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ROLL NO. : 22CS2029

BRANCH : I.D.D.

Q1-

```
const mongoose = require('mongoose');

async function main(){
  await
mongoose.connect('mongodb://127.0.0.1:27017/test3');
}

main()
.then(()=>{console.log("Connected Succesfully");})
.catch((err)=>{console.error(err);});

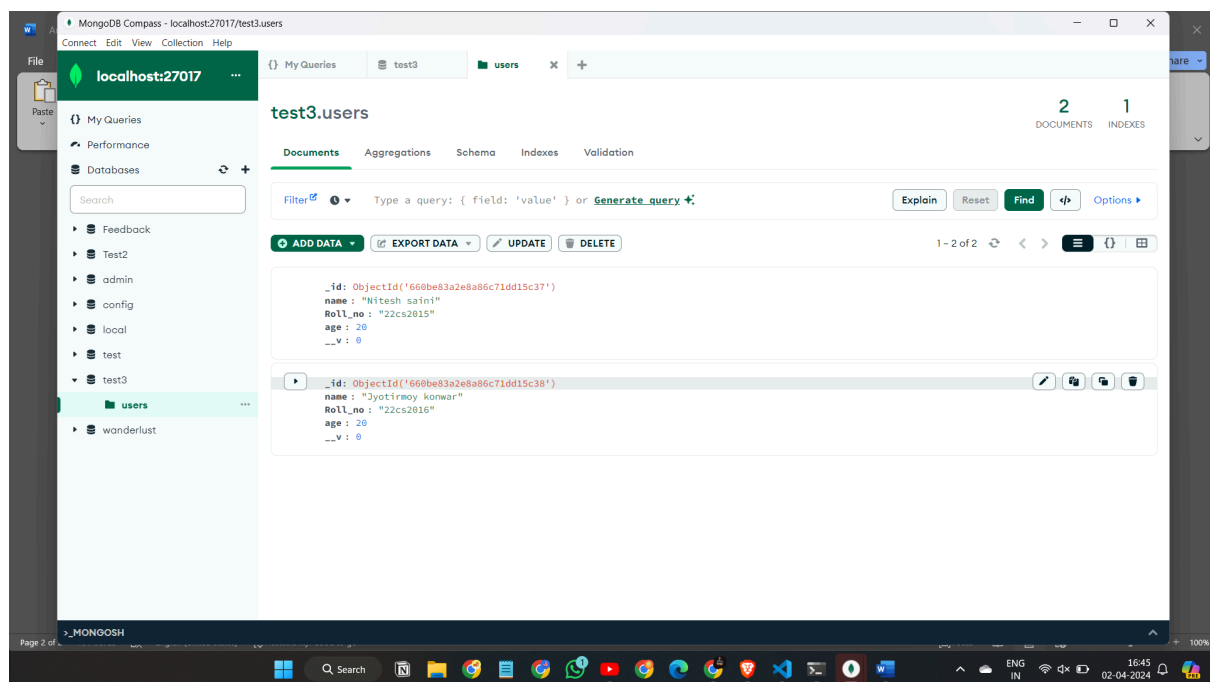
const userSchema = new mongoose.Schema({
  name:String,
  Roll_no:String,
  age:Number,
});

const User = mongoose.model("User",userSchema); //
Making the model or we can say making the collection
and giving the template to the collection.

const user1=new User({ // Inserting one by one or
making the document for the collection User.
  name: "Nitesh saini",
  Roll_no: "22cs2015",
  age: 20
});
```

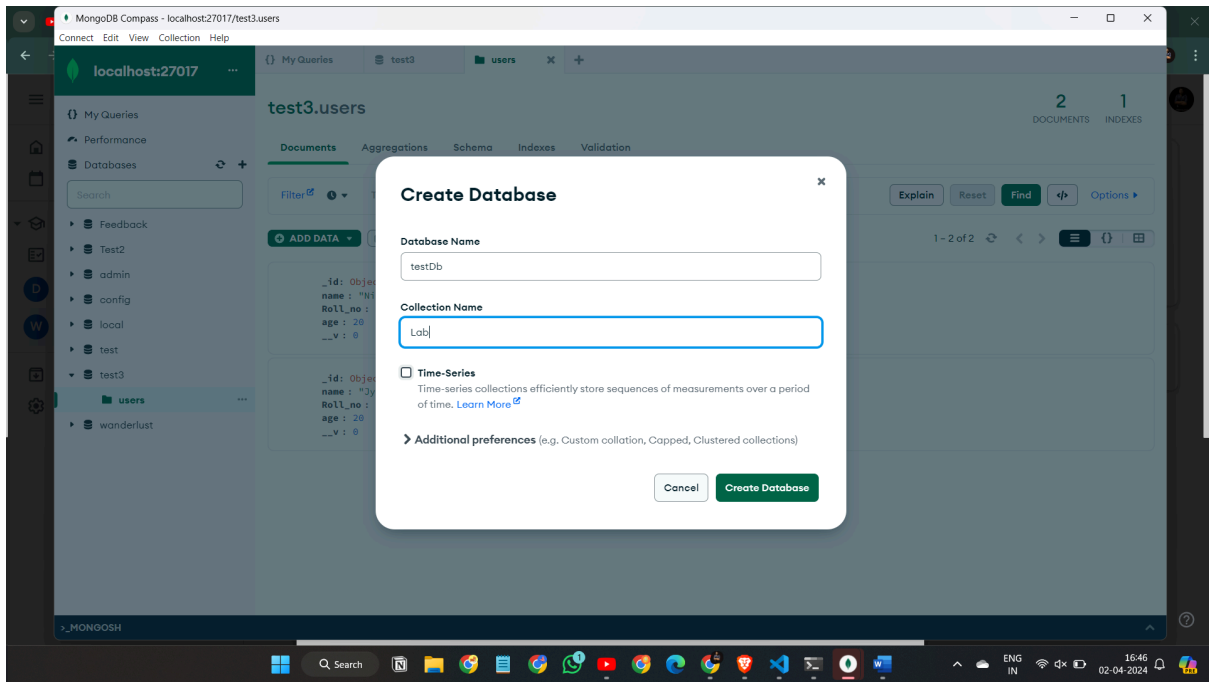
```
const user2=new User({ // Inserting or making the
document for the collection User.
  name: "Jyotirmoy konwar",
  Roll_no: "22cs2016",
  age: 20
});

user1.save();
user2.save();
```

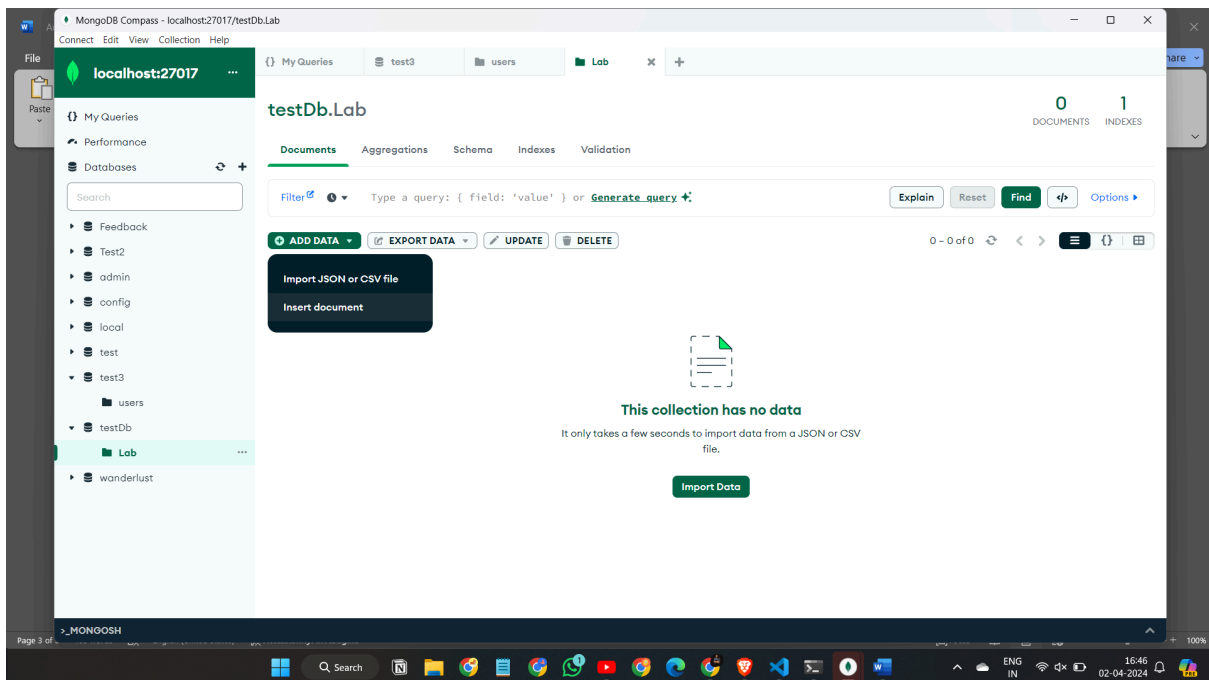


Q-2

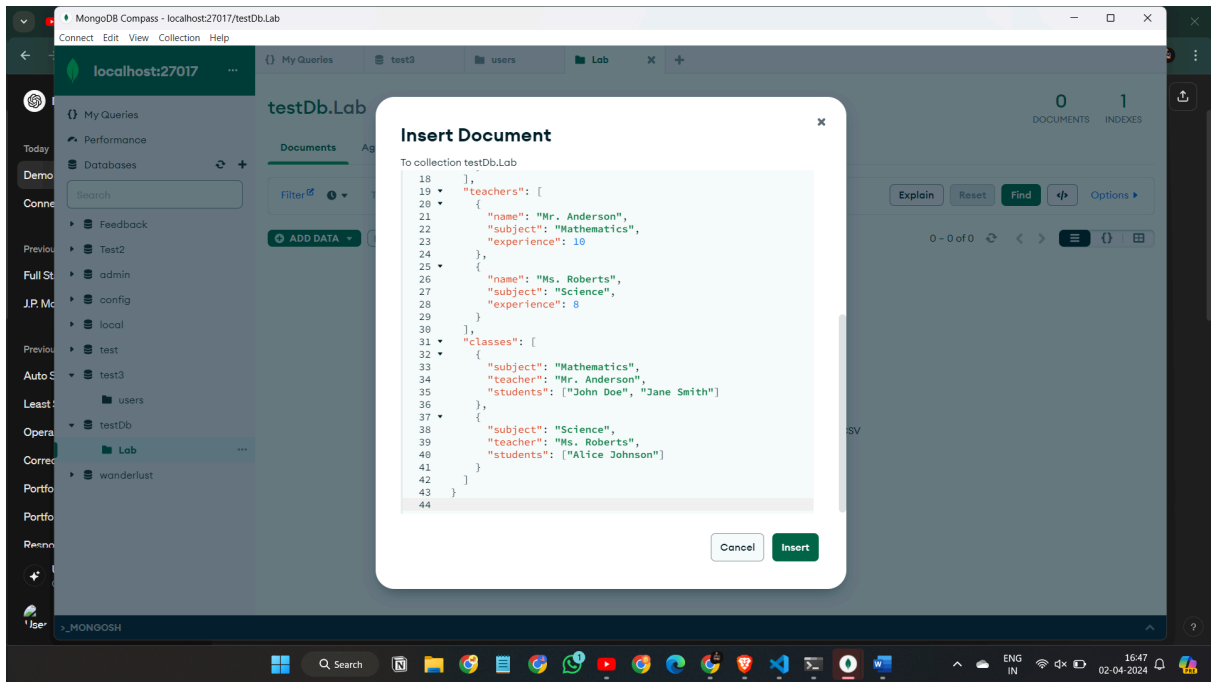
Step -1



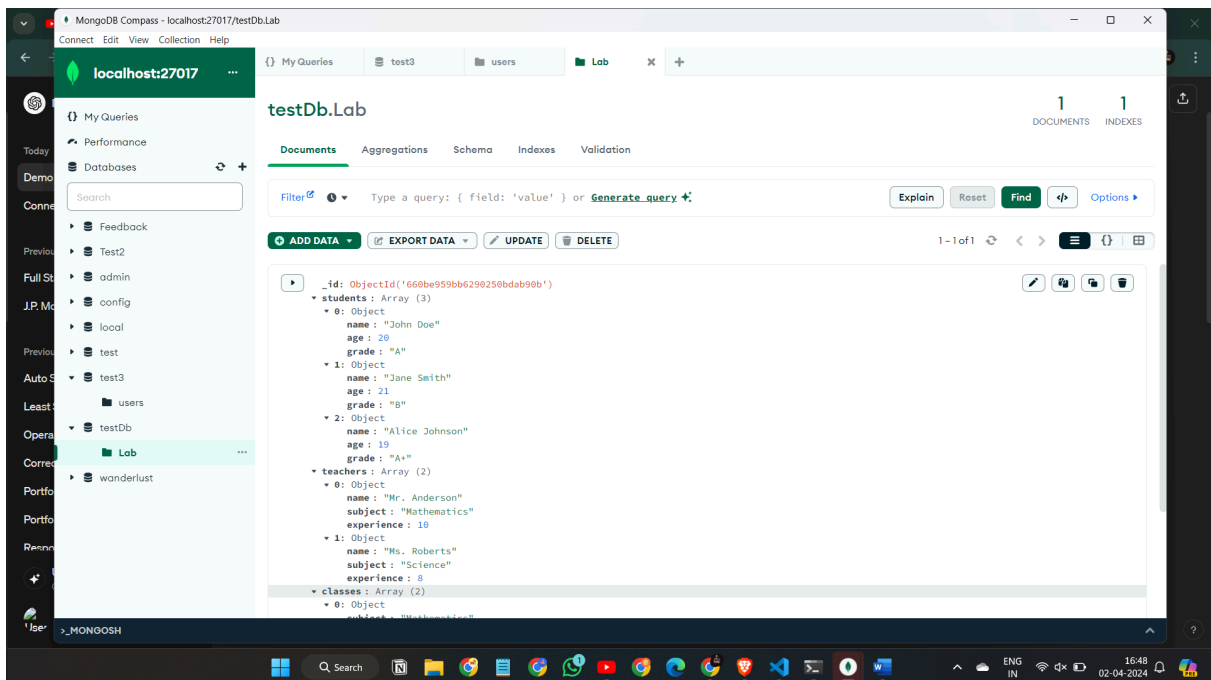
## Step-2



## Step-3

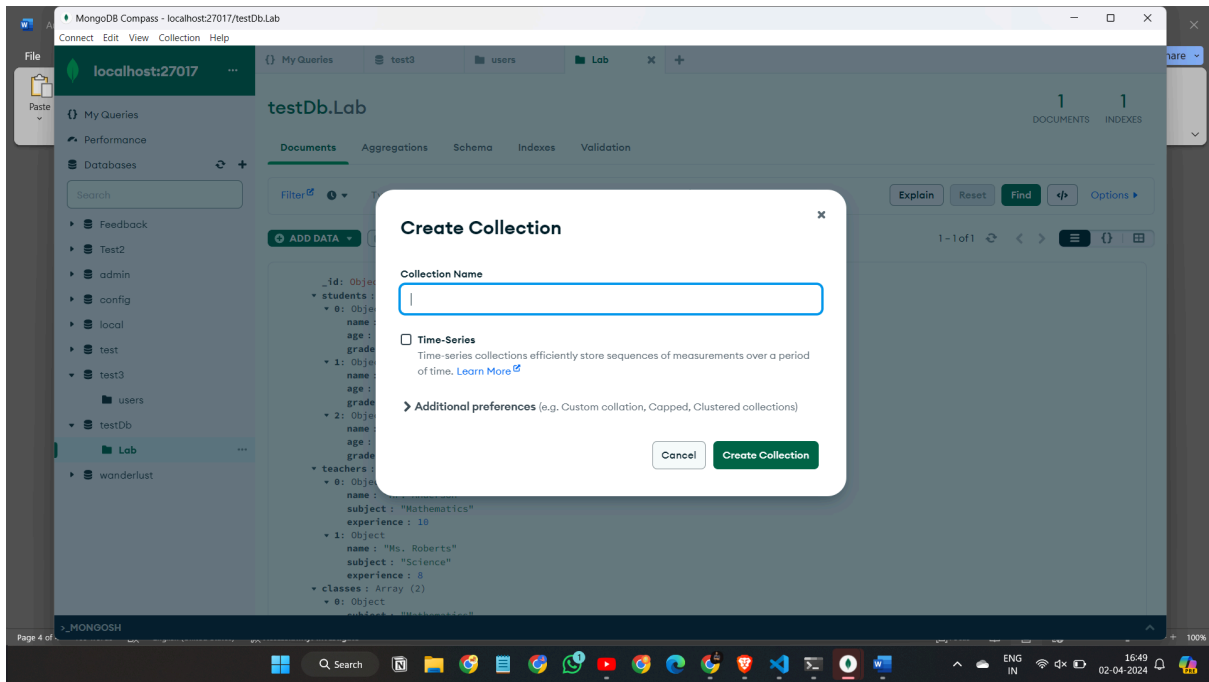


## Step-4

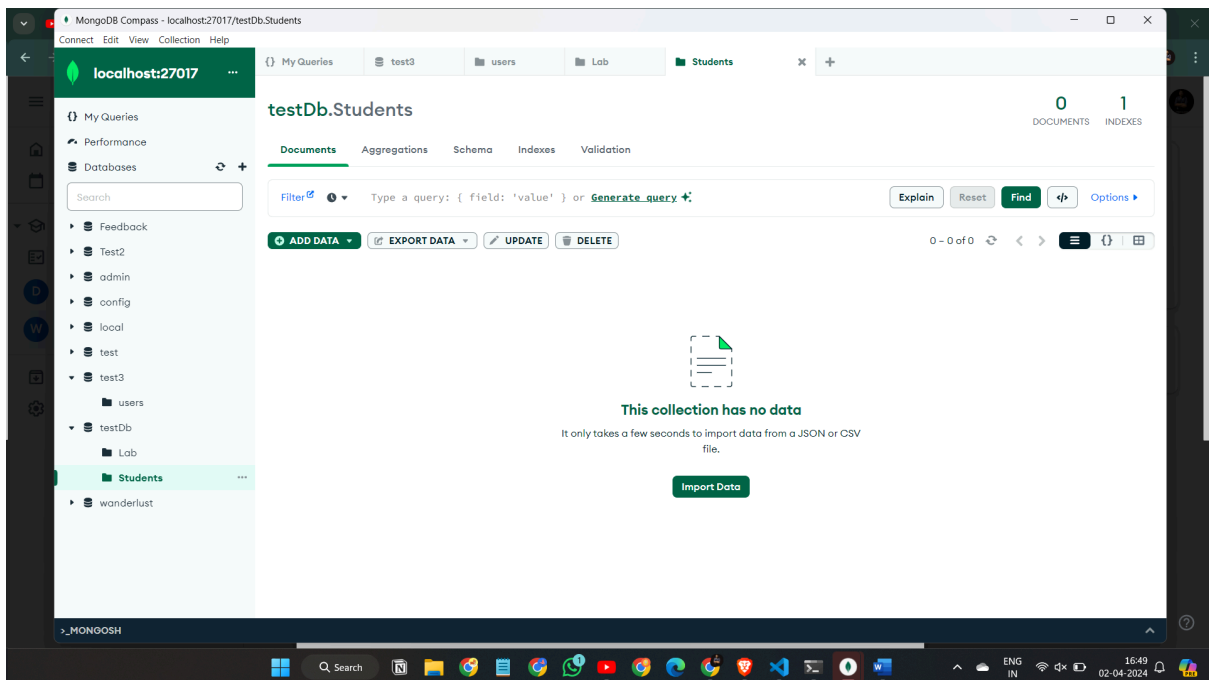


## Q-3

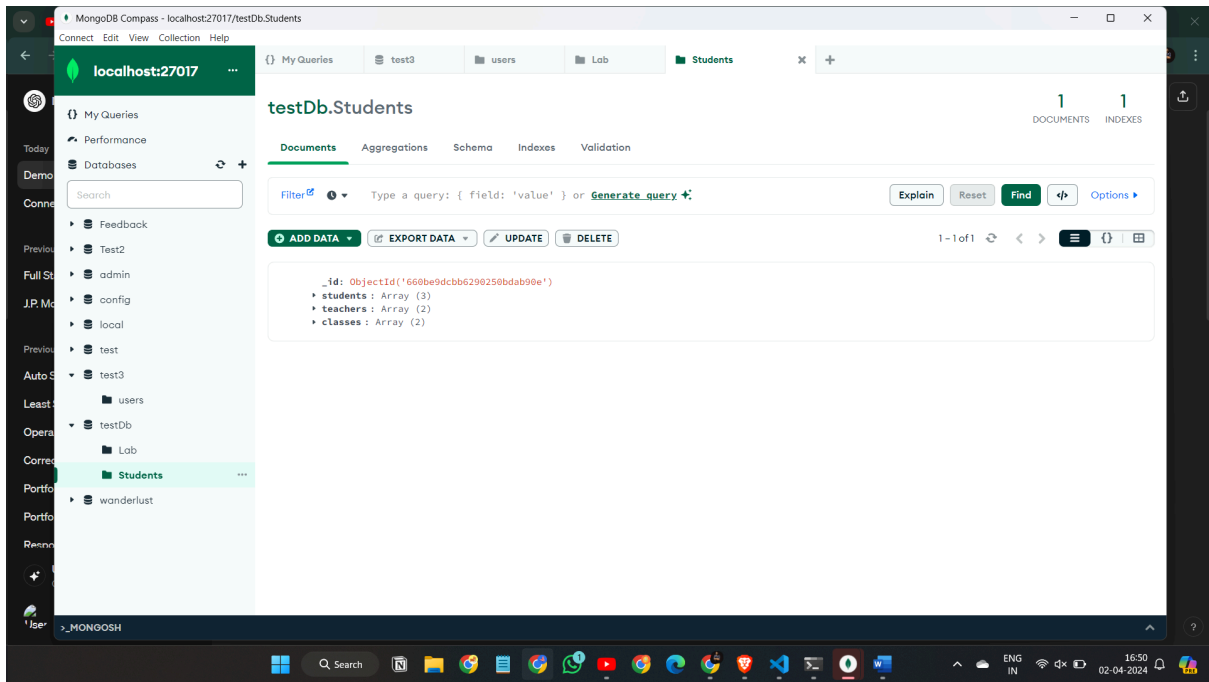
## Step-1



## Step-2

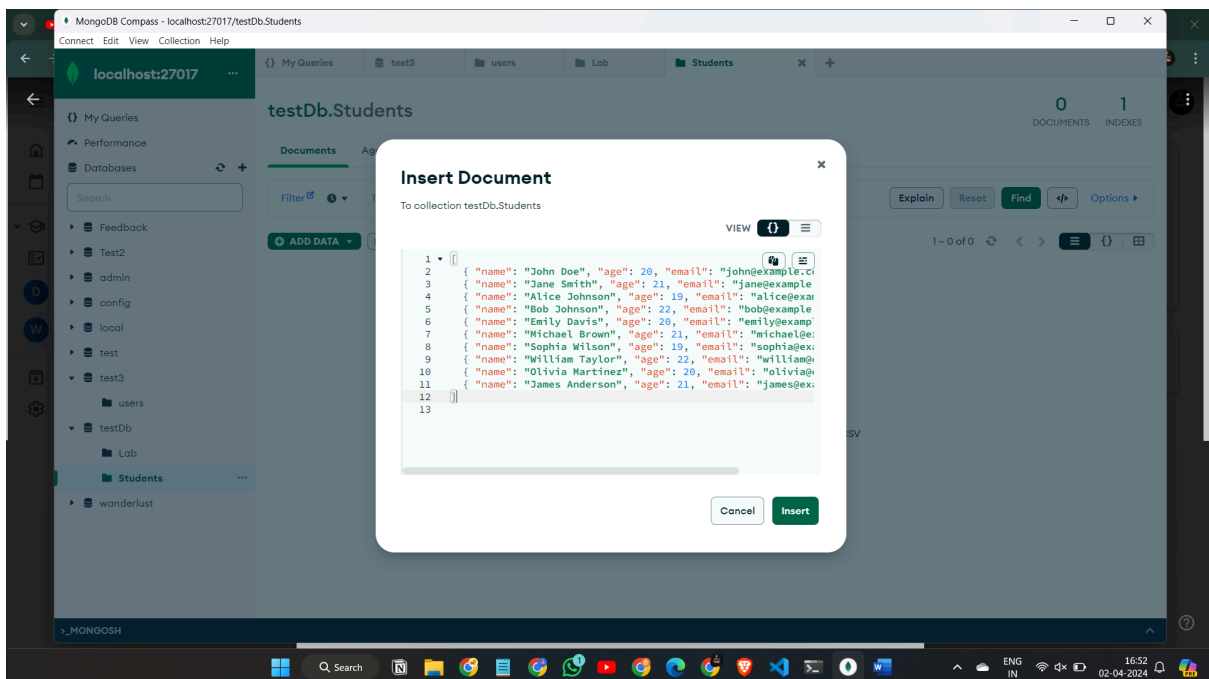


## Step-3

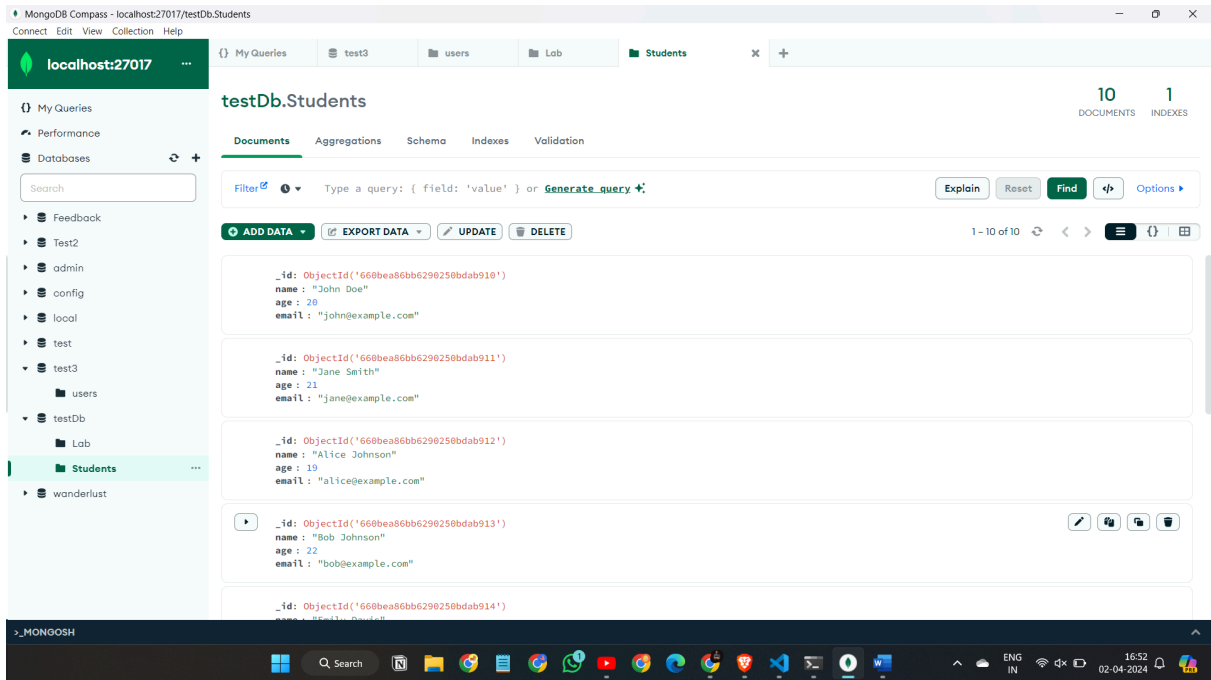


Q-4

Step-1

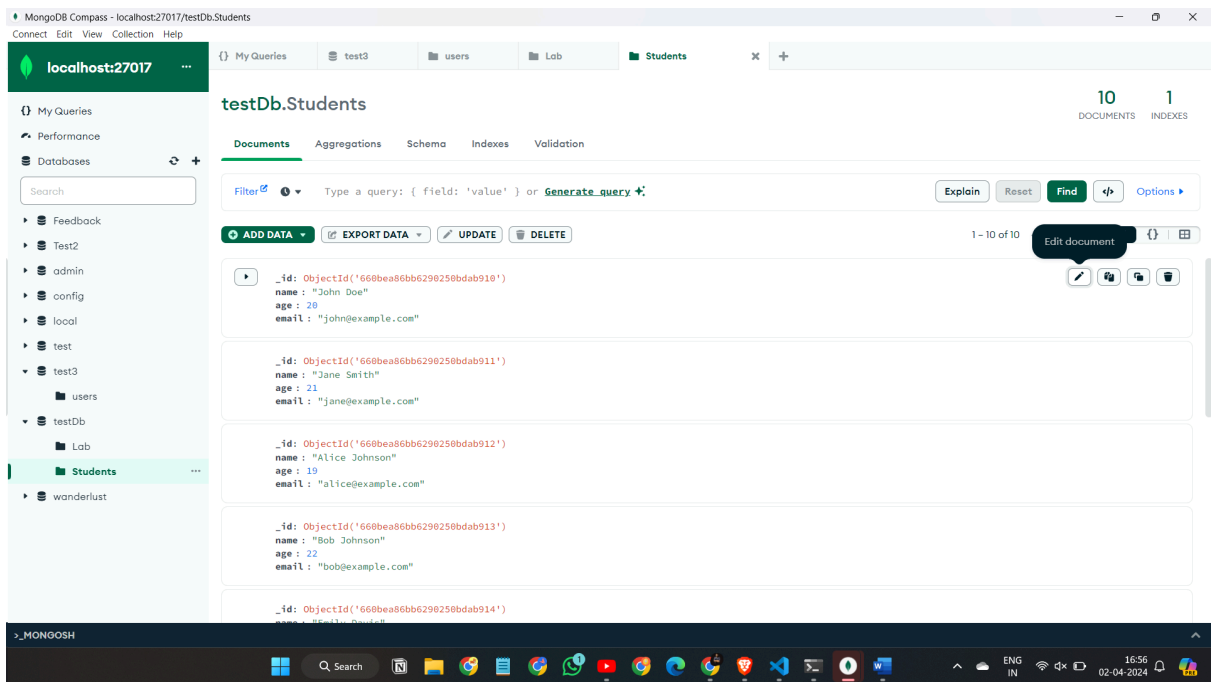


Q-5



Q-6

Step-1



## Step-2

MongoDB Compass - localhost:27017/testDb.Students

Connect Edit View Collection Help

localhost:27017

My Queries Performance Databases Search

testDb.Students

Documents Aggregations Schema Indexes Validation

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

ADD DATA EXPORT DATA UPDATE DELETE

1 - 10 of 10

Document updated.

Document
<pre>{ "_id": ObjectId("660bea86bb6290250bdab910"), "name": "John Doe", "age": 25, "email": "john@example.com" }</pre>
<pre>{ "_id": ObjectId("660bea86bb6290250bdab911"), "name": "Jane Smith", "age": 21, "email": "jane@example.com" }</pre>
<pre>{ "_id": ObjectId("660bea86bb6290250bdab912"), "name": "Alice Johnson", "age": 19, "email": "alice@example.com" }</pre>
<pre>{ "_id": ObjectId("660bea86bb6290250bdab913"), "name": "Bob Johnson", "age": 22, "email": "bob@example.com" }</pre>

Windows taskbar: 16:56 02-04-2024

## Q-7

## Step-1

MongoDB Compass - localhost:27017/testDb.Students

Connect Edit View Collection Help

localhost:27017

My Queries Performance Databases Search

testDb.Students

Documents Aggregations Schema Indexes Validation

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

ADD DATA EXPORT DATA UPDATE DELETE

1 - 10 of 10

Remove document

Document
<pre>{ "_id": ObjectId("660bea86bb6290250bdab910"), "name": "John Doe", "age": 25, "email": "john@example.com" }</pre>
<pre>{ "_id": ObjectId("660bea86bb6290250bdab911"), "name": "Jane Smith", "age": 21, "email": "jane@example.com" }</pre>
<pre>{ "_id": ObjectId("660bea86bb6290250bdab912"), "name": "Alice Johnson", "age": 19, "email": "alice@example.com" }</pre>
<pre>{ "_id": ObjectId("660bea86bb6290250bdab913"), "name": "Bob Johnson", "age": 22, "email": "bob@example.com" }</pre>

Windows taskbar: 16:57 02-04-2024



## Step-2

MongoDB Compass - localhost:27017/testDb.Students

Connect Edit View Collection Help

localhost:27017

My Queries Performance Databases Search

Feedback Test2 admin config local test test3 users testDb Lab Students wonderlust

testDb.Students

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 - 8 of 8

Document deleted.

`{ "_id": ObjectId("660bea86bb6290250bdab912"), "name": "Alice Johnson", "age": 19, "email": "alice@example.com" }`

`{ "_id": ObjectId("660bea86bb6290250bdab913"), "name": "Bob Johnson", "age": 22, "email": "bob@example.com" }`

`{ "_id": ObjectId("660bea86bb6290250bdab914"), "name": "Emily Davis", "age": 20, "email": "emily@example.com" }`

`{ "_id": ObjectId("660bea86bb6290250bdab915"), "name": "Michael Brown", "age": 21, "email": "michael@example.com" }`

16:58 02-04-2024

## Q-8

MongoDB Compass - localhost:27017/testDb.Students

Connect Edit View Collection Help

localhost:27017

My Queries Performance Databases Search

Feedback Test2 admin config local test test3 users testDb Lab Students wonderlust

testDb.Students

Documents Aggregations Schema Indexes Validation

Pipeline \$group

Generate aggregation EXPLAIN EXPORT RUN Options

Untitled - modified SAVE CREATE NEW EXPORT TO LANGUAGE

PREVIEW STAGES TEXT WIZARD

Stage 1 \$group

`1 /**`  
`2 * specifications: The fields to`  
`3 * include or exclude.`  
`4 */`  
`5 {`  
`6 _id: null,`  
`7 averageAge: { $avg: "$age" }`  
`8 }`

Output after \$group stage (Sample of 1 document)

`{ "_id": null, "averageAge": 20.5 }`

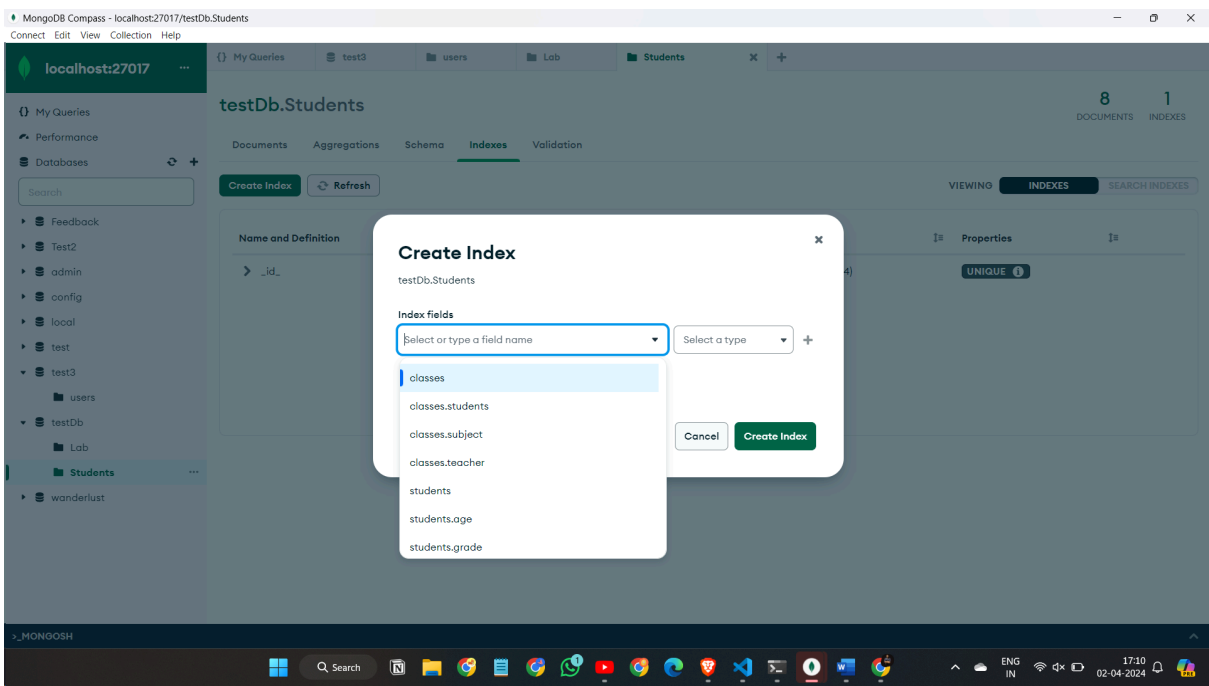
+ Add Stage

[Learn more about aggregation pipeline stages](#)

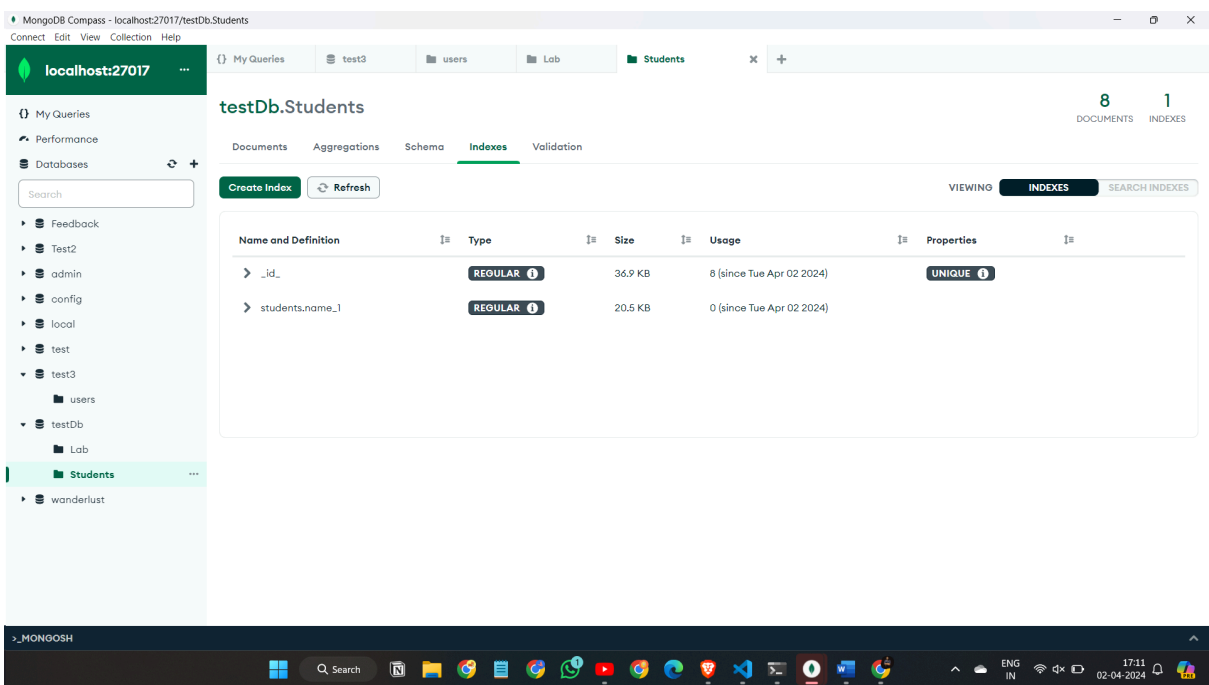
17:09 02-04-2024

## Q-9

# Step-1

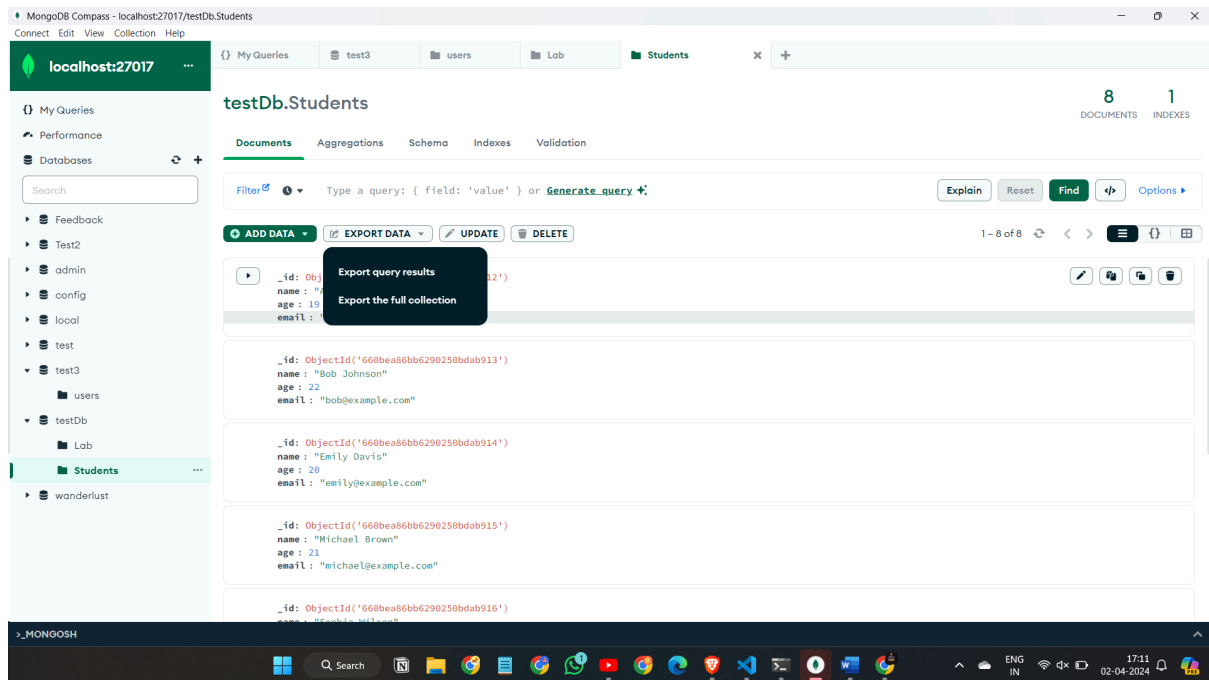


# Step-2

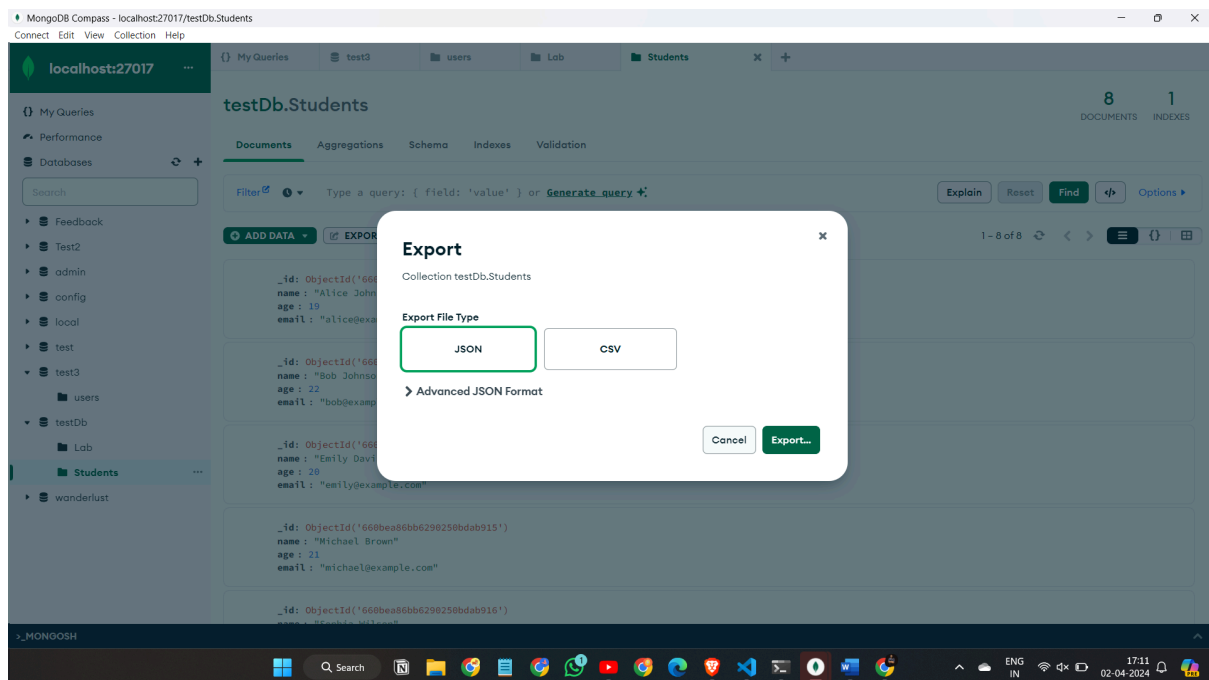


# Q-10

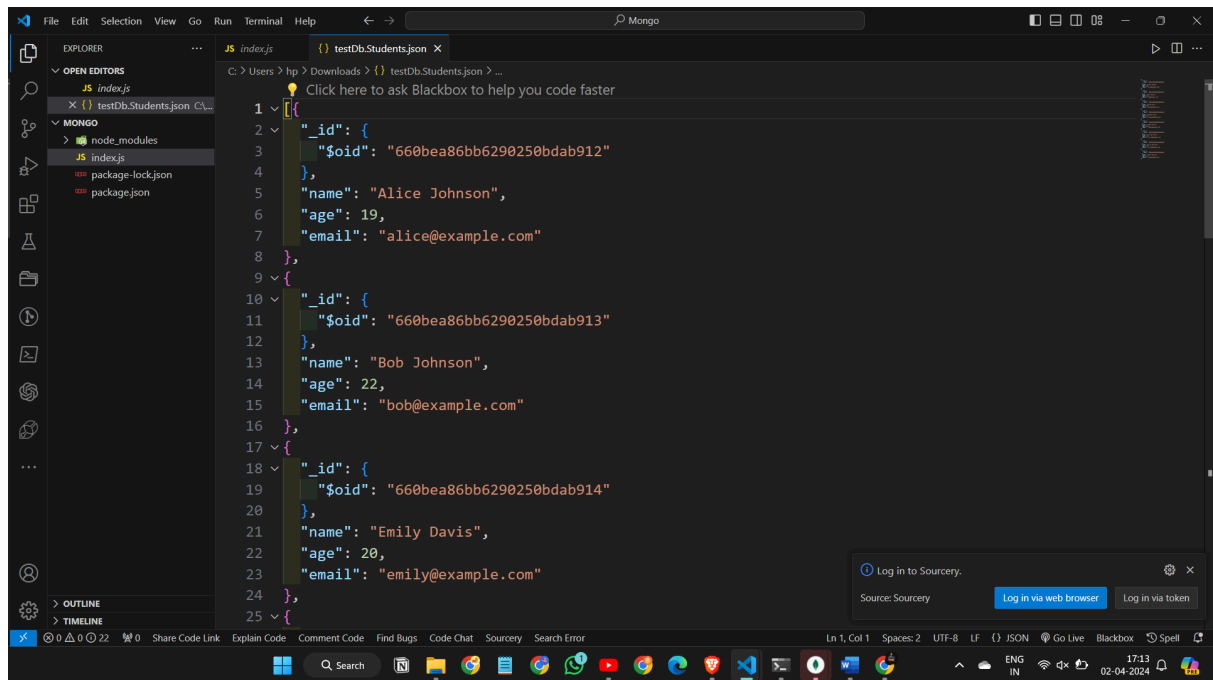
## Step-1



## Step-2

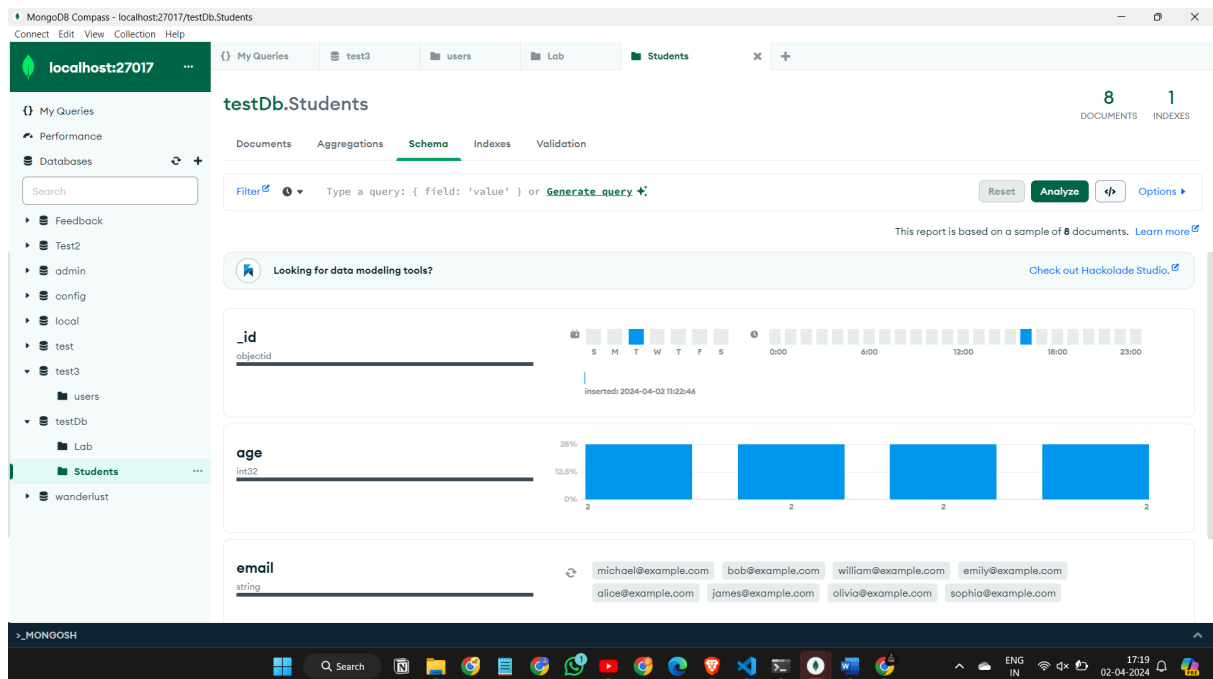


## Step-3



```
1 {
2   "_id": {
3     "$oid": "660bea86bb6290250bdab912"
4   },
5   "name": "Alice Johnson",
6   "age": 19,
7   "email": "alice@example.com"
8 },
9 {
10  "_id": {
11    "$oid": "660bea86bb6290250bdab913"
12  },
13  "name": "Bob Johnson",
14  "age": 22,
15  "email": "bob@example.com"
16 },
17 {
18  "_id": {
19    "$oid": "660bea86bb6290250bdab914"
20  },
21  "name": "Emily Davis",
22  "age": 20,
23  "email": "emily@example.com"
24 },
25 }
```

## Q-13



## Q-14

MongoDB Compass - localhost:27017/testDb.Students

Connect Edit View Collection Help

localhost:27017

My Queries Performance Databases Search

- Feedback
- Test2
- admin
- config
- local
- test
- test3
  - users
- testDb
  - Lab
  - Students**
  - wanderlust

testDb.Students

8 DOCUMENTS 1 INDEXES

Documents Aggregations Schema Indexes **Validation**

Validation Action  Validation Level

```
1 {
2   $jsonSchema: {
3     bsonType: 'object',
4     required: [
5       'name'
6     ],
7     properties: {
8       name: {
9         bsonType: 'string',
10        minLength: 1,
11        description: 'must be a non-empty string'
12      }
13    }
14  }
15 }
```

Sample documents

Passed validation

```
{
  "_id": ObjectId('660bea86bb6290259bdab915'),
  "name": "Michael Brown",
  "age": 21,
  "email": "michael@example.com"
}
```

Failed validation

No Preview Documents

»\_MONGOSH

Search

ENG IN 17:23 02-04-2024