ALL, ANY OPERATOR

ALL & ANY are logical operators in SQL. They return boolean value as a result.

ALL OPERATOR

ALL operator is used to select all tuples of SELECT STATEMENT. It is also used to compare a value to every value in another value set or result from a subquery.

- The ALL operator returns TRUE if all of the subqueries values meet the condition. The ALL must be preceded by comparison operators and evaluates true if all of the subqueries values meet the condition.
- ALL is used with SELECT, WHERE, HAVING statement.

ALL with SELECT Statement

Syntax

```
SELECT ALL field_name
FROM table_name
WHERE condition(s);
```

ALL with WHERE or HAVING Statement

Syntax

```
SELECT column_name(s) FROM table_name WHERE column_name
comparison_operator ALL
(SELECT column_name FROM table_name WHERE condition(s));
```

Example: Consider the following Products Table and OrderDetails Table,**Products Table**

ProductID	ProductName	SupplierID	CategoryID	Price
1	Chais	1	1	18
2	Chang	1	1	19
3	Aniseed Syrup	1	2	10
4	Chef Anton's Cajun Seasoning	2	2	22
5	Chef Anton's Gumbo Mix	2	2	21
6	Boysenberry Spread	3	2	25
7	Organic Dried Pears	3	7	30
8	Northwoods Cranberry Sauce	3	2	40
9	Mishi Kobe Niku	4	6	97

OrderDetails Table

OrderDetailsID	OrderID	ProductID	Quantity
1	10248	1	12
2	10248	2	10
3	10248	3	15
4	10249	1	8
5	10249	4	4
6	10249	5	6
7	10250	3	5
8	10250	4	18
9	10251	5	2
10	10251	6	8
11	10252	7	9
12	10252	8	9
13	10250	9	20
14	10249	9	4

Query 1 - Find the name of the all the product

```
SELECT ALL ProductName
FROM Products
WHERE TRUE;
```

Output

ProductName
Chais
Chang
Aniseed Syrup
Chef Anton's Cajun Seasoning
Chef Anton's Gumbo Mix
Boysenberry Spread
Organic Dried Pears
Northwoods Cranberry Sauce
Mishi Kobe Niku

Query 2 - Find the name of the product if all the records in the OrderDetails has Quantity either equal to 6 or 2.

```
SELECT ProductName FROM Products
WHERE ProductID = ALL (SELECT ProductId FROM OrderDetails
WHERE Quantity = 6 OR Quantity = 2);
```

Output

ProductName
Chef Anton's Gumbo Mix

Query 3 - Find the OrderID whose maximum Quantity among all product of that OrderID is greater than average quantity of all OrderID.

```
SELECT OrderID FROM OrderDetails GROUP BY OrderID
HAVING MAX(Quantity) > ALL (SELECT AVG(Quantity)
FROM OrderDetails GROUP BY OrderID);
```

Output

OrderID
10248
10250

ANY OPERATOR

ANY compares a value to each value in a list or results from a query and evaluates to true if the result of an inner query contains at least one row.

- ANY return true if any of the subqueries values meet the condition.
- ANY must be preceded by comparison operators.

Syntax

```
SELECT column_name(s) FROM table_name WHERE column_name
comparison_operator ANY
(SELECT column_name FROM table_name WHERE condition(s));
```

Query 1 - Find the Distinct CategoryID of the products which have any record in OrderDetails Table.

```
SELECT DISTINCT CategoryID FROM Products
WHERE ProductID = ANY (SELECT ProductID FROM OrderDetails);
```

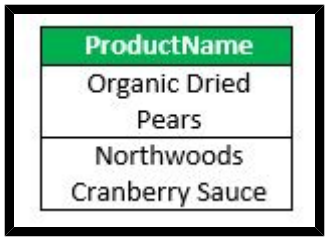
Output

CategoryID
1
2
7
6

Query 2 - Finds any records in the OrderDetails table that Quantity = 9.

```
SELECT ProductName FROM Products
WHERE ProductID = ANY (SELECT ProductID FROM OrderDetails
WHERE Quantity = 9);
```

Output



ProductName
Organic Dried Pears
Northwoods Cranberry Sauce