Day – 1

MongoDB Basic To Advanced

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MongoDB – Working and Features

MongoDB is a powerful, flexible, and scalable NoSQL database that provides high performance and real-time data processing. Unlike traditional relational databases (RDBMS), MongoDB uses a document-oriented model, allowing developers to store and manage large volumes of unstructured or semi-structured data efficiently.

What is MongoDB?

MongoDB is an **open-source document-oriented database** that is designed to store a large scale of data and allows us to work with that data efficiently. It is categorized under the NoSQL database because the storage and retrieval of data in the MongoDB are not in the form of tables. **MongoDB database** is developed and managed by MongoDB. Inc. under SSPL(Server Side Public License) and initially released in February 2009.

Basic structure of MongoDB

Component	Equivalent in RDBMS	Description
Database	Database	Store multiple collections.
Collection	Table	Groups related documents.
Document	Row	A BSON object containing key-value pairs.
Field	Column	Stores data attributes within documents.

2. Storage Format: BSON (Binary JSON)

MongoDB uses BSON, an extended version of JSON, which supports additional data types like binary data, dates, and nested arrays, improving query efficiency and storage performance.

3. Install MongoDB
Requirements for Installing MongoDB on Windows

1. Supported Versions
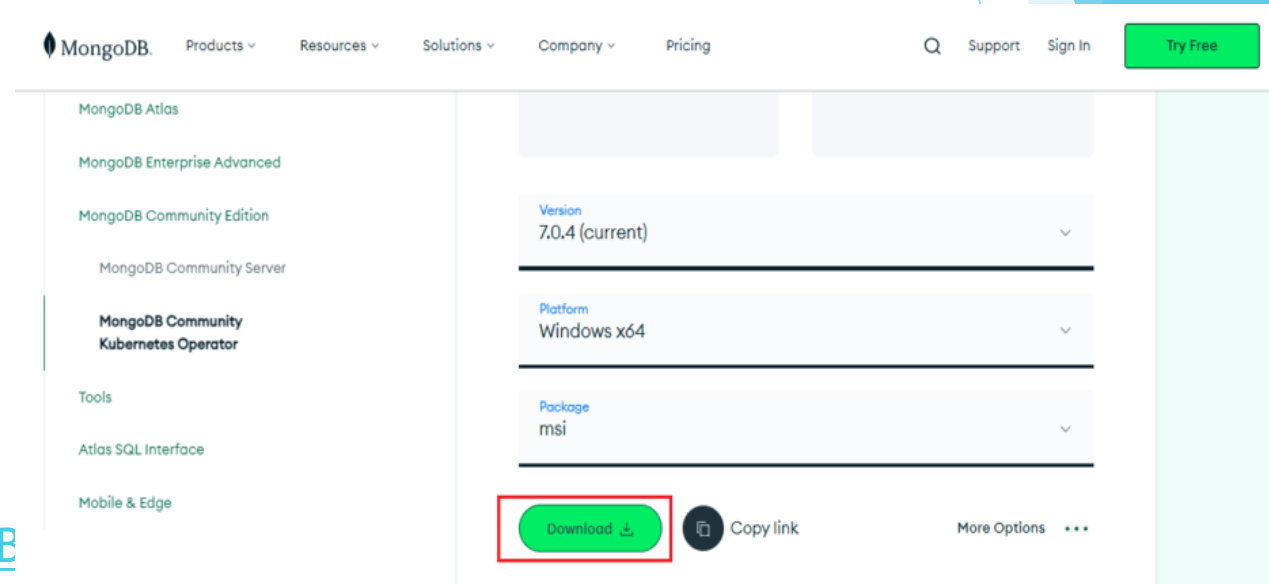MongoDB 4.4 or higher (64-bit only).

2. Compatible Operating Systems:
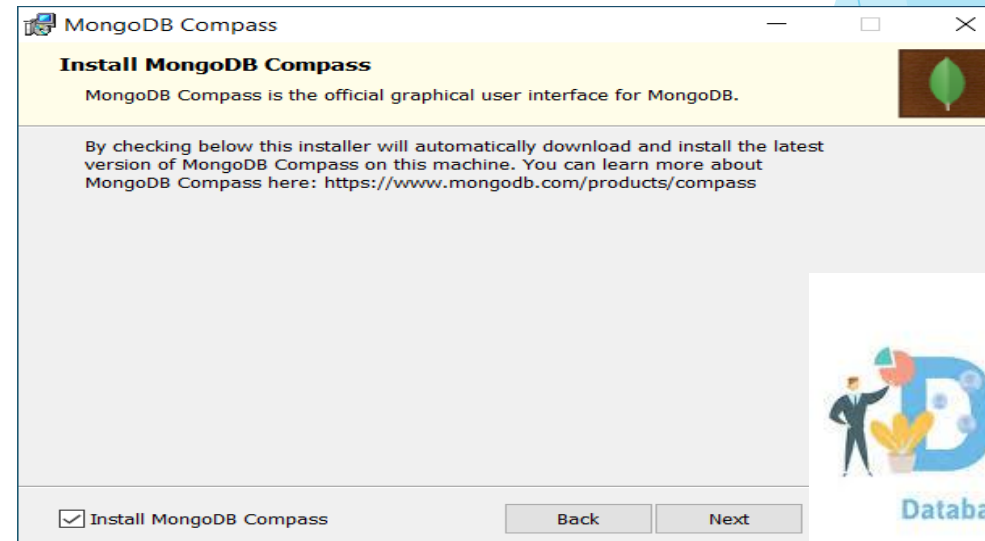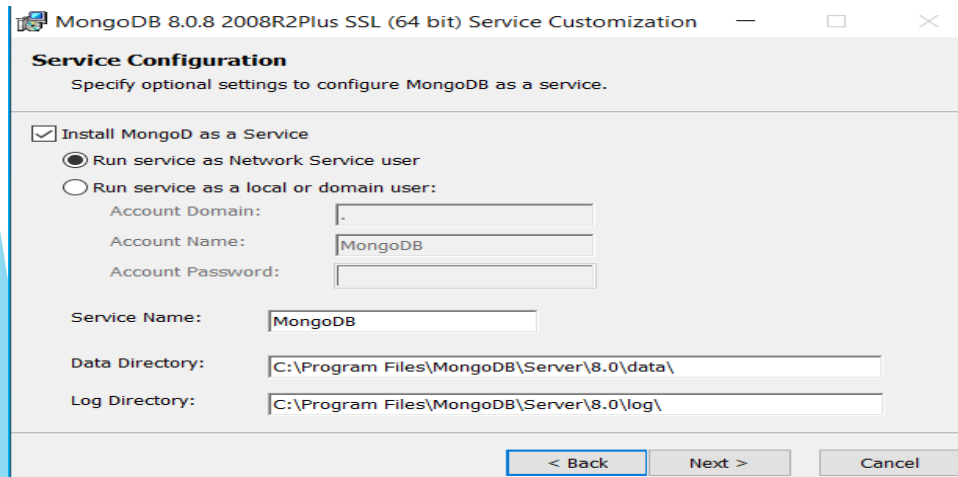Windows Server 2022
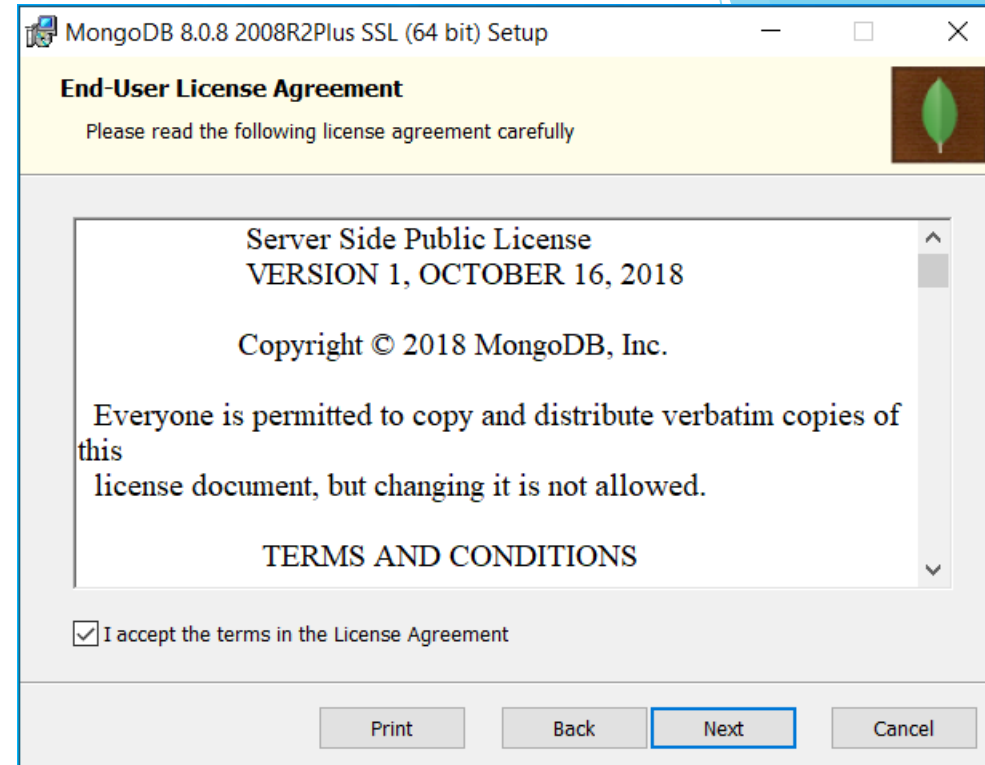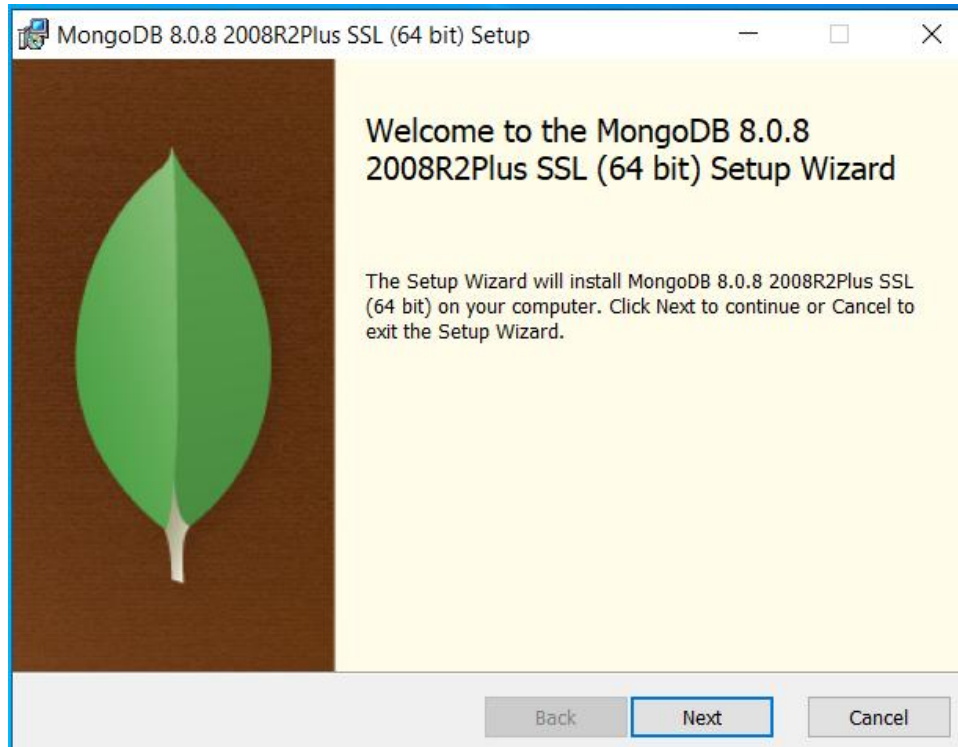Windows Server 2019
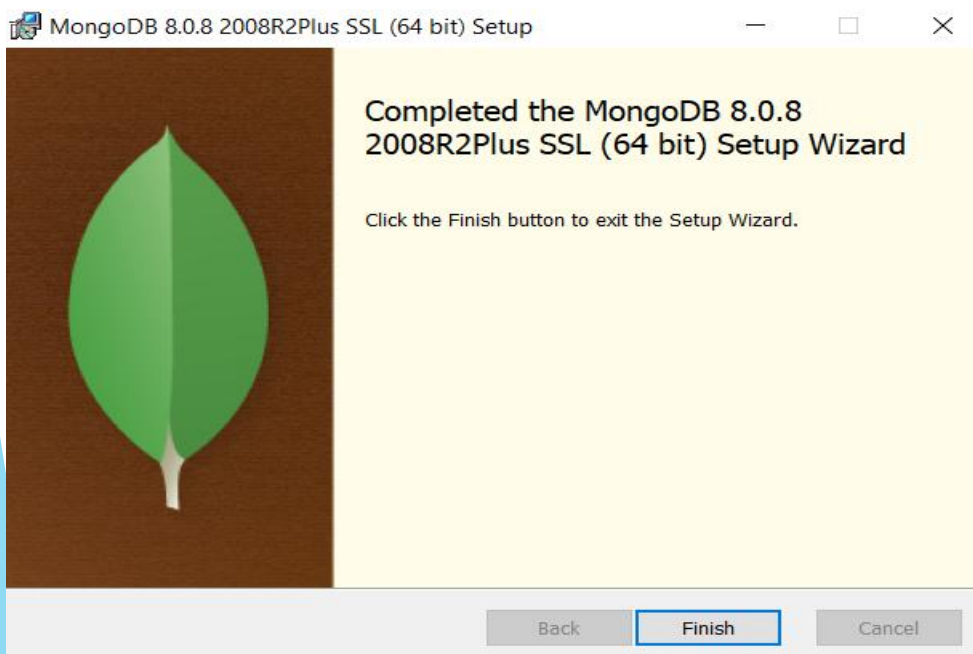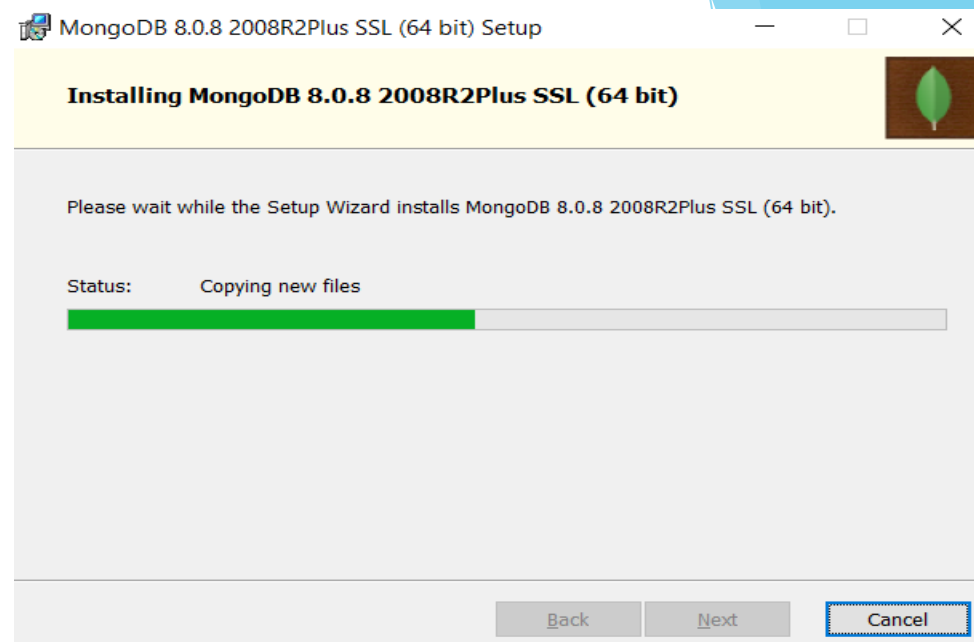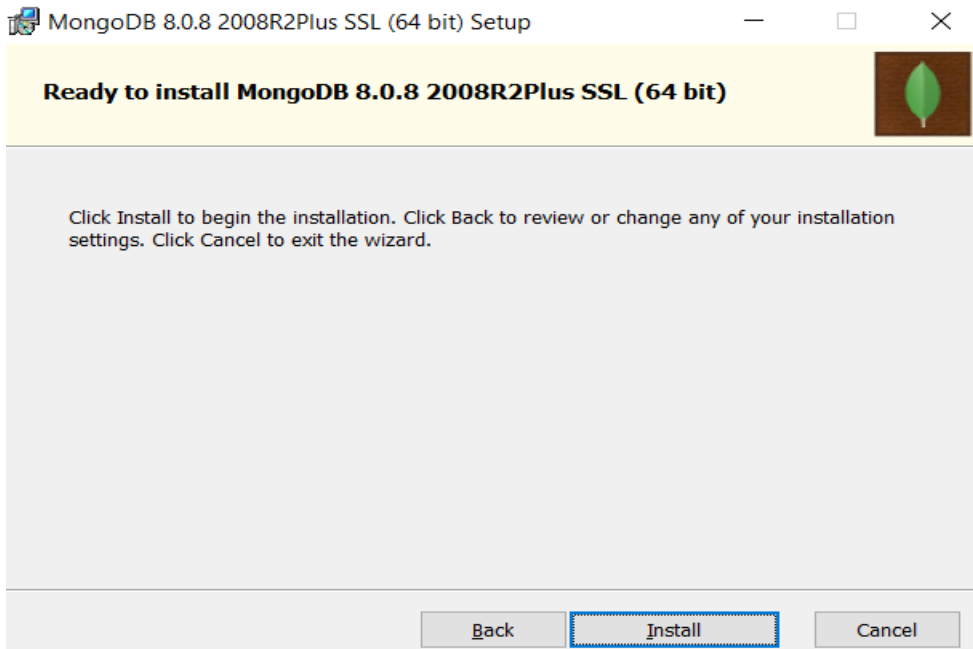Windows 11

Step 1: Download MongoDB Community Server

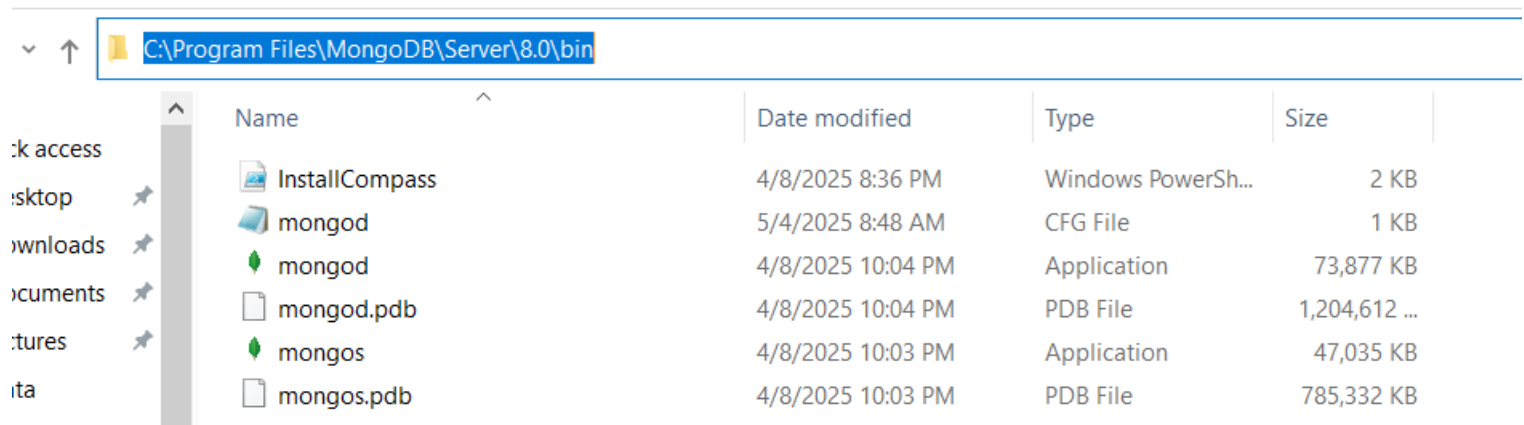Download MongoDB Community Server | MongoDB

Step 2: Install MongoDB

When the download is complete open the msi file and click the next button in the startup screen:

MongoDB 8.0.8 2008R2Plus SSL (64 bit) Setup

Ready to install MongoDB 8.0.8 2008R2Plus SSL (64 bit)

Click Install to begin the installation. Click Back to review or change any of your installation settings. Click Cancel to exit the wizard.

Back | Install | Cancel

MongoDB 8.0.8 2008R2Plus SSL (64 bit) Setup

Installing MongoDB 8.0.8 2008R2Plus SSL (64 bit)

Please wait while the Setup Wizard installs MongoDB 8.0.8 2008R2Plus SSL (64 bit).

Status: Copying new files

Back | Next | Cancel

MongoDB 8.0.8 2008R2Plus SSL (64 bit) Setup

Completed the MongoDB 8.0.8 2008R2Plus SSL (64 bit) Setup Wizard

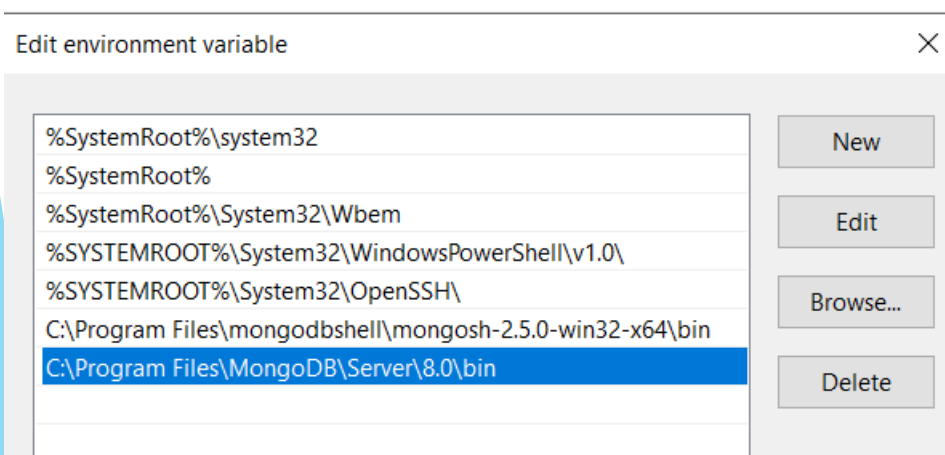Click the Finish button to exit the Setup Wizard.

Back | Finish | Cancel

Step 3: Set Environment Variables
Now we go to the location where MongoDB installed in step 5 in your system and copy the bin path:

Now, to create an environment variable open system properties >> Environment Variable >> System variable
>> path >> Edit Environment variable
paste the copied link to your environment system and click Ok:

To entering the mongodb database type below command in cmd after above steps do successfully .