SQL JOINS

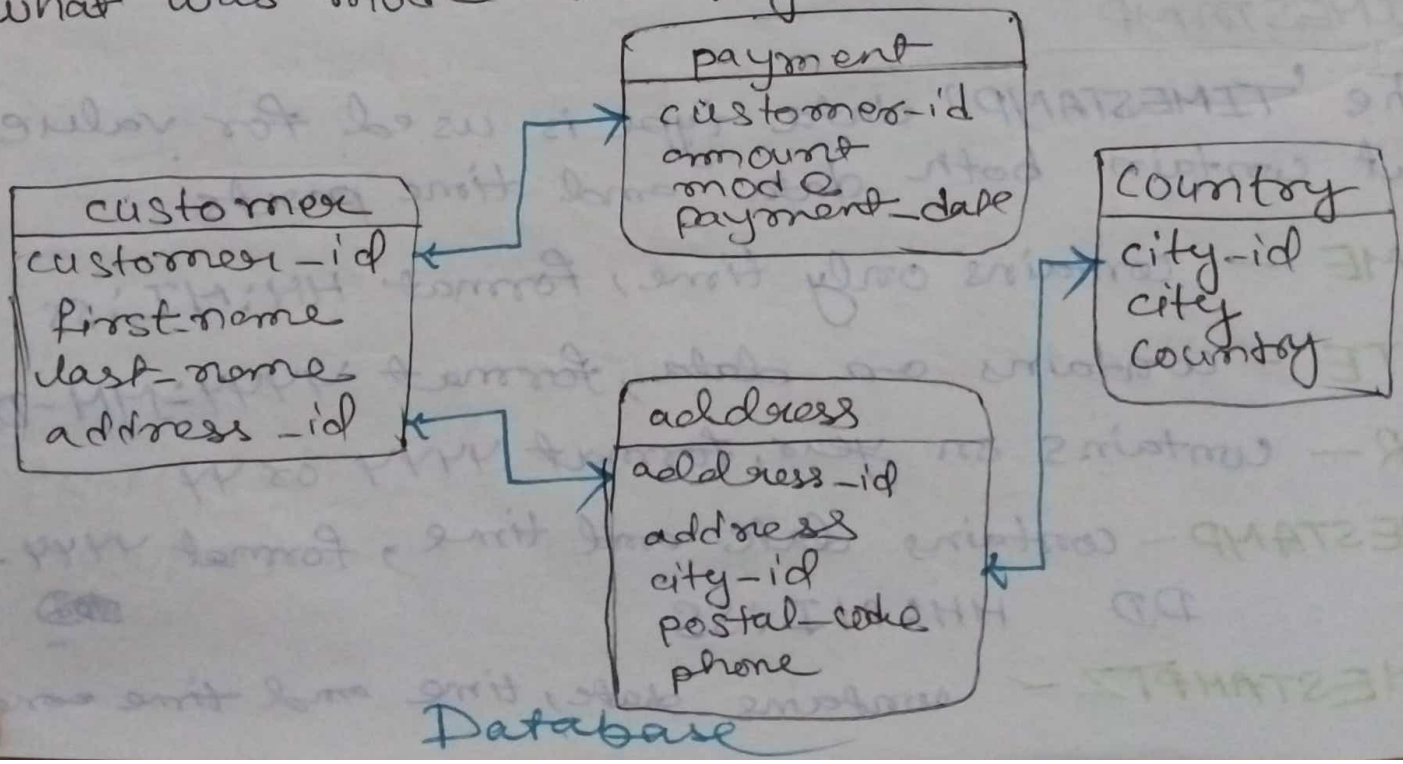
What is JOIN?

↳ JOIN means to combine something.

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

JOIN Example

Q How much amount was paid by customer 'Madan', what was mode and payment date?



Database

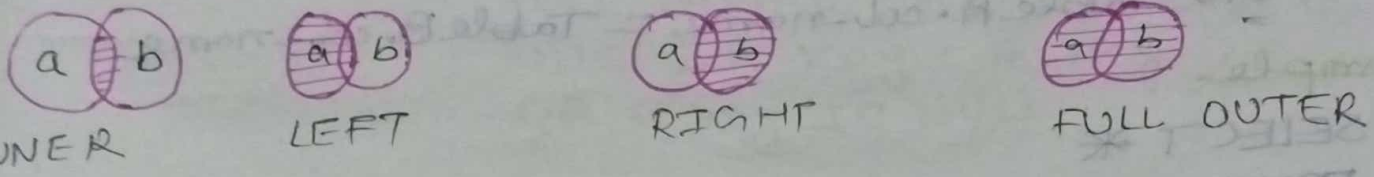
customer_id	first_name	last_name	address
1	Mary	Smith	5
2	Madam	Mohan	6
3	Linda	Williams	7

(8) How much amount was paid by customer Mada
What was mode and payment date.

Ans – Amount = 30, Mode = Credit Card, Date – 2020-4
27

Types OF Joins

⊙ INNER JOIN ⊙ LEFT JOIN ⊙ RIGHT JOIN
⊙ FULL JOIN



⊙ INNER JOIN – Returns records that have matching values in both tables.

Syntax

```
SELECT column_name(s)
FROM TableA
INNER JOIN TableB
ON TableA.col_name = TableB.col_name;
```

Example

```
SELECT * FROM customer AS c
INNER JOIN payment AS p
ON c.customer_id = p.customer_id
```

LEFT JOIN – Returns all records from the left table, and the matched records from the right table.

syntax:

```
SELECT column_name
FROM TableA
LEFT JOIN TableB
ON TableA.col_name = TableB.col_name
```

Example

```
SELECT *
FROM customer AS c
LEFT JOIN payment AS p
ON c.customer_id = p.customer_id
```

RIGHT JOIN - Returns all records from the right table, and the matched records from the left table.

Syntax

```
SELECT column_name
FROM TableA
RIGHT JOIN TableB
ON TableA.col_name = TableB.col_name
```

Example

```
SELECT *
FROM Customer AS c
RIGHT JOIN payment AS p
ON c.customer_id = p.customer_id
```

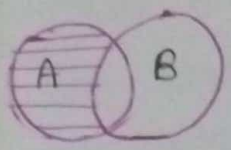
FULL OUTER JOIN - Returns all records when there is a match in ~~their~~ either left or right table.

Syntax

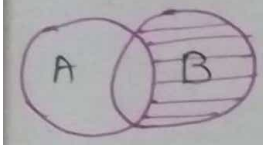
```
SELECT column_name
FROM TableA
FULL OUTER JOIN TableB
ON TableA.col_name = TableB.col_name
```

Example

```
SELECT *
FROM customer AS c
FULL OUTER JOIN payment AS p
ON c.customer_id = p.customer_id
```




```
SELECT <select_list>
FROM TableA A
LEFT JOIN TableB B
ON A.Key = B.Key
WHERE B.Key IS NULL
```




```
SELECT <select_list>
FROM TableA A
RIGHT JOIN TableB B
ON A.Key = B.Key
WHERE A.Key IS NULL
```


```
SELECT <select_list>
FROM TableA A
FULL OUTER JOIN TableB B
WHERE A.Key = B.Key
OR B.Key IS NULL
```

SELF JOIN

↳ A self join is a regular join in which a table is joined to itself.

↳ SELF Joins are powerful for comparing values in a column of rows with the same table

Syntax

```
SELECT column_name
FROM Table AS T1
JOIN Table As T2
ON T1.col_name = T2.col_name
```

Example

empid	empname	manager_id
1	Agni	3
2	Akash	4
3	Dharti	2
4	Vayu	3

Table: emp

(8) Find the name of respective managers for each of the employees?

```
SELECT T2.empname, T1.empname
FROM emp AS T1
JOIN emp AS T2
ON T1.empid = T2.manager_id
```