## Слайд 1

Още SQL ...

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## Слайд 2

**Products**

| ProductID | ProductName | SupplierID | CategoryID | Unit | Price |
|---|---|---|---|---|---|
| 1 | Chais | 1 | 1 | 10 boxes x 20 bags | 18 |
| 2 | Chang | 1 | 1 | 24 - 12 oz bottles | 19 |
| 3 | Aniseed Syrup | 1 | 2 | 12 - 550 ml bottles | 10 |
| 4 | Chef Anton's Cajun Seasoning | 2 | 2 | 48 - 6 oz jars | 22 |
| 5 | Chef Anton's Gumbo Mix | 2 | 2 | 36 boxes | 21.35 |

nd a selection from the "Suppliers" table:

| SupplierID | SupplierName | ContactName | Address | City | PostalCode | Country |
|---|---|---|---|---|---|---|
| 1 | Exotic Liquid | Charlotte Cooper | 49 Gilbert St. | London | EC1 4SD | UK |
| 2 | New Orleans Cajun Delights | Shelley Burke | P.O. Box 78934 | New Orleans | 70117 | USA |
| 3 | Grandma Kelly's Homestead | Regina Murphy | 707 Oxford Rd. | Ann Arbor | 48104 | USA |
| 4 | Tokyo Traders | Yoshi Nagase | 9-8 Sekimai Musashino-shi | Tokyo | 100 | Japan |

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## Слайд 3

**SQL**

*SELECT SupplierName FROM Suppliers*
*WHERE EXISTS (SELECT ProductName FROM Products*
  *WHERE SupplierId = Suppliers.supplierId*
  *AND Price < 20);*


*SELECT SupplierNameFROM Suppliers*
*WHERE EXISTS (SELECT ProductName FROM Products*
  *WHERE SupplierId = Suppliers.supplierId*
  *AND Price = 22);*

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## Слайд 4

**SQL**

*SELECT column_name(s) FROM table_name*
*WHERE column_name IN (value1, value2, ...);*


*SELECT column_name(s) FROM table_name*
*WHERE column_name IN (SELECT STATEMENT);*

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## Слайд 5

**Customers**

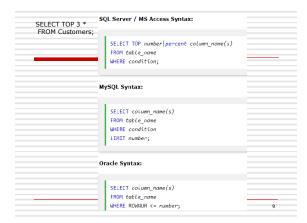| CustomerID | CustomerName | ContactName | Address | City | PostalCode | Country |
|---|---|---|---|---|---|---|
| 1 | Alfreds Futterkiste | Maria Anders | Obere Str. 57 | Berlin | 12209 | Germany |
| 2 | Ana Trujillo Emparedados y helados | Ana Trujillo | Avda. de la Constitución 2222 | México D.F. | 05021 | Mexico |
| 3 | Antonio Moreno Taquería | Antonio Moreno | Mataderos 2312 | México D.F. | 05023 | Mexico |
| 4 | Around the Horn | Thomas Hardy | 120 Hanover Sq. | London | WA1 1DP | UK |
| 5 | Berglunds snabbköp | Christina Berglund | Berguvsvägen 8 | Luleå | S-958 22 | Sweden |

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## Слайд 6

*Примери*

*SELECT * FROM Customers*
*WHERE Country IN ('Germany', 'France', 'UK');*


*SELECT * FROM Customers*
*WHERE Country NOT IN ('Germany', 'France', 'UK');*


*SELECT * FROM Customers WHERE*
*Country IN (SELECT Country FROM Suppliers);*

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## Slide 7

| ProductID | ProductName | SupplierID | CategoryID | Unit | Price |
|-----------|-------------|------------|------------|------|-------|
| 1 | Chais | 1 | 1 | 10 boxes x 20 bags | 18 |
| 2 | Chang | 1 | 1 | 24 - 12 oz bottles | 19 |
| 3 | Aniseed Syrup | 1 | 2 | 12 - 550 ml bottles | 10 |
| 4 | Chef Anton's Cajun Seasoning | 2 | 2 | 48 - 6 oz jars | 22 |
| 5 | Chef Anton's Gumbo Mix | 2 | 2 | 36 boxes | 21.35 |

nd a selection from the "OrderDetails" table:

| OrderDetailID | OrderID | ProductID | Quantity |
|---------------|---------|-----------|----------|
| 1 | 10248 | 11 | 12 |
| 2 | 10248 | 42 | 10 |
| 3 | 10248 | 72 | 5 |
| 4 | 10249 | 14 | 9 |
| 5 | 10249 | 51 | 40 |

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## Slide 8

**Примери**

*SELECT ProductName FROM Products*
*WHERE ProductID*
*= ANY (SELECT ProductID FROM OrderDetails WHERE Quantity = 10);*

*SELECT ProductName FROM Products*
*WHERE ProductID*
*= ANY (SELECT ProductID FROM OrderDetails WHERE Quantity > 99);*

*SELECT ProductName FROM Products*
*WHERE ProductID*
*= ALL (SELECT ProductID FROM OrderDetails WHERE Quantity = 10);*

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## Slide 9

**SQL Server / MS Access Syntax:**

SELECT TOP 3 *
FROM Customers;

```
SELECT TOP number|percent column_name(s)
FROM table_name
WHERE condition;
```

**MySQL Syntax:**

```
SELECT column_name(s)
FROM table_name
WHERE condition
LIMIT number;
```

**Oracle Syntax:**

```
SELECT column_name(s)
FROM table_name
WHERE ROWNUM <= number;
```
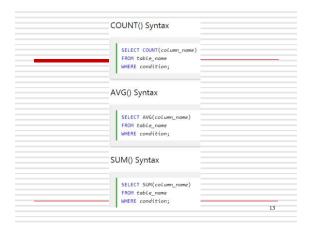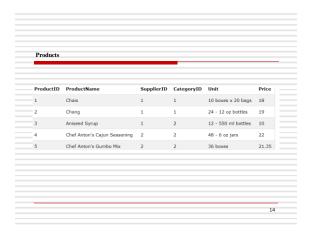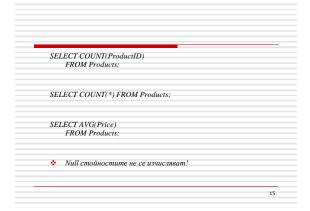
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## Slide 10

5-те най-големи купувача по количество стоки

SELECT TOP 5 Customers.CustomerName,
SUM(OrderDetails.Quantity) FROM Customer, Orders,
OrderDetails WHERE
Customers.Customerid=Order.CustomerID AND
Order.OrderID=OrderDetails.OrderID
GROUP BY Customers.CustomerName

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## Slide 11

| ProductID | ProductName | SupplierID | CategoryID | Unit | Price |
|-----------|-------------|------------|------------|------|-------|
| 1 | Chais | 1 | 1 | 10 boxes x 20 bags | 18 |
| 2 | Chang | 1 | 1 | 24 - 12 oz bottles | 19 |
| 3 | Aniseed Syrup | 1 | 2 | 12 - 550 ml bottles | 10 |
| 4 | Chef Anton's Cajun Seasoning | 2 | 2 | 48 - 6 oz jars | 22 |
| 5 | Chef Anton's Gumbo Mix | 2 | 2 | 36 boxes | 21.35 |

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## Slide 12

**Примери**

- *SELECT MIN(Price) AS SmallestPrice*
  *FROM Products;*

- *SELECT MAX(Price) AS LargestPrice*
  *FROM Products;*

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## COUNT() Syntax

```sql
SELECT COUNT(column_name)
FROM table_name
WHERE condition;
```

## AVG() Syntax

```sql
SELECT AVG(column_name)
FROM table_name
WHERE condition;
```

## SUM() Syntax

```sql
SELECT SUM(column_name)
FROM table_name
WHERE condition;
```

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### Products

| ProductID | ProductName | SupplierID | CategoryID | Unit | Price |
|-----------|-------------|------------|------------|------|-------|
| 1 | Chais | 1 | 1 | 10 boxes x 20 bags | 18 |
| 2 | Chang | 1 | 1 | 24 - 12 oz bottles | 19 |
| 3 | Aniseed Syrup | 1 | 2 | 12 - 550 ml bottles | 10 |
| 4 | Chef Anton's Cajun Seasoning | 2 | 2 | 48 - 6 oz jars | 22 |
| 5 | Chef Anton's Gumbo Mix | 2 | 2 | 36 boxes | 21.35 |

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*SELECT COUNT(ProductID)*
*FROM Products;*

*SELECT COUNT(\*) FROM Products;*

*SELECT AVG(Price)*
*FROM Products;*

❖ *Null стойностите не се изчисляват!*

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### OrderDetails

| OrderDetailID | OrderID | ProductID | Quantity |
|---------------|---------|-----------|----------|
| 1 | 10248 | 11 | 12 |
| 2 | 10248 | 42 | 10 |
| 3 | 10248 | 72 | 5 |
| 4 | 10249 | 14 | 9 |
| 5 | 10249 | 51 | 40 |

*SELECT SUM(Quantity) FROM OrderDetails;*

❖ *Без Null стойности*

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- % - The percent sign represents zero, one, or multiple characters
- _ - The underscore represents a single character

*SELECT column1, column2, ... FROM table_name*
*WHERE columnN **LIKE** pattern;*

| LIKE Operator | Description |
|---------------|-------------|
| WHERE CustomerName LIKE 'a%' | Finds any values that start with "a" |
| WHERE CustomerName LIKE '%a' | Finds any values that end with "a" |
| WHERE CustomerName LIKE '%or%' | Finds any values that have "or" in any position |
| WHERE CustomerName LIKE '_r%' | Finds any values that have "r" in the second position |
| WHERE CustomerName LIKE 'a_%_%' | Finds any values that start with "a" and are at least 3 characters in length |
| WHERE ContactName LIKE 'a%o' | Finds any values that start with "a" and ends with "o" |

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## SQL

SELECT * FROM Customers WHERE City LIKE '[bsp]%';

SELECT * FROM Customers WHERE City LIKE '[a-c]%';

SELECT * FROM Customers WHERE City LIKE '[!bsp]%';

ИЛИ

SELECT * FROM Customers WHERE City NOT LIKE
'[bsp]%';

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## Slide 19

SELECT * FROM Products
WHERE Price BETWEEN 10 AND 20;

| ProductID | ProductName | SupplierID | CategoryID | Unit | Price |
|---|---|---|---|---|---|
| 1 | Chais | 1 | 1 | 10 boxes x 20 bags | 18 |
| 2 | Chang | 1 | 1 | 24 - 12 oz bottles | 19 |
| 3 | Aniseed Syrup | 1 | 2 | 12 - 550 ml bottles | 10 |
| 4 | Chef Anton's Cajun Seasoning | 1 | 2 | 48 - 6 oz jars | 22 |
| 5 | Chef Anton's Gumbo Mix | 1 | 2 | 36 boxes | 21.35 |

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## Slide 20

SELECT *column_name(s)* FROM *table_name*
WHERE *condition* GROUP BY *column_name(s)*
HAVING *condition* ORDER BY *column_name(s);*

| CustomerID | CustomerName | ContactName | Address | City | PostalCode | Country |
|---|---|---|---|---|---|---|
| 1 | Alfreds Futterkiste | Maria Anders | Obere Str. 57 | Berlin | 12209 | Germany |
| 2 | Ana Trujillo Emparedados y helados | Ana Trujillo | Avda. de la Constitución 2222 | México D.F. | 05021 | Mexico |
| 3 | Antonio Moreno Taquería | Antonio Moreno | Mataderos 2312 | México D.F. | 05023 | Mexico |
| 4 | Around the Horn | Thomas Hardy | 120 Hanover Sq. | London | WA1 1DP | UK |
| 5 | Berglunds snabbköp | Christina Berglund | Berguvsvägen 8 | Luleå | S-958 22 | Sweden |

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## Slide 21

*SELECT COUNT(CustomerID), Country*
*FROM Customers*
*GROUP BY Country*
*HAVING COUNT(CustomerID) > 5;*

*SELECT COUNT(CustomerID), Country*
*FROM Customers*
*GROUP BY Country*
*HAVING COUNT(CustomerID) > 5*
*ORDER BY COUNT(CustomerID) DESC;*

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## Slide 22

SELECT *
INTO *newtable* [IN *externaldb*]
FROM *oldtable*
WHERE *condition*;

SELECT *column1*, *column2*, *column3*, ...
INTO *newtable* [IN *externaldb*]
FROM *oldtable*
WHERE *condition;*

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## Slide 23

CASE
    WHEN *condition1* THEN *result1*
    WHEN *condition2* THEN *result2*
    WHEN *conditionN* THEN *resultN*
    ELSE *result*
END;

| OrderDetailID | OrderID | ProductID | Quantity |
|---|---|---|---|
| 1 | 10248 | 11 | 12 |
| 2 | 10248 | 42 | 10 |
| 3 | 10248 | 72 | 5 |
| 4 | 10249 | 14 | 9 |
| 5 | 10249 | 51 | 40 |

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## Slide 24

**Примери**

SELECT OrderID, Quantity,
    CASE
        WHEN Quantity > 30 THEN "The quantity is greater than 30"
        WHEN Quantity = 30 THEN "The quantity is 30"
        ELSE "The quantity is under 30"
    END
    FROM OrderDetails;

SELECT CustomerName, City, Country
    FROM Customers
    ORDER BY
    (CASE
        WHEN City IS NULL THEN Country
        ELSE City
    END);

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# КРАЙ

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