

# ASSIGNMENT-04

## FULL STACK DEVELOPMENT(MERN STACK)

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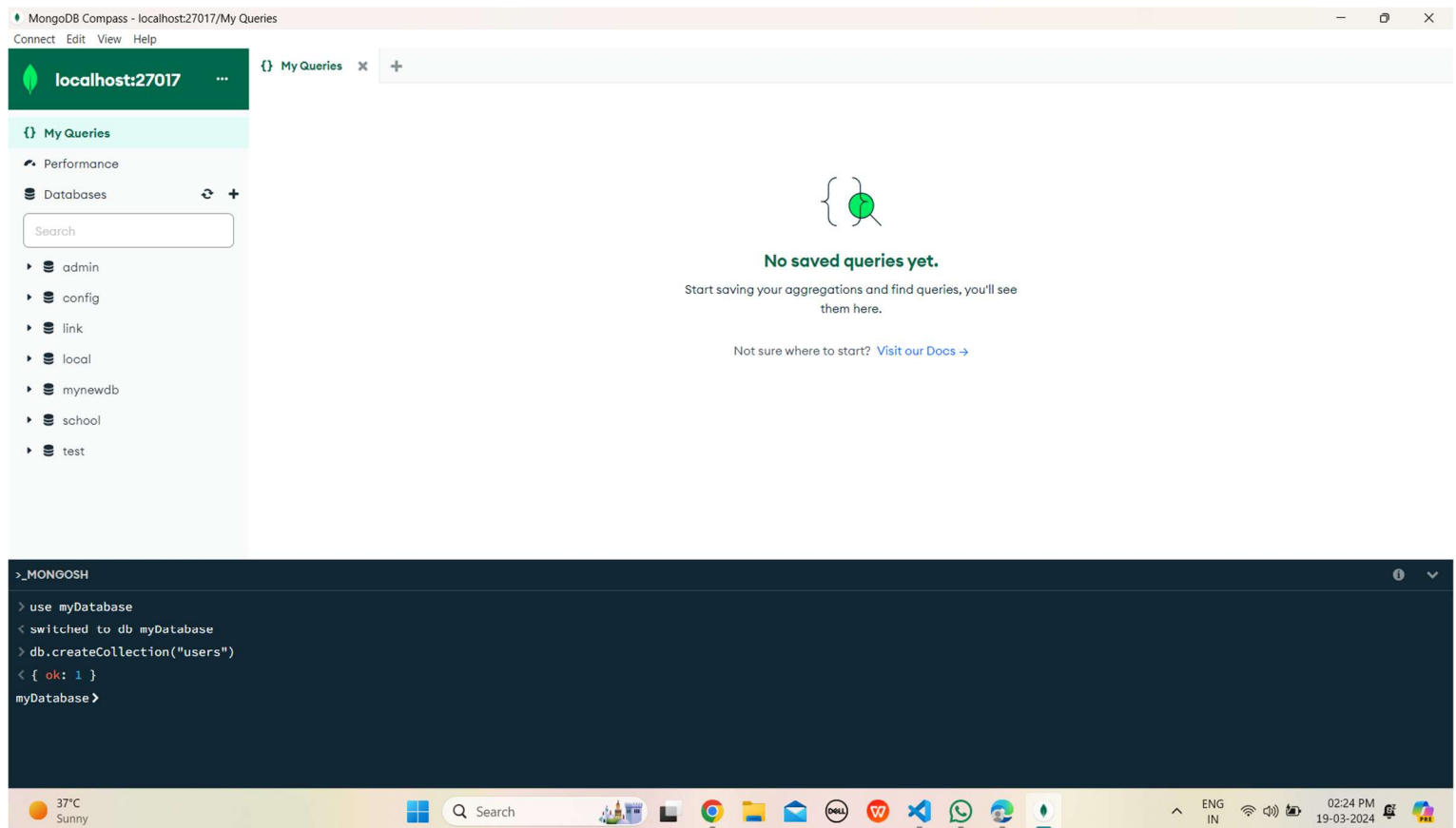
G-mail :balaprudhvi78@gmail.com

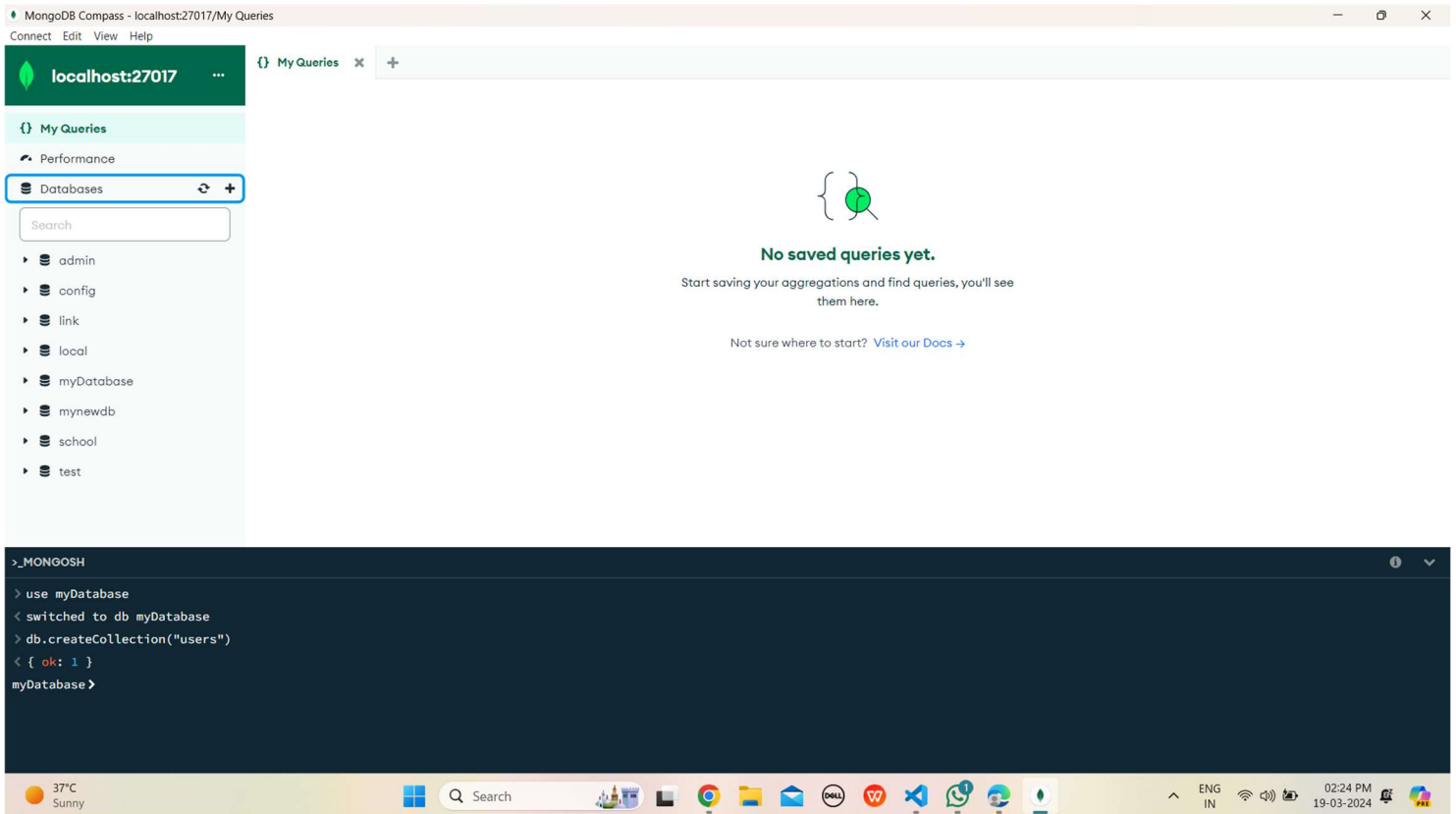
Hallticket :209F1A0538

Course :Full Stack Development(MERN stack).

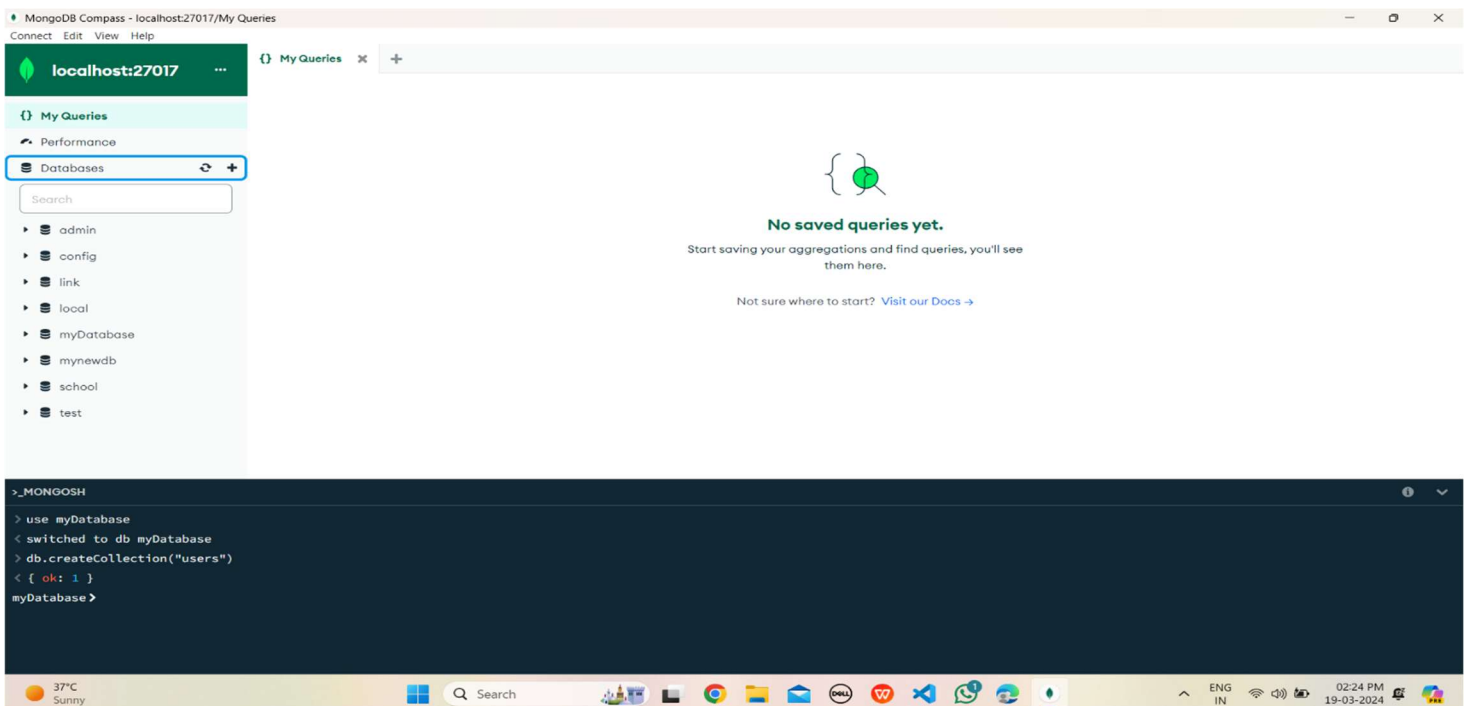
College :Sri Venkateswara Institute of Technology,Anantapur.

**STEP 1 :** Database Setup: Create a new MongoDB database called myDatabase.





**STEP 2 : Collection Creation:** Create a collection named users within the myDatabase database.



STEP 3 : Document Insertion: Insert at least three documents into the users collection, each representing a user with fields such as name, email, and age.

The screenshot shows the MongoDB Compass interface. The left sidebar displays the database structure: localhost:27017 > myDatabase > users. The main panel shows the 'myDatabase.users' collection with 0 documents and 1 index. The 'Documents' tab is active, displaying three documents inserted into the collection:

```
{ "_id": ObjectId("65f953784a30042b42df2ebe"), "name": "Bala", "email": "bala@gmail.com", "age": 25 }
```

```
{ "_id": ObjectId("65f953784a30042b42df2ebf"), "name": "Prudhvi", "email": "prudhvi@gmail.com", "age": 35 }
```

```
{ "_id": ObjectId("65f953784a30042b42df2ec0"), "name": "Raj", "email": "raj@gmail.com", "age": 40 }
```

Below the documents, the MongoDB shell output is visible:

```
>_MONGOSH
acknowledged: true,
insertedIds: {
  '0': ObjectId('65f953784a30042b42df2ebe'),
  '1': ObjectId('65f953784a30042b42df2ebf'),
  '2': ObjectId('65f953784a30042b42df2ec0')
}
```

The screenshot shows the MongoDB Compass interface. The left sidebar displays the database structure: localhost:27017 > myDatabase > users. The main panel shows the 'myDatabase.users' collection with 0 documents and 1 index. The 'Documents' tab is active, displaying the same three documents as in the previous screenshot.

Below the documents, the MongoDB shell output is visible, showing the result of a find query:

```
>_MONGOSH
acknowledged: true,
insertedIds: {
  '0': ObjectId('65f953784a30042b42df2ebe'),
  '1': ObjectId('65f953784a30042b42df2ebf'),
  '2': ObjectId('65f953784a30042b42df2ec0')
}
}
> db.users.find()
< {
  "_id": ObjectId("65f953784a30042b42df2ebe"),
  "name": "Bala",
  "email": "bala@gmail.com",
  "age": 25
}
{
  "_id": ObjectId("65f953784a30042b42df2ebf"),
  "name": "Prudhvi",
  "email": "prudhvi@gmail.com",
  "age": 35
}
{
  "_id": ObjectId("65f953784a30042b42df2ec0"),
  "name": "Raj",
  "email": "raj@gmail.com",
  "age": 40
}
}
```

## STEP 4: All users from the users collection.

The screenshot shows the MongoDB Compass interface. The top bar indicates the connection to 'localhost:27017/myDatabase.users'. The left sidebar shows the database structure with 'myDatabase' selected. The main panel displays the 'users' collection with 1 document. The query editor shows the command `> db.users.find()`. The results pane shows the following document:

```
{
  "_id": ObjectId("65f953784a30042b42df2ebe"),
  "name": "Bala",
  "email": "bala@gmail.com",
  "age": 25
}
```

The bottom status bar shows the system temperature as 37°C and the time as 02:28 PM on 19-03-2024.

## STEP 5 : Users with an age greater than or equal to 30.

The screenshot shows the MongoDB Compass interface. The top bar indicates the connection to 'localhost:27017/myDatabase.users'. The left sidebar shows the database structure with 'myDatabase' selected. The main panel displays the 'users' collection with 1 document. The query editor shows the command `> db.users.find({ age: { $gte: 30 } })`. The results pane shows the following document:

```
{
  "_id": ObjectId("65f953784a30042b42df2ebf"),
  "name": "Prudhvi",
  "email": "prudhvi@gmail.com",
  "age": 35
}
```

The bottom status bar shows the system temperature as 37°C and the time as 02:29 PM on 19-03-2024.

## STEP 6 : Update Operation: Update the age of a user with a specific email address.

MongoDB Compass - localhost:27017/myDatabase.users

localhost:27017

myDatabase.users

Documents Aggregations Schema Indexes Validation

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

ADD DATA EXPORT DATA UPDATE DELETE

1 - 3 of 3

```
{
  "_id": ObjectId('65f953784a30042b42df2ec0'),
  "name": "Bala",
  "email": "bala@gmail.com",
  "age": 25
}
```

>\_MONGOSH

```
_id: ObjectId('65f953784a30042b42df2ec0'),
name: 'Raj',
email: 'raj@gmail.com',
age: 40
}
> db.users.updateOne({email:"bala@gmail.com"},{$set:{age:29}})
< {
  acknowledged: true,
  insertedId: null,
  matchedCount: 1,
  modifiedCount: 1,
  upsertedCount: 0
}
```

myDatabase>

37°C Sunny

Search

ENG IN 02:33 PM 19-03-2024

MongoDB Compass - localhost:27017/myDatabase.users

localhost:27017

myDatabase.users

Documents Aggregations Schema Indexes Validation

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

ADD DATA EXPORT DATA UPDATE DELETE

1 - 3 of 3

```
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 1,
  modifiedCount: 1,
  upsertedCount: 0
}
> db.users.find()
< {
  "_id": ObjectId('65f953784a30042b42df2ec0'),
  "name": "Bala",
  "email": "bala@gmail.com",
  "age": 29
}
{
  "_id": ObjectId('65f953784a30042b42df2ebf'),
  "name": "Prudhvi",
  "email": "prudhvi@gmail.com",
  "age": 35
}
{
  "_id": ObjectId('65f953784a30042b42df2ec0'),
  "name": "Raj",
  "email": "raj@gmail.com",
  "age": 40
}
```

myDatabase>

37°C Sunny

Search

ENG IN 02:34 PM 19-03-2024

MongoDB Compass - localhost:27017/myDatabase.users

Connect Edit View Collection Help

localhost:27017

My Queries Performance Databases

Search

admin config link local myDatabase users mynewdb school test

myDatabase.users

Documents Aggregations Schema Indexes Validation

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

Explain Reset Find Options

ADD DATA EXPORT DATA UPDATE DELETE

1 - 3 of 3

```
{ "_id": ObjectId("65f953784a30042b42df2ebf"), "name": "Bala", "email": "bala@gmail.com", "age": 29 }
```

```
{ "_id": ObjectId("65f953784a30042b42df2ebf"), "name": "Prudhvi", "email": "prudhvi@gmail.com", "age": 35 }
```

```
{ "_id": ObjectId("65f953784a30042b42df2ec0"), "name": "Raj", "email": "raj@gmail.com", "age": 40 }
```

>\_MONGOSH

37°C Sunny

Search

ENG IN 02:34 PM 19-03-2024

**STEP 7 : Deletion Operation:** Delete a user document based on a specific email address.

MongoDB Compass - localhost:27017/myDatabase.users

Connect Edit View Collection Help

localhost:27017

My Queries Performance Databases

Search

admin config link local myDatabase users mynewdb school test

myDatabase.users

Documents Aggregations Schema Indexes Validation

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

Explain Reset Find Options

ADD DATA EXPORT DATA UPDATE DELETE

1 - 3 of 3

```
> db.users.deleteOne({email:"bala@gmail.com"})
```

```
{ acknowledged: true, deletedCount: 1 }
```

myDatabase>

>\_MONGOSH

```
{
  }
{
  _id: ObjectId('65f953784a30042b42df2ebf'),
  name: 'Prudhvi',
  email: 'prudhvi@gmail.com',
  age: 35
}
{
  _id: ObjectId('65f953784a30042b42df2ec0'),
  name: 'Raj',
  email: 'raj@gmail.com',
  age: 40
}
}
```

37°C Sunny

Search

ENG IN 02:35 PM 19-03-2024

MongoDB Compass - localhost:27017/myDatabase.users

Connect Edit View Collection Help

localhost:27017

My Queries Performance Databases

Search

admin config

myDatabase.users

Documents Aggregations Schema Indexes Validation

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

Explain Reset Find Options

ADD DATA EXPORT DATA UPDATE DELETE

1 - 3 of 3

```
>_MONGOSH
> db.users.deleteOne({email:"bala@gmail.com"})
< {
  acknowledged: true,
  deletedCount: 1
}
> db.users.find()
< {
  _id: ObjectId('65f953784a30042b42df2ebf'),
  name: 'Prudhvi',
  email: 'prudhvi@gmail.com',
  age: 35
}
{
  _id: ObjectId('65f953784a30042b42df2ec0'),
  name: 'Raj',
  email: 'raj@gmail.com',
  age: 40
}
}
myDatabase>
```

37°C Sunny

Search

ENG IN 02:35 PM 19-03-2024

MongoDB Compass - localhost:27017/myDatabase.users

Connect Edit View Collection Help

localhost:27017

My Queries Performance Databases

Search

admin config link local myDatabase

users

mynewdb school test

myDatabase.users

Documents Aggregations Schema Indexes Validation

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

Explain Reset Find Options

ADD DATA EXPORT DATA UPDATE DELETE

1 - 2 of 2

```
_id: ObjectId('65f953784a30042b42df2ebf')
name: "Prudhvi"
email: "prudhvi@gmail.com"
age: 35

_id: ObjectId('65f953784a30042b42df2ec0')
name: "Raj"
email: "raj@gmail.com"
age: 40
```

>\_MONGOSH

37°C Sunny

Search

ENG IN 02:35 PM 19-03-2024



## STEP 8 : Index Creation: Create an index on the email field of the users collection.

The screenshot displays the MongoDB Compass interface and a terminal window. The Compass window shows the 'myDatabase.users' collection with 0 documents and 1 index. The terminal window shows the following commands and output:

```
> _MONGOSH
>
> db.users.deleteOne({email:"bala@gmail.com"})
< {
  acknowledged: true,
  deletedCount: 1
}
> db.users.find()
< [
  {
    _id: ObjectId('65f953784a30042b42df2ebf'),
    name: 'Prudhvi',
    email: 'prudhvi@gmail.com',
    age: 35
  },
  {
    _id: ObjectId('65f953784a30042b42df2ec0'),
    name: 'Raj',
    email: 'raj@gmail.com',
    age: 40
  }
]
> db.users.createIndex({email:1})
< email_1
myDatabase>
```

The terminal window also shows the system tray at the bottom with the date and time: 02:37 PM, 19-03-2024.



## QUERIES:

1. USE myDatabase.

2. db.createCollection("users")

3. db.users.insertMany([  
    {name:"Bala",email:"bala@gmail.com",age:25},  
    {name:"Prudhvi",email:"prudhvi@gmail.com",age:35},  
    {name:"Raj",email:"raj@gmail.com",age:40}])

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

5. db.users.updateOne({email:"bala@gmail.com"},{\$set:{age:29}})

6. db.users.deleteOne({email:"bala@gmail.com"})

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