

Creating a Database Using MongoDB and Mongosh

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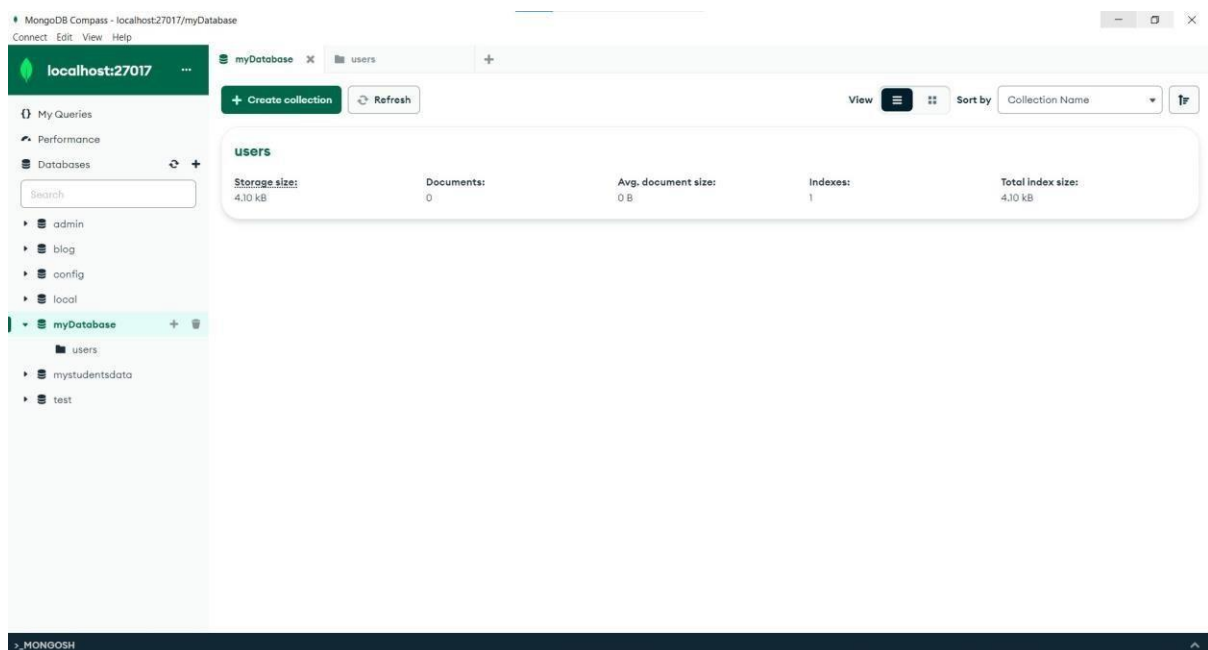
COLLEGE : KALLAM HARANADHAREDDY INSTITUTE OF TECHNOLOGY, GUNTUR

1. Database Setup:

- Open the mongoDB compass
- Create a new MongoDB database: myDatabase

2. Collection Creation:

- Create a collection within database: users



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.

```
>_MONGOSH
> use myDatabase
< switched to db myDatabase
```

- `db.users.insertMany()` method is used to insert the documents into users collection as shown below.

4. Queries to retrieve:

```
>_MONGOSH
myDatabase> db.users.insertMany([
  {
    name:"sure",
    email:"sure24@gmail.com",
    age:21
  },
  {
    name:"divya",
    email:"divya24@gmail.com",
    age:21
  },
  {
    name:"kintaeyung",
    email:"btsv@gmail.com",
    age:24
  },
  {
    name:"yangyang",
    email:"yang@gmail.com",
    age:25
  },
  {
    name:"bie",
    email:"bie@gmail.com",
    age:24
  }
])
```

- To retrieve all the users from the users collection. ○
`db.users.find({ });`

```

> db.users.find({});
< {
  _id: ObjectId('65fdcaa4e25bd28f7b29ab5'),
  name: 'sure',
  email: 'sure24@gmail.com',
  age: 21
}
{
  _id: ObjectId('65fdcaa4e25bd28f7b29ab6'),
  name: 'divya',
  email: 'divya24@gmail.com',
  age: 21
}
{
  _id: ObjectId('65fdcaa4e25bd28f7b29ab7'),
  name: 'kintaeyung',
  email: 'btsv@gmail.com',
  age: 24
}
{
  _id: ObjectId('65fdcaa4e25bd28f7b29ab8'),
  name: 'yangyang',
  email: 'yang@gmail.com',
  age: 25
}
{
  _id: ObjectId('65fdcaa4e25bd28f7b29ab9'),
  name: 'bie',
  email: 'bie@gmail.com',
  age: 24
}

```

- To retrieve the specific users with an age greater than or equal to 22
 - `db.users.find({ age: { $gte: 22 } });`

```

> db.users.find({age:{$gte:22}});
< {
  _id: ObjectId('65fdcaa4e25bd28f7b29ab7'),
  name: 'kintaeyung',
  email: 'btsv@gmail.com',
  age: 24
}
{
  _id: ObjectId('65fdcaa4e25bd28f7b29ab8'),
  name: 'yangyang',
  email: 'yang@gmail.com',
  age: 25
}
{
  _id: ObjectId('65fdcaa4e25bd28f7b29ab9'),
  name: 'bie',
  email: 'bie@gmail.com',
  age: 24
}

```

5. Update Operation:

- To update the age of a user with a specific email address in MongoDB, use the `updateOne()` method. • Example:

```

◦ db.users.updateOne(
    { email: "sure24@gmail.com" },
    { $set: { age: 22 } }
);

```

```

> db.users.updateOne(
  { email:"sure24@gmail.com"},
  { $set: { age: 22}}
);
< {
  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:yangyang@gmail.com});

```

> db.users.deleteOne({ email:"yangyang@gmail.com"});
< {
  acknowledged: true,
  deletedCount: 0
}

```

7. Index Creation:

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});

```

> 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' }
]

```

Final Outcome:

MongoDB Compass - localhost:27017/myDatabase.users

Connect Edit View Collection Help

localhost:27017

My Queries Performance Databases

Search

admin config local myDatabase

users

myDatabase > users

Documents 0 Aggregations Schema Indexes 1 Validation

Type a query: { field: 'value' } or [Generate query](#)

EXPLAIN RESET FIND Options

1 - 5 of 5

ADD DATA EXPORT DATA UPDATE DELETE

```
{ "_id": ObjectId("65fdcaa41e25bd28f7b29ab5"), "name": "sure", "email": "sure24@gmail.com", "age": 22 }
```

```
{ "_id": ObjectId("65fdcaa41e25bd28f7b29ab6"), "name": "divya", "email": "divya24@gmail.com", "age": 21 }
```

```
{ "_id": ObjectId("65fdcaa41e25bd28f7b29ab7"), "name": "kimtaeyung", "email": "btsv@gmail.com", "age": 24 }
```

```
{ "_id": ObjectId("65fdcaa41e25bd28f7b29ab8"), "name": "yangyang", "email": "yang@gmail.com", "age": 25 }
```

```
{ "_id": ObjectId("65fdcaa41e25bd28f7b29ab9"), "name": "bie", "email": "bie@gmail.com", "age": 24 }
```

> MONGOSH

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Documents Aggregations Schema Indexes 1 Validation

0 DOCUMENTS 1 INDEXES

Create Index Refresh

VIEWING INDEXES SEARCH INDEXES

Name and Definition	Type	Size	Usage	Properties
<div><div>_id</div><div>_id ↑</div></div>	REGULAR ⓘ	36.9 KB	4 (since Fri Mar 22 2024)	UNIQUE ⓘ
<div><div>email_1</div><div>email ↑</div></div>	REGULAR ⓘ	20.5 KB	0 (since Fri Mar 22 2024)	