

learning_roadmap

March 30, 2023

SQL Roadmap

- Concepts
 - RDBMS
 - How data is stored in RDMS
 - What is a schema with respect to RDBMS
 - Order of query execution
 - SQL Views
 - Recursive SQL Queries
 - Pivot Table/ Crosstab function
 - Materialized View
 - Stored procedure
 - User defined function
 - Indexes
 - Triggers
 - Temporary Table
 - Dyanamic execution of SQL queries
- Commands
 - DDL
 - DML
 - DCL
 - TCL
 - DQL
- PL/SQL Concepts
 - Variables
 - Cursors
 - Collection Types
 - Loop Statements
 - IF-Else Statements
 - Exception Handling
 - Packages
- Performance Tuning
 - Explain Plan
 - Table Statistics
 - Table Partitioning

- DBMS_profiler
- SQL Trace and TKProf
- Data Types
 - String (char , varchar)
 - Numbers (Integer , float)
 - DATE , DATETIME
 - BOOLEAN
 - Identity column (Auto increment column)
- Constraints
 - Primary Key
 - Foreign Key
 - Check
 - Not Null
 - Unique
 - Default
- Normalization
 - 1NF , 2NF , 3NF
 - BCNF
- Operators
 - Arithmetic
 - Logical
 - Comparison
 - Union , Union All
- CASE Statements
 - Normal Case Statements
 - Nested Case Statements
- Clauses
 - Distinct Clause
 - Order By Clause
 - Limit/Top Clause
 - Group By
 - Having Clause
 - CTE table/With Clause
- Aggregate Functions
 - Min , Max
 - Avg , Sum , Count
- In-Built Functions
 - Substring
 - Position
 - Coalesce

- Date Function (extract,to_date)
- Window Functions
 - Rank , Dense_Rank , Row_number , Percent_Rank
 - Lead , Lag
 - Cume_dist
 - First_value , Last_value , Nth_Value
 - NTILE
- Joins
 - Inner Join
 - Full Outer Join
 - Right & Left Join
 - Self Join
 - Cross Join