**p4.1**

use mydb;

select count(\*) as total\_rows

from order\_details

inner join orders on order\_details.order\_id = orders.id

inner join customers on orders.customer\_id = customers.id

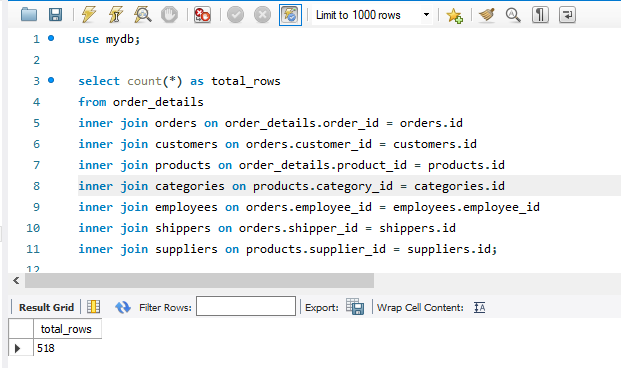
inner join products on order\_details.product\_id = products.id

inner join categories on products.category\_id = categories.id

inner join employees on orders.employee\_id = employees.employee\_id

inner join shippers on orders.shipper\_id = shippers.id

inner join suppliers on products.supplier\_id = suppliers.id;



**p4.2**

use mydb;

select \* from order\_details

left join orders on order\_details.order\_id = orders.id

inner join customers on orders.customer\_id = customers.id

inner join products on order\_details.product\_id = products.id

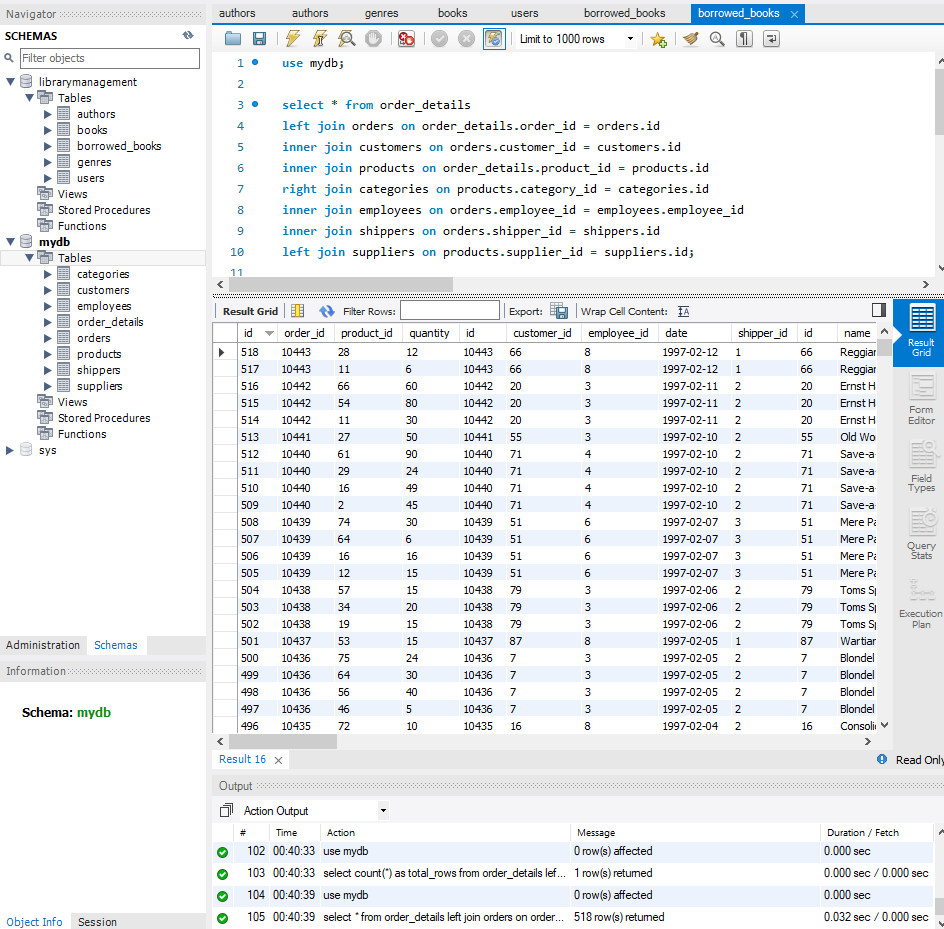
right join categories on products.category\_id = categories.id

inner join employees on orders.employee\_id = employees.employee\_id

inner join shippers on orders.shipper\_id = shippers.id

left join suppliers on products.supplier\_id = suppliers.id;

В даному випадку при зміні деяких операторів на left та right кількість рядків не змінюється, але також Якщо використовувати LEFT або RIGHT JOIN, кількість рядків у вихідному наборі може змінитися в залежності від того, які записи відсутні у відповідних таблицях і які типи JOIN використовуються.



**p4.3**

use mydb;

select \* from order\_details

inner join orders on order\_details.order\_id = orders.id

inner join customers on orders.customer\_id = customers.id

inner join products on order\_details.product\_id = products.id

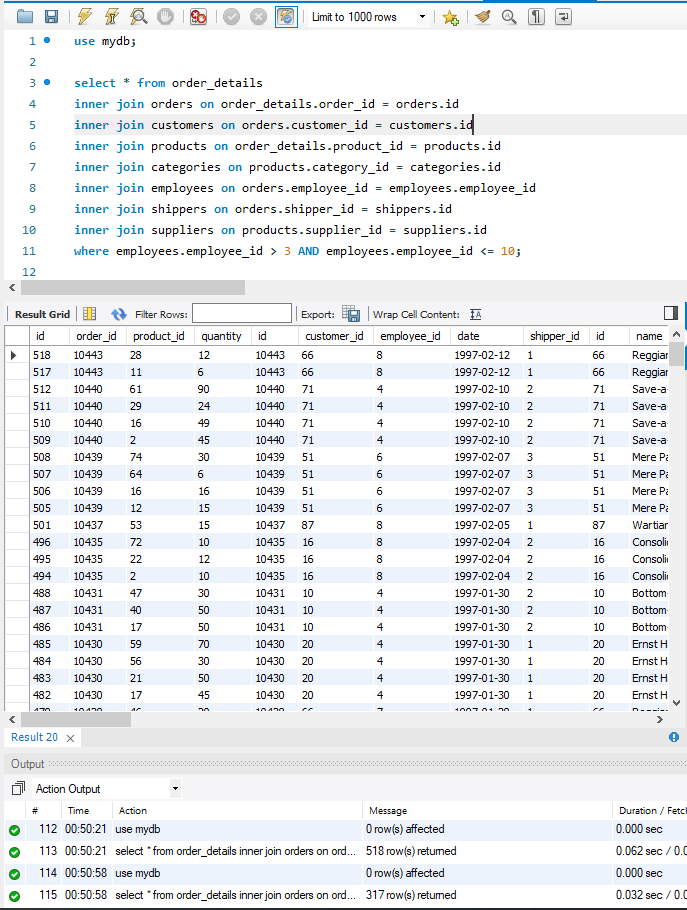
inner join categories on products.category\_id = categories.id

inner join employees on orders.employee\_id = employees.employee\_id

inner join shippers on orders.shipper\_id = shippers.id

inner join suppliers on products.supplier\_id = suppliers.id

where employees.employee\_id > 3 AND employees.employee\_id <= 10;



**p4.4**

use mydb;

select categories.name as category\_name, count(\*) as total\_rows, avg(order\_details.quantity) as average\_quantity

from order\_details

inner join orders on order\_details.order\_id = orders.id

inner join customers on orders.customer\_id = customers.id

inner join products on order\_details.product\_id = products.id

inner join categories on products.category\_id = categories.id

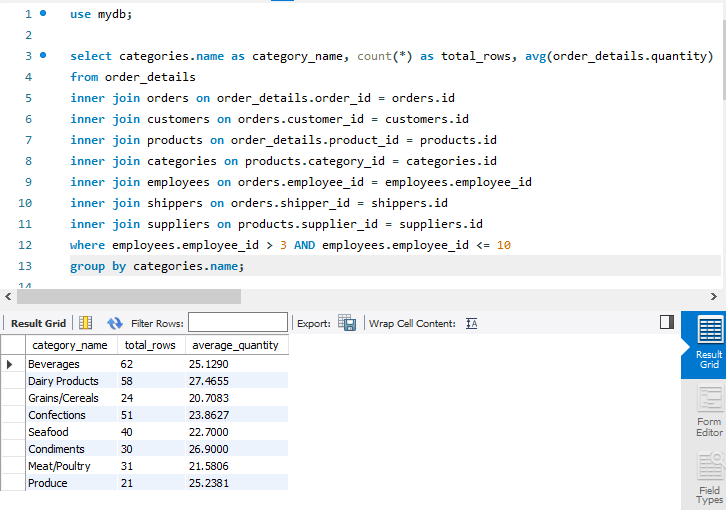
inner join employees on orders.employee\_id = employees.employee\_id

inner join shippers on orders.shipper\_id = shippers.id

inner join suppliers on products.supplier\_id = suppliers.id

where employees.employee\_id > 3 AND employees.employee\_id <= 10

group by categories.name;



**p4.5**

use mydb;

select categories.name as category\_name, count(\*) as total\_rows, avg(order\_details.quantity) as average\_quantity

from order\_details

inner join orders on order\_details.order\_id = orders.id

inner join customers on orders.customer\_id = customers.id

inner join products on order\_details.product\_id = products.id

inner join categories on products.category\_id = categories.id

inner join employees on orders.employee\_id = employees.employee\_id

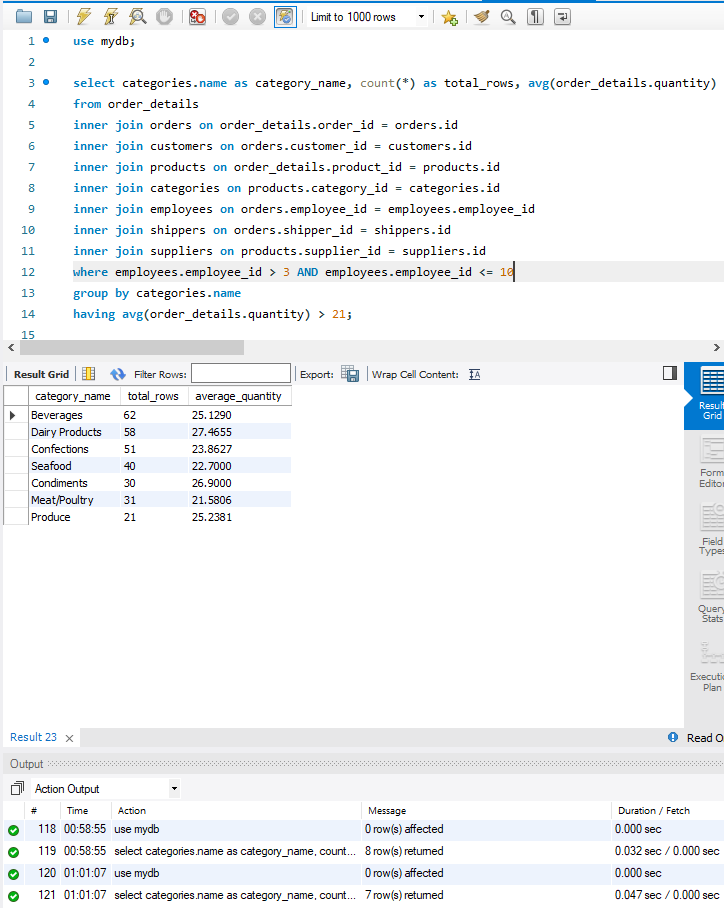
inner join shippers on orders.shipper\_id = shippers.id

inner join suppliers on products.supplier\_id = suppliers.id

where employees.employee\_id > 3 AND employees.employee\_id <= 10

group by categories.name

having avg(order\_details.quantity) > 21;



**p4.6**

use mydb;

select categories.name as category\_name, count(\*) as total\_rows, avg(order\_details.quantity) as average\_quantity

from order\_details

inner join orders on order\_details.order\_id = orders.id

inner join customers on orders.customer\_id = customers.id

inner join products on order\_details.product\_id = products.id

inner join categories on products.category\_id = categories.id

inner join employees on orders.employee\_id = employees.employee\_id

inner join shippers on orders.shipper\_id = shippers.id

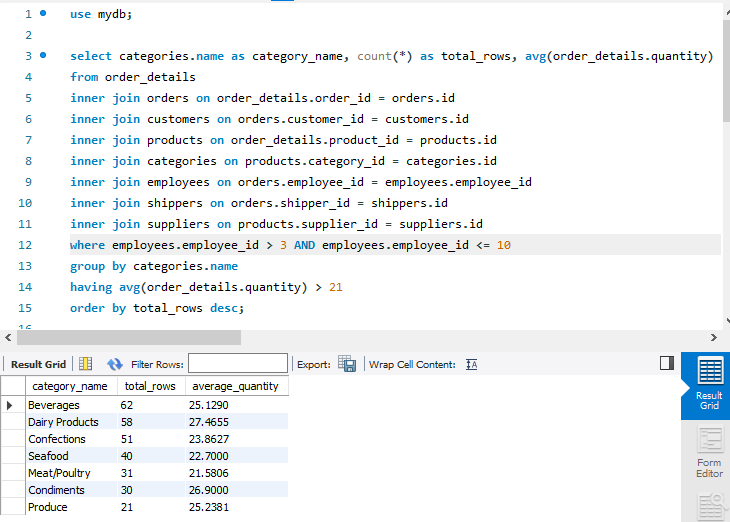
inner join suppliers on products.supplier\_id = suppliers.id

where employees.employee\_id > 3 AND employees.employee\_id <= 10

group by categories.name

having avg(order\_details.quantity) > 21

order by total\_rows desc;



**p4.7**

use mydb;

select categories.name as category\_name, count(\*) as total\_rows, avg(order\_details.quantity) as average\_quantity

from order\_details

inner join orders on order\_details.order\_id = orders.id

inner join customers on orders.customer\_id = customers.id

inner join products on order\_details.product\_id = products.id

inner join categories on products.category\_id = categories.id

inner join employees on orders.employee\_id = employees.employee\_id

inner join shippers on orders.shipper\_id = shippers.id

inner join suppliers on products.supplier\_id = suppliers.id

where employees.employee\_id > 3 AND employees.employee\_id <= 10

group by categories.name

having avg(order\_details.quantity) > 21

order by total\_rows desc

limit 4 offset 1;

