

Министерство образования Республики Беларусь

Учреждение образования

«БЕЛОРУССКИЙ ГОСУДАРСТВЕННЫЙ УНИВЕРСИТЕТ
ИНФОРМАТИКИ И РАДИОЭЛЕКТРОНИКИ»

Факультет компьютерного проектирования

Кафедра экономической информатики

ОТЧЁТ

Лабораторная работа №4.2

«Выборка из одной таблицы. Выборка с добавлением.

Выбор уникальных строк. Извлечение диапазона строк. Сортировка.»

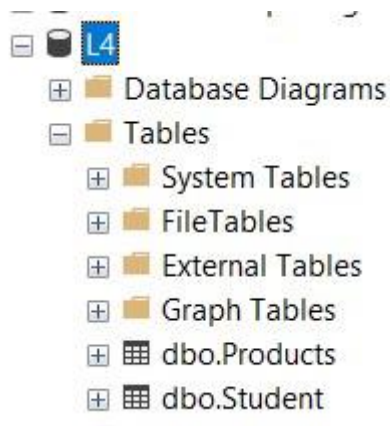
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Минск 2023

1. Создать таблицу Products.



2. Заполнить данными таблицу.

Результаты		Сообщения			
	Id	ProductName	Manufacturer	ProductCount	Price
1	1	GalaxyS8	Samsung	2	46000,00
2	2	GalaxyS8Plus	Samsung	1	56000,00
3	3	iPhone6	Apple	3	36000,00
4	4	iPhone6S	Apple	2	4100,00
5	5	iPhone7	Apple	5	52000,00
6	6	Mi6	Xiaomi	5	28,00
7	7	OnePlus5	OnePlus	6	38000,00

3. Произвести выборку данных по 3-м столбцам.

```
1 Use L4
2 Select ProductName + ' (' + Manufacturer + ')' As [Name (Manufacturer)], Price, Price * ProductCount As [General price]
3 from Products;
```

89 %

Результаты		Сообщения	
	Name (Manufacturer)	Price	General price
1	GalaxyS8 (Samsung)	46000,00	92000,00
2	GalaxyS8Plus (Samsung)	56000,00	56000,00
3	iPhone6 (Apple)	36000,00	108000,00
4	iPhone6S (Apple)	4100,00	8200,00
5	iPhone7 (Apple)	52000,00	260000,00
6	Mi6 (Xiaomi)	28,00	140,00
7	OnePlus5 (OnePlus)	38000,00	228000,00

5. Выборка данных с добавлением.

The screenshot displays the Microsoft SQL Server Enterprise Manager interface. The left pane shows the 'Обозреватель объектов' (Object Explorer) with the 'L4' database selected. The right pane shows the 'SQLQuery18.sql' script with the following query:

```
1 Use L4
2 Select ProductName + ' (' + Manufacturer + ')' As [Name (Manufacturer)],
3 Price into [General price]
4 from Products Select * from [General price]
```

Below the query editor, the 'Результаты' (Results) tab is active, showing the output of the query. The results are displayed in a table with two columns: 'Name (Manufacturer)' and 'Price'.

	Name (Manufacturer)	Price
1	GalaxyS8 (Samsung)	46000.00
2	GalaxyS8Plus (Samsung)	56000.00
3	iPhone6 (Apple)	36000.00
4	iPhone6S (Apple)	4100.00
5	iPhone7 (Apple)	52000.00
6	Mi6 (Xiaomi)	28.00
7	OnePlus5 (OnePlus)	38000.00

6. Сортировка по возрастанию, убыванию, по столбцам Manufacturer и ProductName.

1 Use L4
 2 Select * from Products
 3 Order by ProductName Asc;
 4
 5 Select * from Products
 6 Order by ProductName desc;
 7
 8 Select * from Products
 9 Order by Manufacturer Asc, ProductName Asc;

89 %

Результаты Сообщения

	Id	ProductName	Manufacturer	ProductCount	Price
1	1	GalaxyS8	Samsung	2	46000,00
2	2	GalaxyS8Plus	Samsung	1	56000,00
3	3	iPhone6	Apple	3	36000,00
4	4	iPhone6S	Apple	2	4100,00
5	5	iPhone7	Apple	5	52000,00
6	6	Mi6	Xiaomi	5	28,00
7	7	OnePlus5	OnePlus	6	38000,00

	Id	ProductName	Manufacturer	ProductCount	Price
1	7	OnePlus5	OnePlus	6	38000,00
2	6	Mi6	Xiaomi	5	28,00
3	5	iPhone7	Apple	5	52000,00
4	4	iPhone6S	Apple	2	4100,00
5	3	iPhone6	Apple	3	36000,00
6	2	GalaxyS8Plus	Samsung	1	56000,00
7	1	GalaxyS8	Samsung	2	46000,00

	Id	ProductName	Manufacturer	ProductCount	Price
1	3	iPhone6	Apple	3	36000,00
2	4	iPhone6S	Apple	2	4100,00
3	5	iPhone7	Apple	5	52000,00
4	7	OnePlus5	OnePlus	6	38000,00
5	1	GalaxyS8	Samsung	2	46000,00
6	2	GalaxyS8Plus	Samsung	1	56000,00
7	6	Mi6	Xiaomi	5	28,00

7. Сортировка по псевдониму столбца

```
1 Use L4
2 Select ProductName, ProductCount * Price As TotalSum
3 from Products order by TotalSum;
```

89 %

Результаты Сообщения

	ProductName	TotalSum
1	Mi6	140,00
2	iPhone6S	8200,00
3	GalaxyS8Plus	56000,00
4	GalaxyS8	92000,00
5	iPhone6	108000,00
6	OnePlus5	228000,00
7	iPhone7	260000,00

8. Использование сложного выражения в качестве критерия сортировки

```
1 Use L4
2 Select ProductName, Price, ProductCount
3 from Products order by ProductCount * Price;
```

89 %

Результаты Сообщения

	ProductName	Price	ProductCount
1	Mi6	28,00	5
2	iPhone6S	4100,00	2
3	GalaxyS8Plus	56000,00	1
4	GalaxyS8	46000,00	2
5	iPhone6	36000,00	3
6	OnePlus5	38000,00	6
7	iPhone7	52000,00	5

Самостоятельная работа:

Скрипт выполнения самостоятельной работы:

```
Use AdventureWorksDW2019
Select Top 10 FirstName + ' ' + LastName As FIO, TotalChildren, TotalChildren -
NumberChildrenAtHome
As [Number of children outside of home]
From DimCustomer;

Select Top 10 FirstName + ' ' + LastName As FIO, TotalChildren
into ChildrenInfo
From DimCustomer;

Select * from ChildrenInfo

Select Top 10 FirstName, TotalChildren - NumberChildrenAtHome
As [Number of children outside of home]
from DimCustomer
Order by [Number of children outside of home]

Select Top 10 * from DimCustomer
Order by LastName Asc

Select Top 10 * from DimCustomer
Order by LastName Desc

Select Top 10 * from DimCustomer
Order by TotalChildren Asc, LastName Asc

Select Top 10 LastName, TotalChildren, NumberChildrenAtHome
From DimCustomer
Order by TotalChildren - NumberChildrenAtHome
```

Выполнение:

```
1 Use AdventureWorksDW2019
2 Select Top 10 FirstName + ' ' + LastName As FIO, TotalChildren, TotalChildren - NumberChildrenAtHome
3 As [Number of children outside of home]
4 From DimCustomer;
5
6 Select Top 10 FirstName + ' ' + LastName As FIO, TotalChildren
7 into ChildrenInfo
8 From DimCustomer;
9
10 Select * from ChildrenInfo
11
12 Select Top 10 FirstName, TotalChildren - NumberChildrenAtHome
13 As [Number of children outside of home]
14 from DimCustomer
15 Order by [Number of children outside of home]
16
17 Select Top 10 * from DimCustomer
18 Order by LastName Asc
19
20 Select Top 10 * from DimCustomer
21 Order by LastName Desc
```

89 %

Результаты

Сообщения

9	27629	135	AW00027629	NULL	Christy	A	Zimmer...	0	1984-05-02	S	NULL	F	cnrstyue@adventure-works.c...	3000
10	28630	66	AW00028630	NULL	Jack	NULL	Zimmer...	0	1970-11-09	S	NULL	M	jack24@adventure-works.com	4000

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	CustomerKey	GeographyKey	CustomerAlternateKey	Title	FirstName	MiddleName	LastName	NameStyle	BirthDate	MaritalStatus	Suffix	Gender	EmailAddress	Year
2	11931	352	AW00011931	NULL	Marcus	M	Adams	0	1984-05-12	S	NULL	M	marcus34@adventure-works.c...	700
3	11971	322	AW00011971	NULL	Amanda	P	Adams	0	1979-03-03	S	NULL	F	amanda58@adventure-works....	800
4	14581	547	AW00014581	NULL	Kevin	M	Adams	0	1978-10-17	S	NULL	M	kevin54@adventure-works.com	400
5	14640	51	AW00014640	NULL	Macken...	A	Adams	0	1973-03-03	S	NULL	F	mackenzie36@adventure-wor...	500
6	15715	27	AW00015715	NULL	Isabella	NULL	Adams	0	1980-12-17	S	NULL	F	isabella46@adventure-works.c...	600
7	16845	383	AW00016845	NULL	Andrea	M	Adams	0	1975-09-12	S	NULL	F	andrea37@adventure-works.c...	1700
8	16854	385	AW00016854	NULL	Seth	L	Adams	0	1980-02-20	M	NULL	M	seth33@adventure-works.com	1700
9	16977	316	AW00016977	NULL	Noah	B	Adams	0	1972-04-04	S	NULL	M	noah41@adventure-works.com	600

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LastName	TotalChildren	NumberChildrenAtHome
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Результаты:

Результаты Сообщения

	FIO	TotalChildren	Number of children outside of home
1	Jon Yang	2	2
2	Eugene Huang	3	0
3	Ruben Torres	3	0
4	Christy Zhu	0	0
5	Elizabeth Johnson	5	0
6	Julio Ruiz	0	0
7	Janet Alvarez	0	0
8	Marco Mehta	3	0

	FIO	TotalChildren
3	Ruben Torres	3
4	Christy Zhu	0
5	Elizabeth Johnson	5
6	Julio Ruiz	0
7	Janet Alvarez	0
8	Marco Mehta	3
9	Rob Verhoff	4
10	Shannon Carlson	0

	FirstName	Number of children outside of home
1	Jon	2
2	Eugene	0
3	Ruben	0
4	Christy	0
5	Elizabeth	0

	CustomerKey	GeographyKey	CustomerAlternateKey	Title	FirstName	MiddleName	LastName	NameStyle	BirthDate	MaritalStatus	Suffix	Gender	EmailAddress
3	11659	66	AW00011659	NULL	Miguel	NULL	Adams	0	1974-10-20	S	NULL	M	miguel32@adventure-works.com
4	11869	71	AW00011869	NULL	Kaitlyn	A	Adams	0	1984-05-01	S	NULL	F	kaitlyn13@adventure-works.com
5	11931	352	AW00011931	NULL	Marcus	M	Adams	0	1984-05-12	S	NULL	M	marcus34@adventure-works.com
6	11971	322	AW00011971	NULL	Amanda	P	Adams	0	1979-03-03	S	NULL	F	amanda58@adventure-works.com
7	12154	71	AW00012154	NULL	Hailey	M	Adams	0	1967-07-21	S	NULL	F	hailey55@adventure-works.com
8	12663	223	AW00012663	NULL	Morgan	NULL	Adams	0	1952-12-21	M	NULL	F	morgan12@adventure-works.com
9	12889	547	AW00012889	NULL	James	NULL	Adams	0	1977-05-26	M	NULL	M	james66@adventure-works.com
10	12901	552	AW00012901	NULL	Robert	Q	Adams	0	1974-08-12	M	NULL	M	robert57@adventure-works.com

	CustomerKey	GeographyKey	CustomerAlternateKey	Title	FirstName	MiddleName	LastName	NameStyle	BirthDate	MaritalStatus	Suffix	Gender	EmailAddress	Year	⌵
3	17228	32	AW00017228	NULL	Krystal	NULL	Zimmer...	0	1981-05-20	S	NULL	F	krystal10@adventure-works...	6000	
4	18197	3	AW00018197	NULL	Jenny	NULL	Zimmer...	0	1980-01-10	M	NULL	F	jenny30@adventure-works.c...	1100	
5	22192	627	AW00022192	NULL	Henry	NULL	Zimmer...	0	1982-03-11	S	NULL	M	henry1@adventure-works.com	6000	
6	23325	34	AW00023325	NULL	Tiffany	E	Zimmer...	0	1956-08-21	M	NULL	F	tiffany20@adventure-works.c...	2000	
7	26754	36	AW00026754	NULL	Candice	J	Zimmer...	0	1966-04-01	S	NULL	F	candice3@adventure-works...	6000	
8	27214	300	AW00027214	NULL	Bianca	A	Zimmer...	0	1961-12-01	M	NULL	F	bianca0@adventure-works.c...	2000	
9	27825	155	AW00027825	NULL	Christy	A	Zimmer...	0	1984-05-02	S	NULL	F	christy0@adventure-works.c...	3000	
10	28630	66	AW00028630	NULL	Jack	NULL	Zimmer...	0	1970-11-09	S	NULL	M	jack24@adventure-works.com	4000	⌵

	CustomerKey	GeographyKey	CustomerAlternateKey	Title	FirstName	MiddleName	LastName	NameStyle	BirthDate	MaritalStatus	Suffix	Gender	EmailAddress	Yer	⌵
2	11931	352	AW00011931	NULL	Marcus	M	Adams	0	1984-05-12	S	NULL	M	marcus34@adventure-works.c...	70	
3	11971	322	AW00011971	NULL	Amanda	P	Adams	0	1979-03-03	S	NULL	F	amanda58@adventure-works...	80	
4	14581	547	AW00014581	NULL	Kevin	M	Adams	0	1978-10-17	S	NULL	M	kevin54@adventure-works.com	40	
5	14640	51	AW00014640	NULL	Macken...	A	Adams	0	1973-03-03	S	NULL	F	mackenzie36@adventure-wor...	50	
6	15715	27	AW00015715	NULL	Isabella	NULL	Adams	0	1980-12-17	S	NULL	F	isabella46@adventure-works...	60	
7	16845	383	AW00016845	NULL	Andrea	M	Adams	0	1975-09-12	S	NULL	F	andrea37@adventure-works.c...	17	
8	16854	385	AW00016854	NULL	Seth	L	Adams	0	1980-02-20	M	NULL	M	seth33@adventure-works.com	17	
9	16977	316	AW00016977	NULL	Noah	B	Adams	0	1972-04-04	S	NULL	M	noah41@adventure-works.com	60	⌵

	LastName	TotalChildren	NumberChildrenAtHome
3	Torres	3	3
4	Zhu	0	0
5	Johnson	5	5
6	Ruiz	0	0