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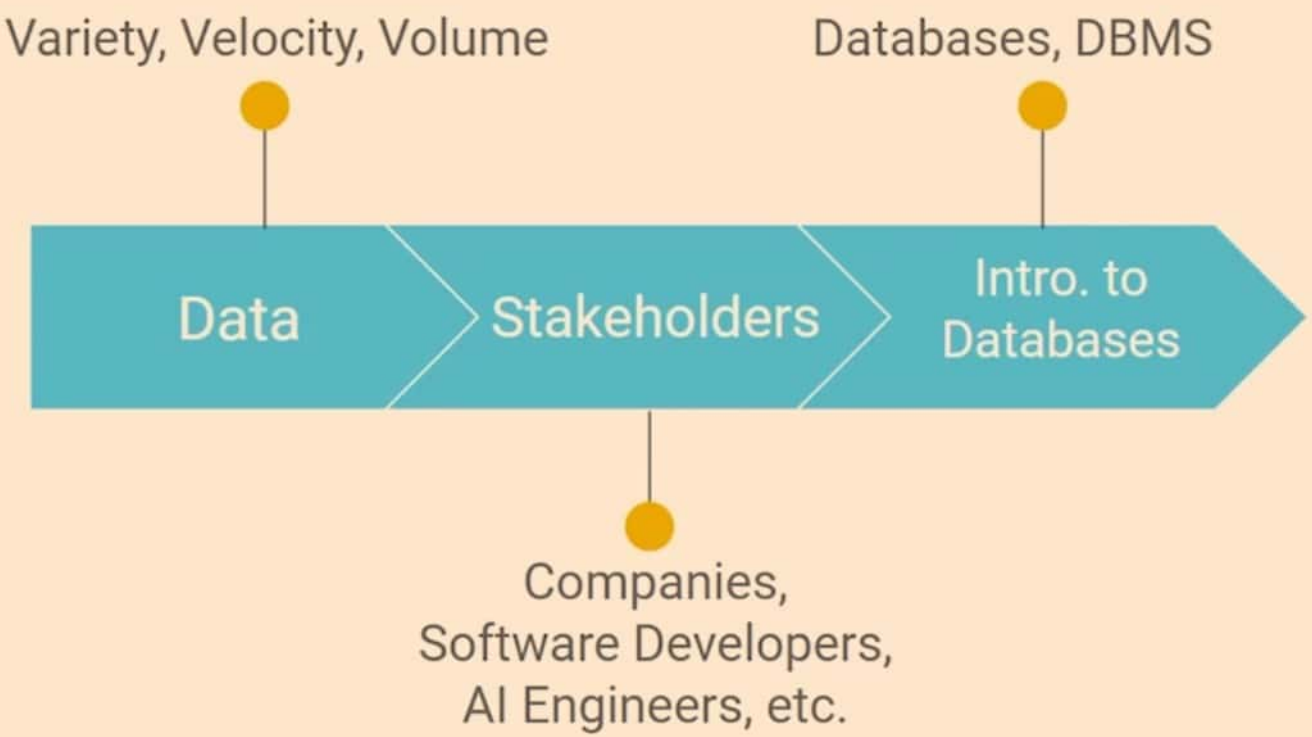
Agenda for Today's Session

Introduction to Databases



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Key Takeaways

- Data
  - Volume
  - Variety
  - Velocity
- Importance of data
- How various stakeholders use data
- Database
- DBMS

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Agenda for Today's Session

Introduction to Database

Advantages of DBMS → Types of Databases → Relational Database & DBMS → Non-Relational Database & DBMS

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Key Takeaways

- Database
- Database Management Systems
- Types of Databases
  - Relational Databases
  - Non-Relational Databases
- Non Relational & Relational DBMS

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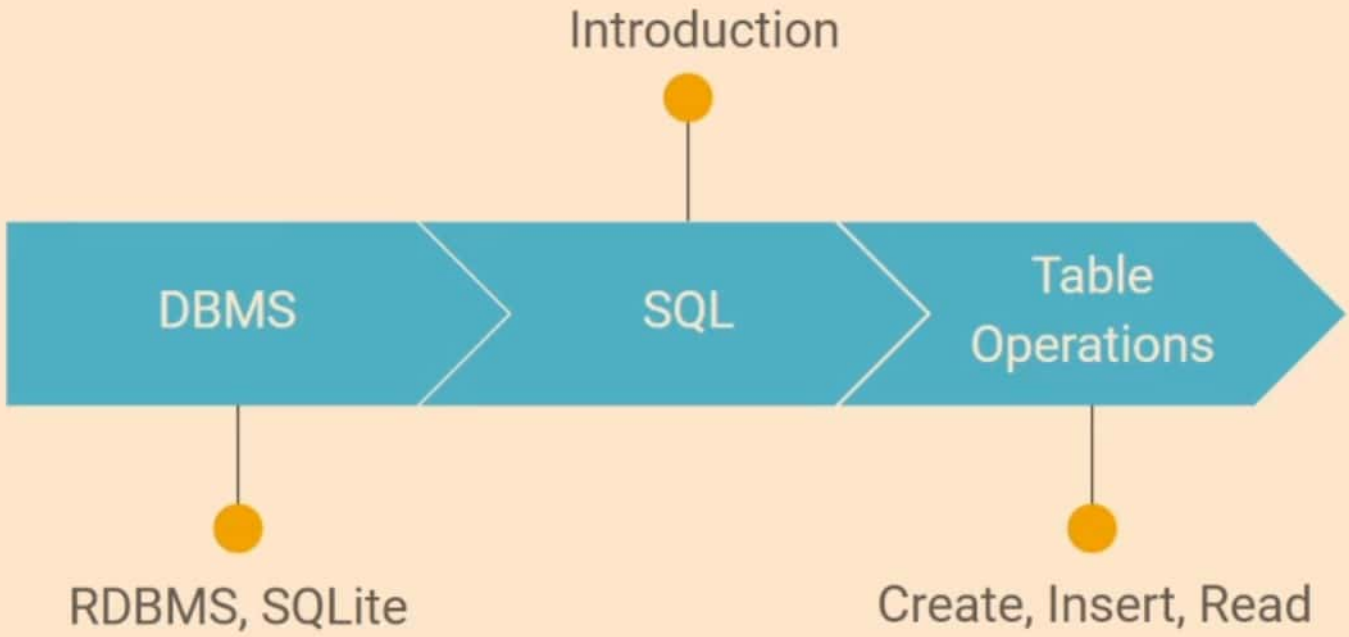
Agenda for Today's Session

Introduction To SQL



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Introduction To SQL Part - 1

Key Takeaways

- DBMS
- Relational DBMS
- Introduction To SQL
- SQL Queries
  - Creating Table
  - Inserting Data
  - Retrieving Data

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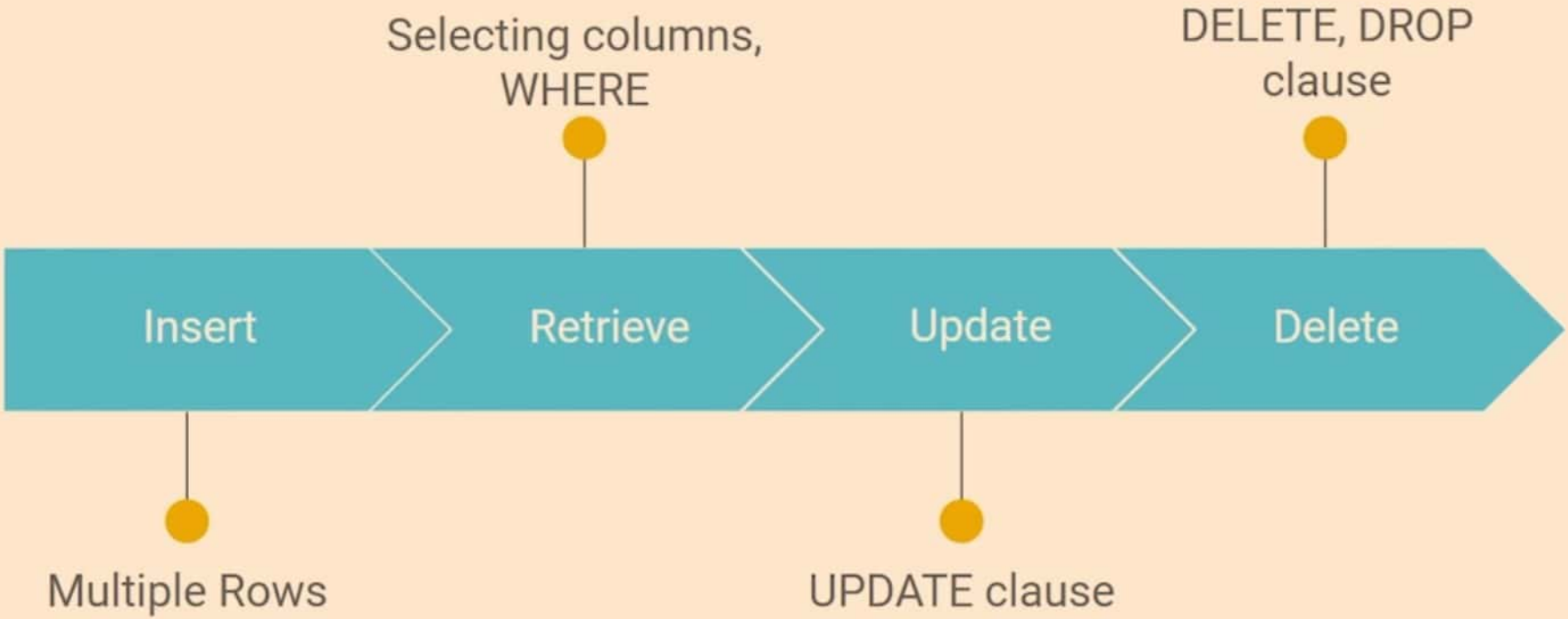
Agenda for Today's Session

Introduction To SQL Part-2



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Key Takeaways

SQL Queries

- Inserting Data
- Retrieving Data
- Updating Data
- Deleting Table
- Updating Table

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Database

Table Information

SQL

```
PRAGMA TABLE_INFO(product);
```

cid	name	type	not null	dflt_value	pk
0	name	VARCHAR(250)	0		0
1	category	VARCHAR(250)	0		0
2	price	INT	0		0
3	brand	VARCHAR(250)	0		0
4	rating	FLOAT	0		0

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Agenda for Today's Session

Querying With SQL - Part 1

Need for Querying

< , <=, >, >=, LIKE etc

% and _

Querying → Operators → Comparison Operators → String Operations → WildCard Characters

Introduction

startswith, endswith etc patterns

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Key Takeaways

- Introduction to Querying
- Comparison Operators
  - >, <, >=, <=, <>, =
  - String Operations
  - LIKE Operator

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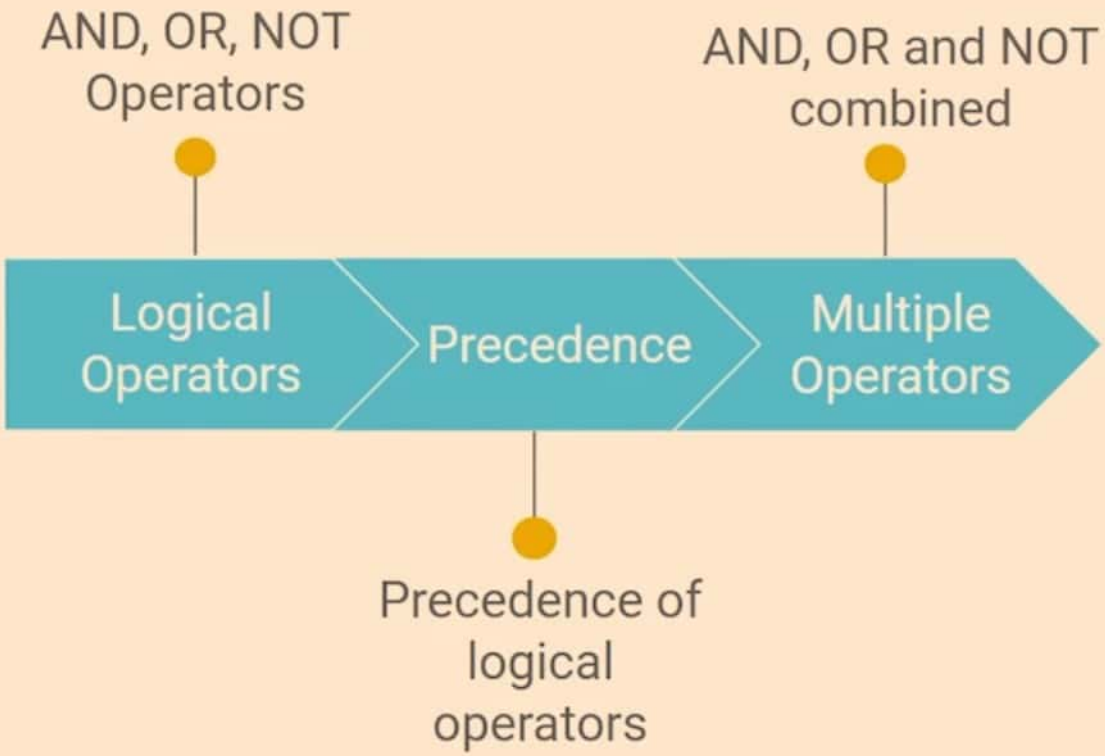
Agenda for Today's Session

Querying With SQL - Part 2



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Key Takeaways

- Logical Operators
  - AND Operator
  - OR Operator
  - NOT Operator
- Precedence
- Using multiple logical operators

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Querying With SQL - Part 3

IN, BETWEEN

ASC, DESC

Comparison Operators Contd. → Pagination → Ordering → Distinct

LIMIT, OFFSET

Handling data duplication

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Key Takeaways

- Comparison Operators
  - IN
  - BETWEEN
- Pagination
  - LIMIT
  - OFFSET
- Ordering results
- Distinct results

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Agenda for Today's Session

Aggregations

SUM, MIN, MAX, COUNT, AVG

AS

Aggregations → Aggregate Functions → Special Cases → Alias

Introduction

NULL values, Non-numeric values, etc.

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Key Takeaways

- Aggregate Functions
  - Sum
  - Average
  - Min
  - Max
  - Count
- Alias

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Agenda for Today's Session

GROUP BY

GROUP BY → GROUP BY on Multiple Columns → Applying Filters → Query Walkthrough

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Key Takeaways

- GROUP BY
  - With multiple columns
  - With WHERE Clause

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Agenda for Today's Session

GROUP BY with HAVING

Query Walkthrough → HAVING clause → WHERE vs HAVING

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Key Takeaways

- Query Walkthrough
- GROUP BY
  - With HAVING
- WHERE vs HAVING

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Agenda for Today's Session

Common Concepts

Using expressions in various clauses

Using CASE clause

Using Expressions in Querying

SQL Functions

CASE CLAUSE

Set Operators

Using strftime CAST functions

Union
Intersect
Minus

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Key Takeaways

- Using expressions in SQL
- Case statements
- SQL Functions
- Set operations
  - Union, Union All
  - Intersect
  - Minus

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