1. Найти самый популярный товар в сервисе (тот, который попал в заказы клиентов наибольшее количество раз).

with d as ([**select**](https://dev.mysql.com/doc/refman/8.0/en/select.html) distinct [products](https://dsintrodb.skillbox.cc/?server=db&username=student&db=skillbox&table=products).product\_id, product\_name,  
[**sum**](https://dev.mysql.com/doc/refman/8.0/en/group-by-functions.html#function_sum)(amount) OVER (partition by product\_id) as sum\_amount  
from [orders\_product](https://dsintrodb.skillbox.cc/?server=db&username=student&db=skillbox&table=orders_product)  
inner [**join**](https://dev.mysql.com/doc/refman/8.0/en/join.html) [products](https://dsintrodb.skillbox.cc/?server=db&username=student&db=skillbox&table=products)  
on [products](https://dsintrodb.skillbox.cc/?server=db&username=student&db=skillbox&table=products).product\_id = [orders\_product](https://dsintrodb.skillbox.cc/?server=db&username=student&db=skillbox&table=orders_product).product\_id)  
  
[**select**](https://dev.mysql.com/doc/refman/8.0/en/select.html) \*  
from d  
where sum\_amount = ([**select**](https://dev.mysql.com/doc/refman/8.0/en/select.html) [**max**](https://dev.mysql.com/doc/refman/8.0/en/group-by-functions.html#function_max)(d.sum\_amount) from d)

1. Найти день, в который количество выполненных доставок в сервисе было максимальным за всё время работы сервиса

with max\_delivery as ([**select**](https://dev.mysql.com/doc/refman/8.0/en/select.html) distinct [info](https://dsintrodb.skillbox.cc/?server=db&username=student&db=skillbox&table=info).delivery\_dt, [**count**](https://dev.mysql.com/doc/refman/8.0/en/group-by-functions.html#function_count)([info](https://dsintrodb.skillbox.cc/?server=db&username=student&db=skillbox&table=info).delivery\_dt) over (partition by [info](https://dsintrodb.skillbox.cc/?server=db&username=student&db=skillbox&table=info).delivery\_dt) as counts  
from [info](https://dsintrodb.skillbox.cc/?server=db&username=student&db=skillbox&table=info)  
where is\_completed\_flg = 'True')  
  
[**select**](https://dev.mysql.com/doc/refman/8.0/en/select.html) \*  
from max\_delivery   
where max\_delivery.counts = ([**select**](https://dev.mysql.com/doc/refman/8.0/en/select.html) [**max**](https://dev.mysql.com/doc/refman/8.0/en/group-by-functions.html#function_max)(max\_delivery.counts) from max\_delivery )

1. Подготовить статистику по количеству заказов в разрезе метода оплаты по годам за всё время работы сервиса.

[**select**](https://dev.mysql.com/doc/refman/8.0/en/select.html) distinct [**year**](https://dev.mysql.com/doc/refman/8.0/en/date-and-time-type-syntax.html)(order\_dt) as [**year**](https://dev.mysql.com/doc/refman/8.0/en/date-and-time-type-syntax.html), [**count**](https://dev.mysql.com/doc/refman/8.0/en/group-by-functions.html#function_count)(order\_id) over (partition by [**year**](https://dev.mysql.com/doc/refman/8.0/en/date-and-time-type-syntax.html)(order\_dt)) as number\_of\_orders,  
payment\_method   
from [orders](https://dsintrodb.skillbox.cc/?server=db&username=student&db=skillbox&table=orders)  
order by payment\_method

1. Найти топ-10 клиентов, совершивших наибольшее количество заказов за всё время работы сервиса.

[**select**](https://dev.mysql.com/doc/refman/8.0/en/select.html) distinct [customers](https://dsintrodb.skillbox.cc/?server=db&username=student&db=skillbox&table=customers).customer\_id, first\_name, last\_name, middle\_name, [**count**](https://dev.mysql.com/doc/refman/8.0/en/group-by-functions.html#function_count)(order\_id) over (partition by customer\_id) as number\_of\_orders  
from [customers](https://dsintrodb.skillbox.cc/?server=db&username=student&db=skillbox&table=customers)   
[**join**](https://dev.mysql.com/doc/refman/8.0/en/join.html) [orders](https://dsintrodb.skillbox.cc/?server=db&username=student&db=skillbox&table=orders)  
on [customers](https://dsintrodb.skillbox.cc/?server=db&username=student&db=skillbox&table=customers).customer\_id=[orders](https://dsintrodb.skillbox.cc/?server=db&username=student&db=skillbox&table=orders).customer\_id  
order by number\_of\_orders DESC  
limit 10

1. Найти самые популярные категории товаров (product\_group\_name) среди пользователей различных возрастных групп:

* 18–30 лет;
* 30–45 лет;
* 45–60 лет;
* 60+ лет.

with a as ([**select**](https://dev.mysql.com/doc/refman/8.0/en/select.html) distinct [customers](https://dsintrodb.skillbox.cc/?server=db&username=student&db=skillbox&table=customers).customer\_id,   
[**case**](https://dev.mysql.com/doc/refman/8.0/en/control-flow-functions.html#operator_case) when [**timestampdiff**](https://dev.mysql.com/doc/refman/8.0/en/date-and-time-functions.html#function_timestampdiff)([**year**](https://dev.mysql.com/doc/refman/8.0/en/date-and-time-type-syntax.html), [**str\_to\_date**](https://dev.mysql.com/doc/refman/8.0/en/date-and-time-functions.html#function_str-to-date)(birth\_dt, '%d.%m.%Y'), [**curdate**](https://dev.mysql.com/doc/refman/8.0/en/date-and-time-functions.html#function_curdate)()) > 18 [**and**](https://dev.mysql.com/doc/refman/8.0/en/logical-operators.html#operator_and) [**timestampdiff**](https://dev.mysql.com/doc/refman/8.0/en/date-and-time-functions.html#function_timestampdiff)([**year**](https://dev.mysql.com/doc/refman/8.0/en/date-and-time-type-syntax.html), [**str\_to\_date**](https://dev.mysql.com/doc/refman/8.0/en/date-and-time-functions.html#function_str-to-date)(birth\_dt, '%d.%m.%Y'), [**curdate**](https://dev.mysql.com/doc/refman/8.0/en/date-and-time-functions.html#function_curdate)()) < 30 then '18-30'  
when [**timestampdiff**](https://dev.mysql.com/doc/refman/8.0/en/date-and-time-functions.html#function_timestampdiff)([**year**](https://dev.mysql.com/doc/refman/8.0/en/date-and-time-type-syntax.html), [**str\_to\_date**](https://dev.mysql.com/doc/refman/8.0/en/date-and-time-functions.html#function_str-to-date)(birth\_dt, '%d.%m.%Y'), [**curdate**](https://dev.mysql.com/doc/refman/8.0/en/date-and-time-functions.html#function_curdate)()) >= 30 [**and**](https://dev.mysql.com/doc/refman/8.0/en/logical-operators.html#operator_and) [**timestampdiff**](https://dev.mysql.com/doc/refman/8.0/en/date-and-time-functions.html#function_timestampdiff)([**year**](https://dev.mysql.com/doc/refman/8.0/en/date-and-time-type-syntax.html), [**str\_to\_date**](https://dev.mysql.com/doc/refman/8.0/en/date-and-time-functions.html#function_str-to-date)(birth\_dt, '%d.%m.%Y'), [**curdate**](https://dev.mysql.com/doc/refman/8.0/en/date-and-time-functions.html#function_curdate)()) < 45 then '30-45'  
when [**timestampdiff**](https://dev.mysql.com/doc/refman/8.0/en/date-and-time-functions.html#function_timestampdiff)([**year**](https://dev.mysql.com/doc/refman/8.0/en/date-and-time-type-syntax.html), [**str\_to\_date**](https://dev.mysql.com/doc/refman/8.0/en/date-and-time-functions.html#function_str-to-date)(birth\_dt, '%d.%m.%Y'), [**curdate**](https://dev.mysql.com/doc/refman/8.0/en/date-and-time-functions.html#function_curdate)()) >= 45 [**and**](https://dev.mysql.com/doc/refman/8.0/en/logical-operators.html#operator_and) [**timestampdiff**](https://dev.mysql.com/doc/refman/8.0/en/date-and-time-functions.html#function_timestampdiff)([**year**](https://dev.mysql.com/doc/refman/8.0/en/date-and-time-type-syntax.html), [**str\_to\_date**](https://dev.mysql.com/doc/refman/8.0/en/date-and-time-functions.html#function_str-to-date)(birth\_dt, '%d.%m.%Y'), [**curdate**](https://dev.mysql.com/doc/refman/8.0/en/date-and-time-functions.html#function_curdate)()) < 60 then '45-60'  
when [**timestampdiff**](https://dev.mysql.com/doc/refman/8.0/en/date-and-time-functions.html#function_timestampdiff)([**year**](https://dev.mysql.com/doc/refman/8.0/en/date-and-time-type-syntax.html), [**str\_to\_date**](https://dev.mysql.com/doc/refman/8.0/en/date-and-time-functions.html#function_str-to-date)(birth\_dt, '%d.%m.%Y'), [**curdate**](https://dev.mysql.com/doc/refman/8.0/en/date-and-time-functions.html#function_curdate)()) >= 60 then '60+'  
[**end**](https://dev.mysql.com/doc/refman/8.0/en/begin-end.html) as age\_group,  
product\_group\_name  
from [customers](https://dsintrodb.skillbox.cc/?server=db&username=student&db=skillbox&table=customers)  
  
[**join**](https://dev.mysql.com/doc/refman/8.0/en/join.html) [orders](https://dsintrodb.skillbox.cc/?server=db&username=student&db=skillbox&table=orders)  
on [customers](https://dsintrodb.skillbox.cc/?server=db&username=student&db=skillbox&table=customers).customer\_id=[orders](https://dsintrodb.skillbox.cc/?server=db&username=student&db=skillbox&table=orders).customer\_id  
  
[**join**](https://dev.mysql.com/doc/refman/8.0/en/join.html) [orders\_product](https://dsintrodb.skillbox.cc/?server=db&username=student&db=skillbox&table=orders_product)  
on [orders\_product](https://dsintrodb.skillbox.cc/?server=db&username=student&db=skillbox&table=orders_product).order\_id=[orders](https://dsintrodb.skillbox.cc/?server=db&username=student&db=skillbox&table=orders).order\_id  
  
[**join**](https://dev.mysql.com/doc/refman/8.0/en/join.html) [products](https://dsintrodb.skillbox.cc/?server=db&username=student&db=skillbox&table=products)  
on [products](https://dsintrodb.skillbox.cc/?server=db&username=student&db=skillbox&table=products).product\_id=[orders\_product](https://dsintrodb.skillbox.cc/?server=db&username=student&db=skillbox&table=orders_product).product\_id)  
  
[**select**](https://dev.mysql.com/doc/refman/8.0/en/select.html) age\_group, product\_group\_name, [**count**](https://dev.mysql.com/doc/refman/8.0/en/group-by-functions.html#function_count)(product\_group\_name) as number  
from a  
group by age\_group, product\_group\_name  
order by age\_group ASC, number DESC

1. Найти товар, который клиенты чаще всего заказывают совместно с [товаром X]

with a as([**select**](https://dev.mysql.com/doc/refman/8.0/en/select.html) order\_id, [orders\_product](https://dsintrodb.skillbox.cc/?server=db&username=student&db=skillbox&table=orders_product).product\_id, product\_name   
from [orders\_product](https://dsintrodb.skillbox.cc/?server=db&username=student&db=skillbox&table=orders_product)  
[**join**](https://dev.mysql.com/doc/refman/8.0/en/join.html) [products](https://dsintrodb.skillbox.cc/?server=db&username=student&db=skillbox&table=products)  
on [products](https://dsintrodb.skillbox.cc/?server=db&username=student&db=skillbox&table=products).product\_id=[orders\_product](https://dsintrodb.skillbox.cc/?server=db&username=student&db=skillbox&table=orders_product).product\_id  
where order\_id [**in**](https://dev.mysql.com/doc/refman/8.0/en/comparison-operators.html#function_in) (  
[**select**](https://dev.mysql.com/doc/refman/8.0/en/select.html) [orders\_product](https://dsintrodb.skillbox.cc/?server=db&username=student&db=skillbox&table=orders_product).order\_id  
from [orders\_product](https://dsintrodb.skillbox.cc/?server=db&username=student&db=skillbox&table=orders_product)  
[**join**](https://dev.mysql.com/doc/refman/8.0/en/join.html) [products](https://dsintrodb.skillbox.cc/?server=db&username=student&db=skillbox&table=products)  
on [products](https://dsintrodb.skillbox.cc/?server=db&username=student&db=skillbox&table=products).product\_id=[orders\_product](https://dsintrodb.skillbox.cc/?server=db&username=student&db=skillbox&table=orders_product).product\_id  
where product\_name='Круассан') [**and**](https://dev.mysql.com/doc/refman/8.0/en/logical-operators.html#operator_and) product\_name != 'Круассан')  
  
[**select**](https://dev.mysql.com/doc/refman/8.0/en/select.html) product\_name, [**count**](https://dev.mysql.com/doc/refman/8.0/en/group-by-functions.html#function_count)(product\_name) as more\_often  
from a  
group by product\_name  
order by more\_often DESC  
limit 1