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Лабораторная работа №3
ЯЗЫК SQL. СОЗДАНИЕ ТАБЛИЦ И ОГРАНИЧЕНИЙ НА SQL

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Цель работы

Изучение структурированного языка запросов Transact - SQL, являющегося основой системы программирования SQL Server, и приобретение навыков применения инструментальных средств разработки и программирования объектов создаваемых баз данных. Изучить SQL-операторы для работы с таблицами и индексами. Изучить sql-команды для создания, изменения и удаления таблиц. Изучить используемые в SQL Server типы ограничений. Изучить SQL-операторы для работы с ограничениями.

```
SELECT COUNT(*) as count FROM product WHERE storage_conditions='cold'
```

```
SELECT COUNT(DISTINCT type_payment) as count FROM supplier
```

	count
1	3

	count
1	2

```
SELECT SUM(summ) as sum FROM product_sale
```

```
SELECT SUM(summ) as sum FROM product_sale WHERE id<3
```

	sum
1	74

	sum
1	19

```
SELECT *, UPPER(department_name) as name FROM department
```

```
SELECT *, UPPER(name_client) as name FROM client
```

	id	department_name	amount_counters	amount_seller	number_hall	name
1	1	fruit	3	2	1	FRUIT
2	2	meat	2	3	3	MEAT
3	3	vegetables	3	2	2	VEGATABLES
4	4	cereals	1	1	5	CEREALS
5	5	beverages	4	2	6	BEVERAGES

	id	name_client	adress	payment	name
1	1	Halnazar	Minsk	card	HALNAZAR
2	2	Andrey	Vitebsk	cash	ANDREY
3	3	Victor	Moscow	card	VICTOR
4	4	Sergey	Tomsk	cash	SERGEY
5	5	Leo	Barcelona	card	LEO

SELECT *, LOWER(department_name) as name FROM department

SELECT *, LOWER(name_client) as name FROM client

	id	department_name	amount_counters	amount_seller	number_hall	name
1	1	fruit	3	2	1	fruit
2	2	meat	2	3	3	meat
3	3	vegetables	3	2	2	vegetables
4	4	cereals	1	1	5	cereals
Click to select the whole row				2	6	beverages

	id	name_client	adress	payment	name
1	1	Halnazar	Minsk	card	halnazar
2	2	Andrey	Vitebsk	cash	andrey
3	3	Victor	Moscow	card	victor
4	4	Sergey	Tomsk	cash	sergey
5	5	Leo	Barcelona	card	leo

SELECT *, MONTH(time) as month FROM product_sale

SELECT *, YEAR(time) as year FROM product_sale

	id	date	time	amount	prime	summ	product_id	month
1	1	2022-10-01	2022-10-03 17:00:00.000	3	5	15	3	10
2	2	2022-10-02	2022-10-03 18:00:00.000	2	2	4	1	10
3	3	2022-09-30	2022-10-03 14:00:00.000	10	2	20	2	10
4	4	2022-10-01	2022-10-03 13:00:00.000	20	1	20	5	10
5	5	2022-09-29	2022-10-03 12:00:00.000	5	3	15	4	10

	id	date	time	amount	prime	summ	product_id	year
1	1	2022-10-01	2022-10-03 17:00:00.000	3	5	15	3	2022
2	2	2022-10-02	2022-10-03 18:00:00.000	2	2	4	1	2022
3	3	2022-09-30	2022-10-03 14:00:00.000	10	2	20	2	2022
4	4	2022-10-01	2022-10-03 13:00:00.000	20	1	20	5	2022
5	5	2022-09-29	2022-10-03 12:00:00.000	5	3	15	4	2022

SELECT date, SUM(summ) as sum FROM product_sale GROUP BY date

SELECT date, SUM(amount) as sum FROM product_sale GROUP BY date

	date	sum
1	2022-09-29	15
2	2022-09-30	20
3	2022-10-01	35
4	2022-10-02	4

	date	sum
1	2022-09-29	5
2	2022-09-30	10
3	2022-10-01	23
4	2022-10-02	2

SELECT COUNT(*) from department HAVING COUNT(*) > 3;

SELECT COUNT(*) from client HAVING COUNT(*) > 3;

	(No column name)
1	5

	(No column name)
1	5

SELECT * FROM department WHERE id>0 ORDER BY amount_counters

SELECT * FROM department WHERE id>0 ORDER BY amount_seller

	id	department_name	amount_counters	amount_seller	number_hall
1	4	cereals	1	1	5
2	2	meat	2	3	3
3	3	vegetables	3	2	2
4	1	fruit	3	2	1
5	5	beverages	4	2	6

	id	department_name	amount_counters	amount_seller	number_hall
1	4	cereals	1	1	5
2	5	beverages	4	2	6
3	1	fruit	3	2	1
4	3	vegetables	3	2	2
5	2	meat	2	3	3

INSERT INTO client(name_client, adress, payment) VALUES ('Igor', 'Minsk', 'card')

INSERT INTO client(name_client, adress, payment) VALUES ('Vasya', 'Minsk', 'card')

	id	name_client	adress	payment
1	1	Halnazar	Minsk	card
2	2	Andrey	Vitebsk	cash
3	3	Victor	Moscow	card
4	4	Sergey	Tomsk	cash
5	5	Leo	Barcelona	card
6	6	Igor	Minsk	card
7	7	Vasya	Minsk	card

UPDATE client SET adress='Barcelona' WHERE id=1

UPDATE client SET adress='Asgabat' WHERE id=4

	id	name_client	adress	payment
1	1	Halnazar	Barcelona	card
2	2	Andrey	Vitebsk	cash
3	3	Victor	Moscow	card
4	4	Sergey	Asgabat	cash
5	5	Leo	Barcelona	card
6	6	Igor	Minsk	card
7	7	Vasya	Minsk	card

DELETE FROM client WHERE id=2

DELETE FROM client WHERE id=3

	id	name_client	adress	payment
1	1	Halnazar	Barcelona	card
2	2	Andrey	Vitebsk	cash
3	3	Victor	Moscow	card
4	4	Sergey	Asgabat	cash
5	5	Leo	Barcelona	card