Assignment - 4

Creating a Database Using MongoDB and Mongosh

- 1. Database Setup
- Open the mongoDB compass
- Create a new MongoDB database: myDatabase
- 2. Collection Creation:
- Create a collection within database: users

```
Connect Edit View Collection Help
                               {} My Queries
                                                                              Users
                                                                                         × +

■ test

                                                               users
     localhost:27017
                               test > Users
 {} My Queries
                                                 Aggregations
                                                               Schema
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     admin
     config
   local

    myDatabase

      Users
      users
                                                                            This collection has no data
                                                                   It only takes a few seconds to import data from a JSON or CSV
                                                                                     Import Data
```

3. Document Insertion:

- Insert five documents into the users collection, each representing a user with fields such as name, email, and age.
- Before inserting into collection "use db" command to switch the current database context within MongoDB. • db.users.insertMany() method is used to insert the documents into users collection as shown below.

```
>_MONGOSH
> db.Users.insertMany([
    {Name: "Bakshu",
    Age:21,
    Email: "Bakshu@gmail.com"
  },
    {Name:"javid",
    Age:22,
    Email:"javid@gmail.com"
  },
    Name: "Asif",
    Age:21,
    Email: "asif@gmail.com"
  1)
< {
    acknowledged: true,
    insertedIds: {
      '0': ObjectId('65fdae1c74ffc01a2acc2f82'),
      '1': ObjectId('65fdae1c74ffc01a2acc2f83'),
      '2': ObjectId('65fdae1c74ffc01a2acc2f84')
```

• To retrieve all the users from the users collection. o db.users.find({ });

4. Queries to retrieve:

```
>_MONGOSH
> db.users.find({})
< {
    _id: ObjectId('65fda62df4d90c6c798df3ea'),
    Name: 'Bakshu',
    Age: 24,
    Email: 'Bakshu@gmail.com'
    _id: ObjectId('65fda62df4d90c6c798df3eb'),
    Name: 'Javid',
    Age: 22,
    Email: 'javid@gmail.com'
    _id: ObjectId('65fda62df4d90c6c798df3ec'),
    Name: 'Asif',
    Age: 21,
    Email: 'Asifa@gmail.com'
```

> db.users.find({Age: { \$gt: 21}});

• To retrieve the specific users with an age greater than or equal to 30 o db.users.find({ Age: { \$gte: 30 } });

```
_id: ObjectId('65fda62df4d90c6c798df3ea'),
    Name: 'Bakshu',
    Age: 22,
    Email: 'Bakshu@gmail.com'
                                 Q Search
5. Update Operation:
• To update the age of a user with a specific email address in MongoDB, use the updateOne() method.
```

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• Example: o Db.users.updateOne({ Name: "Bakshu" }, { \$set: { Age: 24 } }); >_MONGOSH

>_MONGOSH

> db.users.updateOne({Name:"Bakshu"},{\$set: {Age:24}});

```
< {
       acknowledged: true,
       insertedId: null,
       matchedCount: 1,
       modifiedCount: 1,
       upsertedCount: 0
6. Deletion Operation:
• To delete the user document based on a specific email address in MongoDB, you can use the deleteOne() method.
                                       db.Users.deleteOne({Email:"asif@gmail.com"})
```

7. Index Creation:

acknowledged: true,

deletedCount: 1

```
db.users.deleteOne({Email: asif@gmail.com});
• To create an index on the email field of the users collection in MongoDB, use the db.users.createIndex() method.
   db.users.createIndex({ Email: 1 });
      >_MONGOSH
       > db.users.createIndex({Email: 1});
         Email_1
```

{ v: 2, key: { _id: 1 }, name: '_id_' },

Email: "Bakshu@gmail.com"

Email: "javid@gmail.com"

Name: "javid"

Age: 22

_id: ObjectId('65fdae1c74ffc01a2acc2f83')

{ v: 2, key: { Email: 1 }, name: 'Email_1' }

test>

< [

Users

users

> db.users.getIndexes();

```
Final Outcome:
                                {} My Queries
                                                                                           × +
     localhost:27017
                                test > Users
 {} My Queries
                                                   Aggregations
                                                                 Schema
                                                                          Indexes 1
                                                                                        Validation
                                  Documents 0
 Performance
  Databases
                        € +
                                  ■ Type a query: { field: 'value' } or Generate query +:
                                                                                                                                              Explain
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                                                                                                                                                               Find
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                                                                                                                                                        Reset
   Search
                                 ◆ ADD DATA ▼

☑ EXPORT DATA ▼

                                                                  UPDATE DELETE
                                                                                                                                                   1-3 of 3 😌
  ▶ 3 admin
  a config
                                         _id: ObjectId('65fdad5e74ffc01a2acc2f7e')

    myDatabase

                                         _id: ObjectId('65fdae1c74ffc01a2acc2f82')
                                         Name: "Bakshu"
```