

# Introduction To Database - Session 1

04 July 2024 12:08

## Introduction To Database

- Agenda :
  - What is Database?
  - Data:
  - SQL VS MYSQL
  - CRUD
    - C - Create
    - R - Read
    - U - Update
    - D - Delete
  - String Function
  - Aggregation Function
  - GROUP BY

Department - Group  
- Aggregation

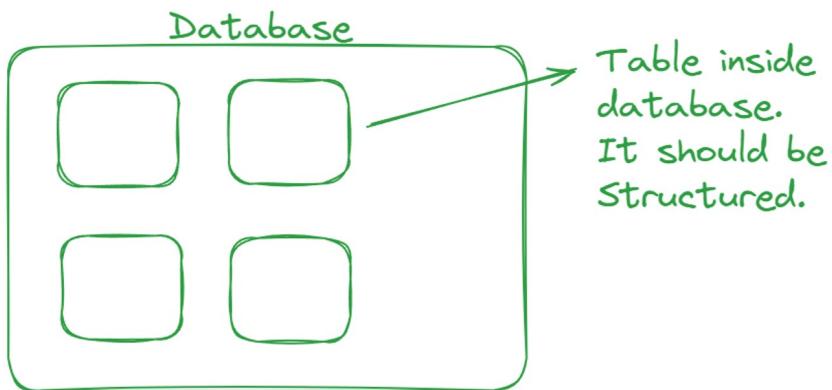
- Logical Operator.
- Joins - Union - Relationship
- Case Function
- Views / Modes
- Window Function
- Instagram

## What is Database?

- Data - Is a Knowledge & Money

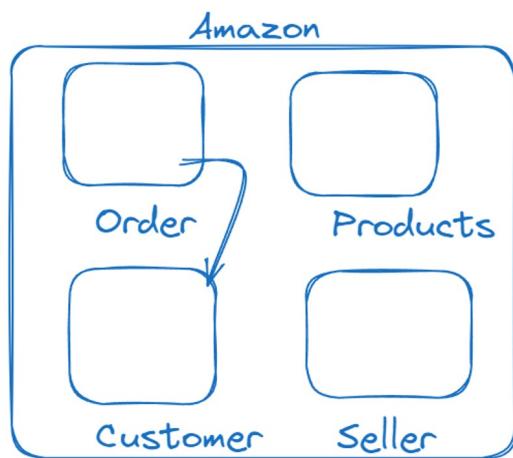


- Loss Making Company



Why we are not storing every individual information in a single table.

- High Computation Power.
- Low Efficiency.

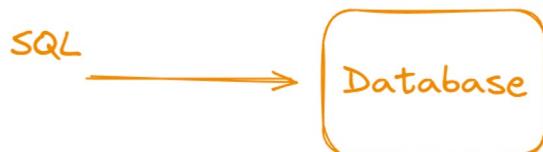
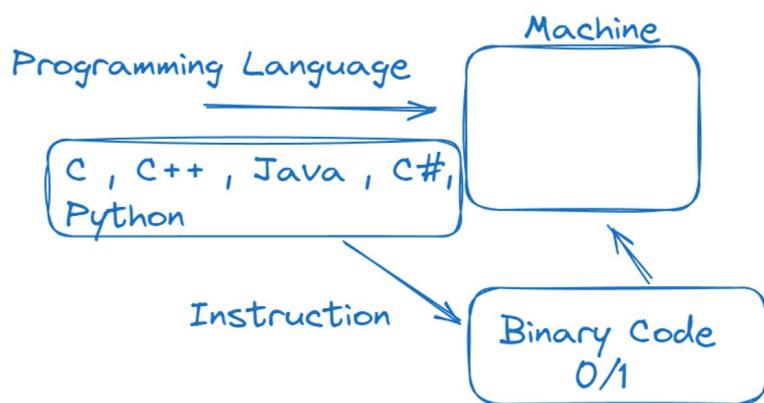


Your Database:

Tablenames	Records
<u>Customers</u>	91
<u>Categories</u>	8
<u>Employees</u>	10
OrderDetails	518

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<u>Employees</u>	10
<u>OrderDetails</u>	518
<u>Orders</u>	196
<u>Products</u>	77
<u>Shippers</u>	3
<u>Suppliers</u>	29

## SQL - Structured Query Language



**A Quick Example**

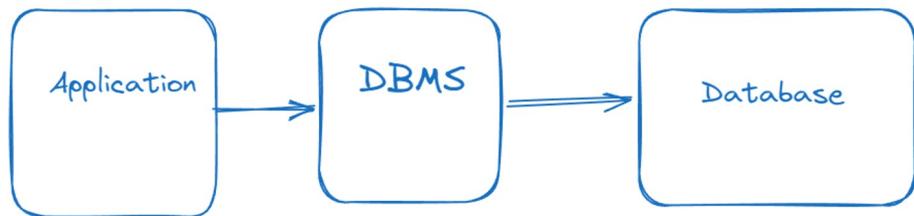
→

L_name	F_Name	A.Code	Phone Number
Andrews,	Archie	- (949)	345-2222
Cooper,	Betty	- (212)	246-9846
Flanders,	Ned	- (415)	987-3451
Jones,	Jughead	- (415)	888-3777
Lodge,	Veronica	- (714)	332-0981
Snow,	Jon	- (949)	621-1908
Stark,	Ned	- (310)	119-6501

Find Ned Flanders' Phone Number  
 Find People With First Name "Ned"  
 Find All Phone Numbers With Area Code 415  
 Find All People Who Have a 3-letter First Name

cha\_length(F\_name) --- 3 Letters Data

`cha_length(F_name)` } 3 Letters Data



### Database Management System:

- MYSQL
- POSTGRESQL
- ORACLE
- SQLite

SQL is the language we use to  
 "talk" to our databases

"Find All Users"  
 "Find All Users Who Are 18 Years Old"  
 "Add A New User With Username 'JumboJim'"  
 Delete Every Single User!

1. `SELECT * FROM USERS;`
2. `SELECT * FROM USERS WHERE AGE > 18.`

3. `INSERT INTO USER(username)  
VALUES("JumboJim");`

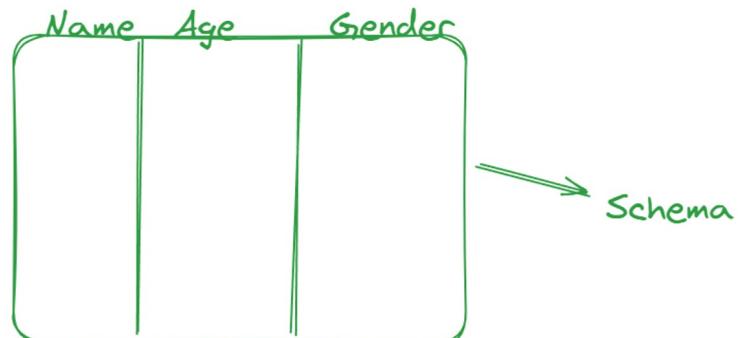
Arguments.

Parameter

Arguments.

Parameter

4. DELETE \* FROM USERS;



DELETE - Delete data.  
TRUNCATE - Remove all data except Schema.  
DROP - Remove Complete Structure/ Schema.

## Two Takeaways

1. Once you learn SQL, it's pretty easy to switch to another DB that uses SQL
2. What makes databases (DBMS) unique are the features they offer, not the language

<https://dev.mysql.com/doc/refman/8.0/en/windows-installation.html>

<https://dev.mysql.com/downloads/installer/>