Joins, Where, Self Join, Sub Queries

21 September 2022 10:01

Objectives

Joins

- Inner Join → Join [ON]
- LEFT Join → LEFT OUTER Join
- RIGHT Join → RIGHT OUTER Join
- Join with where clause
- Cartesian Join

→ Natural Join ≈ Join

(2) Self Join

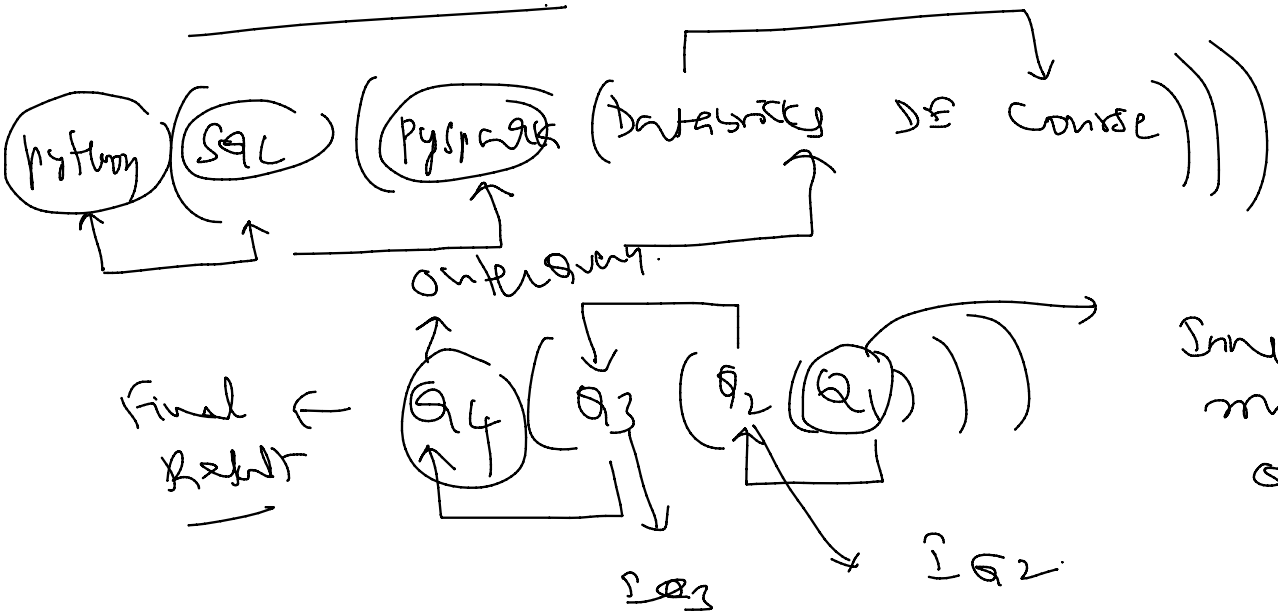
| Empno | Ename | MGR | Deptno |
|---|---|---|---|
| 1010 | X | 1009 | |
| 1020 | Y | 1010 | |
| 1030 | Z | 1009 | |
| 1040 | A | 1010 | |

MGR etc. from the table along with the Empno details →

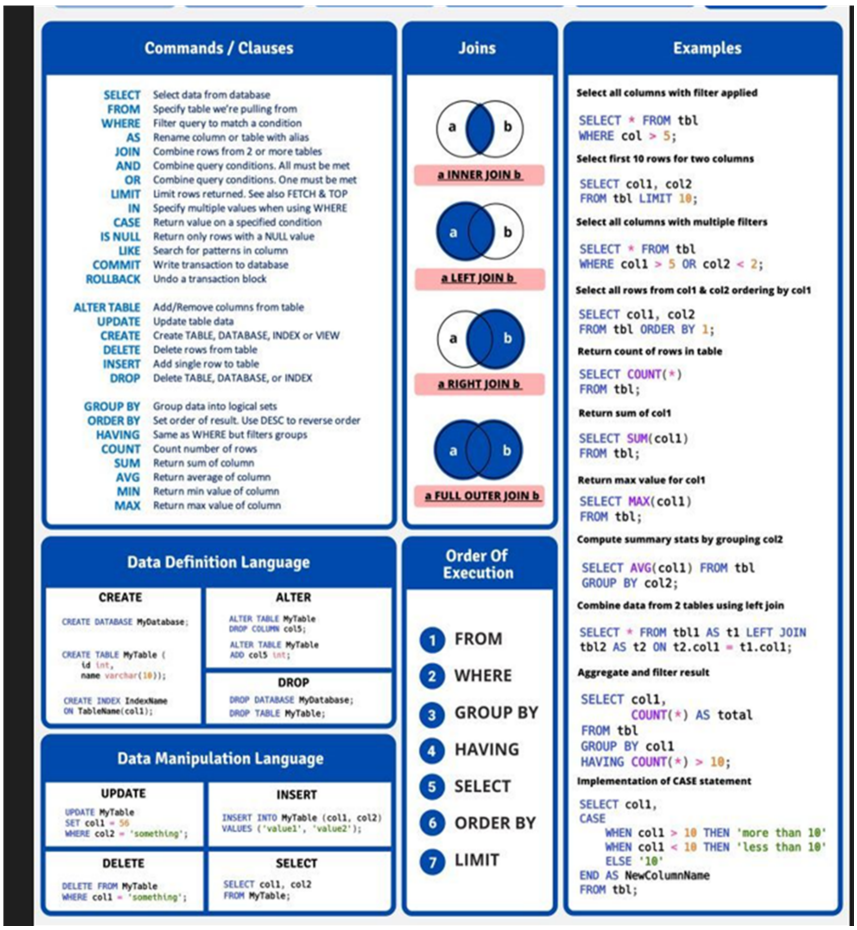
Same table we are going to Join to achieve certain results.

(3) Sub Queries

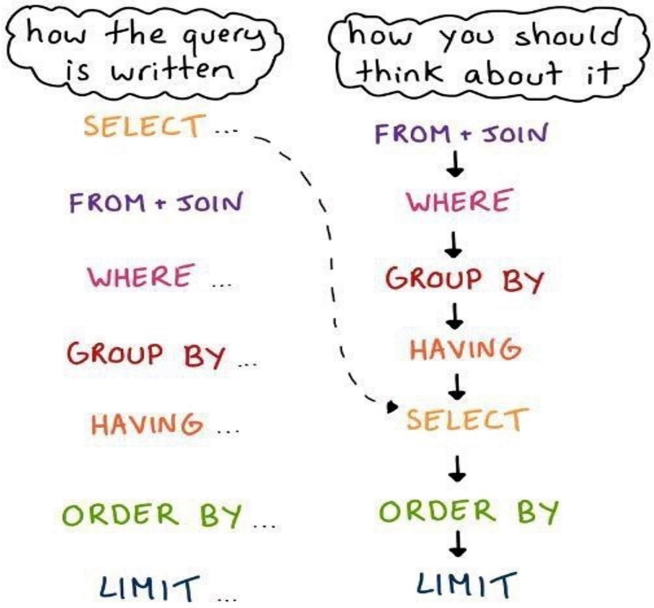
(5) Sub queries




Sub queries ⟹ nested queries ✓



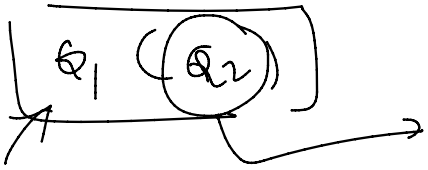

The query's steps don't happen in the order they're written:



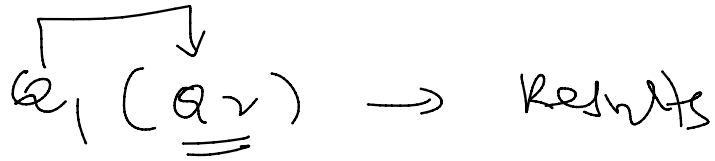

(In reality query execution is much more complicated than this. There are a lot of optimizations.)

## Subquery

Query embedded in another Query.




## Correlated Subquery




| Subquery Vs | Correlated Subquery |
| --- | --- |
| Q1 (Q2) |   |
| first Q2 will execute then the result will be given to Q1 ⇒ final Result | while running Q2 Depends on Q1 to generate the Result |

Subqueries

$Q_1$ ( $Q_2$ )

$Q_2$ generates the Result to $Q_1$

$Q_1$ finally executes

$Q_1$ ⇒ Result

$Q_1$ ( $Q_2$ ) ( $Q_3$ ) ⇒ Nested queries

inner query

Key Take aways

1. Joins
   - Cross Join
   - Non-equi Join
   - Join with where
   - Joining more than 2 tables

2. Case sheet →

- Summary Constructs
  - DDL, DML
  - Order of Execution **
  - Trans
  - Other aspects

(3)

## Sub Queries

Q ⇒ $Q_1$ ($Q_2$)

Nested Queries

$Q_1$ — outer query

$Q_2$ — Inner Query

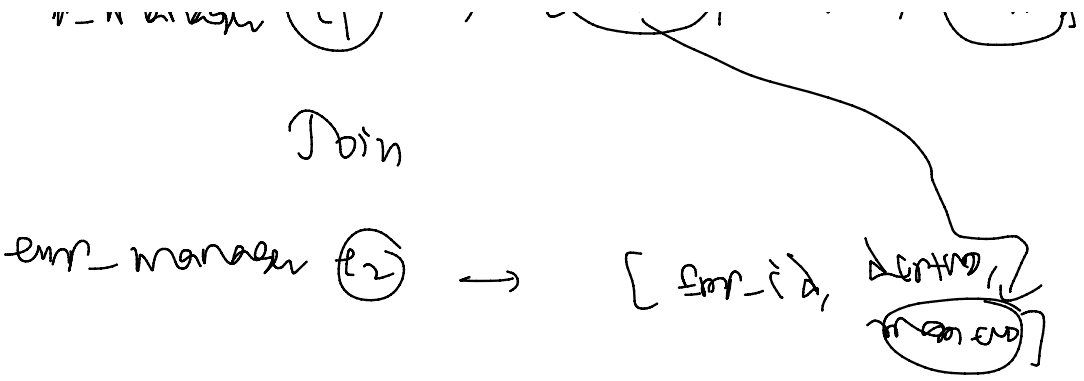
emp_manager

(emp_id, dept_no, manager_no)

| 10020 | 10039 |
|---|---|

emp_manager ($e_1$) → [Emp_id, dept_no, mgr_no]

Join




Key take aways - Day-12

① Joins
- Self Join
- Join where
- Natural Join
- Cross Join

② Correlated Subqueries Vs Subqueries
- Subqueries with In
- Subqueries with Exists
- Subquries with Join
- Subqueries with Union
- Group By, Where

③ Order of Execution

(3) Order of Function

→

Topics To be Covered

(1) In daily

(2) With CCT(E)

(3) Analytical Function