Домашнее задание 2 (vo_HW)

Тема: Основные операторы PostgreSQL.

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1. **Создаем таблицы с заданными структурами и загружаем данные из csv-файлов.**

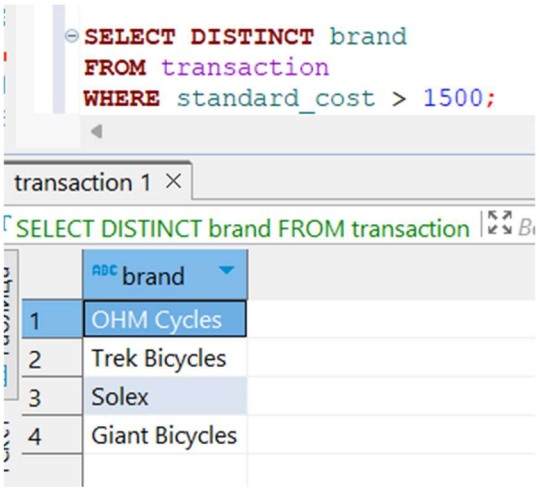
```
CREATE TABLE customer (
	customer_id int4
	,first_name varchar(50)
	,last_name varchar(50)
	,gender varchar(30)
	,DOB varchar(50)
	,job_title varchar(50)
	,job_industry_category varchar(50)
	,wealth_segment varchar(50)
	,deceased_indicator varchar(50)
	,owns_car varchar(30)
	,address varchar(50)
	,postcode varchar(30)
	,state varchar(30)
	,country varchar(30)
	,property_valuation int4
	,UNIQUE("customer_id")
)
```

```
CREATE TABLE transaction (
	transaction_id int4
	,product_id int4
	,customer_id int4
	,transaction_date varchar(30)
	,online_order varchar(30)
	,order_status varchar(30)
	,brand varchar(30)
	,product_line varchar(30)
	,product_class varchar(30)
	,product_size varchar(30)
	,list_price float4
	,standard_cost float4
	,UNIQUE("transaction_id")
	,FOREIGN KEY ("customer_id") REFERENCES customer("customer_id")
)
```

2. Выполнить следующие запросы:

- **(1 балл) Вывести все уникальные бренды, у которых стандартная стоимость выше 1500 долларов.**

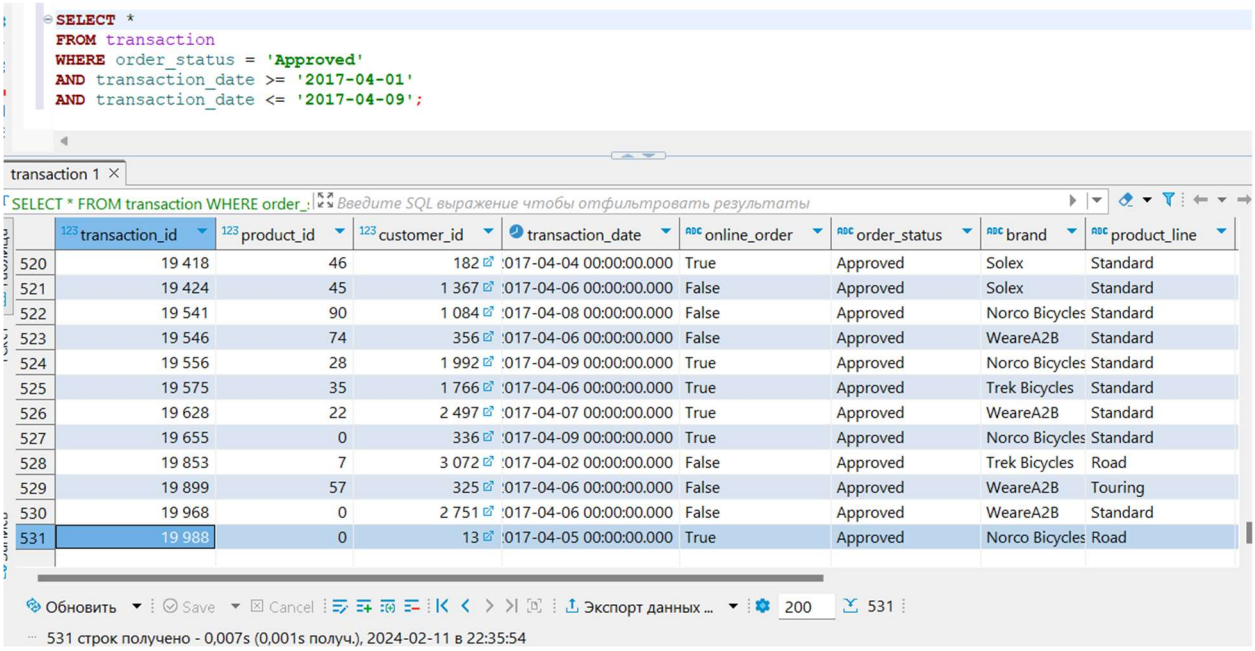
```sql
SELECT DISTINCT brand
FROM transaction
WHERE standard_cost > 1500;
```



	brand
1	OHM Cycles
2	Trek Bicycles
3	Solex
4	Giant Bicycles

- **(1 балл) Вывести все подтвержденные транзакции за период '2017-04-01' по '2017-04-09' включительно.**

```sql
SELECT *
FROM transaction
WHERE order_status = 'Approved'
AND transaction_date >= '2017-04-01'
AND transaction_date <= '2017-04-09'
```



	transaction_id	product_id	customer_id	transaction_date	online_order	order_status	brand	product_line
520	19 418	46	182	017-04-04 00:00:00.000	True	Approved	Solex	Standard
521	19 424	45	1 367	017-04-06 00:00:00.000	False	Approved	Solex	Standard
522	19 541	90	1 084	017-04-08 00:00:00.000	False	Approved	Norco Bicycles	Standard
523	19 546	74	356	017-04-06 00:00:00.000	False	Approved	WeareA2B	Standard
524	19 556	28	1 992	017-04-09 00:00:00.000	True	Approved	Norco Bicycles	Standard
525	19 575	35	1 766	017-04-06 00:00:00.000	True	Approved	Trek Bicycles	Standard
526	19 628	22	2 497	017-04-07 00:00:00.000	True	Approved	WeareA2B	Standard
527	19 655	0	336	017-04-09 00:00:00.000	True	Approved	Norco Bicycles	Standard
528	19 853	7	3 072	017-04-02 00:00:00.000	False	Approved	Trek Bicycles	Road
529	19 899	57	325	017-04-06 00:00:00.000	False	Approved	WeareA2B	Touring
530	19 968	0	2 751	017-04-06 00:00:00.000	False	Approved	WeareA2B	Standard
531	19 988	0	13	017-04-05 00:00:00.000	True	Approved	Norco Bicycles	Road

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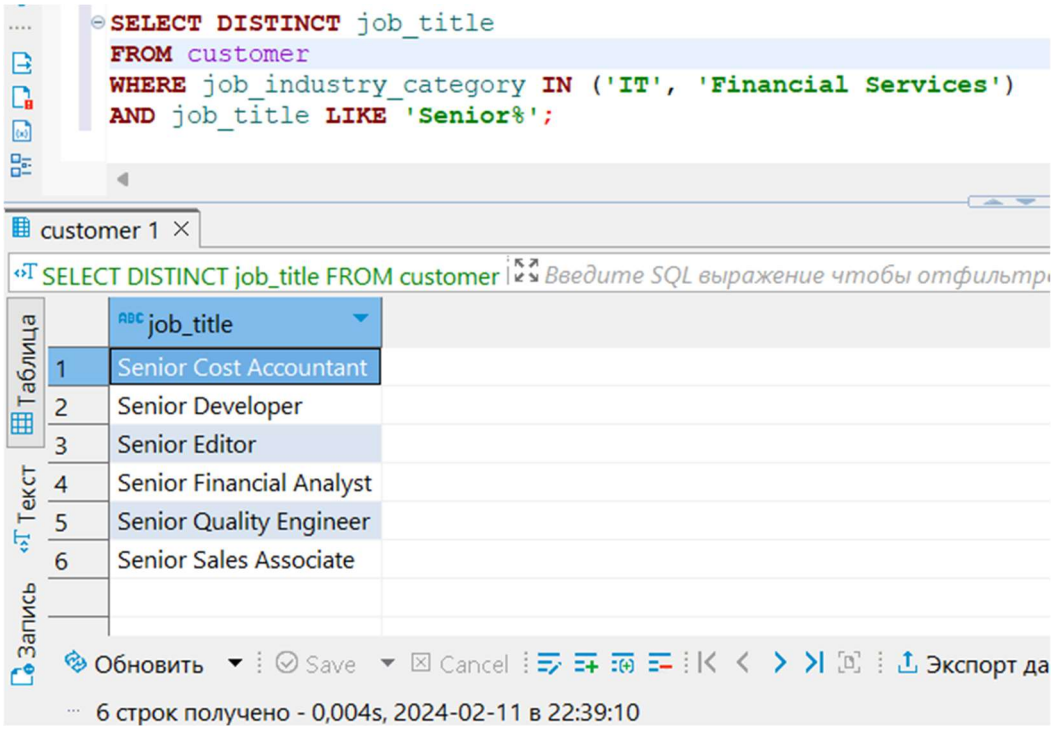
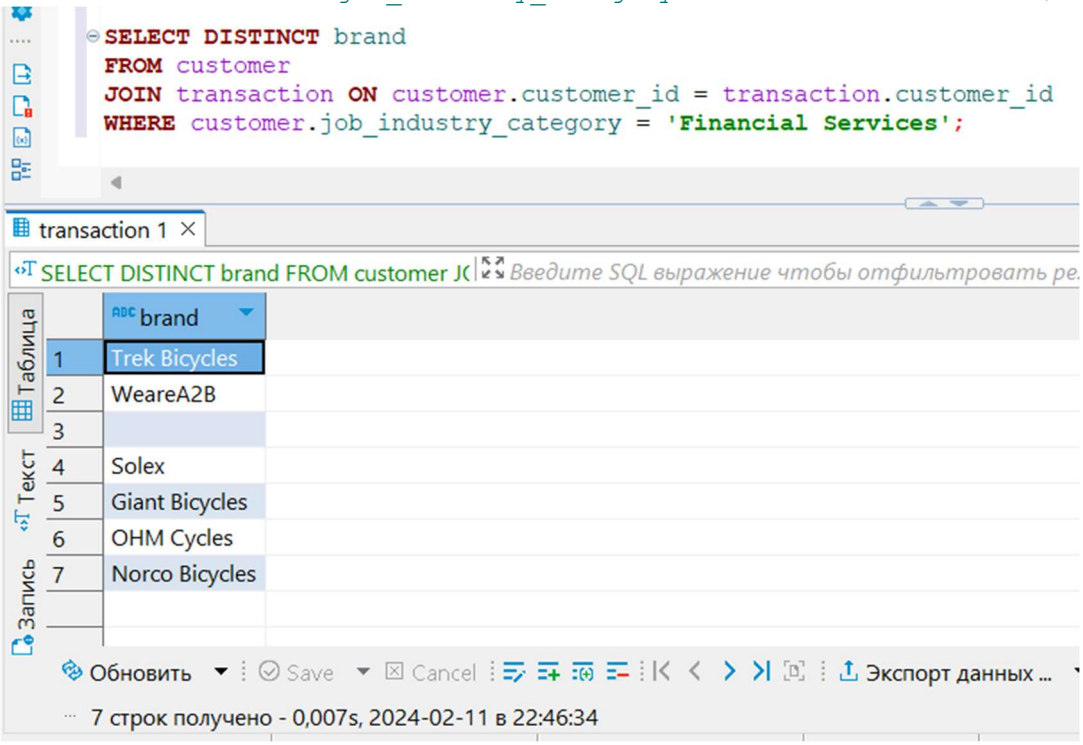
- **(1 балл) Вывести все профессии у клиентов из сферы IT или Financial Services, которые начинаются с фразы 'Senior'.**

```
SELECT DISTINCT job_title
FROM customer
WHERE job_industry_category IN ('IT', 'Financial Services')
AND job_title LIKE 'Senior%';
```



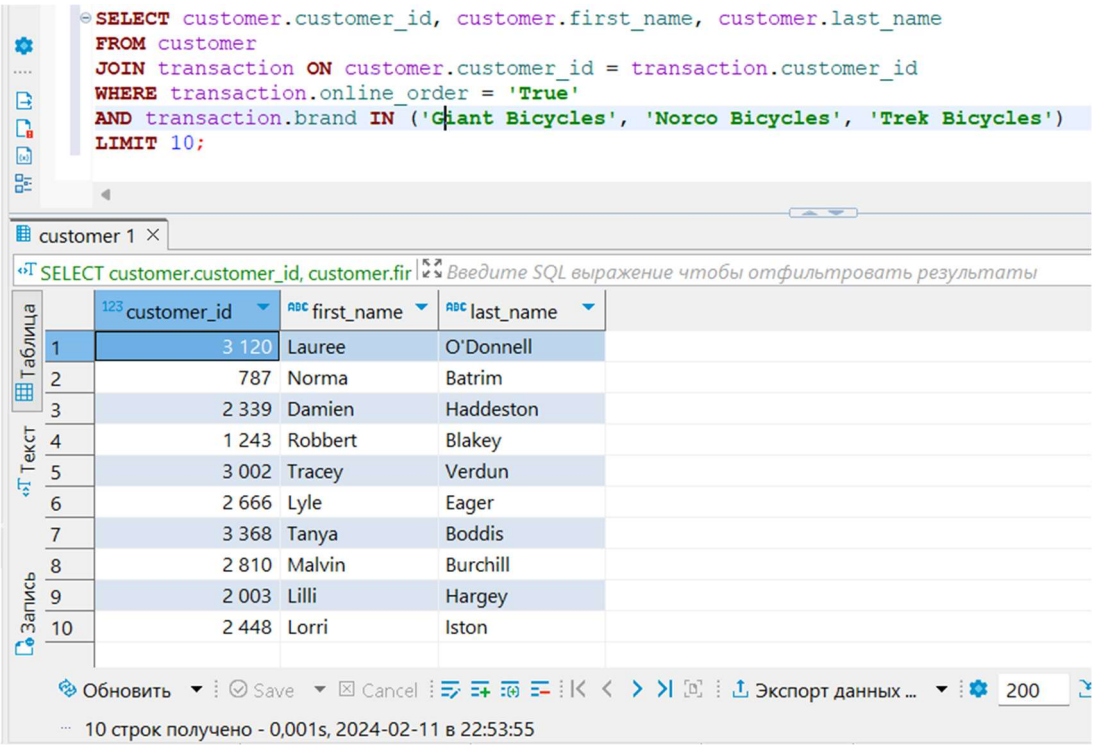
- **(1 балл) Вывести все бренды, которые закупают клиенты, работающие в сфере Financial Services**

```
SELECT DISTINCT brand
FROM customer
JOIN transaction ON customer.customer_id = transaction.customer_id
WHERE customer.job_industry_category = 'Financial Services';
```



- **(1 балл) Вывести 10 клиентов, которые оформили онлайн-заказ продукции из брендов 'Giant Bicycles', 'Norco Bicycles', 'Trek Bicycles'.**

```
SELECT customer.customer_id, customer.first_name, customer.last_name
FROM customer
JOIN transaction ON customer.customer_id = transaction.customer_id
WHERE transaction.online_order = 'True'
AND transaction.brand IN ('Giant Bicycles', 'Norco Bicycles', 'Trek
Bicycles')
LIMIT 10;
```



```
SELECT customer.customer_id, customer.first_name, customer.last_name
FROM customer
JOIN transaction ON customer.customer_id = transaction.customer_id
WHERE transaction.online_order = 'True'
AND transaction.brand IN ('Giant Bicycles', 'Norco Bicycles', 'Trek Bicycles')
LIMIT 10;
```

customer 1

SELECT customer.customer_id, customer.fir | Введите SQL выражение чтобы отфильтровать результаты

	customer_id	first_name	last_name
1	3 120	Lauree	O'Donnell
2	787	Norma	Batrim
3	2 339	Damien	Haddeston
4	1 243	Robbert	Blakey
5	3 002	Tracey	Verdun
6	2 666	Lyle	Eager
7	3 368	Tanya	Boddis
8	2 810	Malvin	Burchill
9	2 003	Lilli	Hargey
10	2 448	Lorri	Iston

Таблица | Текст | Запись

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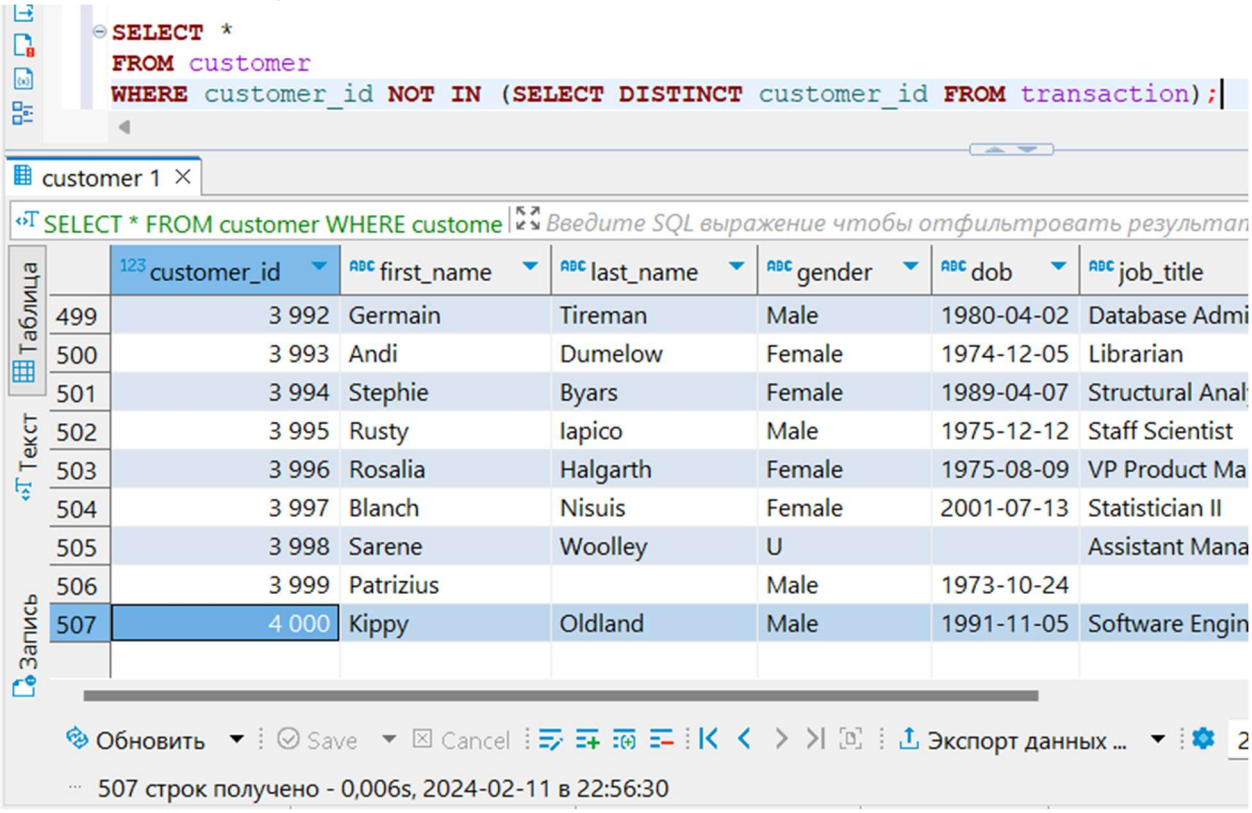
10 строк получено - 0,001s, 2024-02-11 в 22:53:55

- **(1 балл) Вывести всех клиентов, у которых нет транзакций.**

```
SELECT *
FROM customer
WHERE customer_id NOT IN (SELECT DISTINCT customer_id FROM
transaction);
```



```
SELECT *
FROM customer
WHERE customer_id NOT IN (SELECT DISTINCT customer_id FROM transaction);
```

customer 1

SELECT * FROM customer WHERE custome | Введите SQL выражение чтобы отфильтровать результат

Таблица | Текст | Запись

	customer_id	first_name	last_name	gender	dob	job_title
499	3 992	Germain	Tireman	Male	1980-04-02	Database Admi
500	3 993	Andi	Dumelow	Female	1974-12-05	Librarian
501	3 994	Stephie	Byars	Female	1989-04-07	Structural Anal
502	3 995	Rusty	Iapico	Male	1975-12-12	Staff Scientist
503	3 996	Rosalia	Halgarth	Female	1975-08-09	VP Product Ma
504	3 997	Blanch	Nisuis	Female	2001-07-13	Statistician II
505	3 998	Sarene	Woolley	U		Assistant Mana
506	3 999	Patrizius		Male	1973-10-24	
507	4 000	Kippy	Oldland	Male	1991-11-05	Software Engin

Обновить | Save | Cancel | Экспорт данных ...

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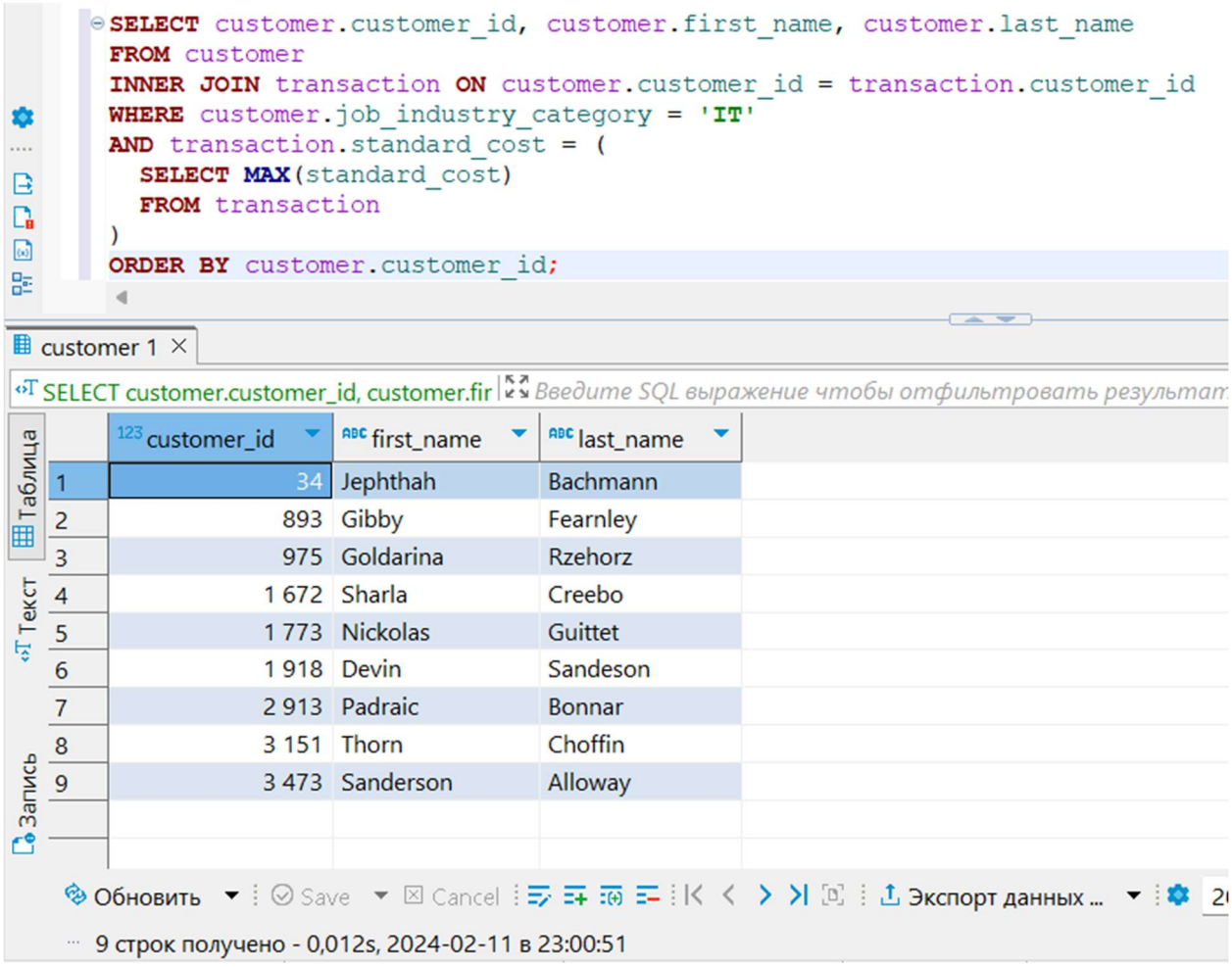
- **(2 балла) Вывести всех клиентов из IT, у которых транзакции с максимальной стандартной стоимостью.**

```sql
SELECT customer.customer_id, customer.first_name, customer.last_name
FROM customer
INNER JOIN transaction ON customer.customer_id =
transaction.customer_id
WHERE customer.job_industry_category = 'IT'
AND transaction.standard_cost = (
  SELECT MAX(standard_cost)
  FROM transaction
)
ORDER BY customer.customer_id;
```



```sql
SELECT customer.customer_id, customer.first_name, customer.last_name
FROM customer
INNER JOIN transaction ON customer.customer_id = transaction.customer_id
WHERE customer.job_industry_category = 'IT'
AND transaction.standard_cost = (
  SELECT MAX(standard_cost)
  FROM transaction
)
ORDER BY customer.customer_id;
```

customer 1

SELECT customer.customer_id, customer.fir | Введите SQL выражение чтобы отфильтровать результат

Таблица | Текст | Запись

	customer_id	first_name	last_name
1	34	Jephthah	Bachmann
2	893	Gibby	Fearnley
3	975	Goldarina	Rzehorz
4	1 672	Sharla	Creebo
5	1 773	Nickolas	Guittet
6	1 918	Devin	Sandeson
7	2 913	Padraic	Bonnar
8	3 151	Thorn	Choffin
9	3 473	Sanderson	Alloway

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- **(2 балла) Вывести всех клиентов из сферы IT и Health, у которых есть подтвержденные транзакции за период '2017-07-07' по '2017-07-17'.**

```
SELECT customer.customer_id, customer.first_name, customer.last_name
FROM customer
INNER JOIN transaction ON customer.customer_id =
transaction.customer_id
WHERE customer.job_industry_category IN ('IT', 'Health')
AND transaction.order_status = 'Approved'
AND transaction.transaction_date >= '2017-07-07'
AND transaction.transaction_date <= '2017-07-17';
```