

# Промежуточная аттестационная работа

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## 1. Найти самый дорогой товар. Вывести имя товара и его цену

```
SELECT name AS Most_expensive_Good, value AS Price_of_Good
FROM Goods JOIN Prices
ON Goods.id=Prices.id
WHERE value = (SELECT MAX(value) FROM Prices);
```

-Вывод Имени и Цены, используя присвоение нового имени AS

-Связь между таблицами по ключу

-Условие, по которому выбирается максимальное значение в столбце value табл. Prices, используя запрос SELECT.

The screenshot shows a database console interface with the following components:

- Query Editor:** Contains the SQL query:

```
1 SELECT name AS Most_expensive_Good, value AS Price_of_Good
2 FROM Goods JOIN Prices
3 ON Goods.id=Prices.id
4 WHERE value = (SELECT MAX(value) FROM Prices);
5
6
7
```
- Database Explorer:** Shows the database structure with tables: goods, manufacturer, prices, quantity, and suppliers.
- Services:** Lists various database services and their execution times, including console\_4 (14 s).
- Output:** Displays the result of the query as a table with two columns: `most_expensive_good` and `price_of_good`. The result is:

| most_expensive_good | price_of_good |
|---------------------|---------------|
| 1 Goods_20          | 19800         |

## 2. Найти товары с нулевым остатком. Вывести имя товара и его цену

```
SELECT name AS Name_of_Good, Prices.value AS Price_of_Good
FROM Goods JOIN Quantity
ON Goods_id=Goods.id
JOIN Prices
ON Goods.id=Prices.id
WHERE Quantity.value = 0;
```

-Вывод Имени и Цены, используя присвоение нового имени AS

-Связь между 2мя таблицами по ключам

-Условие, по которому выбирается значение, равное 0, в столбце value табл. Quantity

The screenshot shows a database console interface with a SQL query and its results. The query is as follows:

```
SELECT name AS Name_of_Good, Prices.value AS Price_of_Good
FROM Goods JOIN Quantity
ON Goods_id=Goods.id
JOIN Prices
ON Goods.id=Prices.id
WHERE Quantity.value = 0;
```

The results are displayed in a table with two columns: `name_of_good` and `price_of_good`. The table contains one row:

| name_of_good | price_of_good |
|--------------|---------------|
| Goods_5      | 4950          |

The console also shows a list of queries and their execution times on the left side, and a database schema on the right side.

### 3. Найти производителя с самой большой средней ценой за товары. Вывести имя производителя и среднюю стоимость

```
SELECT Manufacturer.name AS Name_of_Manufacturer, AVG(value) AS Average_price
FROM Goods JOIN Prices
         ON Goods.id=Prices.id
      JOIN Suppliers
         ON Suppliers.id=Goods.Supplier_id
      JOIN Manufacturer
         ON Manufacturer.id=Suppliers.manufacturer_id
GROUP BY Manufacturer.name
ORDER BY (AVG(value)) DESC
LIMIT 1
```

-Вывод Имени, и среднего значения стоимости (AVG), используя присвоение нового имени AS

-Связь между 3мя таблицами по ключам

-Группировка GROUP BY по полю Manufacturer.name (Иначе будет ошибка при выводе AVG(value))

-Сортировка ORDER BY по убыванию значения средней стоимости, чтобы максимальное - оказалось сверху таблицы

-Условие, по которому выбирается первое значение в столбце AVG(value)

The screenshot shows a database console interface with a SQL query being executed. The query is as follows:

```
SELECT Manufacturer.name AS Name_of_Manufacturer, AVG(value) AS Average_price
FROM Goods JOIN Prices
         ON Goods.id=Prices.id
      JOIN Suppliers
         ON Suppliers.id=Goods.Supplier_id
      JOIN Manufacturer
         ON Manufacturer.id=Suppliers.manufacturer_id
GROUP BY Manufacturer.name
ORDER BY (AVG(value)) DESC
LIMIT 1
```

The results of the query are displayed in the 'Output' pane, showing a single row:

|   | name_of_manufacturer | average_price      |
|---|----------------------|--------------------|
| 1 | Manufacturer_4       | 14126.666666666667 |

The 'Services' pane on the left shows the execution timeline of the query, indicating it took 2 s 960 ms to complete.

#### 4. Найти все товары производителей из Москвы. Вывести имена товаров, их цены и имена производителей

```
SELECT Goods.name AS Name_of_Good, Prices.value AS Price_of_Good,  
Manufacturer.name AS Name_of_Manufacture  
FROM Goods JOIN Manufacturer  
ON Goods.id=Manufacturer.id  
JOIN Prices  
ON Goods.id=Prices.id  
WHERE Location = 'Moscow';
```

-Вывод Имени, Цены, и Имени\_Производителя, используя присвоение нового имени AS

-Связь между 2мя таблицами по ключам

-Условие, по которому выбирается поле в столбце Location со значением Moscow таблицы Manufacturer

The screenshot shows a database console interface with a SQL query and its results. The query is as follows:

```
SELECT Goods.name AS Name_of_Good, Prices.value AS Price_of_Good, Manufacturer.name AS Na  
FROM Goods JOIN Manufacturer  
ON Goods.id=Manufacturer.id  
JOIN Prices  
ON Goods.id=Prices.id  
WHERE Location = 'Moscow';
```

The results are displayed in a table with 3 rows:

|   | name_of_good | price_of_good | name_of_manufacture |
|---|--------------|---------------|---------------------|
| 1 | Goods_1      | 990           | Manufacturer_1      |
| 2 | Goods_5      | 4950          | Manufacturer_5      |
| 3 | Goods_9      | 8910          | Manufacturer_9      |

The interface also shows a list of services on the left and a database schema on the right.

console\_4 [cdhassuf@rajje.db.elephantsql.com]

```
17 SELECT Goods.name AS Name_of_
18 FROM Goods JOIN Manufacturer
19 ON Goods.id=Manufacturer.id
20 JOIN Prices
21 ON Goods.id=Prices.id
22 WHERE Location = 'Moscow';
23
```

Services

- cdhassuf@rajje.db.elephantsql.com
  - default 8 s 826 ms
  - console 2 s 470 ms
  - console 2 s 470 ms
  - console\_1
  - console\_2 11 s 289 ms
  - console\_2 11 s
  - console\_3 5 s 819 ms
  - console\_3 5 s
  - console\_4 2 s 481 ms
  - console\_4 2 s 481 ms
  - manufacturer 6 s 608 ms
  - manufacturer
- widswcuu@salt.db.elephantsql.com
  - console

Visualization for public

manufacturer

- name varchar(50)
- inn integer
- location varchar(50)
- id integer

suppliers

- name varchar(50)
- manufacturer\_id integer
- id integer

goods

- name varchar(50)
- supplier\_id integer
- id integer

prices

- goods\_id integer
- value integer
- discount integer
- id integer

quantity

- value integer
- goods\_id integer

pg\_stat\_statements

- userid oid
- dbid oid
- queryid bigint
- query text
- calls bigint
- total\_time double precision
- min\_time double precision
- max\_time double precision
- mean\_time double precision
- stddev\_time double precision
- rows bigint
- shared\_blks\_hit bigint
- shared\_blks\_read bigint
- shared\_blks\_dirtied bigint
- shared\_blks\_written bigint
- local\_blks\_hit bigint
- local\_blks\_read bigint
- local\_blks\_dirtied bigint
- local\_blks\_written bigint
- temp\_blks\_read bigint
- temp\_blks\_written bigint
- blk\_read\_time double precision
- blk\_write\_time double precision

Database

- cdhassuf@rajje.db.elephantsql.com 1 of 5,523
  - cdhassuf 1 of 3
    - public
      - tables 5
        - goods
        - manufacturer
        - prices
        - quantity
        - suppliers

\_of\_manufacture

- manufacturer\_1
- manufacturer\_5
- manufacturer\_9

## СТРУКТУРА ТАБЛИЦ