**CRUD создать, прочитать, обновить, удалить**

Задача 2

SELECT id\_product, name, category, name\_store FROM products\_data\_all

Задача 3

SELECT name, price, name\_store, date\_upd FROM products\_data\_all WHERE category = 'молоко и сливки' AND date\_upd = '2019-06-01'

Задача 4

SELECT

 name,

 price,

 name\_store,

 date\_upd

FROM

 products\_data\_all

WHERE

 category ='молоко и сливки' AND date\_upd IN ('2019-06-08', '2019-06-15', '2019-06-22', '2019-06-29')

Задача 5

SELECT

 \*

FROM

 transactions

WHERE

 date >= '2019-06-01' AND date < '2019-06-02' AND id\_product IN (0, 1, 2, 3, 4, 6, 7, 8, 9, 10, 11, 12, 13, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 28, 29, 30, 31, 32, 34, 35, 36, 37, 38, 39, 40, 42, 43, 44, 45, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75,76, 77, 78, 80, 81, 82, 83, 84, 86, 88, 89, 90, 91, 92, 93, 95, 96, 97, 98, 99, 100, 102, 103, 104, 105,106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 118, 119, 5, 14, 27, 33, 41, 46, 62, 79, 85, 87, 94, 101, 117)

Задача 6

SELECT

 COUNT(\*) AS cnt

FROM

 products\_data\_all

Связи между таблицами

Задача 1

SELECT

 id\_transaction, products.category, products.name

FROM

 transactions

INNER JOIN products ON products.id\_product = transactions.id\_product

ORDER BY id\_transaction

LIMIT 10

Задача 2

SELECT

 products.id\_product, products.name, products\_stores AS id\_store

FROM

 products

LEFT JOIN products\_stores ON products.id\_product = products\_stores.id\_product

Задача 3

SELECT

 transactions.id\_transaction, stores.name\_store, products.category, products.name

FROM

 transactions

INNER JOIN products ON transactions.id\_product = products.id\_product

INNER JOIN stores ON transactions.id\_store = stores.id\_store

WHERE

 transactions.date > '2019-06-05'

Изменение типов

Задача 1

SELECT

 AVG(weight::real) AS average

FROM

 products\_data\_all

WHERE units='г'

Группируем данные

Задача 1

SELECT

 name\_store,

 COUNT(name) AS name\_cnt,

 COUNT(DISTINCT name) AS name\_uniq\_cnt

FROM

 products\_data\_all

GROUP BY

 name\_store

Задача 2

SELECT

 category,

 max(weight :: real) AS max\_weight

FROM

 products\_data\_all

GROUP BY

 category

Задача 3

SELECT

name\_store,

AVG(price) AS average\_price,

MAX(price) AS max\_price,

MIN(price) AS min\_price

FROM

 products\_data\_all

GROUP BY

 name\_store

Задача 4

SELECT

name,

MAX(price) - MIN(price) AS max\_min\_diff

FROM

 products\_data\_all

WHERE

 date\_upd :: date = '2019-06-10' AND category = 'масло сливочное и маргарин'

GROUP BY

 name

Сортируем данные

Задача 1

SELECT

 date\_upd::date AS update\_date,

 category,

 COUNT(name) AS name\_cnt

FROM

 products\_data\_all

WHERE

 date\_upd::date = '2019-06-05'

GROUP BY

 category,

 update\_date

 ORDER BY

 name\_cnt

Задача 2

SELECT

 date\_upd::date AS update\_date,

 name\_store,

 category,

 COUNT(DISTINCT name) AS uniq\_name\_cnt

FROM

 products\_data\_all

WHERE

date\_upd::date = '2019-06-30'AND name\_store = 'Lentro'

GROUP BY

 date\_upd,

 name\_store,

 category

ORDER BY

 uniq\_name\_cnt DESC

Задача 3

SELECT

 name,

 MAX(price) AS max\_price

FROM

 products\_data\_all

GROUP BY

 name

ORDER BY

 max\_price DESC

LIMIT 5

Обработка данных в группировке

Задача 1

SELECT

 name,

 MAX(price) AS max\_price

FROM

 products\_data\_all

GROUP BY

 name

HAVING

 MAX(price) > 500

Задача 2

SELECT

 date\_upd::date AS update\_date,

 name\_store,

 COUNT(weight::real) AS name\_cnt

FROM

 products\_data\_all

WHERE

 units = 'г' AND weight::real > 900 AND date\_upd::date = '2019-06-03'

GROUP BY

 update\_date,

 name\_store

HAVING

 COUNT(name) < 10

Задача 3

SELECT

 name\_store,

 COUNT(DISTINCT name) AS name\_uniq\_cnt

FROM

 products\_data\_all

GROUP BY

 name\_store

HAVING COUNT(DISTINCT name) > 30

ORDER BY

 name\_uniq\_cnt

LIMIT 3

Операторы и функции для работы с датами

Задача 1

SELECT

 EXTRACT(hour FROM date) AS hours

FROM

 transactions;

Задача 2

SELECT

 EXTRACT(hour FROM date) AS hours,

 COUNT(id\_product) AS cnt

FROM

 transactions

GROUP BY

 hours

ORDER BY

 hours

Задача 3

SELECT

 EXTRACT(day FROM date) AS days,

 COUNT(id\_product) AS cnt

FROM

 transactions

GROUP BY

 days

ORDER BY

 days

 Задача 4

SELECT

 DATE\_TRUNC('day', date) AS date\_month,

 COUNT(id\_product) AS cnt

FROM

 transactions

GROUP BY

 date\_month

ORDER BY

 date\_month

Подзапросы

Задача 1

SELECT

 id\_product,

 price

FROM

 products\_data\_all

WHERE

(category = 'молоко и сливки' AND price > 120) OR

(category = 'масло сливочное и маргарин' AND price > 354)

Задача 2

SELECT

 COUNT(DISTINCT user\_id)

FROM

 transactions

WHERE

 id\_product IN

 (SELECT

 id\_product

 FROM

 products\_data\_all

 WHERE

 (category='молоко и сливки' AND price > 120) OR

 (category='масло сливочное и маргарин' AND price > 354));

Задача 3

SELECT

 COUNT(DISTINCT id\_transaction) AS transaction\_per\_day,

 DATE\_TRUNC('day', date) AS trunc\_date

FROM

 transactions

GROUP BY

 trunc\_date

Задача 4

SELECT

 EXTRACT(week from SUBQ.trunc\_date ) AS week\_number,

 AVG(SUBQ.transaction\_per\_day) AS avg\_week\_transaction

FROM

 (SELECT

 COUNT(distinct id\_transaction) as transaction\_per\_day,

 DATE\_TRUNC('day', date) AS trunc\_date

 FROM

 transactions

 GROUP BY

 trunc\_date) AS SUBQ

GROUP BY week\_number;

Все ответы: <https://mob25.com/skachat-kurs-python-razrabotchik-ot-yandeks-praktikum-s-otvetami/>