+----------------------+-----------+
|                20000 |      1201 |
|                35000 |      1202 |
|                65000 |      1203 |
+----------------------+-----------+
3 rows in set (0.001 sec)

MariaDB [db_warnet]>
```

```
SELECT SUM(harga_pembayaran), id_member
-> FROM pembayaran
-> GROUP BY id_member;
```

6. SELECT HAVING ==> Digunakan ketika ‘WHERE’ tidak dapat digunakan pada fungsi agregat

```
MariaDB [db_warnet]> SELECT SUM(harga_pembayaran), id_member
    -> FROM pembayaran
    -> GROUP BY id_member
    -> HAVING sum(harga_pembayaran) > 30000;
+-----------------------+-----------+
| SUM(harga_pembayaran) | id_member |
+-----------------------+-----------+
|                 35000 |      1202 |
|                 65000 |      1203 |
+-----------------------+-----------+
2 rows in set (0.001 sec)

MariaDB [db_warnet]>
```

```
SELECT SUM(harga_pembayaran), id_member
-> FROM pembayaran
-> GROUP BY id_member
-> HAVING sum(harga_pembayaran) > 30000;
```

7. ORDER BY ==> Mengurutkan data dalam urutan naik (ASC) atau turun (DESC)

```
MariaDB [db_warnet]> SELECT * FROM pembayaran
    -> ORDER BY id_member DESC;
+---------------+----------+--------------------+------------------+------------------+-----------+
| id_pembayaran | id_kasir | tanggal_pembayaran | jenis_pembayaran | harga_pembayaran | id_member |
+---------------+----------+--------------------+------------------+------------------+-----------+
|          1703 |     1601 | 19 Agustus 2023    | Kredit           |            65000 |      1203 |
|          1702 |     1601 | 18 Agustus 2023    | QRIS             |            35000 |      1202 |
|          1701 |     1601 | 17 Agustus 2023    | Tunai            |            20000 |      1201 |
+---------------+----------+--------------------+------------------+------------------+-----------+
3 rows in set (0.001 sec)

MariaDB [db_warnet]>
```

```
SELECT * FROM pembayaran
  -> ORDER BY id_member DESC;
```