



INTRODUCTION TO DATA BASE



SQL VS NOSQL

SQL	NOSQL
Relational Database management system	Distributed Database management system
Vertically Scalable	Horizontally Scalable
Fixed or predefined Schema	Dynamic Schema
Not suitable for hierarchical data storage	Best suitable for hierarchical data storage
Can be used for complex queries	Not good for complex queries

MYSQL

What is MySQL :

MySQL is an open-source relational database management system (RDBMS) Uses tables as the main component Offers less functionality than PostgreSQL.

Features OF MySQL :
Security and authentication
Client server execution and remote database access
Embedded SQL Transaction Control Language

POSTGRESQL

- What is PostgreSQL :
- An advanced, enterprise-class, and open-source relational database system A highly stable database Used as a primary database for many web applications General purpose transaction database Language support : Python ,Java ,JavaScript (Node.js)...
- Features OF PostgreSQL : Can run dynamic websites and web apps as a LAMP stack option. Freely available under an open source license Asynchronous replication... Table inheritance Sophisticated locking mechanism

SQL SERVER

- What is SQL Server :
- A Relational Database Management System (RDBM) Developed and operated by Microsoft. It's manages and performs all the database operations. It has both command-line and GUI(Graphical User Interface)
- Features OF SQL Server : High availability management. Support for geographic data. Centralized management and deployment of multiple instances and applications

MYSQL VS POSTGRESQL VS SQL SERVER

- MySQL :A relational database management system. Most popular open source database Not extensible.
- PostgreSQL :Available as free and open source software in perpetuity An object-relational database management system. More advanced and Highly extensible. Provides online backup. Most advanced open source database PostgreSQL does not have a native data type for geographic data.
- SQL Server :Available through commercial license and can be licensed on a per-core model or server and client access level (CAL) model. Use a variant of Structured Query Language (SQL) called T-SQL (for Transact-SQL) SQL Server has the geography data type for storing geographic spatial data. Easy to use and reliable, with strong .NET compatibility

MONGO DB

- MONGO DB IS A SOURCE-AVAILABLE CROSS-PLATFORM DOCUMENT-ORIENTED DATABASE PROGRAM. CLASSIFIED AS A NOSQL DATABASE PROGRAM, MONGO DB USES JSON-LIKE DOCUMENTS WITH OPTIONAL SCHEMAS,

MongoDB

Database

Collections

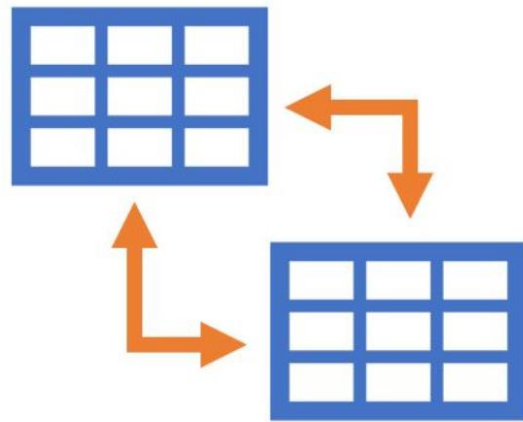
Documents

Fields

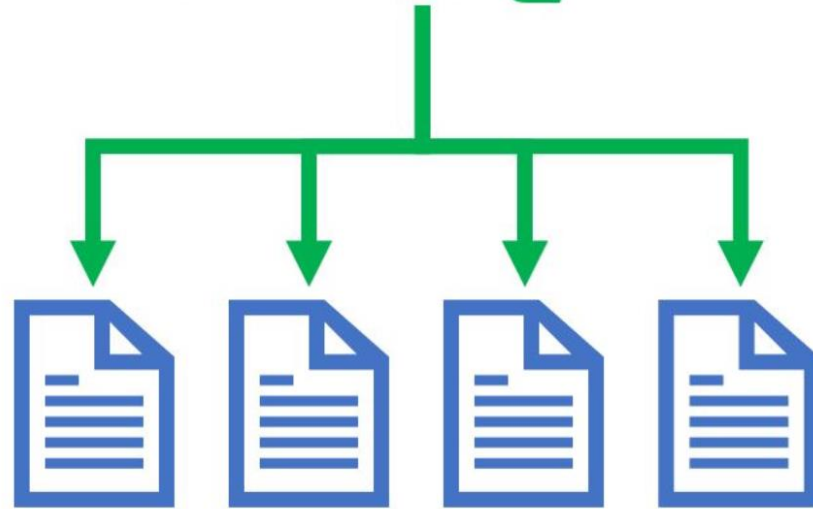
Example

```
{  
  "_id" : ObjectId("5fa80120e6f1eff7a1c9a6ec"),  
  "deptname" : "Marketing",  
  "deptmanager" : "Jacob",  
  "deptrank" : 3  
}
```


SQL VS ***NOSQL***



(Structured Data)



(Un-Structured Data)

A spiral-bound notebook with a white cover and a silver spiral binding. The words "Thank You" are written in a large, black, sans-serif font on the front cover. A silver and black pen is resting on the bottom left corner of the notebook. The notebook is placed on a light-colored wooden surface.

Thank
You

shutterstock.com · 1273422685

A close-up view of a wooden floor with light-colored wood planks and a natural wood grain pattern.