Assignment – 4

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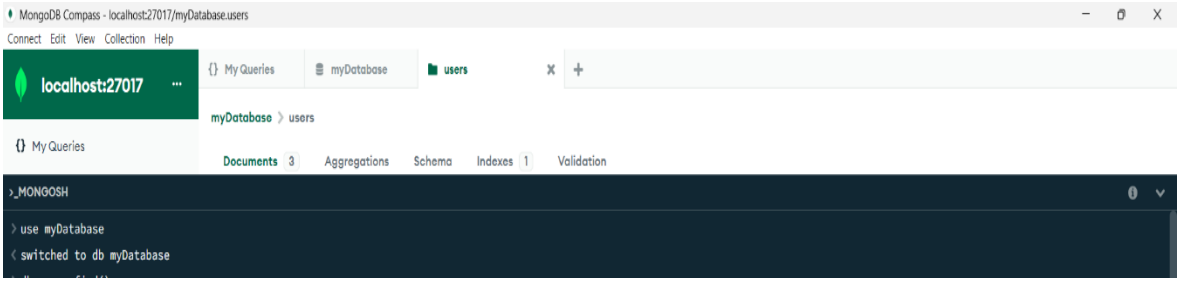
Creating a Database Using MongoDB and Mongosh

- **Database Setup**: First open MongoDB Compass and later on create a new MongoDB database called myDatabase.

  Command : use myDatabase

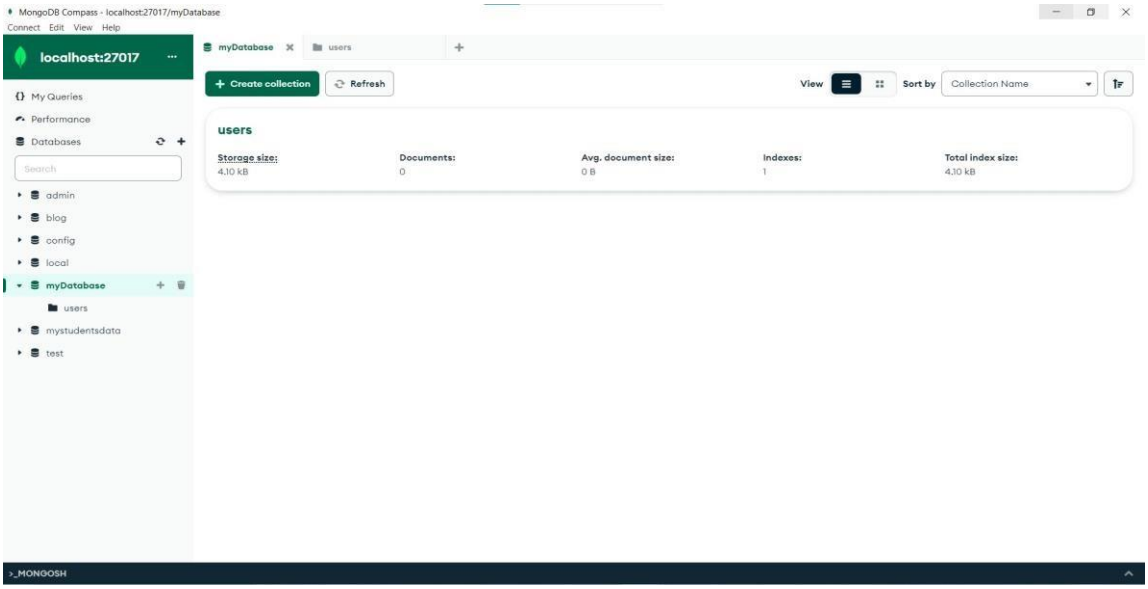
  Result: switched to db myDatabase



- **Collection Creation:**

  Creating a collection named users within the database.

  Command : db.createCollection('users')



- **Document Insertion:** Inserting documents into the users Collection either single or multiple , each representing a user with fields such as name, email, and age.

- **Inserting single person details**:

Command :

db.users.insertOne({'name':'sai','email':'sai22@gmail.com','age':22})

Result:

{

acknowledged: true,

insertedId: ObjectId('65f957fea3543e81167f43b1')

}

Command :

db.users.insertOne({'name':'chandra','email':'chandra56@gmail.com','age':30})

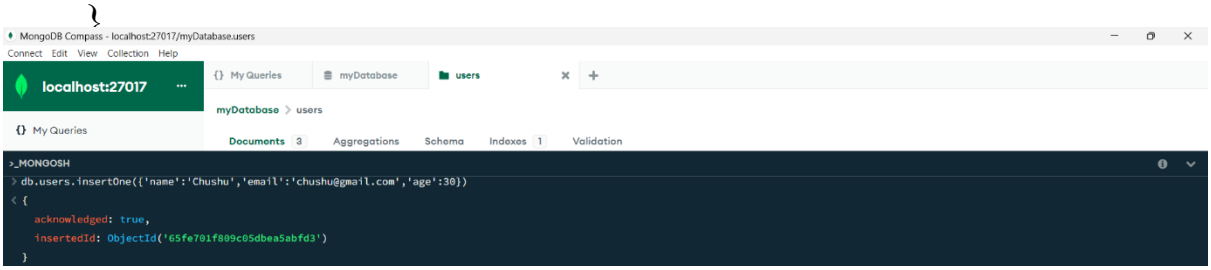
Result:

{

acknowledged: true,

insertedId: ObjectId('65fe701f809c05dbea5abfd3

}



- **Inserting multiple persons details**:

Command :

db.users.insertMany([{'name':'Mani','email':'mani55@gmail.com','age': 23},{'name':'anil','email':'anil51@gmail.com','age':23}])

Result:

{

acknowledged: true,

insertedIds: {

'0': ObjectId('65f958b1a3543e81167f43b2'),

'1': ObjectId('65f958b1a3543e81167f43b3')

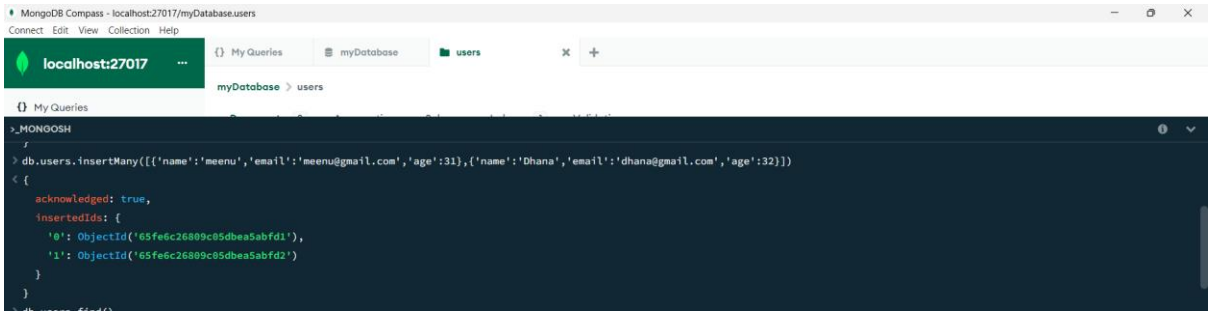
}

}

Command :

db.users.insertMany([{'name':'sankar','email':'sankar47@gmail.com','ag e':31},{'name':'balu','email':'balu56@gmail.com','age':32}])

Result:



Querying: Writing queries to retrieve the users data.

- Finding/Retrieving all users from the users collection.

Command : db.users.find()

Result:

```
> db.users.find()
< {
    _id: ObjectId('65f957fea3543e81167f43b1'),
    name: 'Nikki',
    email: 'nikki@gmail.com',
    age: 22
  }
  {
    _id: ObjectId('65f958b1a3543e81167f43b2'),
    name: 'Maha',
    email: 'maha@gmail.com',
    age: 23
  }
```

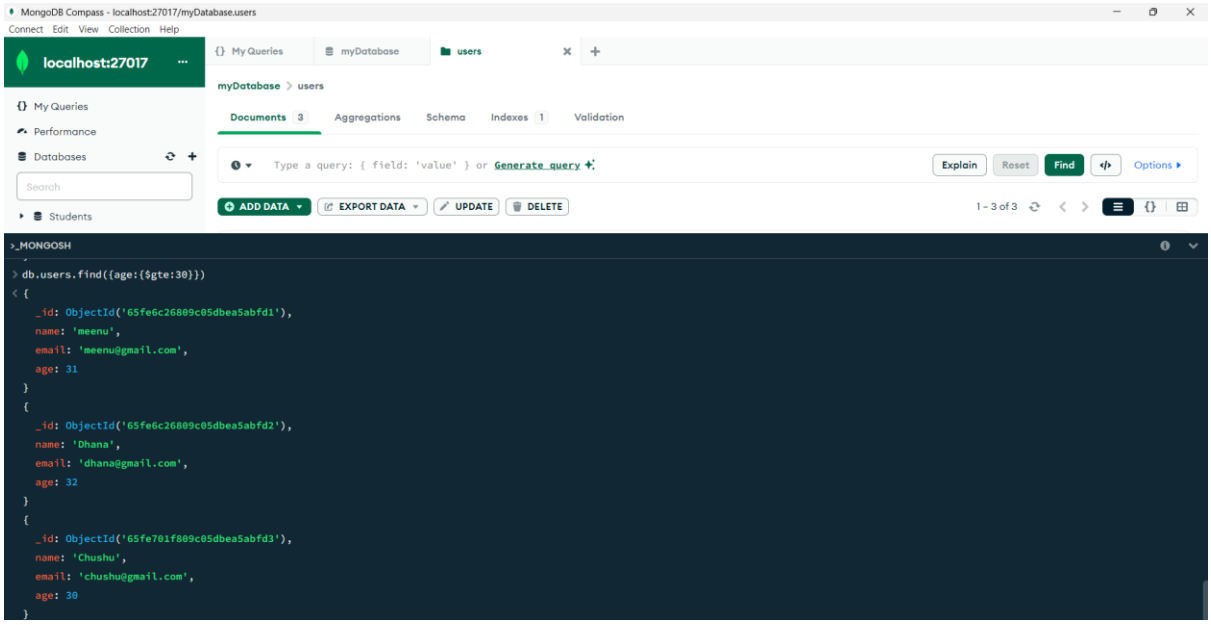
```
{
  _id: ObjectId('65f958b1a3543e81167f43b3'),
  name: 'Deekshi',
  email: 'deekshi@gmail.com',
  age: 23
}
{
  _id: ObjectId('65fe6c26809c05dbea5abfd1'),
  name: 'meenu',
  email: 'meenu@gmail.com',
  age: 31
}
{
  _id: ObjectId('65fe6c26809c05dbea5abfd2'),
  name: 'Dhana',
  email: 'dhana@gmail.com',
  age: 32
}
{
  _id: ObjectId('65fe701f809c05dbea5abfd3'),
  name: 'Chushu',
  email: 'chushu@gmail.com',
  age: 30
}
```

- Retrieving Users with an age greater than or equal to 30

  Command :

  db.users.find({age:{$gte:30}})

  Result:



- **Update Operation:** Updating the age of a user (maha) with a specific email address.

Command :

db.users.updateOne({'email':'sankar@gmail.com'},{$set:{'age':20

}})

Result:

```
> db.users.updateOne({'email':'maha@gmail.com'},{$set:{'age':20}})
< {
    acknowledged: true,
    insertedId: null,
    matchedCount: 1,
    modifiedCount: 1,
    upsertedCount: 0
  }
```

- Retrieving / Finding whether age is updated or not?

Command :

db.users.find({age:{$eq:20}})

Result:

```
> db.users.find({age:{$eq:20}})
< {
    _id: ObjectId('65f958b1a3543e81167f43b2'),
    name: 'Maha',
    email: 'maha@gmail.com',
    age: 20
  }
```

- **Deletion Operation:** Deleting a user document (chushu)

  based on a specific email address.

  Command :

  db.users.deleteOne({'email':'china@gmail.com'})

Result:

```
> db.users.deleteOne({'email':'chushu@gmail.com'})
< {
    acknowledged: true,
    deletedCount: 1
  }
```

- Finding whether age is updated or not?

  Result:

```
> db.users.find({'email':'chushu@gmail.com'})
<
> db.users.deleteOne({'email':'chushu@gmail.com'})
< {
    acknowledged: true,
    deletedCount: 0
  }
myDatabase >
```

- **Index Creation:** Creating an index on the email field of the user's collection. We use db.users.createIndex() method.

Command : db.users.createIndex({email:1})

Result:

```
> db.users.createIndex({ email: 1 });
< email_1
> db.users.getIndexes();
< [
    { v: 2, key: { _id: 1 }, name: '_id_' },
    { v: 2, key: { email: 1 }, name: 'email_1' }
  ]
myDatabase >
```

Final Output :