

HOMEWORK 6

Subquery

Nama : Bagus Cipta Pratama

NIM : 23/516539/PA/22097

Kelas : KOMC

SQL DATA:

<https://drive.google.com/file/d/104R9vgmzLp00fljhii7D8mCyrk60miuv/view?usp=sharing>

Perhatikan bahwa sebelum bisa menggunakan database tersebut kita harus mengimport datanya sehingga bisa digunakan . maka kita harus mengimportnya terlebih dahulu . setelah mengimport , saya melakukan beberapa observasi yang bisa dilihat dari gambar screenshot berikut :

```
mysql> use homework7;
Database changed
mysql> show tables;
+-----+
| Tables_in_homework7 |
+-----+
| tb_location          |
| tb_product           |
| tb_type              |
+-----+
3 rows in set (0.01 sec)
```

```
mysql> select * from tb_location;
+-----+-----+
| location_code | location_name |
+-----+-----+
| INFO01       | Laboratorium 1 M Informatika |
| INFO02       | Laboratorium 2 M Informatika |
| INFO03       | Ruang Dosen M Informatika   |
+-----+-----+
3 rows in set (0.00 sec)
```

```
mysql> select * from tb_product;
```

type_code	location_code	product_code	product_name	total
A001	INFO02	AP004	0x506170616E2054756C6973	11
E001	INFO01	EK0014	0x4B6F6D7075746572	2
E001	INFO01	EK0015	0x5072696E746572	3
E001	INFO01	EK0016	0x4C43442050726F6A6563746F72	1
E001	INFO02	EK0014	0x4B6F6D7075746572	8
E001	INFO02	EK0015	0x5072696E746572	6
E001	INFO02	EK0016	0x4C43442050726F6A6563746F72	2
M001	INFO01	MM011	0x4D656A61204B6F6D7075746572	35
M001	INFO01	MM012	0x4B7572736920486964726F6C696B	30
M001	INFO02	MM011	0x4D656A61204B6F6D7075746572	45
M001	INFO03	MM012	0x4B7572736920486964726F6C696B	10

```
11 rows in set (0.00 sec)
```

```
mysql> select * from tb_type;
```

type_code	type_name	description
A001	ATK	alat tulis kantor
E001	Alat-alat elektronik	alat elektronik
M001	Mebeler	alat mebel

```
3 rows in set (0.00 sec)
```

Dapat dilihat bahwa di dalam tabel tb_product ada sedikit kejanggalan yaitu product_name yang berbentuk aneh, maka saya melakukan perubahan dengan menghapus semua data di php my admin terkait tabel tersebut dan melakukan penyesuaian sebagai berikut :

```
mysql> UPDATE tb_product
-> SET product_name = CONVERT(UNHEX(product_name) USING utf8);
ERROR 1411 (HY000): Incorrect string value: 'homework7' for function unhex
mysql>
```

```
mysql> ALTER TABLE tb_product
-> MODIFY COLUMN product_name VARCHAR(100) DEFAULT NULL;
Query OK, 0 rows affected (0.07 sec)
Records: 0 Duplicates: 0 Warnings: 0
```

```
mysql> insert into tb_product(type_code,location_code,product_code,product_name,total) values
-> ('A001','INFO02','AP004','Papan Tulis',11),
-> ('E001','INFO01','EK0014','Komputer',2),
-> ('E001','INFO01','EK0015','Printer',3),
-> ('E001','INFO01','EK0016','LCD Projector',1),
-> ('E001','INFO02','EK0014','Komputer',8),
-> ('E001','INFO02','EK0015','Printer',6),
-> ('E001','INFO02','EK0016','LCD Projector',2),
-> ('M001','INFO01','MM011','Meja Komputer',35),
-> ('M001','INFO01','MM012','Kursi Hidrolik',30),
-> ('M001','INFO02','MM011','Meja Komputer',45),
-> ('M001','INFO03','MM012','Kursi Hidrolik',10);
Query OK, 11 rows affected (0.01 sec)
Records: 11 Duplicates: 0 Warnings: 0
```

Sehingga kita sekarang bisa dengan mudah memahami nilai product_name dengan lebih mudah

Buatlah query SQL menggunakan *subquery* untuk:

1. Menampilkan kode barang, nama barang beserta jumlahnya yang berada di lokasi "Laboratorium 2 M Informatika"

```
mysql> select product_code , product_name , total
-> from tb_product where location_code in
-> (select location_code from tb_location
-> where location_name = 'Laboratorium 2 M Informatika');
+-----+-----+-----+
| product_code | product_name | total |
+-----+-----+-----+
| AP004        | Papan Tulis  | 11    |
| EK0014       | Komputer     | 8     |
| EK0015       | Printer      | 6     |
| EK0016       | LCD Projector| 2     |
| MM011        | Meja Komputer| 45    |
+-----+-----+-----+
5 rows in set (0.00 sec)
```

2. Menampilkan kode barang, nama barang yang berjenis "Alat-alat elektronik" dan seluruh barang yang ada di "Ruang Dosen M Informatika"

```
mysql> select product_code , product_name
-> from tb_product where type_code in
-> ( select type_code from tb_type
-> where type_name = 'Alat-alat elektronik')
-> or location_code in
-> (select location_code from tb_location
-> where location_name = 'Ruang Dosen M Informatika');
+-----+-----+
| product_code | product_name |
+-----+-----+
| EK0014       | Komputer     |
| EK0015       | Printer      |
| EK0016       | LCD Projector|
| EK0014       | Komputer     |
| EK0015       | Printer      |
| EK0016       | LCD Projector|
| MM012        | Kursi Hidrolik|
+-----+-----+
7 rows in set (0.00 sec)
```

3. Menampilkan kode barang, nama barang dan jumlah barang yang merupakan jenis "Alat-alat elektronik" dan "Mebeler" yang terletak di "Laboratorium 2 M Informatika"

```
mysql> select product_code , product_name , total
-> from tb_product where type_code in
-> ( select type_code from tb_type
-> where type_name = 'Alat-alat elektronik' or type_name = '
Mebeler')
-> and location_code in
-> ( select location_code from tb_location
-> where location_name = 'Laboratorium 2 M Informatika');
```

product_code	product_name	total
EK0014	Komputer	8
EK0015	Printer	6
EK0016	LCD Projector	2
MM011	Meja Komputer	45

4 rows in set (0.00 sec)

- Menampilkan semua informasi barang selain jenis "Mebeler" yang berada di "Laboratorium 2 M Informatika"

```
mysql> select * from tb_product
-> where type_code not in
-> (select type_code from tb_type
-> where type_name = 'Mebeler')
-> and location_code in
-> (select location_code from tb_location
-> where location_name = 'Laboratorium 2 M Informatika');
```

type_code	location_code	product_code	product_name	total
A001	INFO02	AP004	Papan Tulis	11
E001	INFO02	EK0014	Komputer	8
E001	INFO02	EK0015	Printer	6
E001	INFO02	EK0016	LCD Projector	2

4 rows in set (0.00 sec)

- Menambahkan barang dengan nama "Spidol" dengan kode barang "AP005" dan informasi barang lain sama dengan "Papan Tulis" tetapi jumlah barang 2 kali lipat dari jumlah "Papan Tulis"

```
mysql> INSERT INTO tb_product (type_code, location_code, product_code, product_name, total)
-> VALUES (
-> (SELECT type_code FROM tb_product p WHERE p.product_name = "Papan Tulis"),
-> (SELECT location_code FROM tb_product p WHERE p.product_name = "Papan Tulis"),
-> "AP005",
-> "Spidol",
-> (SELECT p.total * 2 FROM tb_product p WHERE p.product_name = "Papan Tulis")
-> );
Query OK, 1 row affected (0.01 sec)

mysql> select * from tb_product;
+-----+-----+-----+-----+-----+
| type_code | location_code | product_code | product_name | total |
+-----+-----+-----+-----+-----+
| A001      | INF002       | AP004       | Papan Tulis  | 11    |
| A001      | INF002       | AP005       | Spidol       | 22    |
| E001      | INF001       | EK0014      | Komputer     | 2      |
| E001      | INF001       | EK0015      | Printer      | 3      |
| E001      | INF001       | EK0016      | LCD Projector | 1      |
| E001      | INF002       | EK0014      | Komputer     | 8      |
| E001      | INF002       | EK0015      | Printer      | 6      |
| E001      | INF002       | EK0016      | LCD Projector | 2      |
| M001      | INF001       | MM011       | Meja Komputer | 35     |
| M001      | INF001       | MM012       | Kursi Hidrolik | 30     |
| M001      | INF002       | MM011       | Meja Komputer | 45     |
| M001      | INF003       | MM012       | Kursi Hidrolik | 10     |
+-----+-----+-----+-----+-----+
12 rows in set (0.00 sec)
```

6. Menambahkan "Kabel HDMI" yang akan di tempatkan di "Ruang Dosen M Informatika" dengan kode barang "EK0017", jenis 'E001', dan berjumlah sama dengan seluruh "LCD Projector"

```
mysql> INSERT INTO tb_product (type_code, location_code, product_code, product_name, total)
-> VALUES (
-> "E001",
-> (SELECT l.location_code FROM tb_location l WHERE l.location_name = "Ruang Dosen M Informatika"),
-> "EK0017",
-> "Kabel HDMI",
-> (SELECT SUM(p.total) FROM tb_product p WHERE p.product_name = "LCD Projector")
-> );
Query OK, 1 row affected (0.01 sec)

mysql> select * from tb_product;
+-----+-----+-----+-----+-----+
| type_code | location_code | product_code | product_name | total |
+-----+-----+-----+-----+-----+
| A001      | INF002       | AP004       | Papan Tulis  | 11    |
| A001      | INF002       | AP005       | Spidol       | 22    |
| E001      | INF001       | EK0014      | Komputer     | 2      |
| E001      | INF001       | EK0015      | Printer      | 3      |
| E001      | INF001       | EK0016      | LCD Projector | 1      |
| E001      | INF002       | EK0014      | Komputer     | 8      |
| E001      | INF002       | EK0015      | Printer      | 6      |
| E001      | INF002       | EK0016      | LCD Projector | 2      |
| E001      | INF003       | EK0017      | Kabel HDMI   | 3      |
| M001      | INF001       | MM011       | Meja Komputer | 35     |
| M001      | INF001       | MM012       | Kursi Hidrolik | 30     |
| M001      | INF002       | MM011       | Meja Komputer | 45     |
| M001      | INF003       | MM012       | Kursi Hidrolik | 10     |
+-----+-----+-----+-----+-----+
13 rows in set (0.00 sec)
```

7. Mengubah jumlah "Komputer" yang ada di "Laboratorium 1 M Informatika" sesuai dengan jumlah "Meja Komputer" di ruangan tersebut

```
mysql> update tb_product
-> set total = (select * from ( select p.total from tb_produ
ct p where p.product_name = 'Meja Komputer'
-> and p.location_code in ( select location_code from tb_loc
ation where location_name = 'Laboratorium 1 M Informatika')) as
temp )
-> where product_name = 'Komputer' and location_code in (
-> select location_code
-> from tb_location
-> where location_name = 'Laboratorium 1 M Informatika'
-> );
```

Query OK, 1 row affected (0.01 sec)

Rows matched: 1 Changed: 1 Warnings: 0

```
mysql> select * from tb_product where location_code = 'INFO01';
```

type_code	location_code	product_code	product_name	total
E001	INFO01	EK0014	Komputer	35
E001	INFO01	EK0015	Printer	3
E001	INFO01	EK0016	LCD Projector	1
M001	INFO01	MM011	Meja Komputer	35
M001	INFO01	MM012	Kursi Hidrolik	30

5 rows in set (0.00 sec)

8. Mengubah seluruh jumlah "Kursi Hidrolik" di setiap ruangan dengan jumlah minimum dari "Meja Komputer"

```
mysql> UPDATE tb_product
-> SET total = (SELECT MIN(p.total) FROM tb_product p WHERE p.product_name = "Meja Komputer") AS temp)
-> WHERE product_name = "Kursi Hidrolik";
Query OK, 2 rows affected (0.00 sec)
Rows matched: 2 Changed: 2 Warnings: 0
```

```
mysql> select * from tb_product where product_name = 'Kursi Hidrolik' or product_name = 'Meja Komputer';
```

type_code	location_code	product_code	product_name	total
M001	INFO01	MM011	Meja Komputer	35
M001	INFO01	MM012	Kursi Hidrolik	35
M001	INFO02	MM011	Meja Komputer	45
M001	INFO03	MM012	Kursi Hidrolik	35

4 rows in set (0.00 sec)

9. Menghapus seluruh data barang yang ada di lokasi "Ruang Dosen M Informatika"

```
mysql> delete from tb_product
-> where location_code =
-> ( select location_code from tb_location
-> where location_name = 'Ruang Dosen M Informatika');
Query OK, 2 rows affected (0.01 sec)
```

```
mysql> select * from tb_product
-> where location_code =
-> ( select location_code from tb_location l where l.location_name = 'Ruang Dosen M Informatika' );
Empty set (0.00 sec)
```

10. Menghapus seluruh data barang di lokasi "Laboratorium 2 M Informatika" yang bukan merupakan jenis "Mebeler"

```
mysql> delete from tb_product
-> where location_code =
-> ( select location_code from tb_location
-> where location_name = 'Laboratorium 2 M Informatika')
-> and type_code not in
-> (select type_code from tb_type
-> where type_name = 'Mebeler');
Query OK, 5 rows affected (0.01 sec)
```

```
mysql> select * from tb_product where location_code =
-> ( select location_code from tb_location
-> where location_name = 'Laboratorium 2 M Informatika');
```

type_code	location_code	product_code	product_name	total
M001	INFO02	MM011	Meja Komputer	45

1 row in set (0.00 sec)