Sorting Rows

POWERING POTENTIAL
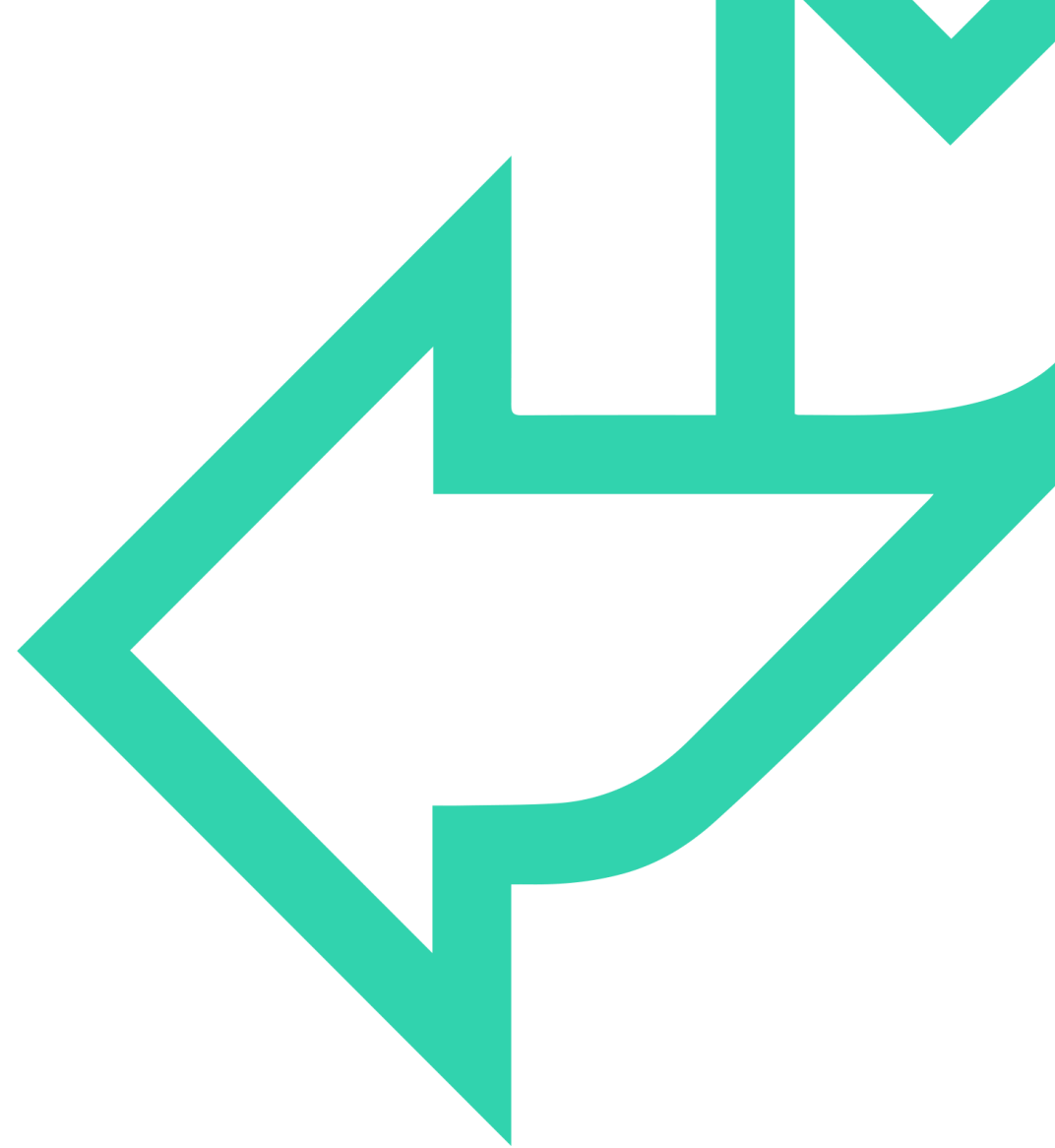
Overview

- ORDER BY clause
- Sort order
- Sort on multiple columns
- Sort on expressions
- Eliminate duplicates - DISTINCT
- Limit results - TOP
- Hands-on lab

OBJECTIVES

At the end of this module you will be able to:

- write a query that sorts on a single column
- write a query that sorts on multiple columns
- write a query that sorts on a calculated column
- write a query that selects unique values
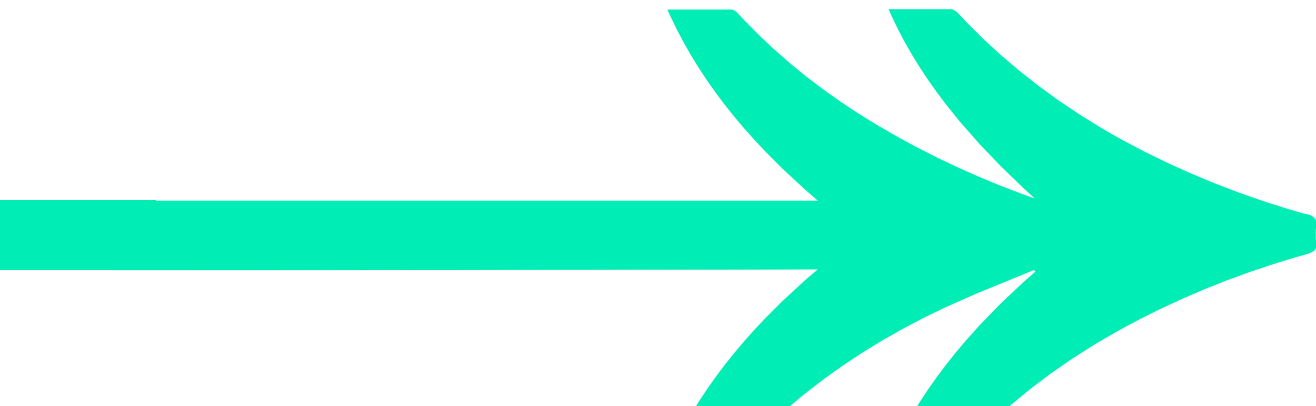- write a query that returns only a specified number of rows

ORDER BY clause

ORDER BY
clause

SELECT <<field(s)>>

FROM <<table(s)>>

WHERE <<condition(s)>>

GROUP BY *<<field(s)>>*

HAVING *<<condition(s)>>*

ORDER BY *<<field(s)>>*

Sort order

Sort order

- **ASC – ascending**
  - Default
- **DESC – descending**

```
SELECT
    ProductName,
    UnitPrice
FROM
    dbo.Products
ORDER BY
    UnitPrice DESC
```

Sort on multiple columns

Sort on multiple columns

- **Up to 16 columns in ORDER BY clause**

- **Sort columns do not have to be included in select list**

```
SELECT
    ProductID, ProductName,
    CategoryID, UnitPrice
FROM
    dbo.Products
ORDER BY
    CategoryID,
    UnitPrice DESC
```

Sort on expressions

Sort on expressions

- **ORDER BY**
  - *<<expression>>*
  - *<<expression-alias>>*
  - *<<expression-ordinal>>*

```
SELECT
    ProductName, UnitsInStock,
    UnitsOnOrder,
    UnitsInStock + UnitsOnOrder
        AS FutureStock
FROM
    dbo.Products
ORDER BY
    FutureStock DESC
```

	ProductName	UnitsInStock	UnitsOnOrder	FutureStock
1	Rhönbräu Klosterbier	125	0	125
2	Boston Crab Meat	123	0	123
3	Grandma's Boysenberry Spread	120	0	120
4	Pâté chinois	115	0	115
5	Sirop d'érable	113	0	113
6	Geitost	112	0	112
7	Inlagd Sill	112	0	112
8	Sasquatch Ale	111	0	111

QATSQL\SQL2012 (11.0 CTP) | QATSQL\Student (52) | Northwind | 00:00:00 | 77 rows

Eliminate duplicates – DISTINCT

Eliminate duplicates – SELECT DISTINCT

```
SELECT
   City, Country
FROM
   dbo.Customers
```

```
SELECT DISTINCT
   City, Country
FROM
   dbo.Customers
```

	City	Country
1	Berlin	Germany
2	México D.F.	Mexico
3	México D.F.	Mexico
4	London	UK
5	Luleå	Sweden
6	Mannheim	Germany
7	Strasbourg	France
8	Madrid	Spain

(54) | Northwind | 00:00:00 | 91 rows

	City	Country
1	Aachen	Germany
2	Albuquerque	USA
3	Anchorage	USA
4	Århus	Denmark
5	Barcelona	Spain
6	Barquisimeto	Venezuela
7	Bergamo	Italy
8	Berlin	Germany

(54) | Northwind | 00:00:00 | 69 rows

Limit results – TOP

Limit results – SELECT TOP

- **SELECT TOP** *n*
- **SELECT TOP** *n* **PERCENT**
- **SELECT TOP** *n* **... WITH TIES**

```sql
SELECT TOP 11 WITH TIES
    ProductName,
    UnitPrice
FROM
    dbo.Products
ORDER BY
    UnitPrice DESC
```

Hands-on lab

- **Basic sorting**
- **Sorting on expressions**
- **Unique rows**
- **Limiting results**

Review

- **ORDER BY clause**
- **Sorting on columns**
- **Sort orders**
- **Selecting unique rows**
- **Limiting results**