Advanced Filtering: IN, OR, and NOT

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UC**DAVIS**
EXTENSION

Learning Objectives

Use the IN and OR operators to filter your data and get results you want

Differentiate between use of the IN and BETWEEN operators

Discuss importance of order of operations

Explain how and when to use the NOT operator

Slide 2: L earning Objectives

IN Operator

Specifies a range of conditions

Comma delimited list of values

Enclosed in ()

IN Operator Example

```
SELECT
ProductID
,UnitPrice
,SupplierID
From Products
WHERE SupplierID IN (9, 10,
11);
```

	ProductID	UnitPrice	SupplierID
1	22	21	9
2	23	9	9
3	24	4.5	10
4	25	14	11
5	26	31.23	11
6	27	43.9	11

OR Operator

DBMS will not evaluate the second conditions in a WHERE clause if the first condition is met

Use for any rows matching the specific conditions

ProductID	UnitPrice	SupplierID	ProductName
1	14	23.25	6	Tofu

```
ProductName
,ProductID
,UnitPrice
,SupplierID
,ProductName
From Products
Where ProductName = 'Tofu' OR
'Konbu';
```

IN vs. OR

In works the same as OR

Benefits of IN

Long list of options

IN executes faster than OR

Don't have to think about the order with IN

Can contain another SELECT

Slide 7: OR with AND

OR with AND

ProductID	UnitPrice	SupplierID
1	22	21	9
2	23	9	9
3	26	31.23	11
4	27	43.9	11

```
SELECT
ProductID
,UnitPrice
,SupplierID
FROM Products
WHERE SupplierID = 9 OR
SupplierID = 11
AND UnitPrice > 15;
```

ProductID	UnitPrice	SupplierID
1	22	21	9
2	26	31.23	11
3	27	43.9	11

```
SELECT
ProductID
,UnitPrice
,SupplierID
FROM Products
WHERE (SupplierID = 9 OR
SupplierID = 11)
AND UnitPrice > 15;
```

Order of Operations

Can contain AND and OR Operators

SQL processes AND before OR

Use ()

Don't rely on the default order of operations. You are better being specific and getting in the habit of using the ()

NOT Operator

	EmployeeID	LastName	FirstName	Title	TitleOfCourtesy	BirthDate	HireDate	Address	City	Region	
1	2	Fuller	Andrew	Vice President, Sales	Dr.	2/19/1952 12:00:00 AM	8/14/1992 12:00:00 AM	908 W. Capital Way	Tacoma	WA	
2	3	Leverling	Janet	Sales Representative	Ms.	8/30/1963 12:00:00 AM	4/1/1992 12:00:00 AM	722 Moss Bay Blvd.	Kirkland	WA	
3	4	Peacock	Margaret	Sales Representative	Mrs.	9/19/1937 12:00:00 AM	5/3/1993 12:00:00 AM	4110 Old Redmond Rd.	Redmond	WA	

```sql
SELECT *

FROM Employees

WHERE NOT City='London' AND
NOT City='Seattle';
```