MYSQL- Join Query

Why?

If I want to retrieve the data from multiple data then go for join query.

By using one select statement, we can retrieve the the data from multiple table.

It is used to retrieve data from multiple tables. It is performed whenever you need to fetch records from two or more tables.

There are three types of MySQL joins:

- MySQL INNER JOIN (or sometimes called simple join)
- MySQL LEFT OUTER JOIN (or sometimes called LEFT JOIN)
- MySQL RIGHT OUTER JOIN (or sometimes called RIGHT JOIN)

Inner Join-

It gives you exactly matching rows called inner join.

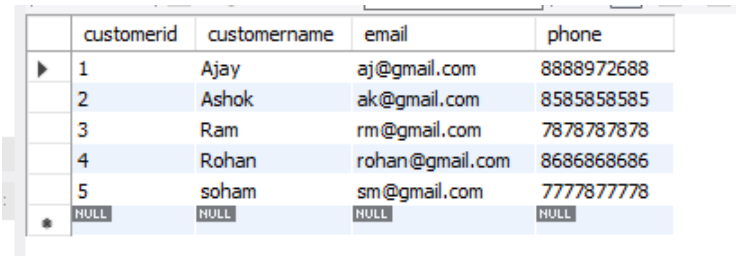
Syntax-

SELECT columns FROM table1 INNER JOIN table2 ON table1.column = table2.column;

Example-

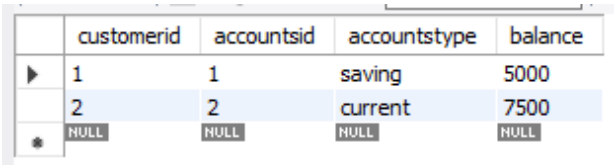
Table 1-

create table customers(
customerid int(10)primary key auto_increment not null, customername varchar(32), email varchar(32), phone varchar(125));



customerid	customername	email	phone
1	Ajay	aj@gmail.com	8888972688
2	Ashok	ak@gmail.com	8585858585
3	Ram	rm@gmail.com	7878787878
4	Rohan	rohan@gmail.com	8686868686
5	soham	sm@gmail.com	7777877778
NULL	NULL	NULL	NULL

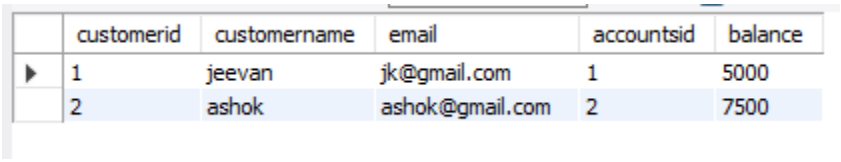
create table accounts(customerid int,
accountsid int primary key auto_increment not null,
accountstype varchar(10), balance int(50), foreign key(customerid) references customers(customerid));



customerid	accountsid	accountstype	balance
1	1	saving	5000
2	2	current	7500
NULL	NULL	NULL	NULL

Inner Join;

Select customers.customerid,customername, email, accountsid,balance from customers INNER JOIN accounts on customers.customerid = accounts.customerid;



customerid	customername	email	accountsid	balance
1	jeevan	jk@gmail.com	1	5000
2	ashok	ashok@gmail.com	2	7500

2. **Left outer join**-The LEFT OUTER JOIN returns all rows from the left hand table (Table 1) specified in the ON condition and only those rows from the other table where the join condition is fulfilled.

Syntax- SELECT columns FROM table1 LEFT [OUTER] JOIN table2 ON table1.column = table2.column;

Example-

select customername, email, accountsid, balance from customers left join accounts on customers.customerid = accounts.customerid;

customerid	customername	email	accountsid	balance
1	Ajay	aj@gmail.com	1	5000
2	Ashok	ak@gmail.com	2	7500
5	soham	sm@gmail.com	3	1000
3	Ram	rm@gmail.com	NULL	NULL
4	Rohan	rohan@gmail.com	NULL	NULL

3. **Right outer join**-The MySQL Right Outer Join returns all rows from the RIGHT-hand table (Table 2) specified in the ON condition and only those rows from the other table where he join condition is fulfilled.

Syntax- SELECT columns FROM table1 RIGHT [OUTER] JOIN table2
ON table1.column = table2.column;

Example-

select customername, email, accountsid, balance from customers right join accounts on customers.customerid = accounts.customerid;

customername	email	accountsid	balance
Ajay	aj@gmail.com	1	5000
Ashok	ak@gmail.com	2	7500
soham	sm@gmail.com	3	1000
NULL	NULL	7	2000

4. Full outer Join-

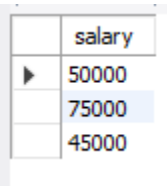
In MySQL it is the combination of left join union right join.

select * from customers left join accounts on customers.customerid = accounts.customerid union select * from customers right join accounts on customers.customerid = accounts.customerid;

customerid	customername	email	phone	customerid	accountsid	accountstype	balance
1	Ajay	aj@gmail.com	8888972688	1	1	saving	5000
2	Ashok	ak@gmail.com	8585858585	2	2	current	7500
5	soham	sm@gmail.com	7777877778	5	3	saving	1000
3	Ram	rm@gmail.com	7878787878	NULL	NULL	NULL	NULL
4	Rohan	rohan@gmail.com	8686868686	NULL	NULL	NULL	NULL
NULL	NULL	NULL	NULL	NULL	7	saving	2000

Highest Salary Calculate Query-

Finding Nth highest salary in a table is the most common question asked in interviews.



	salary
▶	50000
	75000
	45000

First solution- with using sub- query.

1st Highest salary

SELECT salary FROM (SELECT salary FROM student ORDER BY salary DESC LIMIT 1) AS s ORDER BY salary LIMIT 1;

2nd Highest salary

SELECT salary FROM (SELECT salary FROM student ORDER BY salary DESC LIMIT 2) AS s ORDER BY salary LIMIT 1;

Description-

In this solution, we have first sorted all salaries form Employee table in descending order, so that 2 highest salaries come at top of the result set.

After that we took just two records by using LIMIT 2.

Again we did the same thing but this time we sort the result set on ascending order,

so that second highest salary comes at top.

Now we print that salary by using LIMIT.

3rd Highest salary

SELECT salary FROM (SELECT salary FROM student ORDER BY salary DESC LIMIT 3) AS s ORDER BY salary LIMIT 1;

Second solution- without using sub- query

2nd Highest Salary calculates.

SELECT salary FROM student ORDER BY salary DESC LIMIT 1,1;

Here (1, 1) -> second 1 is used for to fetch only one row or record.

First 1 is used to calculate the 2nd highest salary.