

**LAPORAN**  
**PRAKTEK BASIS DATA**  
**SUB QUERY**



**SEMESTER 3**

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## A. DASAR TEORI

Subquery adalah kueri dalam kueri, bisa disebut juga sebagai permintaan dalam permintaan atau permintaan bersarang. Subquery dapat digunakan di mana pun ekspresi diizinkan. Subquery adalah ekspresi kueri yang terdapat di dalam tanda kurung. Subquery dapat digunakan dengan pernyataan SELECT, INSERT, UPDATE, atau DELETE.

Subquery MySQL disebut queri dalam, sedangkan queri yang berisi subquery disebut queri luar. Ada lebih dari satu cara untuk menjalankan tugas SQL. Banyak subquery yang bisa diganti dengan SQL join. Alasan menggunakan SQL join adalah biasanya lebih cepat.

Ada beberapa aturan yang subqueries harus mengikuti:

-  Subqueries harus tertutup dalam tanda kurung.
-  Sebuah subquery hanya dapat memiliki satu kolom pada klausa SELECT, kecuali beberapa kolom yang di query utama untuk subquery untuk membandingkan kolom yang dipilih.
-  ORDER BY tidak dapat digunakan dalam subquery, meskipun permintaan utama dapat menggunakan ORDER BY. GROUP BY dapat digunakan untuk melakukan fungsi yang sama seperti ORDER BY dalam subquery.
-  Subqueries yang kembali lebih dari satu baris hanya dapat digunakan dengan beberapa value operator, seperti operator IN.
-  Daftar SELECT tidak bisa menyertakan referensi ke nilai-nilai yang mengevaluasi ke BLOB, ARRAY, CLOB, atau NCLOB.
-  Sebuah subquery tidak dapat segera tertutup dalam fungsi set.
-  Operator BETWEEN tidak dapat digunakan dengan subquery; Namun, BETWEEN dapat digunakan dalam subquery.

Sintaks formal subquery :

SELECT field1, field2,.....

→ query1 atau query luar

FROM namatabel1

WHERE field OPERATOR

(SELECT namafield

→ query2 atau query dalam

FROM namatabel

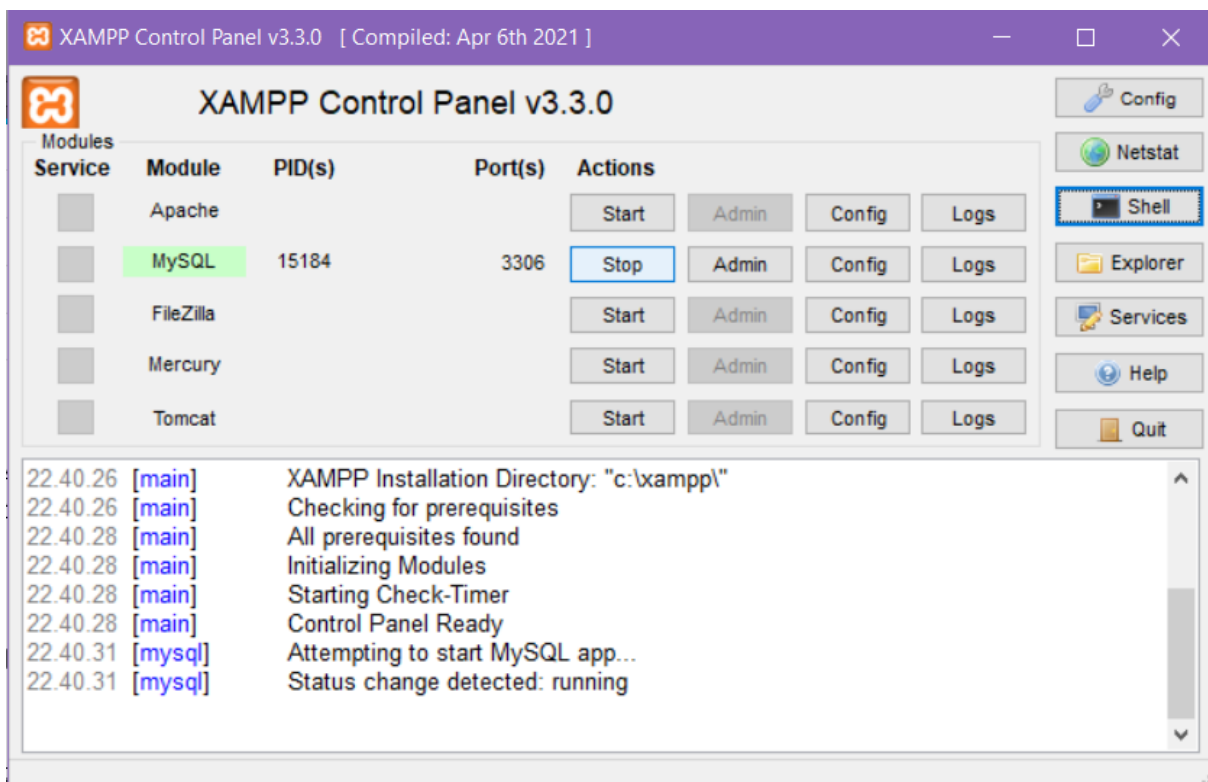
WHERE kondisi);

## B. ALAT DAN BAHAN

1. PC / Laptop
2. Software XAMPP Control Panel
3. Software CMD

## C. LANGKAH KERJA

- ✚ Jalankan XAMPP Control panel pada MySQL.



✚ Tampilkan data transaksi yang memiliki jumlah diatas jumlah rata-rata

♠ Cari terlebih dahulu rata-rata jumlah

```
MariaDB [dbpenjualan]> SELECT AVG(jml)
-> FROM ttrans;
+-----+
| AVG(jml) |
+-----+
| 13.5500 |
+-----+
1 row in set (0.017 sec)
```

♠ Data transaksi dengan jumlah diatas rata-rata

```
MariaDB [dbpenjualan]> SELECT * FROM ttrans
-> WHERE jml > 13.55;
+-----+-----+-----+-----+-----+-----+
| nonota | tgl          | kdlgn | kdbrg | jml | hrg    |
+-----+-----+-----+-----+-----+-----+
| T001   | 2008-09-01   | P001  | B003  | 20  | 25000  |
| F002   | 2008-09-01   | P002  | B002  | 15  | 175000 |
| K001   | 2008-09-02   | P002  | B001  | 20  | 750000 |
| K001   | 2008-09-02   | P002  | B002  | 20  | 175000 |
| K002   | 2008-09-03   | P003  | B002  | 30  | 225000 |
| K002   | 2008-09-03   | P003  | B005  | 30  | 50000  |
| F010   | 2005-03-01   | P002  | B004  | 15  | 220000 |
| K005   | 2006-05-31   | P001  | B001  | 40  | 750000 |
+-----+-----+-----+-----+-----+-----+
8 rows in set (0.002 sec)
```

✚ Tampilkan tgl, nonota, kdbrg, jml, dan hrg untuk barang yang satuannya sama dengan barang dengan kode B002

♠ Cari dulu nilai satuan B002

```
MariaDB [dbpenjualan]> SELECT satuan FROM tbrg
-> WHERE kdbrg = 'B002';
+-----+
| satuan |
+-----+
| Unit   |
+-----+
1 row in set (0.011 sec)
```

- ♠ Tampilkan tgl, nonota, kdbrg, jml, dan hrg untuk barang yang satuannya unit

```
MariaDB [dbpenjualan]> SELECT tgl, nonota, kdbrg, jml, hrg
-> FROM ttrans JOIN tbrg USING(kdbrg)
-> WHERE satuan = 'Unit';
```

| tgl        | nonota | kdbrg | jml | hrg    |
|------------|--------|-------|-----|--------|
| 2008-09-01 | T001   | B001  | 5   | 750000 |
| 2008-09-02 | K001   | B001  | 20  | 750000 |
| 2008-10-01 | T004   | B001  | 10  | 750000 |
| 2008-10-10 | T011   | B001  | 5   | 175000 |
| 2007-01-10 | T004   | B001  | 5   | 750000 |
| 2006-02-06 | K003   | B001  | 12  | 750000 |
| 2005-03-01 | F010   | B001  | 10  | 750000 |
| 2006-05-31 | K005   | B001  | 40  | 750000 |
| 2008-09-01 | T001   | B002  | 5   | 175000 |
| 2008-09-01 | T001   | B002  | 5   | 175000 |
| 2008-09-01 | F002   | B002  | 15  | 175000 |
| 2008-09-02 | K001   | B002  | 20  | 175000 |
| 2008-09-03 | K002   | B002  | 30  | 225000 |
| 2007-01-10 | T004   | B002  | 1   | 175000 |

14 rows in set (0.006 sec)

## SUBQUERY Menggunakan Operator Relasi

- ✚ Tampilkan data transaksi yang memiliki jumlah diatas jumlah rata-rata

```
MariaDB [dbpenjualan]> SELECT tgl, nonota, kdbrg, jml, hrg
-> FROM ttrans JOIN tbrg USING(kdbrg)
-> WHERE satuan = (SELECT satuan FROM tbrg WHERE kdbrg = 'B002');
```

| tgl        | nonota | kdbrg | jml | hrg    |
|------------|--------|-------|-----|--------|
| 2008-09-01 | T001   | B001  | 5   | 750000 |
| 2008-09-02 | K001   | B001  | 20  | 750000 |
| 2008-10-01 | T004   | B001  | 10  | 750000 |
| 2008-10-10 | T011   | B001  | 5   | 175000 |
| 2007-01-10 | T004   | B001  | 5   | 750000 |
| 2006-02-06 | K003   | B001  | 12  | 750000 |
| 2005-03-01 | F010   | B001  | 10  | 750000 |
| 2006-05-31 | K005   | B001  | 40  | 750000 |
| 2008-09-01 | T001   | B002  | 5   | 175000 |
| 2008-09-01 | T001   | B002  | 5   | 175000 |
| 2008-09-01 | F002   | B002  | 15  | 175000 |
| 2008-09-02 | K001   | B002  | 20  | 175000 |
| 2008-09-03 | K002   | B002  | 30  | 225000 |
| 2007-01-10 | T004   | B002  | 1   | 175000 |

14 rows in set (0.006 sec)

- ✚ Tampilkan tgl, nonota, kdbrg, jml, dan hrg untuk barang yang satuannya sama dengan barang dengan kode B002

```
MariaDB [dbpenjualan]> SELECT * FROM ttrans
-> WHERE jml > (SELECT AVG(jml) FROM ttrans);
```

| nonota | tgl        | kdlgn | kdbrg | jml | hrp    |
|--------|------------|-------|-------|-----|--------|
| T001   | 2008-09-01 | P001  | B003  | 20  | 25000  |
| F002   | 2008-09-01 | P002  | B002  | 15  | 175000 |
| K001   | 2008-09-02 | P002  | B001  | 20  | 750000 |
| K001   | 2008-09-02 | P002  | B002  | 20  | 175000 |
| K002   | 2008-09-03 | P003  | B002  | 30  | 225000 |
| K002   | 2008-09-03 | P003  | B005  | 30  | 50000  |
| F010   | 2005-03-01 | P002  | B004  | 15  | 220000 |
| K005   | 2006-05-31 | P001  | B001  | 40  | 750000 |

8 rows in set (0.003 sec)

- ✚ Tampilkan data transaksi yang memiliki harga terendah

```
MariaDB [dbpenjualan]> SELECT * FROM ttrans
-> WHERE hrg = (SELECT MIN(hrg) FROM ttrans);
```

| nonota | tgl        | kdlgn | kdbrg | jml | hrp   |
|--------|------------|-------|-------|-----|-------|
| T001   | 2008-09-01 | P001  | B003  | 20  | 25000 |
| T004   | 2007-01-10 | P003  | B003  | 3   | 25000 |

2 rows in set (0.009 sec)

- ✚ Tampilkan data pelanggan selain kodenya P005 dan berada dikota yang berbeda dengan pelanggan Gamatechno

```
MariaDB [dbpenjualan]> SELECT * FROM tpelanggan
-> WHERE kdlgn <> 'P005' AND kota <> (SELECT kota FROM tpelanggan WHERE nmlgn = 'Gamatechno');
```

| kdlgn | nmlgn        | almlgn      | kota           | kdpos | telp         |
|-------|--------------|-------------|----------------|-------|--------------|
| P001  | Galaxy Media | Birugo      | Bukittinggi    | 26111 | 081291313052 |
| P003  | Citra Mozaic | Jl. Veteran | Padang Panjang | 27401 | 081291313052 |
| P006  | Tk. Intan    | Jl.S.Hatta  | Bukittinggi    | 26111 | 081291313052 |
| P010  | Rudi         | NULL        | Solok          | NULL  | NULL         |

4 rows in set (0.009 sec)

- 🚦 Tampilkan data mahasiswa (nama,kode,nilai) yang mendapatkan nilai yang sama dengan Darmawan pada saat mengambil matakuliah dengan kode TI111

```
MariaDB [dbperkuliahahan]> SELECT kode, nama, nilai FROM t_mahasiswa JOIN t_ambil USING(no_bp)
-> WHERE nilai = (SELECT nilai FROM t_mahasiswa JOIN t_ambil
-> USING(no_bp) WHERE nama LIKE '%darmawan%' AND kode IN ('ti111'));
```

| kode  | nama           | nilai |
|-------|----------------|-------|
| ti111 | darmawan p     | A     |
| ti321 | albinanto      | A     |
| ti123 | rizky yulianto | A     |
| ti221 | nova kurniawan | A     |
| ti331 | andik taufik   | A     |
| ti111 | anggun hapsari | A     |

```
6 rows in set (0.024 sec)
```

```
MariaDB [dbperkuliahahan]> SELECT nama, kode, nilai FROM t_mahasiswa JOIN t_ambil USING(no_bp)
-> WHERE kode = 'TI111' AND nilai = (SELECT nilai FROM t_mahasiswa JOIN t_ambil USING(no_bp)
-> WHERE nama LIKE 'darmawan%' AND kode = 'TI111');
```

| nama           | kode  | nilai |
|----------------|-------|-------|
| darmawan p     | ti111 | A     |
| anggun hapsari | ti111 | A     |

```
2 rows in set (0.001 sec)
```

- 🚦 Tampilkan nama dosen yang usianya lebih muda dari rila mandala

```
MariaDB [dbperkuliahahan]> SELECT * FROM t_dosen
-> WHERE timestampdiff(year, tgl_lahir, now()) < (SELECT timestampdiff(year, tgl_lahir, now())
-> FROM t_dosen WHERE nama LIKE '%rila mandala%');
```

| nip       | nama          | tgl_lahir  | alamat                   |
|-----------|---------------|------------|--------------------------|
| 132012069 | rinaldi munir | 1966-04-12 | jl.soekarno hatta no 131 |
| 132041073 | reza satria   | 1970-11-21 | jl.buah batu no 42       |

```
2 rows in set (0.001 sec)
```

## SUBQUERY menggunakan Operator IN dan NOT IN

🚦 Tampilkan data mahasiswa yang mendapatkan nilai yang sama dengan nilai darmawan

```
MariaDB [dbperkuliahahan]> SELECT nama, kode, nilai FROM t_mahasiswa JOIN t_ambil USING(no_bp)
-> WHERE nilai IN (SELECT nilai FROM t_mahasiswa JOIN t_ambil USING(no_bp)
-> WHERE nama LIKE 'darmawan%');
+-----+-----+-----+
| nama          | kode  | nilai |
+-----+-----+-----+
| darmawan p    | ti111 | A      |
| darmawan p    | ti211 | B      |
| darmawan p    | ti321 | C      |
| darmawan p    | ti331 | C      |
| albinanto     | ti111 | B      |
| albinanto     | ti211 | C      |
| albinanto     | ti321 | A      |
| rizky yulianto | ti111 | C      |
| rizky yulianto | ti123 | A      |
| rizky yulianto | ti211 | B      |
| rizky yulianto | ti331 | B      |
| nova kurniawan | ti123 | B      |
| nova kurniawan | ti221 | A      |
| nova kurniawan | ti211 | B      |
| gama melisa   | ti111 | B      |
| gama melisa   | ti123 | B      |
| gama melisa   | ti211 | C      |
| andik taufik  | ti211 | C      |
| andik taufik  | ti321 | B      |
| andik taufik  | ti331 | A      |
| anggun hapsari | ti111 | A      |
| anggun hapsari | ti221 | B      |
| anggun hapsari | ti211 | B      |
| anggun hapsari | ti321 | C      |
+-----+-----+-----+
24 rows in set (0.001 sec)
```

🚦 Tampilkan data mahasiswa yang mendapatkan nilai yang tidak sama dengan nilai darmawan

```
MariaDB [dbperkuliahahan]> SELECT nama, kode, nilai FROM t_mahasiswa JOIN t_ambil USING(no_bp)
-> WHERE nilai NOT IN (SELECT nilai FROM t_mahasiswa JOIN t_ambil USING(no_bp)
-> WHERE nama LIKE 'darmawan%');
+-----+-----+-----+
| nama          | kode  | nilai |
+-----+-----+-----+
| albinanto     | ti221 | D      |
| nova kurniawan | ti111 | E      |
| gama melisa   | ti221 | E      |
| andik taufik  | ti111 | D      |
+-----+-----+-----+
4 rows in set (0.004 sec)
```



- Tampilkan nama lengkap employee yang berkerja satu kantor dengan employee bernama Peter Marsh

```
MariaDB [classicmodels]> SELECT officeCode, CONCAT(firstName,' ',lastName) nama_karyawan
-> FROM employees
-> WHERE officeCode = (SELECT officeCode FROM employees
-> WHERE CONCAT(firstName,' ',lastName) ='Peter Marsh');
+-----+-----+
| officeCode | nama_karyawan |
+-----+-----+
| 6          | William Patterson |
| 6          | Andy Fixter      |
| 6          | Peter Marsh      |
| 6          | Tom King         |
+-----+-----+
4 rows in set (0.023 sec)
```

- Tampilkan nama produk, quantityOdered, priceEach, total (quantityoOrdered \* priceeach) yang memiliki quantityordered antara 60-70 dan total diatas rata-rata total keseluruhan. Tampilkan terurut dari total tertinggi.

```
MariaDB [classicmodels]> SELECT productName, quantityOrdered, PriceEach, quantityOrdered * priceEach AS total
-> FROM products JOIN orderDetails USING(productCode)
-> WHERE quantityOrdered BETWEEN 60 AND 70
-> AND quantityOrdered * priceEach > (SELECT AVG(quantityOrdered * priceEach) FROM orderDetails)
-> ORDER BY total DESC;
+-----+-----+-----+-----+
| productName | quantityOrdered | PriceEach | total |
+-----+-----+-----+-----+
| 2003 Harley-Davidson Eagle Drag Bike | 66 | 174.29 | 11503.14 |
| 1968 Ford Mustang | 64 | 163.44 | 10460.16 |
| 1992 Ferrari 360 Spider red | 60 | 157.49 | 9449.40 |
| 1972 Alfa Romeo GTA | 64 | 134.64 | 8616.96 |
| 2002 Suzuki XRE0 | 66 | 122.00 | 8052.00 |
| 1956 Porsche 356A Coupe | 70 | 112.34 | 7863.80 |
| 1962 Volkswagen Microbus | 70 | 109.90 | 7693.00 |
| 1948 Porsche Type 356 Roadster | 65 | 117.26 | 7621.90 |
| 1993 Mazda RX-7 | 61 | 124.56 | 7598.16 |
| 1937 Lincoln Berline | 65 | 99.66 | 6477.90 |
| 1969 Harley Davidson Ultimate Chopper | 66 | 79.43 | 5242.38 |
| 1932 Alfa Romeo 8C2300 Spider Sport | 66 | 73.62 | 4858.92 |
| 1948 Porsche 356-A Roadster | 61 | 72.38 | 4415.18 |
| 1912 Ford Model T Delivery Wagon | 60 | 72.58 | 4354.80 |
| 1957 Ford Thunderbird | 66 | 64.14 | 4233.24 |
| 1928 Ford Phaeton Deluxe | 62 | 62.60 | 3881.20 |
| Corsair F4U ( Bird Cage) | 64 | 59.37 | 3799.68 |
| 1970 Chevy Chevelle SS 454 | 60 | 60.26 | 3615.60 |
+-----+-----+-----+-----+
18 rows in set (0.008 sec)
```

- ✚ Tampilkan data order berupa ordernumber, orderdate, requireddate dan status yang terjadi selama tahun 2005 yang status ordernya tidak sama dengan status yang pernah terjadi pada bulan May 2005

```
MariaDB [classicmodels]> SELECT orderNumber, orderDate, requiredDate, status
-> FROM orders
-> WHERE YEAR(orderDate) = 2005 AND status NOT IN (SELECT status FROM orders
-> WHERE orderDate BETWEEN '20050501' AND '20050531');
```

| orderNumber | orderDate  | requiredDate | status   |
|-------------|------------|--------------|----------|
| 10367       | 2005-01-12 | 2005-01-21   | Resolved |
| 10386       | 2005-03-01 | 2005-03-09   | Resolved |

2 rows in set (0.009 sec)

## D. TUGAS DAN PEMBAHASAN

### ✚ SOAL AGGREGATE

1. tampilkan berapa omset setiap tahun. Omset adalah jumlah total penjualan.

```
MariaDB [dbpenjualan]> SELECT SUM(jml) AS 'Barang Terjual', SUM(jml*hrg) AS 'Omset',
-> YEAR(tgl) AS 'Tahun' FROM ttrans
-> GROUP BY year(tgl);
```

| Barang Terjual | Omset    | Tahun |
|----------------|----------|-------|
| 25             | 10800000 | 2005  |
| 52             | 39000000 | 2006  |
| 9              | 4000000  | 2007  |
| 185            | 46450000 | 2008  |

4 rows in set (0.004 sec)

2. Jika barang yang dibeli jumlah totalnya lebih dari 50 maka akan mendapatkan diskon penjualan sebesar 10% dari total harga. Jika dibawahnya tidak mendapatkan diskon. Tampilkan tgl, jumlah total barang dan besarnya diskon, kelompokkan berdasarkan tanggal transaksi

```
MariaDB [dbpenjualan]> SELECT tgl,SUM(jml) AS 'Total Barang',  
-> IF(SUM(jml)>50, SUM(jml*hrng)*0.1,0) AS 'Diskon',  
-> SUM(jml*hrng)-IF(SUM(jml)>50 , SUM(jml*hrng)*0.1,0) AS 'Total Bayar'  
-> FROM ttrans  
-> GROUP BY tgl;
```

| tgl        | Total Barang | Diskon   | Total Bayar |
|------------|--------------|----------|-------------|
| 2005-03-01 | 25           | 0.0      | 10800000.0  |
| 2006-02-06 | 12           | 0.0      | 9000000.0   |
| 2006-05-31 | 40           | 0.0      | 30000000.0  |
| 2007-01-10 | 9            | 0.0      | 4000000.0   |
| 2008-09-01 | 60           | 912500.0 | 8212500.0   |
| 2008-09-02 | 50           | 0.0      | 20700000.0  |
| 2008-09-03 | 60           | 825000.0 | 7425000.0   |
| 2008-10-01 | 10           | 0.0      | 7500000.0   |
| 2008-10-10 | 5            | 0.0      | 875000.0    |

9 rows in set (0.001 sec)

3. Pelanggan yang membeli barang dengan jumlah total lebih dari 30 pcs akan mendapatkan hadiah panci, jika dibawah itu mendapatkan hadiah sandal jepit. Tampilkan kdlgn, jumlah barang yang dibeli dan hadiah apa yang didapatkan pelanggan tersebut.

```
MariaDB [dbpenjualan]> SELECT kdlgn, SUM(jml) AS jml,  
-> CASE  
-> WHEN SUM(jml) > 30 THEN 'Panci'  
-> ELSE 'Sandal Jepit'  
-> END AS 'Hadiah'  
-> FROM ttrans  
-> GROUP BY kdlgn;
```

| kdlgn | jml | Hadiah       |
|-------|-----|--------------|
| P001  | 75  | Panci        |
| P002  | 95  | Panci        |
| P003  | 89  | Panci        |
| P004  | 12  | Sandal Jepit |

4 rows in set (0.009 sec)

## DBPERKULIAHAN

4. Jika :

Nilai A = 85

B = 75

C = 65

D = 55

E = 45

Maka hitunglah rata rata nilai yang didapatkan oleh masing-masing mahasiswa

```
MariaDB [dbperkuliahan]> SELECT no_bp, nama,  
-> AVG(CASE nilai  
-> WHEN 'A' THEN '85'  
-> WHEN 'B' THEN '75'  
-> WHEN 'C' THEN '65'  
-> WHEN 'D' THEN '55'  
-> ELSE '45'  
-> END) AS 'Rata-Rata'  
-> FROM t_ambil JOIN t_mahasiswa USING(no_bp)  
-> GROUP BY no_bp;
```

| no_bp    | nama           | Rata-Rata |
|----------|----------------|-----------|
| 13501001 | darmawan p     | 72.5      |
| 13501002 | albinanto      | 70        |
| 13501003 | rizky yulianto | 75        |
| 13501004 | nova kurniawan | 70        |
| 13501005 | gama melisa    | 65        |
| 13501006 | andik taufik   | 70        |
| 13501007 | anggun hapsari | 75        |

7 rows in set (0.004 sec)

5. Tampilkan IPK yang diperoleh masing2 mahasiswa.. Urutkan dari IPK tertinggi.

```
MariaDB [dbperkuliahahan]> SELECT no_bp, nama,  
-> ROUND(SUM(CASE nilai  
-> WHEN 'A' THEN '4'  
-> WHEN 'B' THEN '3'  
-> WHEN 'C' THEN '2'  
-> WHEN 'D' THEN '1'  
-> ELSE '0'  
-> END * sks) /SUM(sks),2) IPK  
-> FROM t_ambil JOIN t_kuliah USING(kode) JOIN t_mahasiswa USING(no_bp)  
-> GROUP BY no_bp  
-> ORDER BY IPK DESC;  
+-----+-----+-----+  
| no_bp | nama | IPK |  
+-----+-----+-----+  
| 13501007 | anggun hapsari | 3.12 |  
| 13501003 | rizky yulianto | 2.89 |  
| 13501001 | darmawan p | 2.78 |  
| 13501006 | andik taufik | 2.56 |  
| 13501004 | nova kurniawan | 2.50 |  
| 13501002 | albinanto | 2.25 |  
| 13501005 | gama melisa | 1.88 |  
+-----+-----+-----+  
7 rows in set (0.008 sec)
```

6. Jika nonota

berawalan

T → Tunai

F → Bayar Besok

K → Kredit,

tampilkan berapa orang pelanggan yang membayar tunai, bayar besok dan kredit ?

```
MariaDB [dbpenjualan]> SELECT CASE  
-> WHEN nonota LIKE 'T%' THEN 'Tunai'  
-> WHEN nonota LIKE 'F%' THEN 'Bayar Besok'  
-> ELSE 'Kredit'  
-> END 'nota',  
-> COUNT(CASE  
-> WHEN nonota LIKE 'T%' THEN 'Tunai'  
-> WHEN nonota LIKE 'F%' THEN 'Bayar Besok'  
-> ELSE 'Kredit'  
-> END) 'Banyak Nota'  
-> FROM ttrans  
-> GROUP BY nota;  
+-----+-----+  
| nota | Banyak Nota |  
+-----+-----+  
| Bayar Besok | 5 |  
| Kredit | 6 |  
| Tunai | 9 |  
+-----+-----+  
3 rows in set (0.001 sec)
```

## SUB QUERY

1. Siapakah nama customer yang melakukan pembayaran pada tahun 2004 dan nilainya diatas pembayaran rata-rata? Tampilkan nama customer, paymentdate dan amount

```
MariaDB [classicmodels]> SELECT customerName, paymentDate, amount  
-> FROM customers JOIN payments USING(customerNumber)  
-> WHERE YEAR(paymentDate)=2004 AND AMOUNT > (SELECT AVG(amount) FROM payments);
```

| customerName                   | paymentDate | amount    |
|--------------------------------|-------------|-----------|
| Signal Gift Stores             | 2004-08-20  | 33347.88  |
| Australian Collectors, Co.     | 2004-12-15  | 82261.22  |
| Australian Collectors, Co.     | 2004-03-10  | 44894.74  |
| La Rochelle Gifts              | 2004-08-08  | 47924.19  |
| Baane Mini Imports             | 2004-11-28  | 34638.14  |
| Mini Gifts Distributors Ltd.   | 2004-08-28  | 85410.87  |
| Mini Gifts Distributors Ltd.   | 2004-12-27  | 47142.70  |
| Mini Gifts Distributors Ltd.   | 2004-11-02  | 55639.66  |
| Mini Gifts Distributors Ltd.   | 2004-03-26  | 43369.30  |
| Blauer See Auto, Co.           | 2004-03-24  | 33820.62  |
| Land of Toys Inc.              | 2004-12-02  | 50025.35  |
| Land of Toys Inc.              | 2004-09-11  | 35321.97  |
| Euro+ Shopping Channel         | 2004-11-01  | 36140.38  |
| Euro+ Shopping Channel         | 2004-01-30  | 59830.55  |
| Euro+ Shopping Channel         | 2004-12-31  | 116208.40 |
| Euro+ Shopping Channel         | 2004-07-09  | 35420.74  |
| Volvo Model Replicas, Co       | 2004-12-12  | 36005.71  |
| Saveley & Henriot, Co.         | 2004-03-18  | 40978.53  |
| Saveley & Henriot, Co.         | 2004-01-16  | 49614.72  |
| Muscle Machine Inc             | 2004-12-14  | 39964.63  |
| Diecast Classics Inc.          | 2004-11-19  | 35152.12  |
| Diecast Classics Inc.          | 2004-09-07  | 63357.13  |
| Handji Gifts& Co               | 2004-09-16  | 38785.48  |
| Handji Gifts& Co               | 2004-07-07  | 44160.92  |
| La Corne D'abondance, Co.      | 2004-12-04  | 51209.58  |
| Gift Depot Inc.                | 2004-07-10  | 42044.77  |
| Osaka Souvenirs Co.            | 2004-01-19  | 47177.59  |
| Vitachrome Inc.                | 2004-11-16  | 44400.50  |
| Toys of Finland, Co.           | 2004-10-21  | 34341.08  |
| AV Stores, Co.                 | 2004-11-03  | 52825.29  |
| AV Stores, Co.                 | 2004-12-08  | 47159.11  |
| Clover Collections, Co.        | 2004-03-01  | 32538.74  |
| UK Collectables, Ltd.          | 2004-06-15  | 37258.94  |
| Canadian Gift Exchange Network | 2004-11-08  | 33594.58  |
| Online Mini Collectables       | 2004-08-13  | 51152.86  |
| Mini Caravy                    | 2004-05-04  | 36069.26  |

|                                   |            |          |
|-----------------------------------|------------|----------|
| Heintze Collectables              | 2004-11-02 | 53745.34 |
| Collectable Mini Designs Co.      | 2004-03-15 | 80375.24 |
| giftsbymail.co.uk                 | 2004-11-16 | 46788.14 |
| Amica Models & Co.                | 2004-09-19 | 33924.24 |
| Amica Models & Co.                | 2004-09-04 | 48298.99 |
| Auto Associates & Cie.            | 2004-10-22 | 53116.99 |
| Toms Spezialitäten, Ltd           | 2004-11-06 | 61234.67 |
| Royal Canadian Collectables, Ltd. | 2004-08-30 | 37527.58 |
| Rovelli Gifts                     | 2004-12-05 | 37654.09 |
| Souvenirs And Things Co.          | 2004-08-02 | 35806.73 |
| Marta's Replicas Co.              | 2004-10-28 | 47411.33 |
| Marta's Replicas Co.              | 2004-09-05 | 43134.04 |
| Vida Sport, Ltd                   | 2004-03-13 | 47375.92 |
| Vida Sport, Ltd                   | 2004-09-18 | 61402.00 |
| Petit Auto                        | 2004-08-09 | 45352.47 |
| Mini Classics                     | 2004-11-06 | 42339.76 |
| Down Under Souvenirs, Inc         | 2004-06-24 | 37281.36 |
| Down Under Souvenirs, Inc         | 2004-12-24 | 39440.59 |
| GiftsForHim.com                   | 2004-05-15 | 36442.34 |
| Online Diecast Creations Co.      | 2004-11-17 | 50799.69 |
| Salzburg Collectables             | 2004-11-27 | 42813.83 |
| L'ordine Souvenirs                | 2004-07-18 | 51619.02 |
| Tokyo Collectables, Ltd           | 2004-11-29 | 48927.64 |
| Auto Canal+ Petit                 | 2004-01-28 | 49165.16 |
| Extreme Desk Decorations, Ltd     | 2004-07-25 | 35034.57 |
| Scandinavian Gift Ideas           | 2004-09-30 | 48809.90 |
| The Sharp Gifts Warehouse         | 2004-06-21 | 59551.38 |
| Corrida Auto Replicas, Ltd        | 2004-11-15 | 33145.56 |
| FunGiftIdeas.com                  | 2004-11-27 | 48355.87 |
| West Coast Collectables Co.       | 2004-02-13 | 36070.47 |
| Motor Mint Distributors Inc.      | 2004-11-23 | 45994.07 |
| Kelly's Gift Shop                 | 2004-12-31 | 52166.00 |

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68 rows in set (0.001 sec)

2. Tampilkan tanggal order, nama customers, nama produk yang dibeli, country dan status untuk produk yang namanya ford dan customers yang tinggal di negara yang sama dengan customernumber 282 dan 496 dan statusnya selain 'shipped'. Urutkan berdasarkan tanggal order terkini.

```

MariaDB [classicmodels]> SELECT orderDate, customerName, productName, country, status
-> FROM customers JOIN orders USING(customerNumber) JOIN orderDetails
-> USING(orderNumber) JOIN products USING(productCode)
-> WHERE productName LIKE '%ford%' AND country IN (SELECT country FROM customers JOIN orders USING(customerNumber)
-> WHERE customerNumber IN('282','496') AND status!='shipped')
-> ORDER BY orderDate DESC;

```

| orderDate  | customerName                  | productName                      | country     | status     |
|------------|-------------------------------|----------------------------------|-------------|------------|
| 2005-05-29 | Souvenirs And Things Co.      | 1932 Model A Ford J-Coupe        | Australia   | In Process |
| 2005-05-29 | Souvenirs And Things Co.      | 1911 Ford Town Car               | Australia   | In Process |
| 2005-05-29 | Souvenirs And Things Co.      | 1957 Ford Thunderbird            | Australia   | In Process |
| 2005-05-16 | Extreme Desk Decorations, Ltd | 1976 Ford Gran Torino            | New Zealand | Shipped    |
| 2005-04-29 | GiftsForHim.com               | 1913 Ford Model T Speedster      | New Zealand | Shipped    |
| 2005-04-29 | GiftsForHim.com               | 1934 Ford V8 Coupe               | New Zealand | Shipped    |
| 2005-04-08 | Down Under Souvenirs, Inc     | 1976 Ford Gran Torino            | New Zealand | Shipped    |
| 2005-04-08 | Down Under Souvenirs, Inc     | 1968 Ford Mustang                | New Zealand | Shipped    |
| 2005-03-11 | Down Under Souvenirs, Inc     | 1940s Ford truck                 | New Zealand | Shipped    |
| 2005-03-09 | Anna's Decorations, Ltd       | 1926 Ford Fire Engine            | Australia   | Shipped    |
| 2005-03-09 | Anna's Decorations, Ltd       | 1940 Ford Pickup Truck           | Australia   | Shipped    |
| 2005-03-09 | Anna's Decorations, Ltd       | 1913 Ford Model T Speedster      | Australia   | Shipped    |
| 2005-01-20 | Anna's Decorations, Ltd       | 1940s Ford truck                 | Australia   | Shipped    |
| 2005-01-20 | Anna's Decorations, Ltd       | 1926 Ford Fire Engine            | Australia   | Shipped    |
| 2005-01-20 | Anna's Decorations, Ltd       | 1940 Ford Pickup Truck           | Australia   | Shipped    |
| 2004-12-17 | Souvenirs And Things Co.      | 1928 Ford Phaeton Deluxe         | Australia   | Shipped    |
| 2004-12-16 | Kelly's Gift Shop             | 1940 Ford Delivery Sedan         | New Zealand | Shipped    |
| 2004-12-16 | Kelly's Gift Shop             | 1912 Ford Model T Delivery Wagon | New Zealand | Shipped    |
| 2004-12-16 | Kelly's Gift Shop             | 1903 Ford Model A                | New Zealand | Shipped    |
| 2004-12-04 | Down Under Souvenirs, Inc     | 1968 Ford Mustang                | New Zealand | Shipped    |
| 2004-11-29 | Australian Collectors, Co.    | 1913 Ford Model T Speedster      | Australia   | Shipped    |
| 2004-11-29 | Australian Collectors, Co.    | 1926 Ford Fire Engine            | Australia   | Shipped    |
| 2004-11-29 | Australian Collectors, Co.    | 1940 Ford Pickup Truck           | Australia   | Shipped    |
| 2004-11-29 | Australian Collectors, Co.    | 1940s Ford truck                 | Australia   | Shipped    |
| 2004-11-29 | Australian Collectors, Co.    | 1934 Ford V8 Coupe               | Australia   | Shipped    |
| 2004-11-24 | Australian Collectors, Co.    | 1976 Ford Gran Torino            | Australia   | Shipped    |
| 2004-07-19 | Souvenirs And Things Co.      | 1940 Ford Pickup Truck           | Australia   | Shipped    |

|            |                               |                             |             |           |
|------------|-------------------------------|-----------------------------|-------------|-----------|
| 2004-12-04 | Down Under Souvenirs, Inc     | 1968 Ford Mustang           | New Zealand | Shipped   |
| 2004-11-29 | Australian Collectors, Co.    | 1913 Ford Model T Speedster | Australia   | Shipped   |
| 2004-11-29 | Australian Collectors, Co.    | 1926 Ford Fire Engine       | Australia   | Shipped   |
| 2004-11-29 | Australian Collectors, Co.    | 1940 Ford Pickup Truck      | Australia   | Shipped   |
| 2004-11-29 | Australian Collectors, Co.    | 1940s Ford truck            | Australia   | Shipped   |
| 2004-11-29 | Australian Collectors, Co.    | 1934 Ford V8 Coupe          | Australia   | Shipped   |
| 2004-11-24 | Australian Collectors, Co.    | 1976 Ford Gran Torino       | Australia   | Shipped   |
| 2004-07-19 | Souvenirs And Things Co.      | 1940 Ford Pickup Truck      | Australia   | Shipped   |
| 2004-07-19 | Souvenirs And Things Co.      | 1940s Ford truck            | Australia   | Shipped   |
| 2004-07-19 | Souvenirs And Things Co.      | 1913 Ford Model T Speedster | Australia   | Shipped   |
| 2004-07-12 | Extreme Desk Decorations, Ltd | 1932 Model A Ford J-Coupe   | New Zealand | Shipped   |
| 2004-07-12 | Extreme Desk Decorations, Ltd | 1911 Ford Town Car          | New Zealand | Shipped   |
| 2004-07-02 | Australian Collectables, Ltd  | 1976 Ford Gran Torino       | Australia   | Shipped   |
| 2004-06-16 | GiftsForHim.com               | 1903 Ford Model A           | New Zealand | Cancelled |
| 2004-06-16 | GiftsForHim.com               | 1969 Ford Falcon            | New Zealand | Cancelled |
| 2004-06-03 | Down Under Souvenirs, Inc     | 1957 Ford Thunderbird       | New Zealand | Shipped   |
| 2004-06-03 | Down Under Souvenirs, Inc     | 1932 Model A Ford J-Coupe   | New Zealand | Shipped   |
| 2004-06-03 | Down Under Souvenirs, Inc     | 1911 Ford Town Car          | New Zealand | Shipped   |
| 2004-03-30 | Extreme Desk Decorations, Ltd | 1940 Ford Delivery Sedan    | New Zealand | Shipped   |
| 2004-02-20 | Australian Collectors, Co.    | 1928 Ford Phaeton Deluxe    | Australia   | Shipped   |
| 2003-11-21 | Australian Collectables, Ltd  | 1957 Ford Thunderbird       | Australia   | Shipped   |
| 2003-11-21 | Australian Collectables, Ltd  | 1934 Ford V8 Coupe          | Australia   | Shipped   |
| 2003-11-21 | Australian Collectables, Ltd  | 1913 Ford Model T Speedster | Australia   | Shipped   |
| 2003-11-21 | Australian Collectables, Ltd  | 1932 Model A Ford J-Coupe   | Australia   | Shipped   |
| 2003-11-21 | Australian Collectables, Ltd  | 1911 Ford Town Car          | Australia   | Shipped   |
| 2003-11-11 | Kelly's Gift Shop             | 1928 Ford Phaeton Deluxe    | New Zealand | Cancelled |
| 2003-11-06 | Australian Gift Network, Co   | 1940 Ford Pickup Truck      | Australia   | Shipped   |
| 2003-11-06 | Australian Gift Network, Co   | 1913 Ford Model T Speedster | Australia   | Shipped   |
| 2003-11-04 | Anna's Decorations, Ltd       | 1976 Ford Gran Torino       | Australia   | Shipped   |
| 2003-11-04 | Anna's Decorations, Ltd       | 1968 Ford Mustang           | Australia   | Shipped   |
| 2003-09-11 | Anna's Decorations, Ltd       | 1957 Ford Thunderbird       | Australia   | Shipped   |
| 2003-07-16 | Souvenirs And Things Co.      | 1934 Ford V8 Coupe          | Australia   | Shipped   |
| 2003-07-16 | Souvenirs And Things Co.      | 1913 Ford Model T Speedster | Australia   | Shipped   |
| 2003-07-07 | Kelly's Gift Shop             | 1957 Ford Thunderbird       | New Zealand | Shipped   |
| 2003-07-07 | Kelly's Gift Shop             | 1932 Model A Ford J-Coupe   | New Zealand | Shipped   |
| 2003-07-07 | Kelly's Gift Shop             | 1911 Ford Town Car          | New Zealand | Shipped   |
| 2003-04-29 | Australian Collectors, Co.    | 1928 Ford Phaeton Deluxe    | Australia   | Shipped   |

56 rows in set (0.003 sec)



3. Tampilkan nama lengkap employee, manager untuk employee yang memiliki manager yang sama dengan Mary Patterson(2 rows)

```
MariaDB [classicmodels]> SELECT CONCAT(k.firstName, ' ', k.lastName) AS 'Nama Karyawan',  
-> CONCAT(m.firstName, ' ', m.lastName) AS 'Nama Manager'  
-> FROM employees k JOIN employees m ON k.reportsTo = m.employeeNumber  
-> WHERE m.employeeNumber IN (SELECT m.employeeNumber FROM employees k JOIN employees m ON k.reportsTo = m.employeeNumber  
-> WHERE CONCAT(k.firstName, ' ', k.lastName) = 'Mary Patterson');  
+-----+-----+  
| Nama Karyawan | Nama Manager |  
+-----+-----+  
| Mary Patterson | Diane Murphy |  
| Jeff Firrelli  | Diane Murphy |  
+-----+-----+  
2 rows in set (0.011 sec)
```

4. Tampilkan nama customer yang membeli product yang sama dengan customer yang bernama Toys, tampilkan 20 data saja secara unik dan terurut berdasarkan nama.

```
MariaDB [classicmodels]> SELECT DISTINCT customerName, productName  
-> FROM customers JOIN orders USING(customerNumber)  
-> JOIN orderDetails USING(orderNumber)  
-> JOIN products USING(productCode)  
-> WHERE productName IN (SELECT productName FROM customers JOIN orders  
-> USING(customerNumber) JOIN orderDetails USING(orderNumber)  
-> JOIN products USING(productCode)  
-> WHERE customerName LIKE '%toys%')  
-> ORDER BY customerName LIMIT 20;  
+-----+-----+  
| customerName | productName |  
+-----+-----+  
| Alpha Cognac | 1980s Black Hawk Helicopter |  
| Alpha Cognac | The Mayflower |  
| Alpha Cognac | HMS Bounty |  
| Alpha Cognac | America West Airlines B757-200 |  
| Alpha Cognac | 1972 Alfa Romeo GTA |  
| Alpha Cognac | The Titanic |  
| Alpha Cognac | Pont Yacht |  
| Alpha Cognac | 1995 Honda Civic |  
| Alpha Cognac | 1999 Yamaha Speed Boat |  
| Alpha Cognac | The USS Constitution Ship |  
| Alpha Cognac | 1900s Vintage Bi-Plane |  
| Alpha Cognac | 1992 Ferrari 360 Spider red |  
| Alpha Cognac | 1937 Horch 930V Limousine |  
| Alpha Cognac | The Queen Mary |  
| Alpha Cognac | American Airlines: MD-11S |  
| Alpha Cognac | 1940 Ford Delivery Sedan |  
| Alpha Cognac | Boeing X-32A JSF |  
| Alpha Cognac | Corsair F4U ( Bird Cage) |  
| Alpha Cognac | 1941 Chevrolet Special Deluxe Cabriolet |  
| Alpha Cognac | 1993 Mazda RX-7 |  
+-----+-----+  
20 rows in set (0.013 sec)
```

## **E. REFERENSI**

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