

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

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

Filtering with Predicates

Querying Tables with SELECT

- Removing Duplicates
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- Lab: Querying Tables with SELECT



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