INTRODUCTION

MongoDB: A Flexible NoSQL Database

Imagine a digital scrapbook instead of a spreadsheet. That's kind of how MongoDB works! It's a popular database designed for beginners to handle information that's not neatly organized in rows and columns like a traditional spreadsheet .

MongoDB is a popular open-source NoSQL (Not Only SQL) database that offers a document-oriented approach to data storage. Unlike traditional relational databases (RDBMS) that use structured tables and rows, MongoDB stores data in flexible JSON-like documents. This makes it well-suited for modern applications that deal with:

- **Unstructured or semi-structured data:**

  Information that doesn't fit neatly into rigid table structures, such as user profiles with varying fields, sensor data with different readings, or social media posts with diverse content.

- **Evolving data models:**

  As applications grow and data requirements change, MongoDB's schema-less design allows you to adapt your data structure without extensive modifications.

- **Large datasets:**

  MongoDB excels at handling massive volumes of data, especially when distributed across multiple servers (sharding).

DATABASE

A database is essentially a big organized collection of information stored electronically on a computer system. This information is typically structured in a way that makes it easy to access and manage.

Here are some key points about databases:

Structured Data:

The information is typically organized in a specific format, often using tables with rows and columns. This makes it easier to search, filter, and analyse the data.

Database Management System (DBMS):

This is the software that acts like the filing cabinet manager. It allows you to store, retrieve, update, and manage all the data within the database.

Data Types:

Databases can hold various kinds of information, including text, numbers, images, videos, and more.

SQL and NoSQL

SQL and NoSQL are two fundamentally different approaches to storing and managing data. Here's a breakdown of their key differences:

Structure:

SQL: Relational databases. Data is organized in tables with rows and columns, enforcing relationships between them.

NoSQL: Non-relational databases. Data can be stored in various formats like documents, key-value pairs, or graphs, offering more flexibility.

Schema:

SQL: deal for structured data with well-defined relationships, complex queries, and data consistency (e.g., financial applications, enterprise resource planning systems).

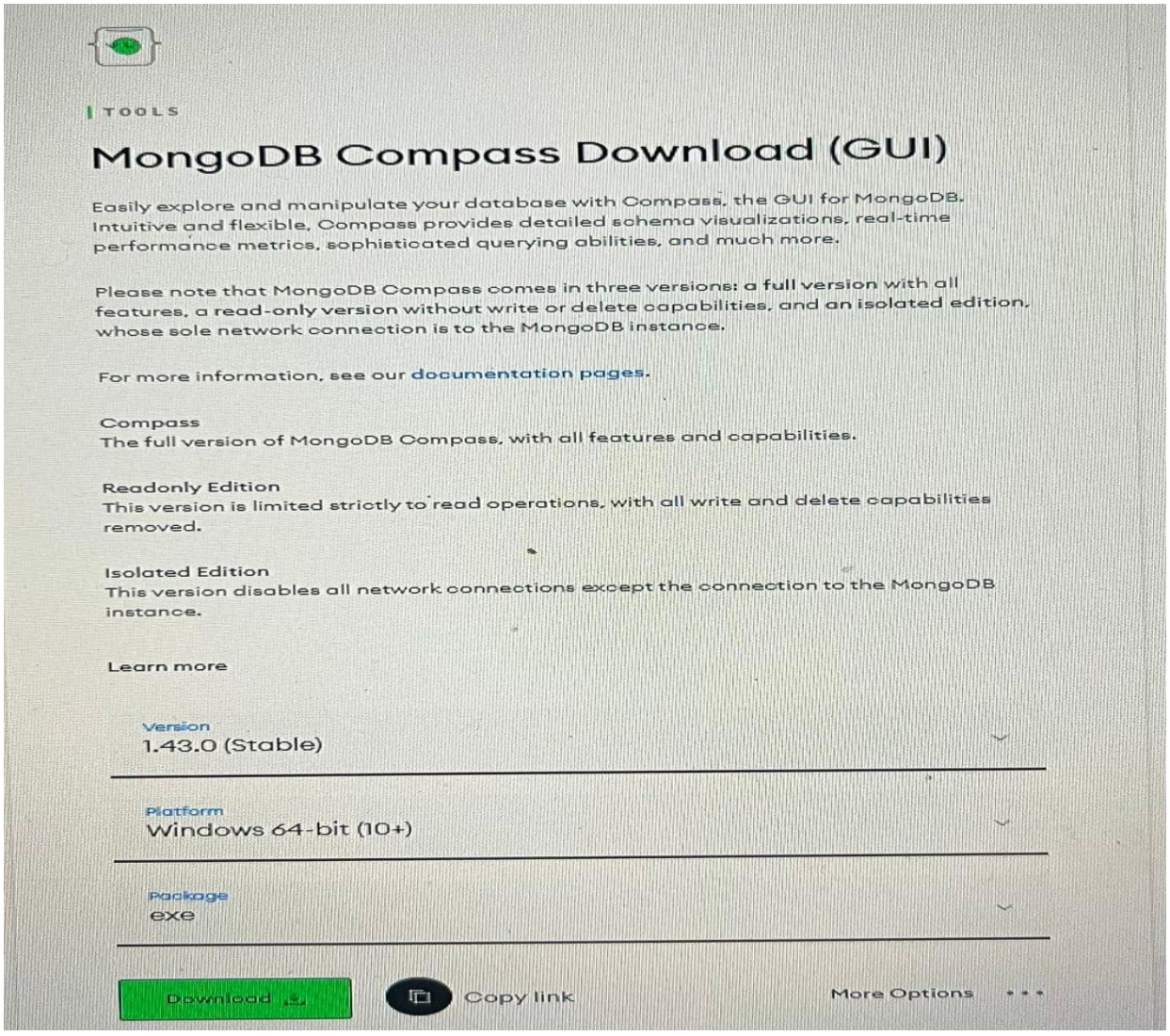
NoSQL: Good for unstructured or big data, high availability, and scalability (e.g., social media applications, real-time analytics).

MONGODB INSTALLATION

You just need to install mongodb compass and mongodb shell.

STEP 1: search mongodb compass download

STEP 2: mongodb compass download



STEP 3: install mongodb shell