Glossary: Getting Started with MongoDB

Welcome! This alphabetized glossary contains many of the terms you'll find within this course. This comprehensive glossary also includes additional industry-recognized terms not used in course videos. These terms are important for you to recognize when working in the industry, participating in user groups, and participating in other certificate programs.

Term	Definition
Aggregation pipeline	The aggregation pipeline in MongoDB allows for data transformation and processing using a series of stages, including filtering, grouping, sorting, and projecting. The aggregation pipeline is a powerful tool for expressive data manipulation.
B+ Tree	The B+ Tree is a data structure commonly used in database indexing to efficiently store and retrieve data based on ordered keys.
CRUD	CRUD is an acronym for create, read, update, and delete, which are the basic operations for the basic operations for interacting with and manipulating data in a database.
Election	In a MongoDB replica set, an election is the process of selecting a new primary node when the current primary becomes unavailable.
Horizontal scaling	The process of adding more machines or nodes to a NoSQL database to improve its performance and capacity. This is typically achieved through techniques like sharding.
Idempotent changes	Idempotent operations are those that can be safely repeated multiple times without changing the result. MongoDB encourages idempotent operations to ensure data consistency.
Indexing	The creation of data structures that improve query performance by allowing the database to quickly locate specific records based on certain fields or columns.
Mongo shell	The MongoDB shell, known as mongo shell, is an interactive command-line interface that allows users to interact with a MongoDB server using JavaScript-like commands. The mongo shell is a versatile tool for administration and data manipulation.
MongoClient	MongoClient is the official MongoDB driver that provides a connection to a MongoDB server and allows developers to interact with the database in various programming languages.
Oplog	The Oplog is a special collection that records all write operations in a primary node. It is used to replicate data to secondary nodes and recover from failures.
Primary node	In a MongoDB replica set, the primary node is the active, writable node that processes all write operations.
Replication	Replication involves creating and maintaining copies of data on multiple nodes to ensure data availability, reduce data loss, fault tolerance (improve system resilience), and provide read scalability.
Replication lag	Replication lag refers to the delay in data replication from a primary node to its secondary nodes in a replica set. Replication lag can impact the consistency of secondary data.
Secondary	Secondary nodes replicate data from the primary and can be used for read-operations.
Sharding	Refers to the practice of partitioning a database into smaller, more manageable pieces called shards to distribute data across multiple servers. Sharding helps with horizontal scaling.
Vertical scaling	Vertical scaling involves upgrading the resources (For example, CPU and RAM) of existing machines to improve performance.