Database System Practicum

Modul 6 – Query Standart and Its Variation

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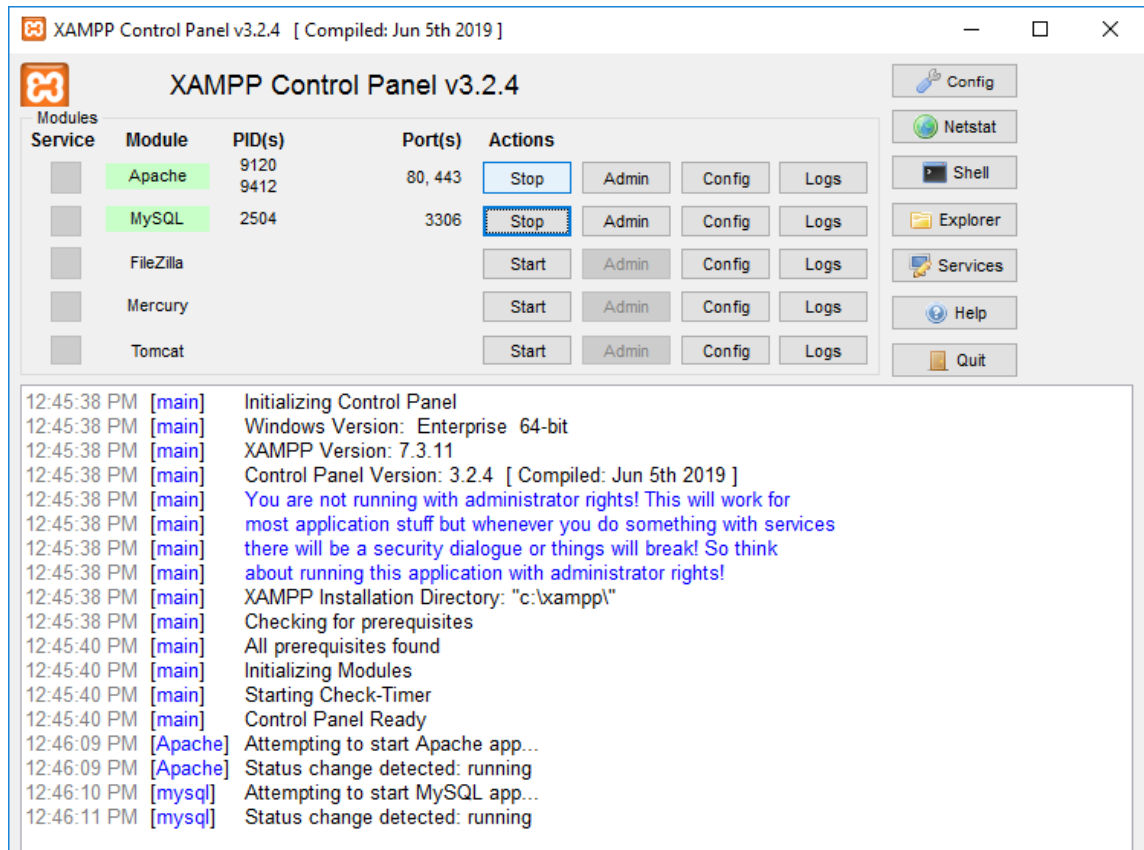
INFORMATION TECHNOLOGY

FACULTY OF COMMUNICATION AND INFORMATICS

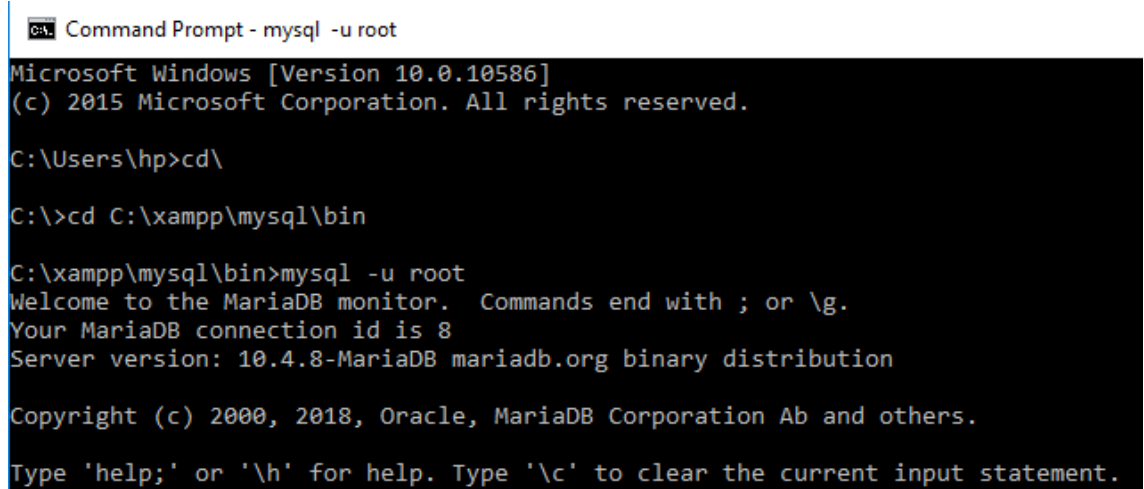**MUHAMMADIYAH UNIVERSITY OF SURAKARTA**

2020

LATIHAN

1. **Run the XAMPP Control Panel**

2. **Running Apache and MySQL servers**

3. **Login as root to MySQL in the Command Prompt**

4. **Enter the banking database**

```
MariaDB [(none)]> use perbankan;
Database changed
```

5. **Show bank names and bank addresses for all bank branches, sorted by bank name**

```
MariaDB [perbankan]> SELECT nama_cabang, alamat_cabang FROM cabang_bank ORDER BY nama_cabang;
+--------------------------+--------------------------+
| nama_cabang              | alamat_cabang            |
+--------------------------+--------------------------+
| Bank Rut Unit Ambon      | Jl. Manggis 8            |
| Bank Rut Unit Boyolali   | Jl. Ahmad Yani 45        |
| Bank Rut Unit Cilacap    | Jl. Melati 76            |
| Bank Rut Unit Demak      | Jl. Sutoyo 43            |
| Bank Rut Unit Enarotali  | Jl. Mawar 32             |
| Bank Rut Unit Gorontalo  | Jl. Naga 17              |
| Bank Rut Unit Indramayu  | Jl. MT Haryono 20        |
| Bank Rut Unit Jakarta    | Jl. Hasanudin 54         |
| Bank Rut Unit Klaten     | Jl. Suparman 23          |
| Bank Rut Unit Lamongan   | Jl. Kantil 3             |
| Bank Rut Unit Palembang  | Jl. Pattimura 6          |
| Bank Rut Unit Surakarta  | Jl. Slamet Riyadi 18     |
| Bank Rut Unit Tangerang  | Jl. Jendral Sudirman 11  |
| Bank Rut Unit Wonogiri   | Jl. Ahmad Yani No.23     |
| Bank Rut Unit Yogyakarta | Jl. Anggrek 21           |
+--------------------------+--------------------------+
15 rows in set (0.001 sec)
```

6. **Show account numbers, pins, and balance amounts for all accounts, sorted by the amount of balance from the largest to the smallest**

```
MariaDB [perbankan]> SELECT no_rekening, pin, saldo FROM rekening ORDER BY saldo DESC;
+-------------+------+---------+
| no_rekening | pin  | saldo   |
+-------------+------+---------+
|         121 | 7890 | 7000000 |
|         108 | 8888 | 5000000 |
|         119 | 5678 | 5000000 |
|         106 | 6666 | 3000000 |
|         105 | 5555 | 2000000 |
|         107 | 7777 | 1000000 |
|         104 | 4444 |  900000 |
|         103 | 3333 |  750000 |
|         118 | 4567 |  700000 |
|         116 | 2345 |  650000 |
|         110 | 1234 |  550000 |
|         123 | 9012 |  550000 |
|         101 | 1111 |  500000 |
|         114 | 1023 |  400000 |
|         115 | 1203 |  350000 |
|         102 | 2222 |  350000 |
|         112 | 0123 |  300000 |
|         120 | 6789 |  300000 |
|         113 | 8888 |  255000 |
|         117 | 3456 |  250000 |
|         111 | 4321 |  150000 |
|         109 | 9999 |       0 |
|         122 | 8901 |       0 |
+-------------+------+---------+
23 rows in set (0.001 sec)
```

ASSIGNMENT

1. **Show customer names and customer addresses sorted by customer name**

```
MariaDB [perbankan]> SELECT nama_nasabah, alamat_nasabah FROM nasabah ORDER BY nama_nasabah;
+-------------------+------------------------+
| nama_nasabah      | alamat_nasabah         |
+-------------------+------------------------+
| Aldila            | Jl. Merpati 82         |
| Annisa Nugraheni  | Jl. Hasanudin 57       |
| Ayu Setia         | Jl. MT Haryono 21      |
| Azzahra Sintaa    | Jl. Slamet Riyadi 24   |
| Budi Eko Prayogo  | Jl. Kantil 30          |
| Budi Murtono      | Jl. Merak 22           |
| Butsaina Nur      | Jl. Pattimura 3        |
| Canka Lokananta   | Jl. Tidar 86           |
| Fahrunnisa        | Jl. Naga 18            |
| Fatikha           | Jl. Sutoyo 5           |
| Kartika Padmasari | Jl. Manggis 15         |
| Maryati           | Jl. MT Haryono 31      |
| Nadya Ayu         | Jl. Melati 48          |
| Pasha Bhima       | Jl. Manggis 23         |
| Rias Wahyuni      | Jl. Mawar 22           |
| Sari Murti        | Jl. Pangandaran 11     |
| Satria Eka Jaya   | Jl. Slamet Riyadi 45   |
| Suparman          | Jl Hasanudin 81        |
| Sutopo            | Jl. Jendral Sudirman 12 |
+-------------------+------------------------+
19 rows in set (0.044 sec)
```

2. **Displays the type of transaction and the number of transactions that are credit type**

```
MariaDB [perbankan]> SELECT jenis_transaksi, jumlah FROM transaksi WHERE jenis_transaksi = 'kredit';
+-----------------+---------+
| jenis_transaksi | jumlah  |
+-----------------+---------+
| kredit          |   20000 |
| kredit          |   30000 |
| kredit          |  200000 |
| kredit          |  150000 |
| kredit          |   50000 |
| kredit          |  200000 |
| kredit          |  100000 |
| kredit          |   20000 |
| kredit          |   50000 |
| kredit          |  200000 |
| kredit          |  100000 |
| kredit          |  100000 |
| kredit          |  400000 |
| kredit          |   30000 |
| kredit          |  900000 |
| kredit          |  650000 |
| kredit          |  800000 |
| kredit          |  500000 |
| kredit          |  800000 |
| kredit          |  100000 |
| kredit          |  250000 |
| kredit          | 2000000 |
+-----------------+---------+
22 rows in set (0.092 sec)
```

3. **Shows the types of transactions and the number of transactions made on November 21, 2009 and sorted by number of transactions**

```
MariaDB [perbankan]> SELECT jenis_transaksi, jumlah FROM transaksi WHERE tanggal = '2009-11-21' ORDER BY jumlah;
+-----------------+--------+
| jenis_transaksi | jumlah |
+-----------------+--------+
| debit           |  40000 |
+-----------------+--------+
1 row in set (0.086 sec)
```

4. **Shows the name of the customer, type of transaction, and number of transactions where the total transaction = IDR 20,000**

```
MariaDB [perbankan]> SELECT DISTINCT nama_nasabah, jenis_transaksi, jumlah FROM nasabah, transaksi WHERE jumlah = 20000;
+------------------+-----------------+--------+
| nama_nasabah     | jenis_transaksi | jumlah |
+------------------+-----------------+--------+
| Sutopo           | kredit          |  20000 |
| Maryati          | kredit          |  20000 |
| Suparman         | kredit          |  20000 |
| Kartika Padmasari| kredit          |  20000 |
| Budi Eko Prayogo | kredit          |  20000 |
| Satria Eka Jaya  | kredit          |  20000 |
| Sari Murti       | kredit          |  20000 |
| Canka Lokananta  | kredit          |  20000 |
| Budi Murtono     | kredit          |  20000 |
| Annisa Nugraheni | kredit          |  20000 |
| Pasha Bhima      | kredit          |  20000 |
| Nadya Ayu        | kredit          |  20000 |
| Aldila           | kredit          |  20000 |
| Fatikha          | kredit          |  20000 |
| Azzahra Sintaa   | kredit          |  20000 |
| Ayu Setia        | kredit          |  20000 |
| Butsaina Nur     | kredit          |  20000 |
| Rias Wahyuni     | kredit          |  20000 |
| Fahrunnisa       | kredit          |  20000 |
| Sutopo           | debit           |  20000 |
| Maryati          | debit           |  20000 |
| Suparman         | debit           |  20000 |
| Kartika Padmasari| debit           |  20000 |
| Budi Eko Prayogo | debit           |  20000 |
| Satria Eka Jaya  | debit           |  20000 |
| Sari Murti       | debit           |  20000 |
| Canka Lokananta  | debit           |  20000 |
| Budi Murtono     | debit           |  20000 |
| Annisa Nugraheni | debit           |  20000 |
| Pasha Bhima      | debit           |  20000 |
| Nadya Ayu        | debit           |  20000 |
| Aldila           | debit           |  20000 |
| Fatikha          | debit           |  20000 |
| Azzahra Sintaa   | debit           |  20000 |
| Ayu Setia        | debit           |  20000 |
| Butsaina Nur     | debit           |  20000 |
| Rias Wahyuni     | debit           |  20000 |
| Fahrunnisa       | debit           |  20000 |
+------------------+-----------------+--------+
```

5. **Show the customer's name and address of the customer where the customer's name begins with the word 'Su'**

```
MariaDB [perbankan]> SELECT nama_nasabah, alamat_nasabah FROM nasabah WHERE nama_nasabah LIKE 'Su%';
+--------------+------------------------+
| nama_nasabah | alamat_nasabah         |
+--------------+------------------------+
| Sutopo       | Jl. Jendral Sudirman 12 |
| Suparman     | Jl Hasanudin 81        |
+--------------+------------------------+
2 rows in set (0.001 sec)
```

6. **Make a question and also the answer that uses 2 conditions in the 'WHERE' clause**

➢ Show no_rekening, branch_codes, and balances of the customer that save their money in Bank Rut Unit Surakarta and have a saldo less than 1.000.000

```
MariaDB [perbankan]> SELECT no_rekening, kode_cabangFK, saldo FROM rekening WHERE kode_cabangFK = 'BRUS' AND saldo < 1000000;
+-------------+---------------+--------+
| no_rekening | kode_cabangFK | saldo  |
+-------------+---------------+--------+
|         101 | BRUS          | 500000 |
|         102 | BRUS          | 350000 |
|         103 | BRUS          | 750000 |
|         120 | BRUS          | 300000 |
+-------------+---------------+--------+
4 rows in set (0.000 sec)
```

7. **Make a question and also the answer that uses 3 conditions in the 'WHERE' clause**

➢ Show no_transaksi and no_rekening that are debit type made in 19 November 2009 with an amount of more than 100.000

```
MariaDB [perbankan]> SELECT no_transaksi, no_rekeningFK FROM transaksi
    -> WHERE jenis_transaksi = 'debit' AND tanggal = '2009-11-19' AND jumlah >= 100000;
+--------------+---------------+
| no_transaksi | no_rekeningFK |
+--------------+---------------+
|           10 |             4 |
|           11 |             2 |
+--------------+---------------+
2 rows in set (0.001 sec)
```

8. **Make a question and also the answer that uses 'ORDER', 'LIMIT', and 'OFFSET' clause**

➢ Show name the name and address of nasabah that sorted by their name with limit 5 and offset 3

```
MariaDB [perbankan]> SELECT nama_nasabah, alamat_nasabah FROM nasabah ORDER BY nama_nasabah LIMIT 5 OFFSET 3;
+-----------------+---------------------+
| nama_nasabah    | alamat_nasabah      |
+-----------------+---------------------+
| Azzahra Sintaa  | Jl. Slamet Riyadi 24 |
| Budi Eko Prayogo | Jl. Kantil 30       |
| Budi Murtono    | Jl. Merak 22        |
| Butsaina Nur    | Jl. Pattimura 3     |
| Canka Lokananta | Jl. Tidar 86        |
+-----------------+---------------------+
5 rows in set (0.000 sec)
```

9. **Make a question using string search conditions and NULL search**

   ➢ Show name and address of nasabah whose first name A and the id is

   not null

```
MariaDB [perbankan]> SELECT nama_nasabah, alamat_nasabah FROM nasabah WHERE nama_nasabah
    -> LIKE 'A%' and id_nasabah IS NOT NULL;
+-----------------+----------------------+
| nama_nasabah    | alamat_nasabah       |
+-----------------+----------------------+
| Annisa Nugraheni | Jl. Hasanudin 57    |
| Aldila          | Jl. Merpati 82       |
| Azzahra Sintaa  | Jl. Slamet Riyadi 24 |
| Ayu Setia       | Jl. MT Haryono 21    |
+-----------------+----------------------+
4 rows in set (0.001 sec)
```

10. **Make a question using string search condition, NULL search, and**

    'ORDER', 'LIMIT', 'OFFSET' clause

    ➢ Show no_transaksi, no_rekening and amount of customer that have transaction

    type kredit and amount is not null, sorted by amount from small to large with

    limit 10 and offset 2

```
MariaDB [perbankan]> SELECT no_transaksi, no_rekeningFK, jumlah FROM transaksi WHERE jenis_transaksi = 'kredit'
    -> AND jumlah IS NOT NULL ORDER BY jumlah ASC LIMIT 10 OFFSET 2;
+--------------+---------------+---------+
| no_transaksi | no_rekeningFK | jumlah  |
+--------------+---------------+---------+
|           33 |             4 |   30000 |
|            5 |             5 |   30000 |
|           20 |             3 |   50000 |
|            9 |             3 |   50000 |
|           27 |             2 |  100000 |
|           22 |             3 |  100000 |
|           45 |             1 |  100000 |
|           15 |             1 |  100000 |
|            7 |             9 |  150000 |
|           13 |             4 |  200000 |
+--------------+---------------+---------+
10 rows in set (0.000 sec)
```

11. **Make 5 question**

    a) Show no_rekening, kode_cabang, and saldo of the customer that save their

    money in Bank Rut Unit Yogyakarta, sorted by amount from small to large

```
MariaDB [perbankan]> SELECT no_rekening, kode_cabangFK, saldo FROM rekening WHERE kode_cabangFK = 'BRUY'
    -> ORDER BY saldo ASC;
+-------------+---------------+--------+
| no_rekening | kode_cabangFK | saldo  |
+-------------+---------------+--------+
|         113 | BRUY          | 255000 |
|         110 | BRUY          | 550000 |
|         123 | BRUY          | 550000 |
+-------------+---------------+--------+
3 rows in set (0.001 sec)
```

b) show data from table cabang_bank sorted by kode_cabang with limit 5

```
MariaDB [perbankan]> SELECT * FROM cabang_bank ORDER BY kode_cabang LIMIT 5;
+-------------+--------------------------+-------------------+
| kode_cabang | nama_cabang              | alamat_cabang     |
+-------------+--------------------------+-------------------+
| BRUA        | Bank Rut Unit Ambon      | Jl. Manggis 8     |
| BRUB        | Bank Rut Unit Boyolali   | Jl. Ahmad Yani 45 |
| BRUC        | Bank Rut Unit Cilacap    | Jl. Melati 76     |
| BRUD        | Bank Rut Unit Demak      | Jl. Sutoyo 43     |
| BRUE        | Bank Rut Unit Enarotali  | Jl. Mawar 32      |
+-------------+--------------------------+-------------------+
5 rows in set (0.001 sec)
```

c) show data from table nasabah that has first name 'S' sorted by their name

```
MariaDB [perbankan]> SELECT * FROM nasabah WHERE nama_nasabah LIKE 'S%'ORDER BY nama_nasabah;
+------------+----------------+-------------------------+
| id_nasabah | nama_nasabah   | alamat_nasabah          |
+------------+----------------+-------------------------+
|          8 | Sari Murti     | Jl. Pangandaran 11      |
|          6 | Satria Eka Jaya| Jl. Slamet Riyadi 45    |
|          3 | Suparman       | Jl Hasanudin 81         |
|          1 | Sutopo         | Jl. Jendral Sudirman 12 |
+------------+----------------+-------------------------+
4 rows in set (0.000 sec)
```

d) show data from table transactions made on 10 Desember 2009 with credit
type sorted by amount from small to large

```
MariaDB [perbankan]> SELECT * FROM transaksi WHERE tanggal = '2009-12-10'
    -> AND jenis_transaksi = 'kredit' ORDER BY jumlah ASC;
+-------------+--------------+--------------+-----------------+---------------------+--------+
| no_transaksi | id_nasabahFK | no_rekeningFK | jenis_transaksi | tanggal             | jumlah |
+-------------+--------------+--------------+-----------------+---------------------+--------+
|          41 |          123 |            2 | kredit          | 2009-12-10 00:00:00 | 500000 |
|          39 |          122 |            3 | kredit          | 2009-12-10 00:00:00 | 650000 |
|          40 |          108 |            4 | kredit          | 2009-12-10 00:00:00 | 800000 |
+-------------+--------------+--------------+-----------------+---------------------+--------+
3 rows in set (0.001 sec)
```

e) show data from transactions table that has debit type sorted by amount from
small to large with limit 5

```
MariaDB [perbankan]> SELECT * FROM transaksi WHERE jenis_transaksi = 'debit' ORDER BY jumlah ASC LIMIT 5;
+-------------+--------------+--------------+-----------------+---------------------+--------+
| no_transaksi | id_nasabahFK | no_rekeningFK | jenis_transaksi | tanggal             | jumlah |
+-------------+--------------+--------------+-----------------+---------------------+--------+
|          23 |          102 |            5 | debit           | 2009-11-30 00:00:00 | 20000  |
|           8 |          102 |            5 | debit           | 2009-11-16 00:00:00 | 20000  |
|          30 |          110 |            9 | debit           | 2009-12-06 00:00:00 | 20000  |
|          25 |          103 |            2 | debit           | 2009-12-02 00:00:00 | 40000  |
|          14 |          105 |            3 | debit           | 2009-11-21 00:00:00 | 40000  |
+-------------+--------------+--------------+-----------------+---------------------+--------+
5 rows in set (0.001 sec)
```