CET-223

Web Technologies

Experiment # 23

Experiment Title

Introduction to MongoDB: Installation and Configuration

Assessment of CLO(s): 03

Performed on _____

Student Name:			
Roll No.		**Group**	
Semester		**Session**	

Total (Max)	**Performance (03)**	**Viva (03)**	**File (04)**	**Total (10)**
Marks Obtained				
Remarks (if any)				

Experiment evaluated by

Instructor's Name	**Engr. Bilal Iqbal**		
Date		**Signature**	

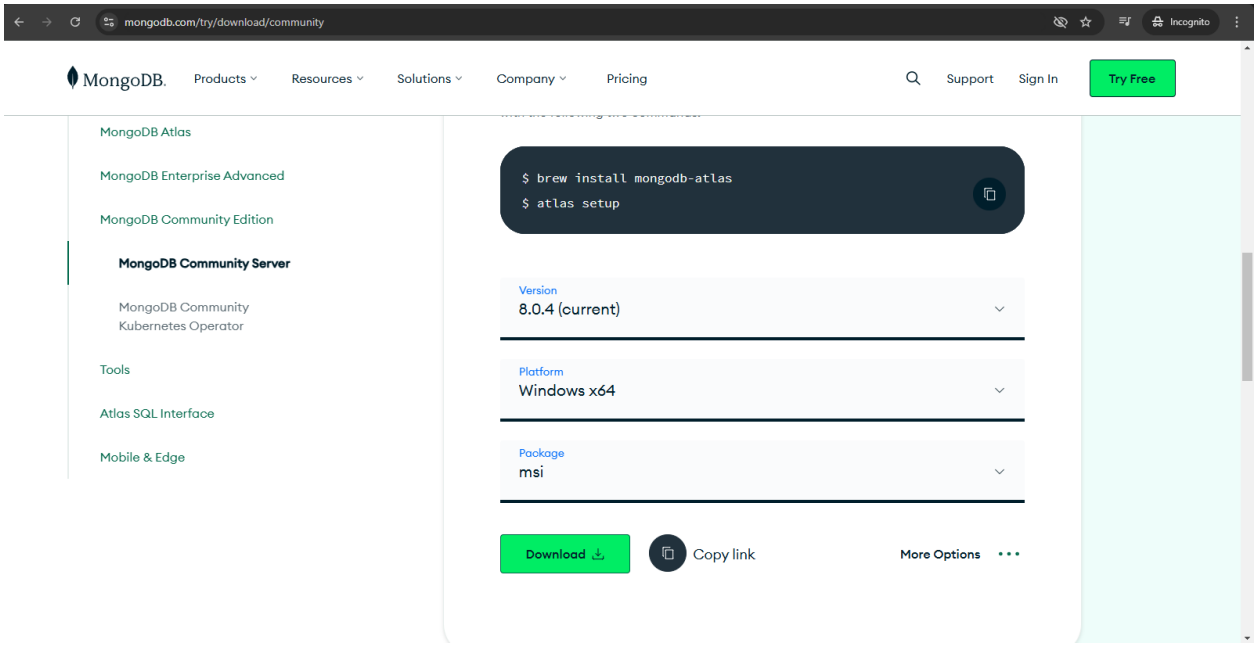
OBJECTIVE:

The objective of this lab is to install MongoDB on your local machine, enabling you to set up a local database for your projects. Additionally, you will learn how to install the PHP MongoDB extension, which will allow you to interact with MongoDB directly from your PHP scripts, enabling seamless data management.

How to Install MongoDB:

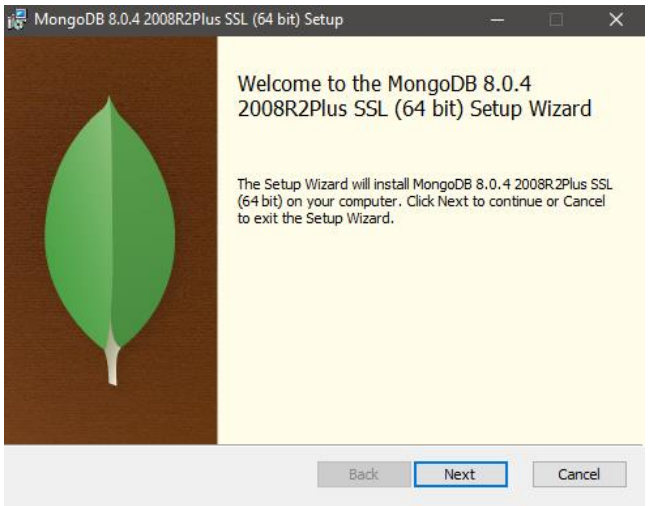
Step 1: Download MongoDB

1. Visit the official MongoDB website: https://www.mongodb.com/try/download/community.
2. Select your operating system (Windows, macOS, or Linux).
3. Download the latest stable version of MongoDB Community Edition.

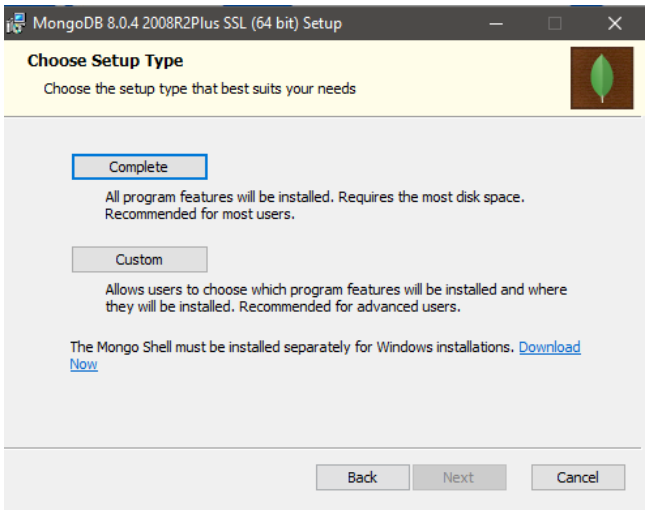


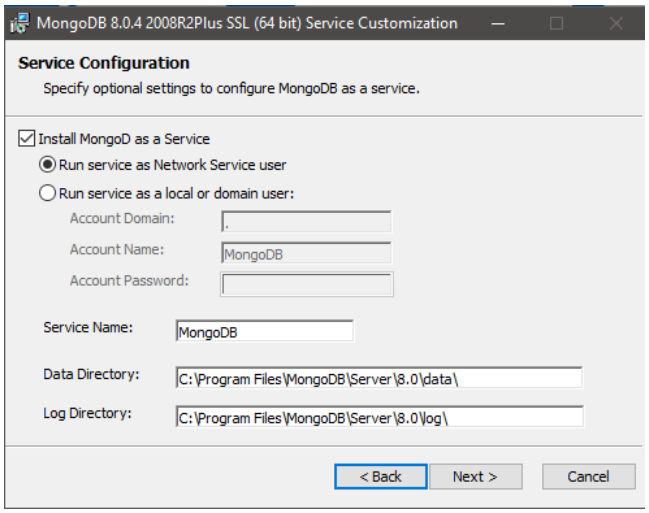
Step 2: Install MongoDB (Windows):

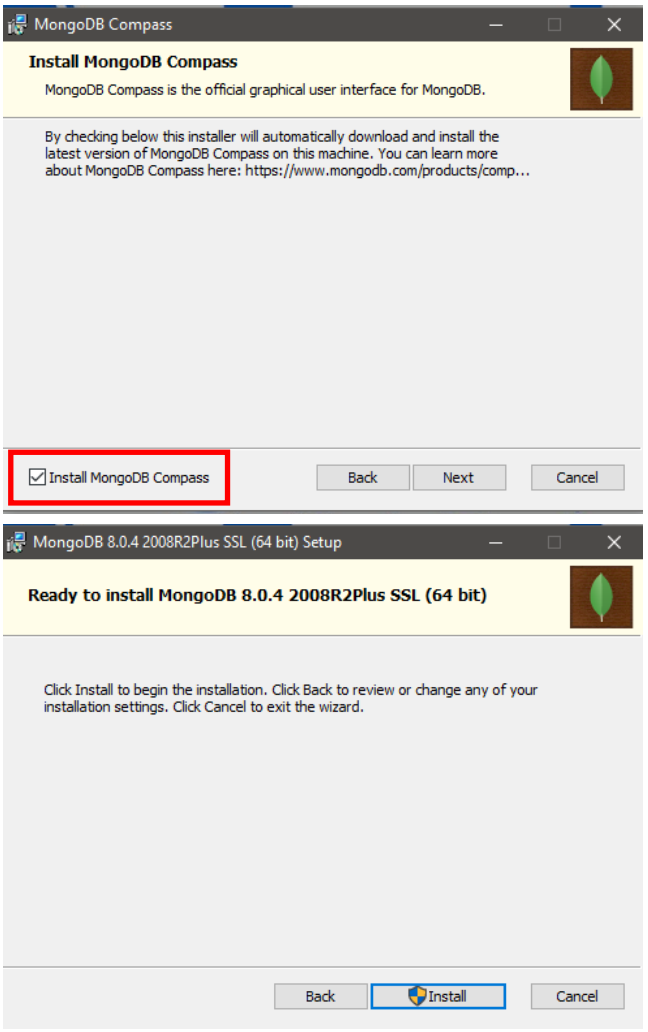
1. Run the downloaded `.msi` installer file.
2. Follow the installation wizard. Ensure that the **MongoDB Compass** (GUI for MongoDB) and **Install as a Service** options are selected.
3. Click **Install** to complete the installation.




MongoDB 8.0.4 2008R2Plus SSL (64 bit) Setup
End-User License Agreement
Please read the following license agreement carefully
Server Side Public License
VERSION 1, OCTOBER 16, 2018
Copyright © 2018 MongoDB, Inc.
Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed.
TERMS AND CONDITIONS
I accept the terms in the License Agreement
Print
Back
Next
Cancel


MongoDB 8.0.4 2008R2Plus SSL (64 bit) Setup
Choose Setup Type
Choose the setup type that best suits your needs
Complete
All program features will be installed. Requires the most disk space.
Recommended for most users.
Custom
Allows users to choose which program features will be installed and where they will be installed. Recommended for advanced users.
The Mongo Shell must be installed separately for Windows installations. Download Now
Back
Next
Cancel


MongoDB 8.0.4 2008R2Plus SSL (64 bit) Service Customization
Service Configuration
Specify optional settings to configure MongoDB as a service.
Install MongoD as a Service
Run service as Network Service user
Run service as a local or domain user:
Account Domain:
Account Name:
MongoDB
Account Password:
Service Name:
MongoDB
Data Directory:
C:\Program Files\MongoDB\Server\8.0\data\
Log Directory:
C:\Program Files\MongoDB\Server\8.0\log\
< Back
Next >
Cancel



Installing PHP MongoDB Extension:
Install the PHP MongoDB Extension

Windows (Using XAMPP):

- Go to your PHP installation directory (e.g., C:\xampp\php\ext\).
- Download the latest MongoDB driver DLL from the official MongoDB website: https://pecl.php.net/package/mongodb.
- Place the downloaded .dll file in the ext directory.
- Edit the php.ini file (located in C:\xampp\php\php.ini) and add the following line:

```
extension=php_mongodb.dll
```

- Restart your web server (Apache).

Sending HTML Form Data to MongoDB

1. **Set Up Your Environment**
   - Ensure your web server (Apache) and MongoDB server are running.
   - Create a database in MongoDB (e.g., `formdata`):
     - Open MongoDB Compass.
     - Click on "Create Database."
     - Enter `formdata` as the database name and `submissions` as the collection name.

2. **Create an HTML Form**

```html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <meta http-equiv="X-UA-Compatible" content="ie=edge">
    <title>Document</title>
</head>
<body>
    <form action="submit.php" method="POST">
        <label for="name">Name:</label>
        <input type="text" name="name" required><br>
        <label for="age">Age:</label>
        <input type="number" name="age" required><br>
        <label for="salary">Salary:</label>
        <input type="number" name="salary" required><br>
        <button type="submit">Submit</button>
    </form>

</body>
</html>
```

3. **Create PHP Script to Handle Form Data**

```php
<?php
// Use MongoDB Client from the MongoDB extension
$client = new MongoDB\Driver\Manager("mongodb://localhost:27017");
if ($_SERVER['REQUEST_METHOD'] == 'POST') {
    $name = $_POST['name'];
    $age = $_POST['age'];
    $salary = $_POST['salary'];
    $bulk = new MongoDB\Driver\BulkWrite;
    $document = [
        'name' => $name,
        'age' => $age,
        'salary' => $salary
    ];
    // Insert the data into MongoDB
    $bulk->insert($document);
    try {
        $result = $client->executeBulkWrite('FormData.Test', $bulk); // Replace
with your database and collection name
        echo "Data inserted successfully!";
    } catch (MongoDB\Driver\Exception\Exception $e) {
        echo "Error: " . $e->getMessage();
    }
}
?>
```

4. **Test the Integration**

- Open `form.html` in your browser.
- Fill in the form and submit it.
- Check MongoDB Compass to verify the data has been added to the `formdata.submissions` collection.

Lab Task:

Using the provided registration form below:

1. Set up a backend to connect the form with a MongoDB database.
2. Save the submitted form data into a MongoDB