

## SQL LEFT, RIGHT & FULL JOIN

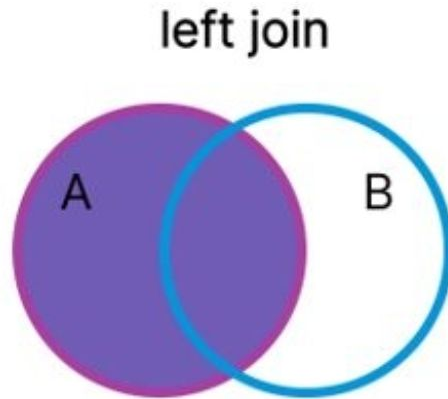
# LEFT JOIN

Also known as LEFT OUTER JOIN

Result guaranteed to contain every row from left\_table

1. Selects rows from left\_column
2. Compares left\_column to right\_column
3. If equal, adds selected columns to result set
4. Otherwise, adds selected columns from left\_table with NULL placeholders for columns in right\_table

```
SELECT select_list  
FROM left_table  
[INNER | LEFT | RIGHT | FULL] JOIN right_table  
ON left_column = right_column;
```



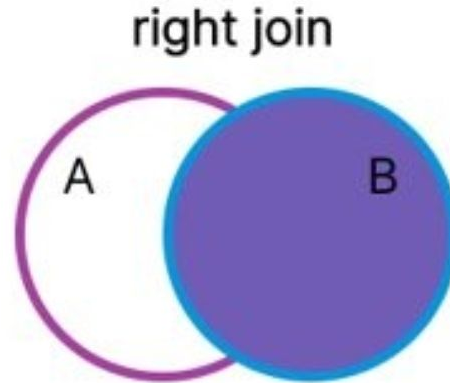
# RIGHT JOIN

Also known as RIGHT OUTER JOIN

Result guaranteed to contain every row from right\_table

1. Selects rows from right\_table
2. Compares left\_column to right\_column
3. If equal, adds selected columns to result set
4. Otherwise, adds selected columns from right\_table with NULL placeholders for columns in left\_table

```
SELECT select_list  
FROM left_table  
[INNER | LEFT | RIGHT | FULL] JOIN right_table  
ON left_column = right_column;
```



# RIGHT JOIN example

For each order, list customer name and amount spent

If no customer name, use NULL placeholder.

	id [PK] integer	name text
1	1	Alice
2	2	Bob
3	3	Carol
4	4	Dave
5	5	Eve
6	6	Faythe
7	7	Grace

```
SELECT c.name, o.dollar_amount_spent
FROM customers c
RIGHT JOIN orders o
ON o.customer_id = c.id;
```

	dollar_amount_spent numeric	customer_id integer
1	100.12	1
2	32.99	2
3	49.12	3
4	10.11	[null]
5	43.01	3
6	75.12	2
7	27.11	[null]
8	211.43	7

# RIGHT JOIN example

For each order, list customer name and amount spent

If no customer name, use NULL placeholder.

```
SELECT c.name, o.dollar_amount_spent
FROM customers c
RIGHT JOIN orders o
ON o.customer_id = c.id;
```



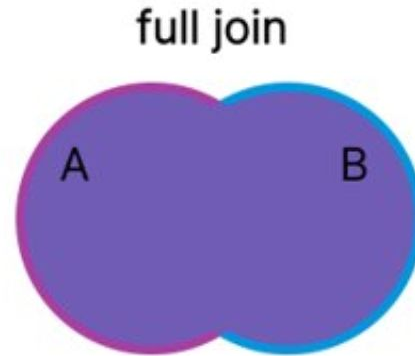
	name text	dollar_amount_spent numeric
1	Alice	100.12
2	Bob	32.99
3	Carol	49.12
4	[null]	10.11
5	Carol	43.01
6	Bob	75.12
7	[null]	27.11
8	Grace	211.43

# FULL JOIN

Selects all rows from both left\_table and right\_table

Selects columns from corresponding joined table if match found, else adds NULL placeholder values

```
SELECT select_list  
FROM left_table  
[INNER | LEFT | RIGHT | FULL] JOIN right_table  
ON left_column = right_column;
```



# FULL JOIN example

For each order, list customer name and amount spent

If no customer name, use NULL placeholder.

	id [PK] integer	name text
1	1	Alice
2	2	Bob
3	3	Carol
4	4	Dave
5	5	Eve
6	6	Faythe
7	7	Grace

```
SELECT c.name, o.dollar_amount_spent
FROM customers c
FULL JOIN orders o
ON o.customer_id = c.id;
```

	dollar_amount_spent numeric	customer_id integer
1	100.12	1
2	32.99	2
3	49.12	3
4	10.11	[null]
5	43.01	3
6	75.12	2
7	27.11	[null]
8	211.43	7

# FULL JOIN example

For each order, list customer name and amount spent

If no customer name, use NULL placeholder.

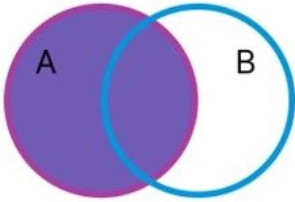
```
SELECT c.name, o.dollar_amount_spent
FROM customers c
FULL JOIN orders o
ON o.customer_id = c.id;
```



	name text	dollar_amount_spent numeric
1	Alice	100.12
2	Bob	32.99
3	Carol	49.12
4	[null]	10.11
5	Carol	43.01
6	Bob	75.12
7	[null]	27.11
8	Grace	211.43
9	Faythe	[null]
10	Eve	[null]
11	Dave	[null]

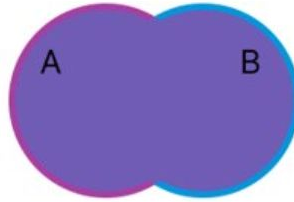


left join



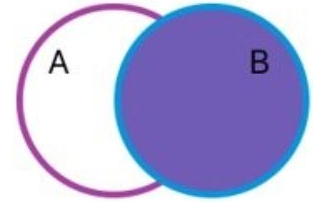
```
SELECT select_list
FROM left_table
LEFT JOIN right_table
ON left_column = right_column;
```

full join



```
SELECT select_list
FROM left_table
FULL JOIN right_table
ON left_column = right_column;
```

right join



```
SELECT select_list
FROM left_table
RIGHT JOIN right_table
ON left_column = right_column;
```

