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Practical - 01

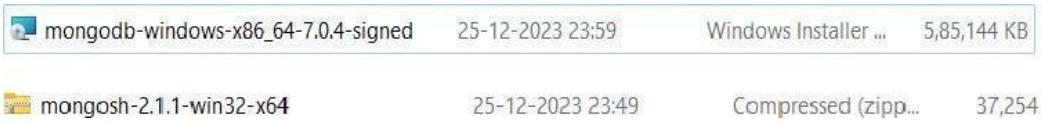
Aim: - Lab Exercise: Setting up and Exploring MongoDB

a) Install MongoDB on your local machine or lab server.
b) Create a new MongoDB database and collection.
c) Insert sample data into the collection.
d) Retrieve and display data from the collection using MongoDB queries.

Description: - MongoDB is a source-available, cross-platform, document-oriented database program. MongoDB is a NoSQL database product and uses JSON-like documents with optional schemas. It is non-relational and suitable for hierarchical data storage. It has a dynamic schema. In terms of performance, it is much faster than RDBMS.

a) Install MongoDB on your local machine or lab server.

Step 1: - Download a MongoDB community server & MongoDB shell in your system.

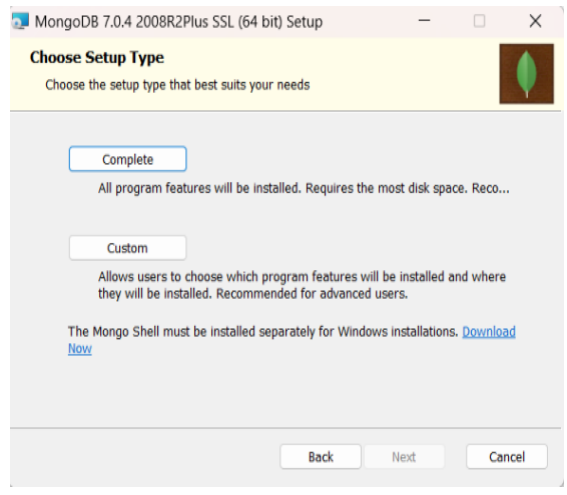


Step 2: - Set the MongoDB environment in your pc

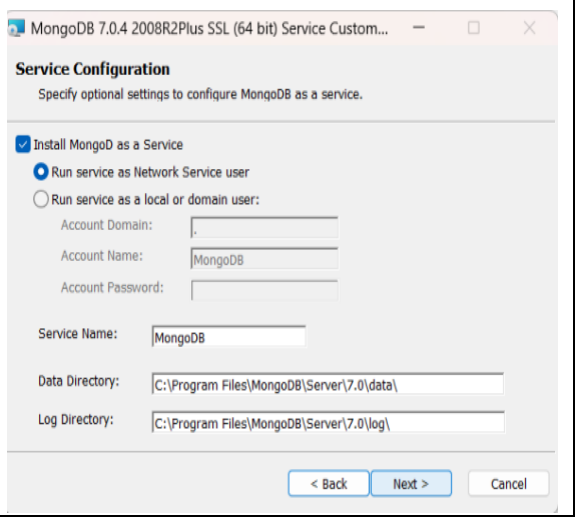
I

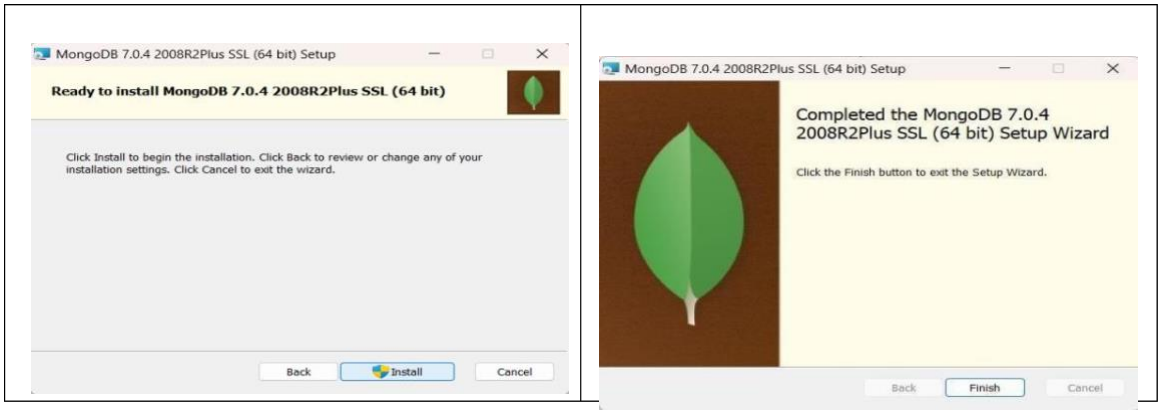
II

III



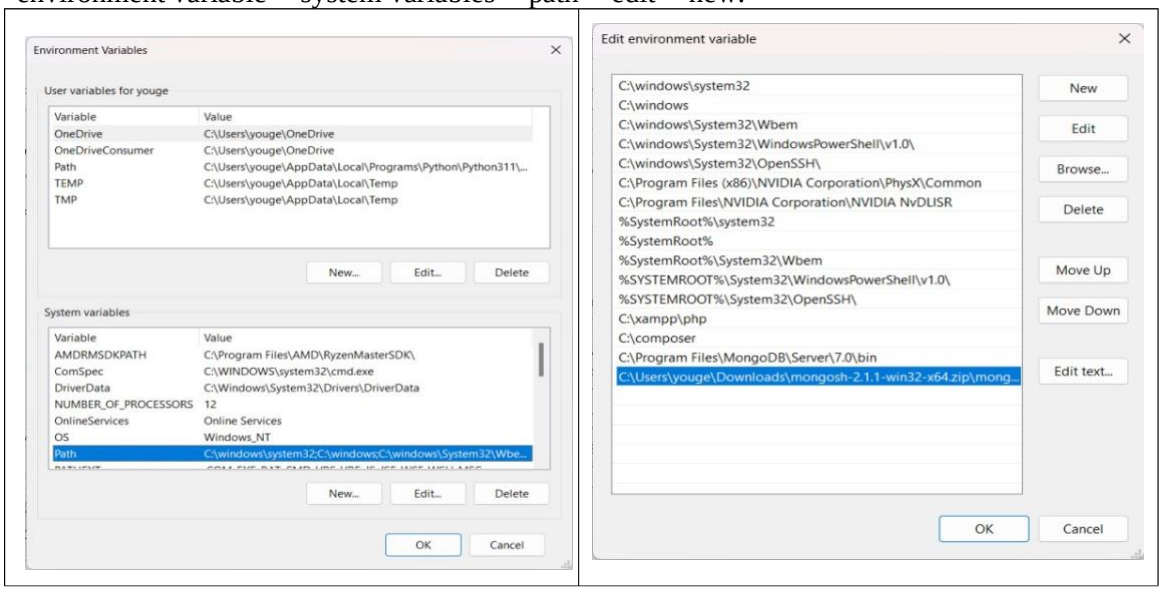
IV



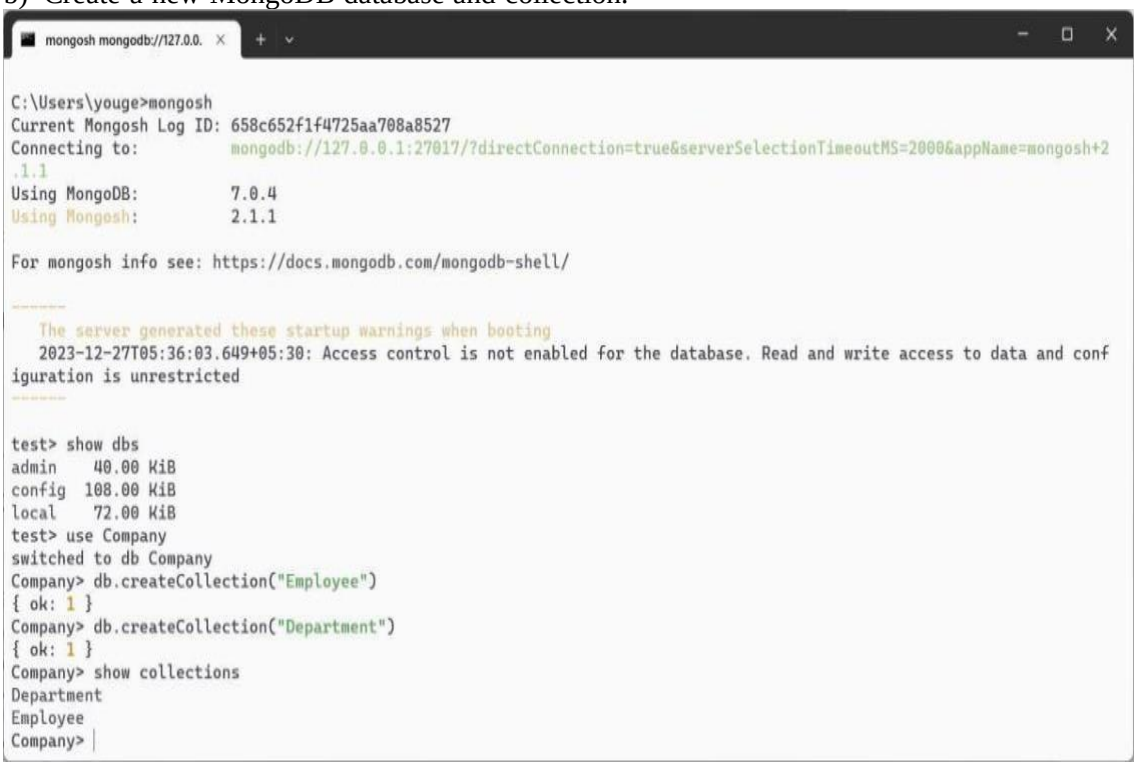


Step 3: -setting the path for the MongoDB

Step 4: - Copy the path of the MongoDB shell path and MongoDB server path and paste them into the environment variable>>system variables>>path>>edit>>new.



b) Create a new MongoDB database and collection.



C) Insert sample data into the collection.

```
Company> db.Department.insertMany([{ dept_id: 1, department: "IT", location: "Bangalore" },
... { dept_id: 2, department: "HR", location: "New York" },
... { dept_id: 3, department: "management", location: "Delhi" },
... { dept_id: 4, department: "Finance", location: "Mumbai" },
... { dept_id: 5, department: "sales", location: "Surat" }]);
{
  acknowledged: true,
  insertedIds: {
    '0': ObjectId('658c714a1f4725aa708a8528'),
    '1': ObjectId('658c714a1f4725aa708a8529'),
    '2': ObjectId('658c714a1f4725aa708a852a'),
    '3': ObjectId('658c714a1f4725aa708a852b'),
    '4': ObjectId('658c714a1f4725aa708a852c')
  }
}
Company>
```

D) Retrieve and display data from the collection using MongoDB queries.

```
Company> db.Department.find()
[
  {
    _id: ObjectId('658c714a1f4725aa708a8528'),
    dept_id: 1,
    department: 'IT',
    location: 'Bangalore'
  },
  {
    _id: ObjectId('658c714a1f4725aa708a8529'),
    dept_id: 2,
    department: 'HR',
    location: 'New York'
  },
  {
    _id: ObjectId('658c714a1f4725aa708a852a'),
    dept_id: 3,
    department: 'management',
    location: 'Delhi'
  },
  {
    _id: ObjectId('658c714a1f4725aa708a852b'),
    dept_id: 4,
    department: 'Finance',
    location: 'Mumbai'
  },
  {
    _id: ObjectId('658c714a1f4725aa708a852c'),
    dept_id: 5,
    department: 'sales',
    location: 'Surat'
  }
]
Company>
```