



The database for modern applications

A laptop screen is shown in a dark, dimly lit environment. The screen displays a data dashboard. At the top, there is a line chart with two data series: 'New Visitor' (represented by a blue line with square markers) and 'Returning Visitor' (represented by a green line with square markers). The 'New Visitor' line shows a general upward trend with some fluctuations, while the 'Returning Visitor' line is more stable. Below the line chart, there is a pie chart. The pie chart is divided into two main sections: a large blue section and a smaller green section. The laptop's keyboard is visible at the bottom of the frame, and the overall scene is dark, with the light from the screen illuminating the surrounding area.

What is **NoSQL** Database?

Before starting with **MongoDB**, we must know about **NoSQL**.

NoSQL or “non-SQL” a non-structured database.

It provides a facility for storage and retrieval of data using fields.

While in SQL the data stores in a tabular form.

Companies are using a NoSQL database in big data and real-time applications

NoSQL offers “eventual consistency” so that it may not meet the real-time application requirements.

Still, its use to merits over relational databases.

What is MongoDB?



MongoDB is an open source platform written in C++ and has a very easy setup environment.

It is a cross-platform, document-oriented and non-structured database.

MongoDB provides high performance, high availability, and auto-scaling.

It is a NoSQL database and has flexibility with querying and indexing.

MongoDB has very rich query language resulting in high performance.

MongoDB Features



1- Ad-hoc Queries

MongoDB supports ad-hoc queries by indexing.

2- Schema-Less Database

It is very flexible than structured databases. There is no need to type mapping.

3- Document Oriented

It is document oriented, JSON like a database.

4- Indexing

Any document can index with primary and secondary indices.

5- Replication

It has this powerful tool. Every document has one primary node which further has two or more secondary replications.

6- Aggregation

For efficient usability, MongoDB has aggregation framework for batch processing.

7- GridFS

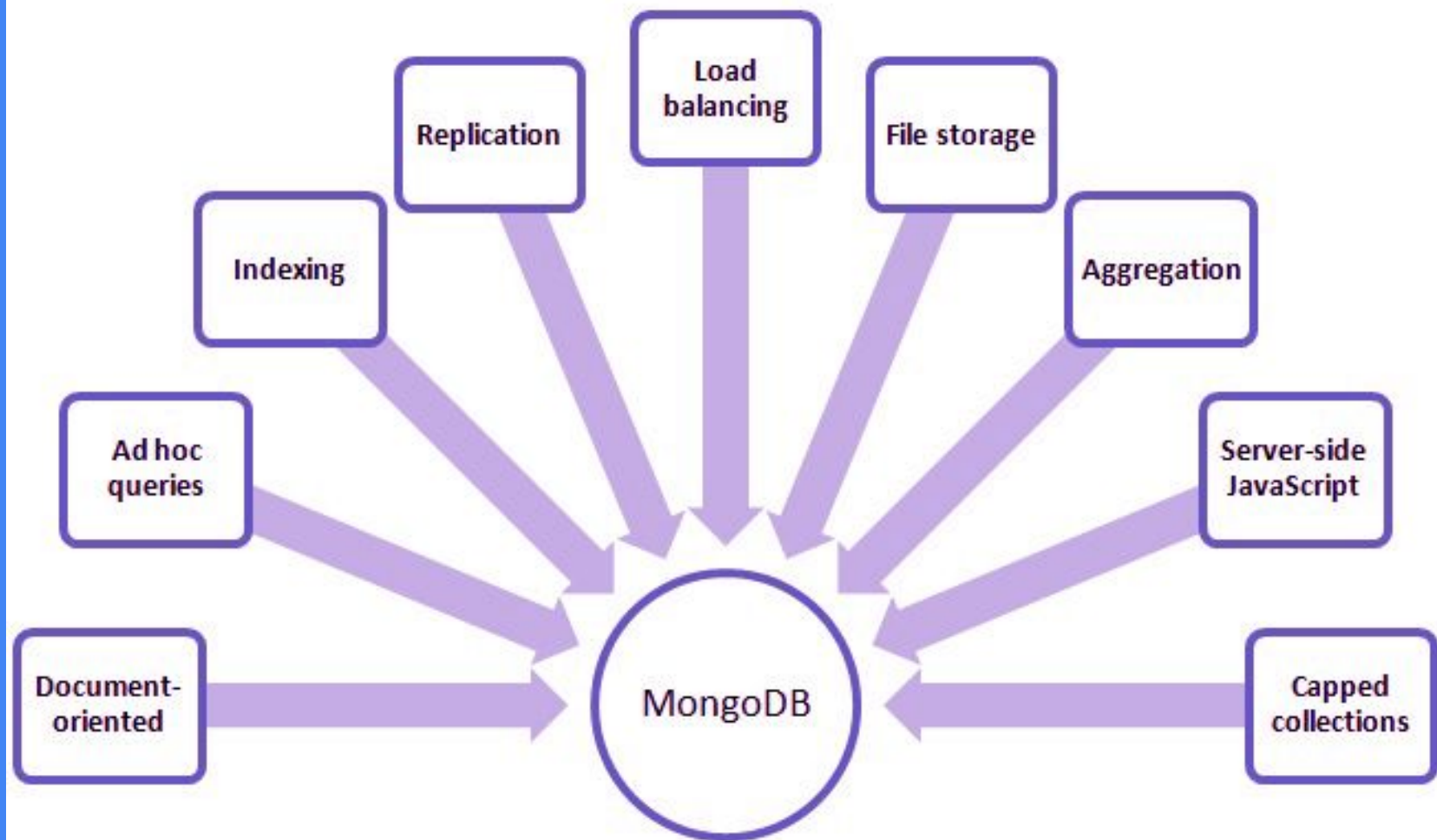
It has grid file system, so it can use to store files in multiple machines.

8- Sharding

For the larger data sets sharding is the best feature. It distributes larger data to multiple machines.

9- High Performance

Indexes support faster queries leading to high performance.





MongoDB History

MongoDB was developed by a company named MongoDB Inc. formerly known as 10gen based in New York. The **MongoDB** was founded by Dwight Merriman, Eliot Horowitz, and Kevin Ryan in 2007. This trio was the team behind DoubleClick (now owned by Google). It was first developed as a platform as a service. It was then introduced in the market as open source database server in 2009 by **MongoDB** Inc. The company maintains the server and provides 24×7 email and call support. The first version of **MongoDB** is v1.4, which was released in March 2010.

MongoDB Applications

- In E-commerce product catalogue.
- **Big data**
- Content management
- Real-time analytics and high-speed logging.
- Maintain Geolocations
- Maintaining data from social websites.

An aerial photograph of New York City at dusk. The sky is a mix of dark purple, blue, and orange. The city is densely packed with skyscrapers, many of which are illuminated with their interior lights. The Empire State Building is prominent in the center-left, with its top lit in red and green. To the right, the dark, angular structure of the 111 West 57th Street is visible. The Hudson River and the New York Harbor are visible in the background, with some bridges and distant city lights. The word "Questions?" is overlaid in a large, white, sans-serif font in the center-left of the image.

Questions?