

Slide 1: Basics of Filtering with SQL

# Basics of Filtering with SQL

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Slide 2: Learning Objectives

# Learning Objectives

Describe the basics of filtering your data

Use the WHERE clause with common operators

Use the BETWEEN clause

Explain the concept of a NULL value

Slide 3: Why Filter?

# Why Filter?

- Be specific about the data you want to retrieve
- Reduce the number of records you retrieve
- Increase query performance
- Reduce the strain on the client application
- Governance limitations

Slide 4: WHERE Clause Operators

# WHERE Clause Operators

```
SELECT column_name, column_name  
FROM table_name  
WHERE column_name operator value;
```

Slide 5: WHERE Clause Operators

# WHERE Clause Operators

```
SELECT column_name, column_name
FROM table_name
WHERE column_name operator value;
```

Operator	Description
=	Equal
<>	Not equal. Note: In some versions of SQL this operator may be written as !=
>	Greater than
<	Less than
>=	Greater than or equal
<=	Less than or equal
BETWEEN	Between an inclusive range
IS NULL	Is a null value

Slide 6: Filtering on a Single Condition

## Filtering on a Single Condition

	ProductName	UnitPrice	SupplierID
1	Tofu	23.25	6

```
SELECT ProductName
,UnitPrice
,SupplierID
FROM Products
WHERE ProductName = 'Tofu';
```

Slide 7: Filtering on a Single Value

# Filtering on a Single Value

	ProductName	UnitPrice	SupplierID
1	Mishi Kobe Niku	97	4
2	Sir Rodney's Marmalade	81	8
3	Thüringer Rostbratwurst	123.79	12
4	Côte de Blaye	263.5	18

```
SELECT ProductName
,UnitPrice
,SupplierID
FROM Products
WHERE UnitPrice >= 75;
```

Slide 8: Checking for Non-Matches

# Checking for Non-Matches

```
SELECT ProductName
       ,UnitPrice
       ,SupplierID
FROM Products
WHERE ProductName <>'Alice
Mutton';
```

	ProductName	UnitPrice	SupplierID
1	Chai	18	1
2	Chang	19	1
3	Aniseed Syrup	10	1
4	Chef Anton's Cajun Seasoning	22	2
5	Chef Anton's Gumbo Mix	21.35	2
6	Grandma's Boysenberry Spread	25	3
7	Uncle Bob's Organic Dried Pears	30	3
8	Northwoods Cranberry Sauce	40	3
9	Mishi Kobe Niku	97	4
10	Ikura	31	4
11	Queso Cabrales	21	5
12	Queso Manchego La Pastora	38	5
13	Konbu	6	6



Slide 9: Filtering with a Range of Values

# Filtering with a Range of Values

```
SELECT ProductName
       ,UnitPrice
       ,SupplierID
       ,UnitsInStock
FROM Products
WHERE UnitsInStock BETWEEN 15
AND 80;
```

	ProductName	UnitPrice	SupplierID	UnitsInStock
1	Chai	18	1	39
2	Chang	19	1	17
3	Chef Anton's Cajun Seasoning	22	2	53
4	Uncle Bob's Organic Dried Pears	30	3	15
5	Mishi Kobe Niku	97	4	29
6	Ikura	31	4	31
7	Queso Cabrales	21	5	22
8	Konbu	6	6	24
9	Tofu	23.25	6	35
10	Genen Shouyu	15.5	6	39
11	Pavlova	17.45	7	29
12	Carnarvon Tigers	62.5	7	42
13	Teatime Chocolate Biscuits	9.2	8	25

Slide 10: Filtering No Value

# Filtering No Value

No value returned because there are no null values in the product name

```
SELECT ProductName
,UnitPrice
,SupplierID
,UnitsInStock
FROM Products
WHERE ProductName IS NULL;
```

## Slide 11: Summary

# Summary

Operator	Description
=	Equal
<>	Not equal. Note: In some versions of SQL this operator may be written as !=
>	Greater than
<	Less than
>=	Greater than or equal
<=	Less than or equal
BETWEEN	Between an inclusive range
IS NULL	Is a null value

Source: [http://www.w3schools.com/sql/sql\\_where.asp](http://www.w3schools.com/sql/sql_where.asp)