

SQL FOR DATA SCIENCE & ANALYTICS

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Agenda

```
44 GO
45 SELECT p.Name AS ProductName,
46 NonDiscountSales = (OrderQty * UnitPrice)
47 Discounts = ((OrderQty * UnitPrice) * Discount)
48 FROM Production.Product AS p
49 INNER JOIN Sales.SalesOrderDetail AS sod
50 ON p.ProductID = sod.ProductID
51 ORDER BY ProductName DESC;
52 GO
```



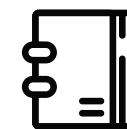
Basics of SQL

Data selection, >=<, LIKE,



Statements & Advanced Queries

SELECT, UPDATE, CREATE, DELETE,



Sorting & Joins

Order by, Joins

Sorting

- In order to sort a table, we need to use the ORDER BY Clause
- In order to get the results sorted based on certain columns, we need to use this. Usage of asc or desc has to be defined to have the results in ascending or descending orders. Default value being asc (ascending)

```
select field1, field2 from tablename where <clause>  
order by field1
```

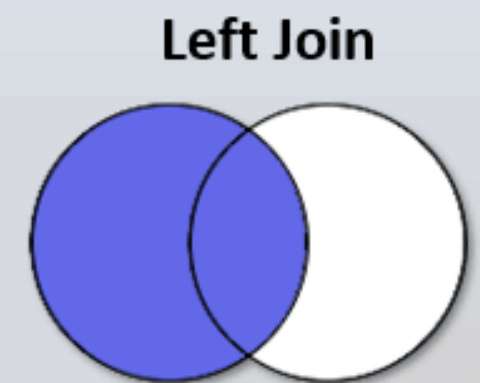
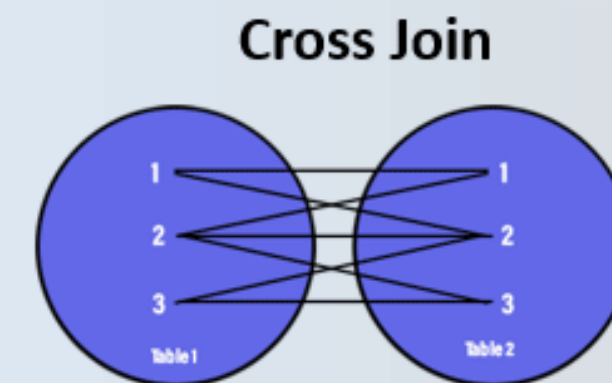
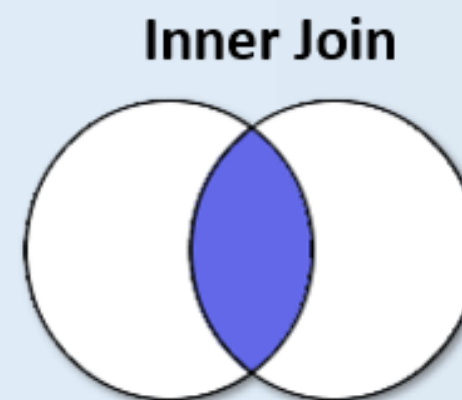
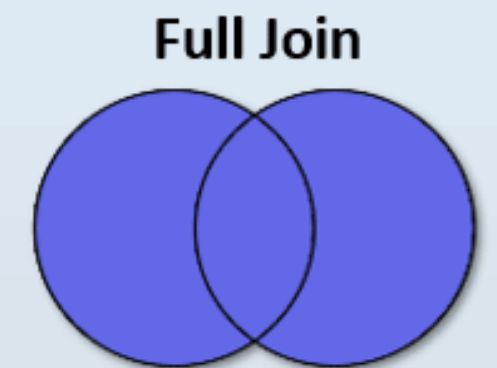
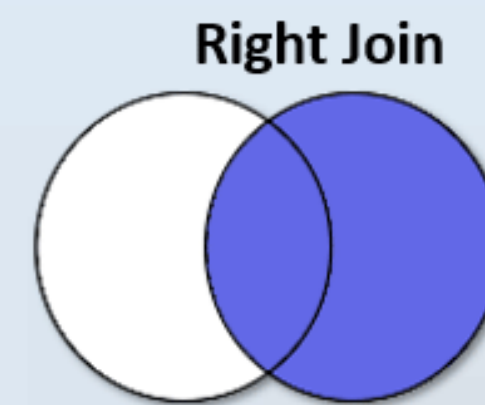
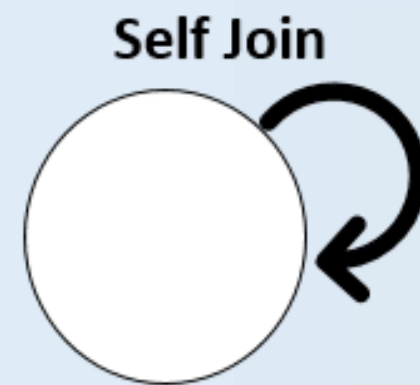
```
select field1, field2 from tablename where <clause>  
order by field1 asc
```

```
select field1, field2 from tablename where <clause>  
order by field1 desc
```

Joins

- In most of the real world problems, we might need data from multiple tables, that's where Joins comes into picture.

Joins in MySQL



Interview Questions

1

List the keywords below in order of their occurrence in a query:

- 1.group by
- 2.order by
- 3.select
- 4.where
- 5.from
- 6.limit
- 7.having

2

Find the first 5 characters from a column

```
LEFT(COLUMN, 5)
```

3

Mask a column such that the last few characters are converted to *

```
CONCAT(LEFT(COLUMN, 5), '****')
```

Interview Questions

4

Find the 3rd to 6th character of a column

SUBSTR() function

5

Retrieve name of employees who have age greater than what Ravi has

NESTED QUERY

6

Same as 5, and store it in a view

CREATE VIEW AS
(QUERY)

Join Questions

There would be multiple join related questions

Let say, you have employee details in employee table, and project details in project table.

Question: Find the list of employees that are assigned to some projects

Question: Find the total list of employees along with their respective project names (Employees with no project details should have their project as null)

Facebook Question

This was asked in one of the facebook interviews for a Sr. Data Analyst position

Let say you have wifi_id, wifi_speed, wifi_latency, date

Question 1: Find the average wifi speed for each wifi

Question 2: Find the average wifi speed for each wifi in the last 2 days

Thanks

