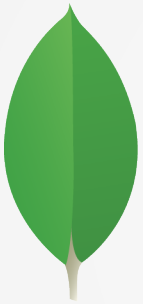


mongoDB®

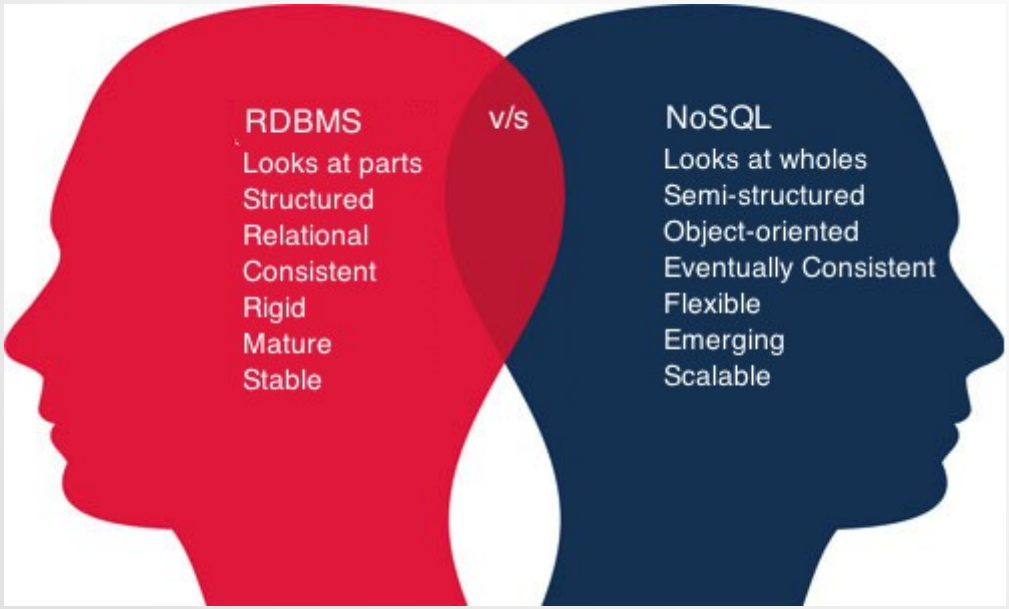
Bhakti Atul Pradhan

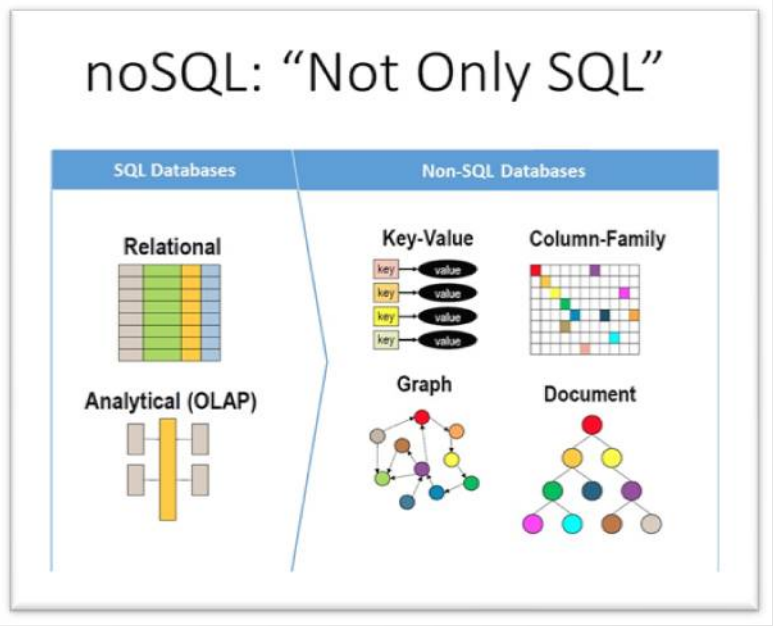
a drop of KNOWLEDGE

Agenda

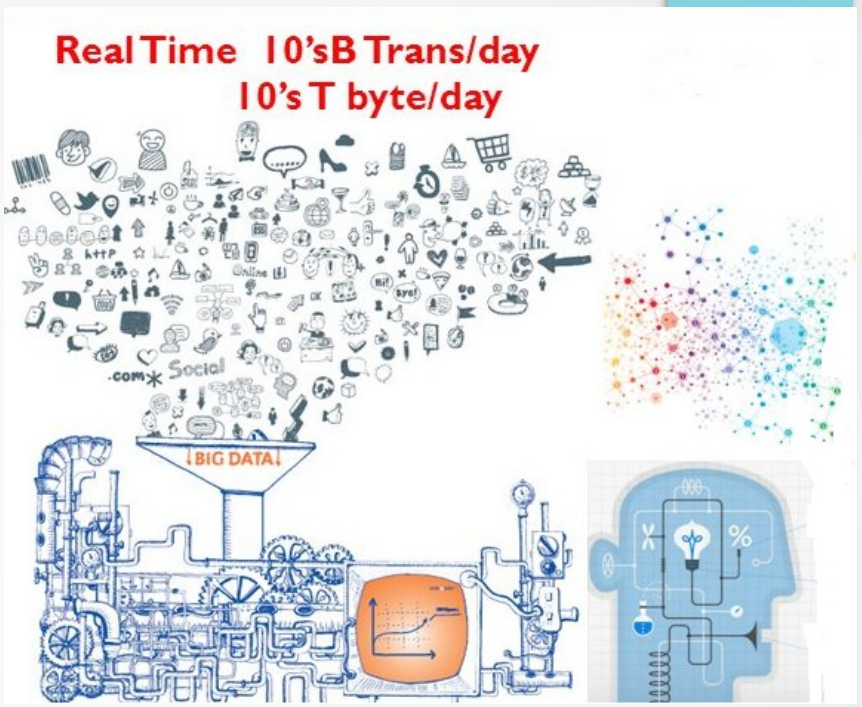
NO SQL (Not Only SQL)

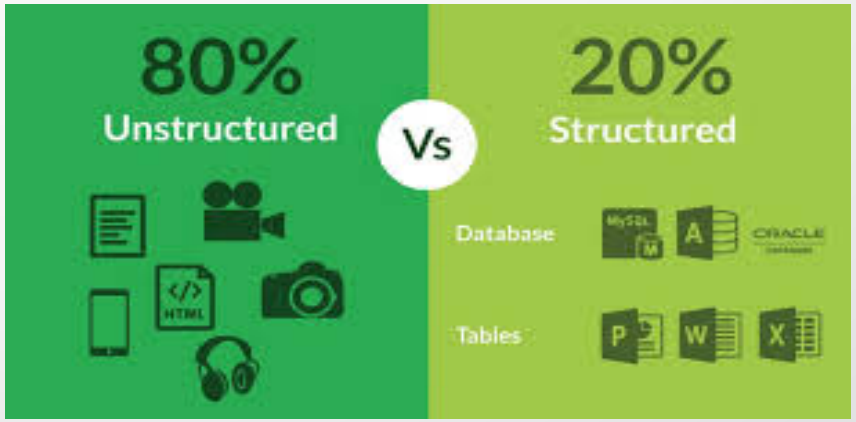
A NoSQL database provides a mechanism for storage and retrieval of data that is modeled in means other than the tabular relations used in relational databases.





Why NoSQL / MongoDB





What / Who MongoDB

- MongoDB is a free and open-source cross-platform document-oriented database that provides high performance, high availability, and automatic scaling.
- MongoDB uses JSON like documents with flexible schema.
- Developed by 10 gen in 2007, later renamed to MongoDB Inc in 2013.
- It is published under a combination of the GNU (General Public License) and the Apache License.

MongoDB Features

- Document Based
- Distributed
- High Performance
- Rich Query Language
- High Availability — Replication
- High Scalability – Sharding
- Support for Multiple Storage Engines
- Dynamic — No rigid schema.
- Flexible – field addition/deletion have less or no impact on the application
- Heterogeneous Data
- No Joins
- Data Representation in JSON or BSON
- Geospatial support
- Document-based query language that's nearly as powerful as SQL
- Easy Integration with BigData Hadoop
- Cloud distributions such as AWS, Microsoft, RedHat,dotCloud and SoftLayer etc

When MongoDB?

- High performance (1000's – millions queries/sec)
- Need flexible schema
- Rich querying with any number of secondary indexes
- Need for replication across multiple data centers globally
- Need to deploy rapidly and scale.
- 99.99999% availability
- Real Time Analysis
- Geospatical Querying
- Processing in real time vs batch
- Agile Project
- Need Strong Data consistency
- Advance Security
- Building Next Gen Solution

When/Where MongoDB?

- You Expect a High Write Load
- You need High Availability in an Unreliable Environment (Cloud and Real Life)
- You need to Grow Big (and Shard Your Data)
- Your Data is Location Based
- Your Data Set is Going to be Big (starting from 1GB) and Schema is Not Stable

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How MongoDB

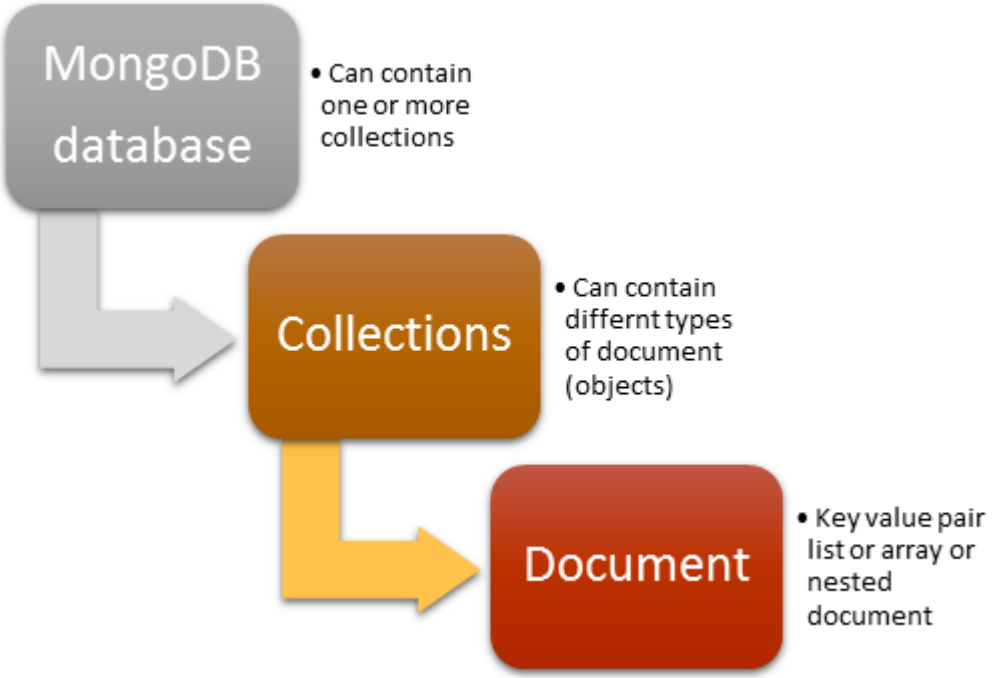
- Getting Started
- Basics with Mongo Shell
- Mongo Compass
- MongoDB CRUD
- Schema Design
- Indexes
- Aggregation Framework
- Sharding
- Replication

Getting Started

- Server
  - MongoDB Atlas is a cloud-hosted service for provisioning, running, monitoring, and maintaining MongoDB deployments.
  - Local – Community/Enterprise

  - Client
    - Mongo Shell
    - Mongo Compass - GUI for MongoDB

Basics



SQL	MongoDB
Table	Collection
Row	Document
Column	Field
Primary key	ObjectId
Index	Index
View	View
Nested table or object	Embedded document

Questions

Thank You