



# Mastering Oracle SQL: DDL Commands Decoded

*Build, Modify, and Manage Database Structures Like a Pro*

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# What is DDL?

*DDL (Data Definition Language) defines and manages database objects.*



 CREATE

Tables, views, indexes



 ALTER

Modify structures



 DROP

Delete objects

Note:

 *DDL auto-commits—changes are permanent!*





## What You Will Learn

1

Understand Oracle data types

2

Create tables with rules (constraints)

3

Use default values in tables

4

Alter and delete tables safely

5

Identify different Oracle objects

6

Understand schema-level design



# Oracle Database Objects



Table

**Stores data**



View

**Virtual table (query result)**



Index

**Speeds up searches**



Sequence

**Generates unique IDs**



## Oracle Naming Rules

1

✓ Start with a letter

Can contain letters, numbers, \_ , \$ , #

Max length: 30 characters

2

✓ Avoid Oracle reserved keywords

Case-insensitive unless quoted

! "EMP\_ID" is not the same as "emp\_id" if quoted.

# Oracle Data Types

Data Type

VARCHAR2(n)

NUMBER(p,s)

DATE

CLOB/BLOB

RAW/LONG RAW

ROWID

Description

Text, up to n characters

Numbers (precision & scale)

Stores date & time

Big character/binary files

Binary data

Row location in a table





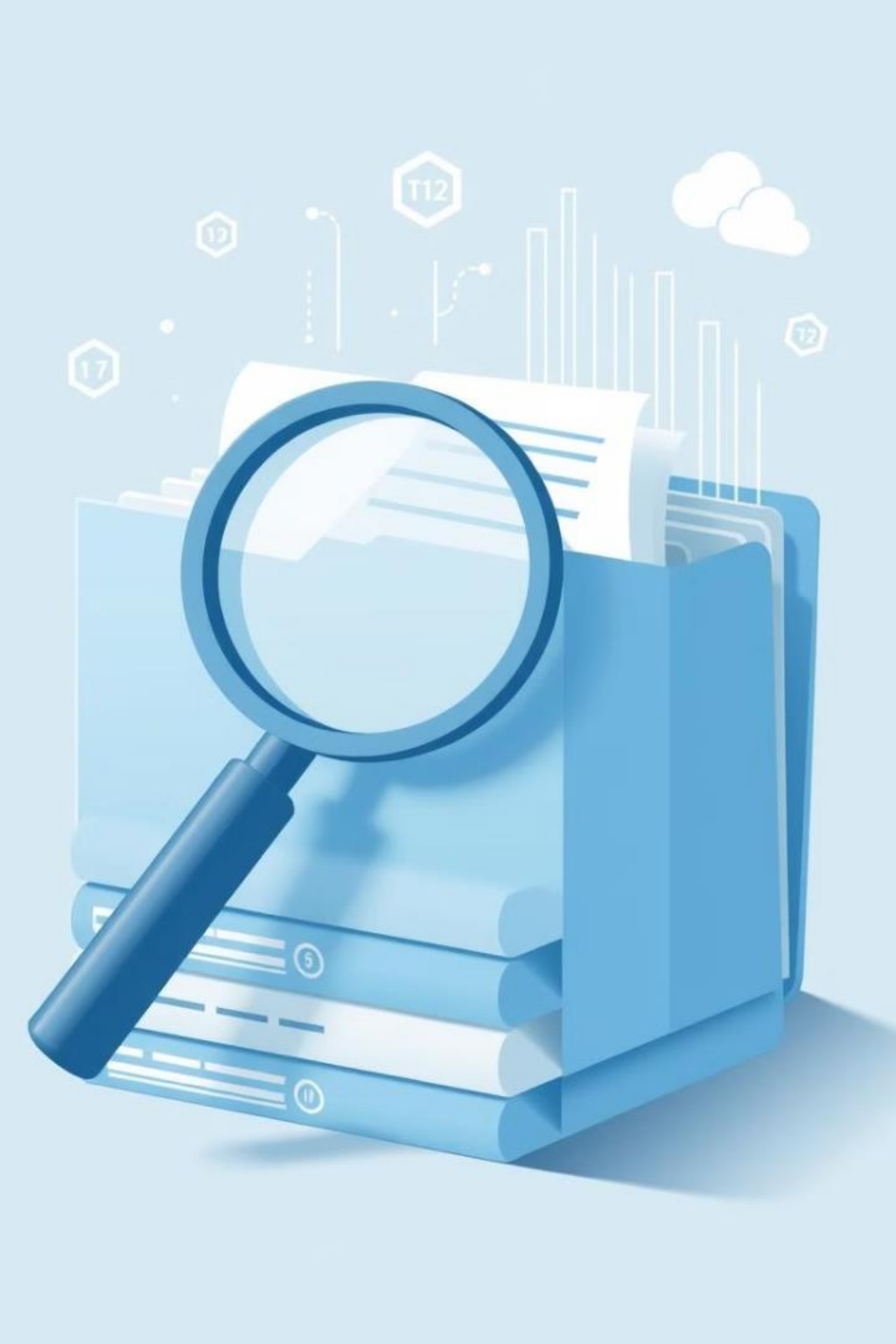
# Create Table Example

CREATE TABLE employees (  
emp\_id NUMBER PRIMARY KEY,  
name VARCHAR2(50) NOT NULL,  
salary NUMBER(10,2) CHECK  
(salary > 0),  
hire\_date DATE DEFAULT SYSDATE  
);

- PRIMARY KEY: Unique row identifier
- DEFAULT: Auto-fills if empty

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1: Meter(1)  
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```

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6	6	6	6	6	6
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97	97	97	97	97	97
98	98	98	98	98	98
99	99	99	99	99	99
100	100	100	100	100	100



## Constraints Explained



**NOT NULL:** Value must be given



**UNIQUE:** No duplicate values



**PRIMARY KEY:** Uniquely identifies a row



**FOREIGN KEY:** Links to another table

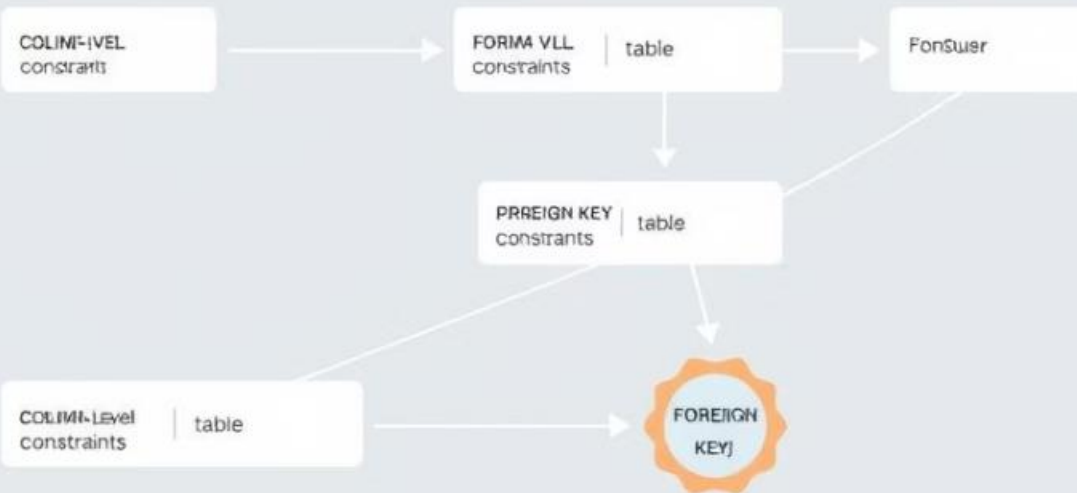
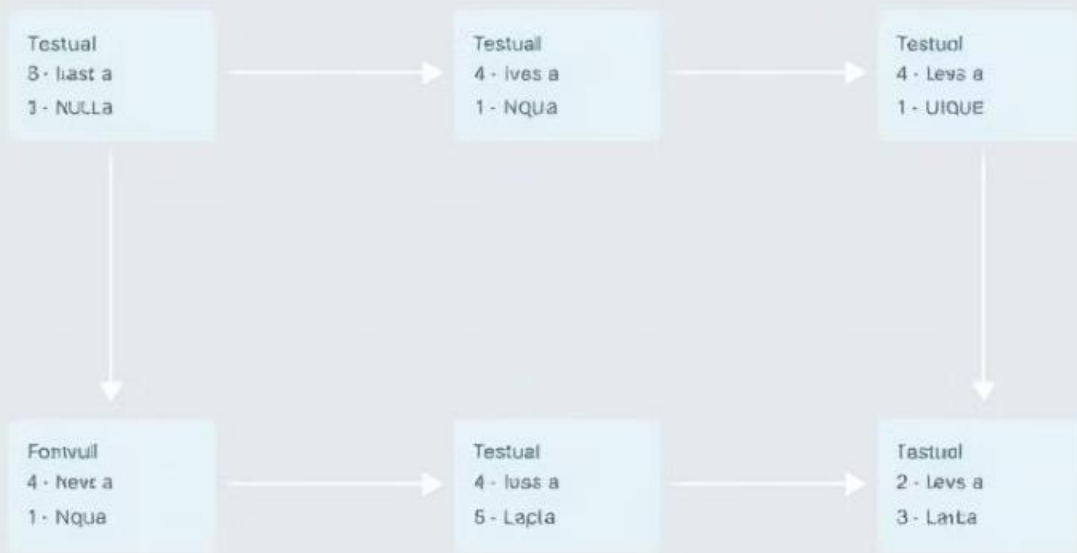


**CHECK:** Must meet a condition



Constraints = Data quality guardrails





## Column vs Table-Level Constraints

### Column-level

 **Column-level:** Defined inside a column

 **NOT NULL** can only be column-level

### Table-level

 **Table-level:** Defined after all columns

 **Use table-level when:**

- Defining multi-column constraints
- Adding a foreign key



# ALTER TABLE Commands

Add column

```
ALTER TABLE dept80 ADD job_id  
VARCHAR2(10);
```

Modify column

```
ALTER TABLE dept80 MODIFY  
last_name VARCHAR2(30);
```

Drop column

```
ALTER TABLE dept80 DROP  
COLUMN job_id;
```



**DELETE**

## DROP TABLE Command

`DROP TABLE dept80;`



1

 Deletes the table and all its data

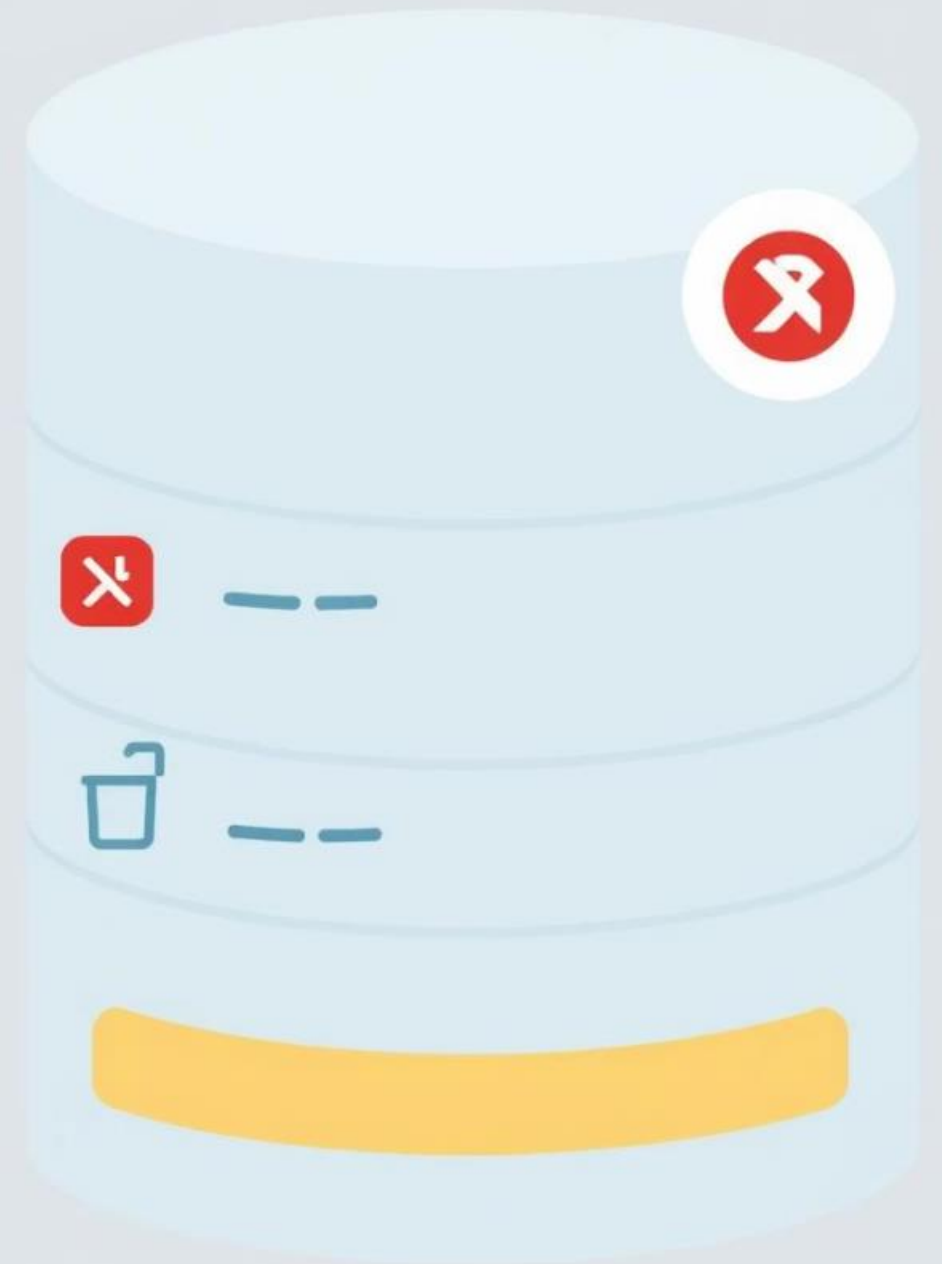
2

 Moves it to **recycle bin** (can be recovered)

3

 Use **PURGE** to delete it permanently

```
DROP TABLE dept80 PURGE;
```



## Summary (DDL Practice)

Lab 1

Create table with **DEFAULT**

Lab 2

Add **PRIMARY KEY** constraint

Lab 3

Add **FOREIGN KEY** with **ON DELETE CASCADE**

Lab 4

Use **CHECK** for value validation

Lab 5

Create table using a subquery

Lab 6–9

Add/modify/drop columns & tables

Practice makes SQL perfect! 



# Thank You!

We appreciate your time and attention.

Master Oracle SQL with practice and confidence.



Keep Practicing

Consistent practice ensures mastery of DDL commands.



Explore Further

Continue learning advanced Oracle SQL concepts.



Ask Questions

Engage with the community for deeper understanding.

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