

# Database System in HealthCare

SQL Basics  
Lecture: 2



# Contents of Lecture



*What is SQL?*



*SQL Commands*

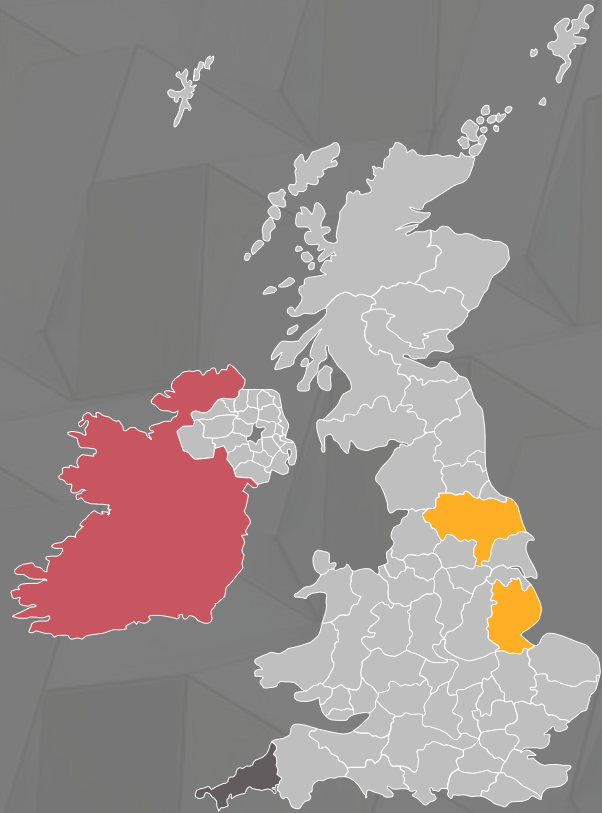


*SQL Data Types*

# What is SQL

**SQL** is Structured Query Language, which is a computer language for storing, manipulating and retrieving data stored in relational database.

SQL is the standard language for Relation Database System. All relational database management systems like "MySQL, MS Access, Oracle, Sybase, Informix and SQL Server" use SQL as standard database language.



02

# SQL Commands





# SQL Commands

## SQL Commands



# Data Manipulation Language

Data Manipulation Language (DML) Statements are used for manipulating or managing data In Database.

In DML there are 4 statements:

**SELECT** \_\_\_\_\_ retrieve data from the a database

**INSERT** \_\_\_\_\_ insert data into a table

**UPDATE** \_\_\_\_\_ updates existing data within a table

**DELETE** \_\_\_\_\_ deletes all records from a table

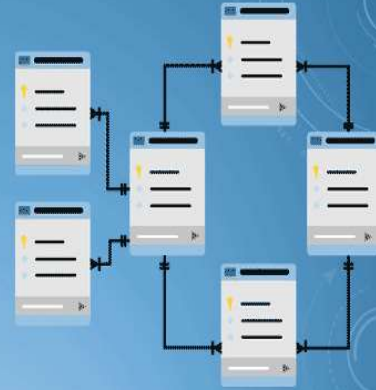
**Note:** the space for the records remain

# Data Definition Language

DDL is creating and modifying database objects such as tables, indexes, and users.

- **CREATE** ————— to create objects in the database
- **ALTER** ————— alters the structure of the database
- **DROP** ————— delete objects from the database
- **RENAME** ————— rename an object

# SQL Data Types



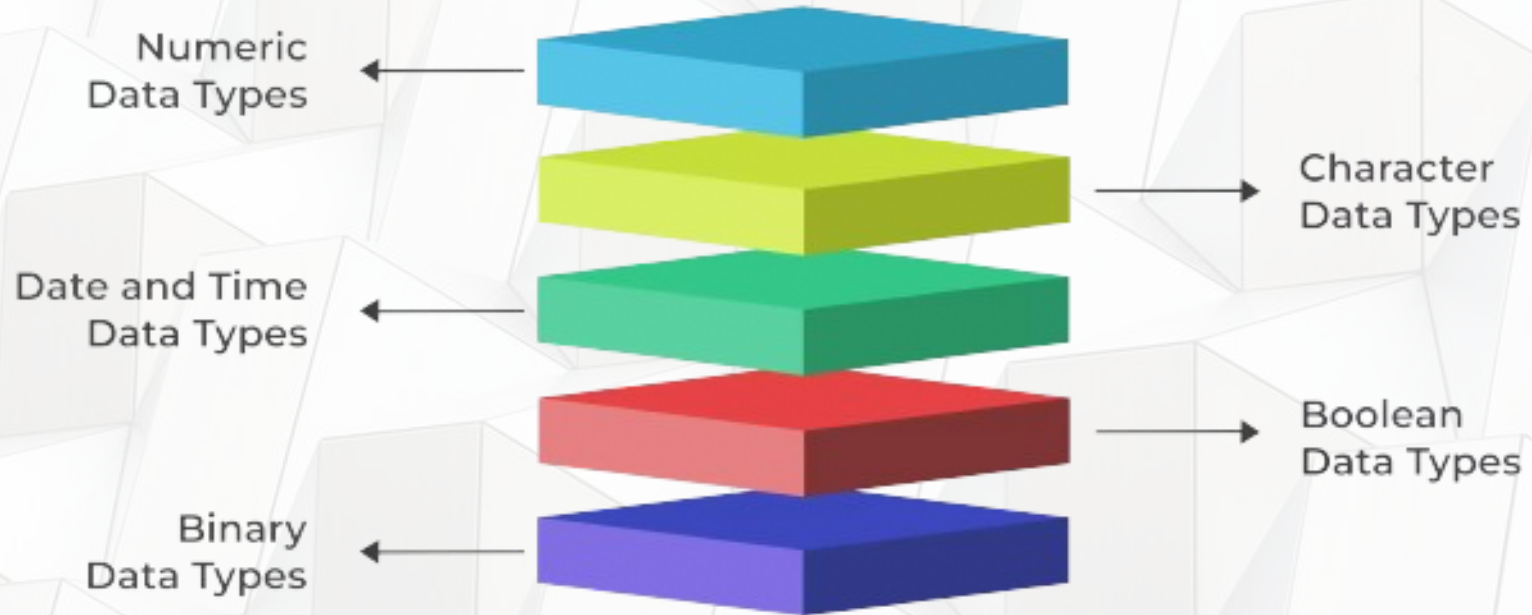
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# SQL Data Types

## SQL DataTypes



# SQL Data Types

- **Numeric** .....
- Character string
- Bit string
- Boolean
- Time

*Integer (Int)*

*Float*

*Real*

*Double*



# SQL Data Types

- Numeric
- Character string .....
- Bit string
- Boolean
- Time



Fixed-length Padded if string is shorter than n

Variable-length  
No Padding

# SQL Data Types

- Numeric
- Character string
- **Bit string** .....
- Boolean
- Time

*Bit(n)*

*Bit Varying(n)*

# SQL Data Types

- Numeric
- Character string
- Bit string
- **Boolean** .....
- Time

*Boolean*

TRUE  
FALSE  
NULL (Unknow)

# SQL Data Types

- Numeric
- Character string
- Bit string
- Boolean
- **Time** .....



Format  
YYYY-MM-DD  
DATE'2010-09-30'

Format  
HH:MM:SS  
TIME' 13:30:27'

The background features a blurred image of hands interacting with a tablet. The image is overlaid with a series of diagonal, semi-transparent grey stripes that create a sense of movement and depth. The overall color palette is muted, with greys, browns, and soft blues.

# Thank You

Do you have any question!