

## 02 | Querying Tables with SELECT



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# Module Overview

- Removing Duplicates
- Sorting Results
- Paging Sorted Results
- Filtering and Using Predicates

# Removing Duplicates

- SELECT ALL
  - Default behavior includes duplicates

```
SELECT Color  
FROM Production.Product;
```

- SELECT DISTINCT
  - Removes duplicates

```
SELECT DISTINCT Color  
FROM Production.Product;
```

Color
Blue
Red
Yellow
Blue
Yellow
Black

Color
Blue
Red
Yellow
Black

# Sorting Results

- Use ORDER BY to sort results by one or more columns
  - Aliases created in SELECT clause are visible to ORDER BY
  - You can order by columns in the source that are not included in the SELECT clause
  - You can specify ASC or DESC (ASC is the default)

```
SELECT ProductCategory AS Category, ProductName  
FROM Production.Product  
ORDER BY Category, Price DESC;
```

# Limiting Sorted Results

- TOP allows you to limit the number or percentage of rows returned by a query
- Works with ORDER BY clause to limit rows by sort order
- Added to SELECT clause:
  - SELECT TOP (N) | TOP (N) Percent
    - With percent, number of rows rounded up
  - SELECT TOP (N) WITH TIES
    - Retrieve duplicates where applicable (nondeterministic)

```
SELECT TOP 10 ProductName, ListPrice
FROM Production.Product
ORDER BY ListPrice DESC;
```

# Paging Through Results

OFFSET-FETCH is an extension to the ORDER BY clause:

- Allows filtering a requested range of rows
  - Dependent on ORDER BY clause
- Provides a mechanism for paging through results
- Specify number of rows to skip, number of rows to retrieve:

```
ORDER BY <order_by_list>  
OFFSET <offset_value> ROW(S)  
FETCH FIRST|NEXT <fetch_value> ROW(S) ONLY
```

# DEMO

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Eliminating Duplicates and Sorting Results

# Filtering and Using Predicates

- Specify predicates in the WHERE clause

Predicates and Operators	Description
= < >	Compares values for equality / non-equality.
IN	Determines whether a specified value matches any value in a subquery or a list.
BETWEEN	Specifies an inclusive range to test.
LIKE	Determines whether a specific character string matches a specified pattern, which can include wildcards.
AND	Combines two Boolean expressions and returns TRUE only when both are TRUE.
OR	Combines two Boolean expressions and returns TRUE if either is TRUE.
NOT	Reverses the result of a search condition.



# DEMO

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Filtering with Predicates

# Querying Tables with SELECT

- Removing Duplicates
- Sorting Results
- Paging Sorted Results
- Filtering and Using Predicates
- Lab: Querying Tables with SELECT



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