



What is our GOAL for this MODULE?

In this class, we learned about Union operators in SQL. the **UNION** operator is used to combine the result-set of two or more SELECT statements. It just takes all the rows of the Two tables and displays them as one.

- 1. Every **SELECT** statement within **UNION** must have the same number of columns.
- 2. The columns must all have similar data types.
- 3. The column in every **SELECT** statement must also be in the same order.

What did we ACHIEVE in the class TODAY?

- Introduction to Union statement
- Union SQL statements

Which CONCEPTS/ CODING BLOCKS did we cover today?

- Union Operator
- SQL Union Syntax



How did we DO the activities?

1. We discussed some of the key differences b/wJ JOIN and UNION

JOIN	UNION
JOIN combines data from many tables based on the condition	UNION combines the result of two or more SELECT statements
It combines data into new columns	It combines data into new rows
The number of columns selected from each table can be different	The number of columns selected from different tables should be the same
Datatypes of corresponding columns in different tables can be different	Datatypes of corresponding columns in different tables should be the same

- 2. We learned about the syntax and conditions of the UNION operator. The UNION operator needs 3 conditions satisfied between the select statements to work. They are as follows -
 - Every SELECT statement within UNION must have the same number of columns.
 - The columns must all have similar data types.
 - The column in every **SELECT** statement must also be in the same order.

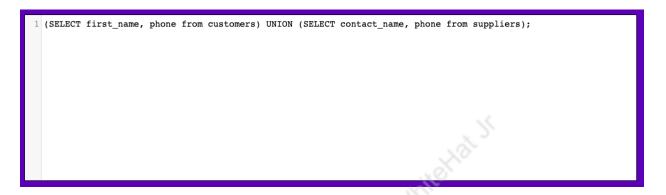
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- 3. Merge the data of the eCommerce company. Query the data of India's all metropolitan cities. -NCR (National Capital Region), Mumbai, Kolkata, Bangalore.
 - Conditions to be taken care of while applying Union operator.
 - **First** -Since the union operator merges the rows of the 2 tables, it needs to make sure that the number of columns is the same. It cannot merge 2 columns of one table with 3 columns of the other table. Therefore, the union operator requires the same number of columns in all the select statements.
 - Second-Suppose that there are 2 tables having the same number of columns, but the data types of these columns are different, then would it make sense to merge the data together through the union? Exactly! We wouldn't want to see strings in a column that should show numbers, or vice versa, since it will confuse us. Therefore, the data types of the columns should be the same.
 - **Third** -The columns in the select statement should be in the same order. Union operator works in a way where it will merge the first column of the first table with the first column of the second table, so on and so forth. Therefore we

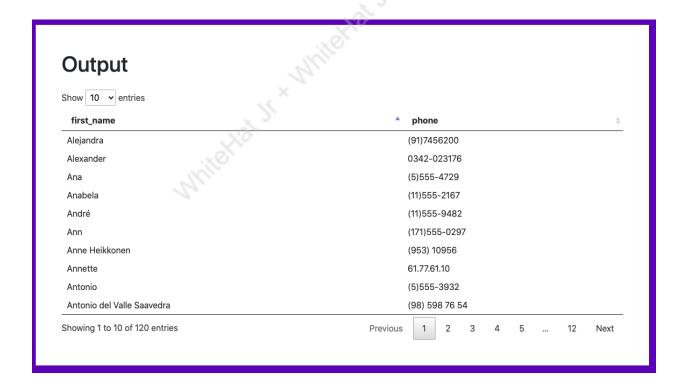


should always keep in mind to keep our columns aligned in the select statements.

- 4. Merge the row first_name and phone no from **customers**, and contact_name and phone from **suppliers** -
 - (SELECT first_name, phone from customers) UNION (SELECT contact_name, phone from suppliers);



Output



5. For duplicate entries in two tables, the **UNION ALL** operator is used. The key difference between **UNION** and **UNION ALL** is that **UNION removes the duplicates**



whereas UNION ALL keeps the duplicates.

- 6. Get the data for all the cities and countries from both customers and suppliers tables. Syntax for the same.
 - (SELECT city, country FROM customers)UNION ALL(SELECT city, country FROM suppliers);



Output



7. To find duplicates, there is another operator called INTERSECT. Syntax for

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INTERSECT

 (SELECT city, country FROM customers)INTERSECT(SELECT city, country FROM suppliers);



- 8. UNION, UNION ALL, and INTERSECT operators are all also known as SET Operators.
- 9. Fetch the names of cities in the USA and Brazil from customers and supplies. Syntax:
 - (SELECT city, country FROM customers WHERE country='USA' OR country='Brazil')

UNION

(SELECT city, country FROM suppliers WHERE country='USA' OR country='Brazil');

```
1 (SELECT city, country FROM customers WHERE country='USA' OR country='Brazil')
2 UNION
3 (SELECT city, country FROM suppliers WHERE country='USA' OR country='Brazil');
```

Output





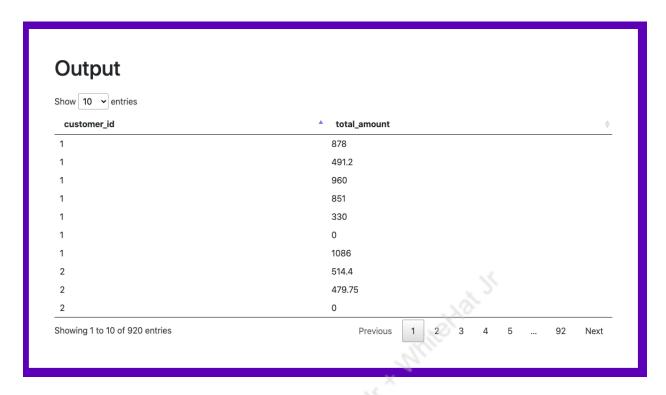
10. In cases where two tables do not have the same number of columns, use constant values to make them the same number.

(SELECT customer_id, total_amount FROM company_orders) UNION (SELECT id, 0 from customers);

```
(SELECT customer_id, total_amount FROM company_orders)
UNION
(SELECT id, 0 from customers);
```

Output





What's next?

In the next class, we will see how we can combine the JOIN with UNION operators and perform a SQL injection on the website, attempting to fetch their user's sensitive data.

EXTEND YOUR KNOWLEDGE:

To know more about SQL Union Set Operator click here