



Joins SQL



Joins SQL

A JOIN clause is used to combine rows from two or more tables, based on a related column between them.

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foreign key

transaction_id	amount	customer_id
1000	4.99	3
1001	2.89	2
1002	3.38	3
1003	4.99	1
1004	1.00	NULL

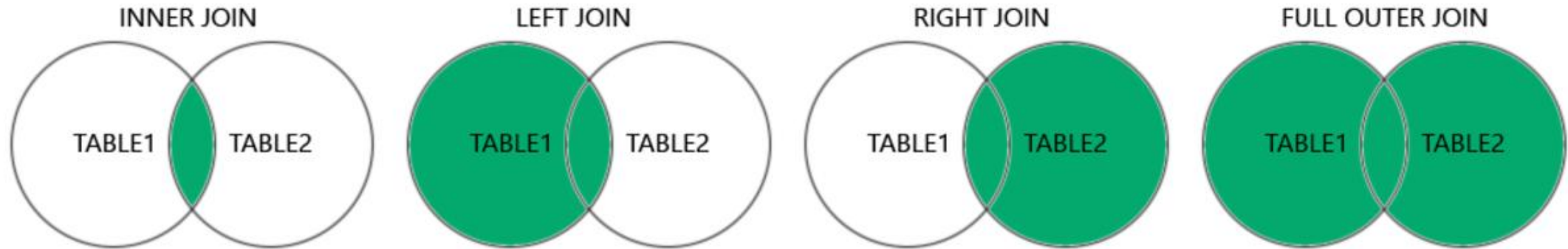


primary key

customer_id	first_name	last_name
1	Fred	Fish
2	Larry	Lobster
3	Bubble	Bass
4	Poppy	Puff



transaction_id	amount	customer_id	first_name	last_name
1000	4.99	3	Bubble	Bass
1001	2.89	2	Larry	Lobster
1002	3.38	3	Bubble	Bass
1003	4.99	1	Fred	Fish

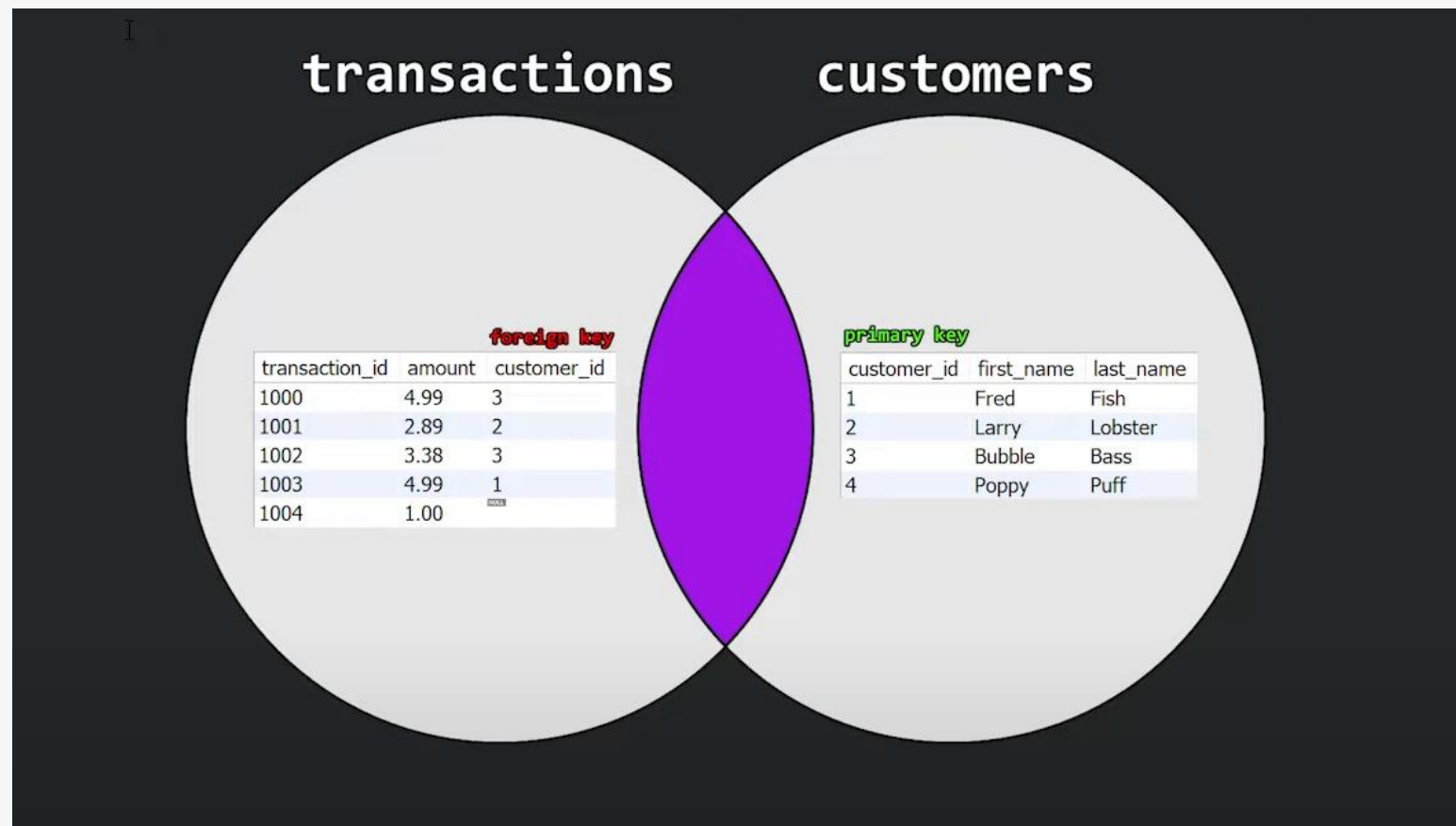


Different Types of SQL JOINS

- **(INNER) JOIN:** Returns records that have matching values in both tables
- **LEFT (OUTER) JOIN:** Returns all records from the left table, and the matched records from the right table
- **RIGHT (OUTER) JOIN:** Returns all records from the right table, and the matched records from the left table
- **FULL (OUTER) JOIN:** Returns all records when there is a match in either left or right table



Inner Joins



Inner Joins

Inner Joins

```
INSERT INTO transactions (amount, customer_id)
VALUES (1.00, NULL);
SELECT * FROM transactions;
```

transaction_id	amount	customer_id
1000	4.99	3
1001	2.89	2
1002	3.38	3
1003	4.99	1
1004	1.00	NULL
NULL	NULL	NULL

Inner Joins

```
INSERT INTO customers (first_name, last_name)
VALUES ("Poppy", "Puff");
SELECT * FROM customers;
```

customer_id	first_name	last_name
1	Fred	Fish
2	Larry	Lobster
3	Bubble	Bass
4	Poppy	Puff
NULL	NULL	NULL

Inner Joins

```
SELECT *  
FROM transactions INNER JOIN customers  
ON transactions.customer_id = customers.customer_id;
```

transaction_id	amount	customer_id	customer_id	first_name	last_name
1000	4.99	3	3	Bubble	Bass
1001	2.89	2	2	Larry	Lobster
1002	3.38	3	3	Bubble	Bass
1003	4.99	1	1	Fred	Fish



Left Joins

Left Joins

```
SELECT *  
FROM transactions LEFT JOIN customers  
ON transactions.customer_id = customers.customer_id;
```

transaction_id	amount	customer_id	customer_id	first_name	last_name
1000	4.99	3	3	Bubble	Bass
1001	2.89	2	2	Larry	Lobster
1002	3.38	3	3	Bubble	Bass
1003	4.99	1	1	Fred	Fish
1004	1.00	NULL	NULL	NULL	NULL



Right Joins

Right Joins

```
SELECT *  
FROM transactions RIGHT JOIN customers  
ON transactions.customer_id = customers.customer_id;
```

transaction_id	amount	customer_id	customer_id	first_name	last_name
1003	4.99	1	1	Fred	Fish
1001	2.89	2	2	Larry	Lobster
1000	4.99	3	3	Bubble	Bass
1002	3.38	3	3	Bubble	Bass
NULL	NULL	NULL	4	Poppy	Puff

End of
Presentation

