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ROLL NUMBER: 22CS3050

WEB TECH – 10

T1.

The image displays two screenshots related to connecting to a MongoDB cluster.

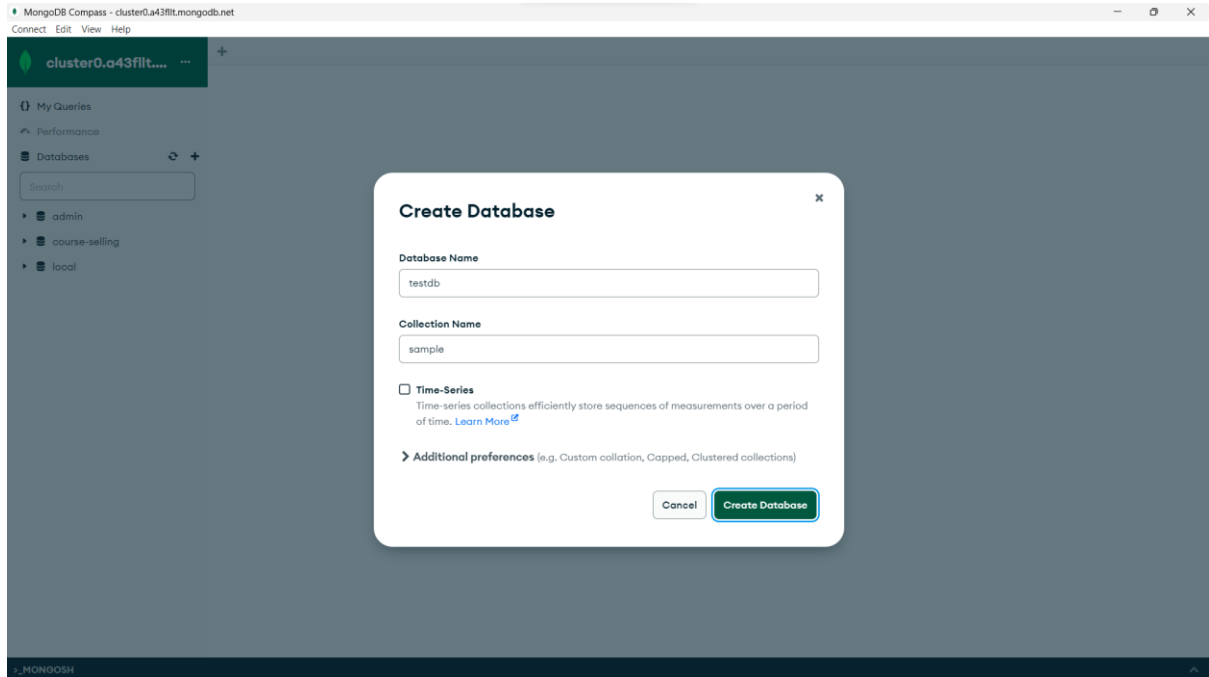
Top Screenshot: MongoDB Atlas 'Connect to Cluster0' dialog

- Progress:** 1. Set up connection security (checked), 2. Choose a connection method (checked), 3. Connect (active).
- Connection Method:** 'I have MongoDB Compass installed' is selected.
- Step 1: Choose your version of Compass**
 - Dropdown menu: '1.12 or later'.
 - Text: 'See your Compass version in "About Compass"'
- Step 2: Copy the connection string, then open MongoDB Compass**
 - Connection string: `mongodb+srv://irishittiwari:password@cluster0.5tbibai.mongodb.net/`
 - Text: 'Replace <password> with the password for the irishittiwari user. When entering your password, make sure that any special characters are URL encoded.'
- Resources:** 'Connect with Compass', 'Import and Export Data', 'Access your Database Users', 'Troubleshoot Connections'.
- Buttons:** 'Go Back', 'Close'.

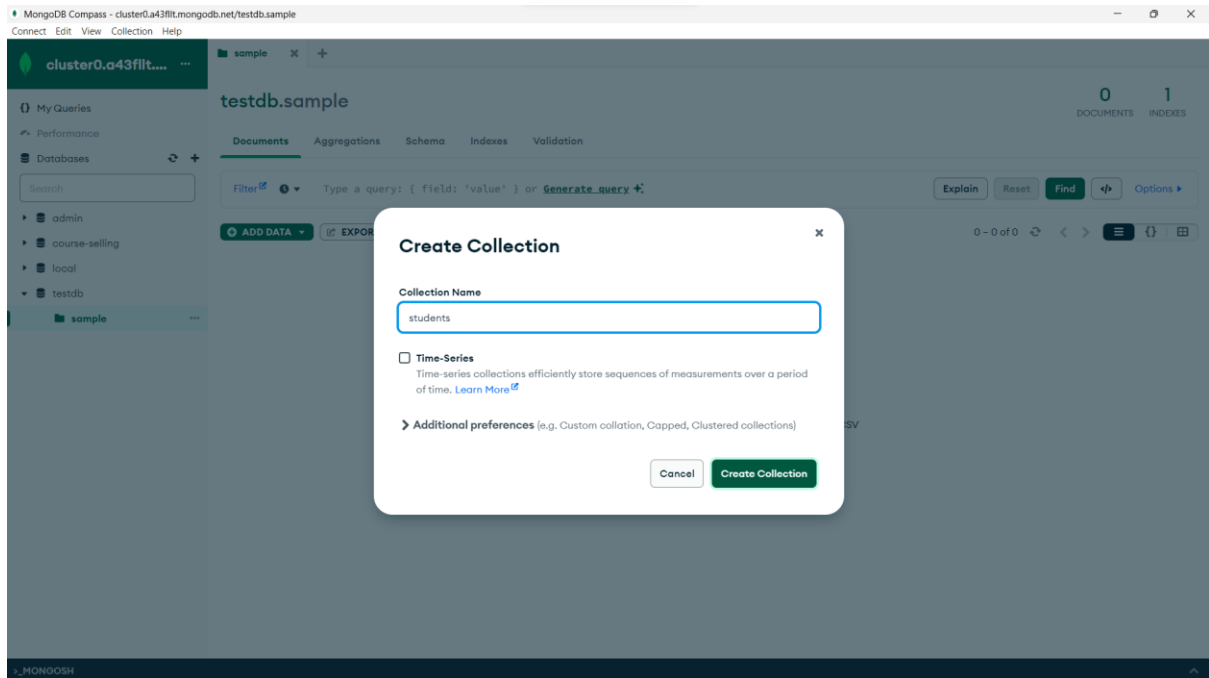
Bottom Screenshot: MongoDB Compass Interface

- Left Sidebar:** 'New connection +', 'Saved connections' (listing QUIZWIZ, SALAHKAAR, WebTechClass), 'Recents' (listing cluster0.5tbibai.mongod..., cluster0.a43fllt.mongodb..., localhost:27017, localhost:27017).
- Main Panel: 'WebTechClass' connection setup**
 - URI: `mongodb+srv://irishittiwari:*****@cluster0.5tbibai.mongodb.net/`
 - Buttons: 'Save', 'Connect'.
- Right Panel: Help/FAQ**
 - 'New to Compass and don't have a cluster?' with 'CREATE FREE CLUSTER' button.
 - 'How do I find my connection string in Atlas?' with 'See example' link.
 - 'How do I format my connection string?' with 'See example' link.

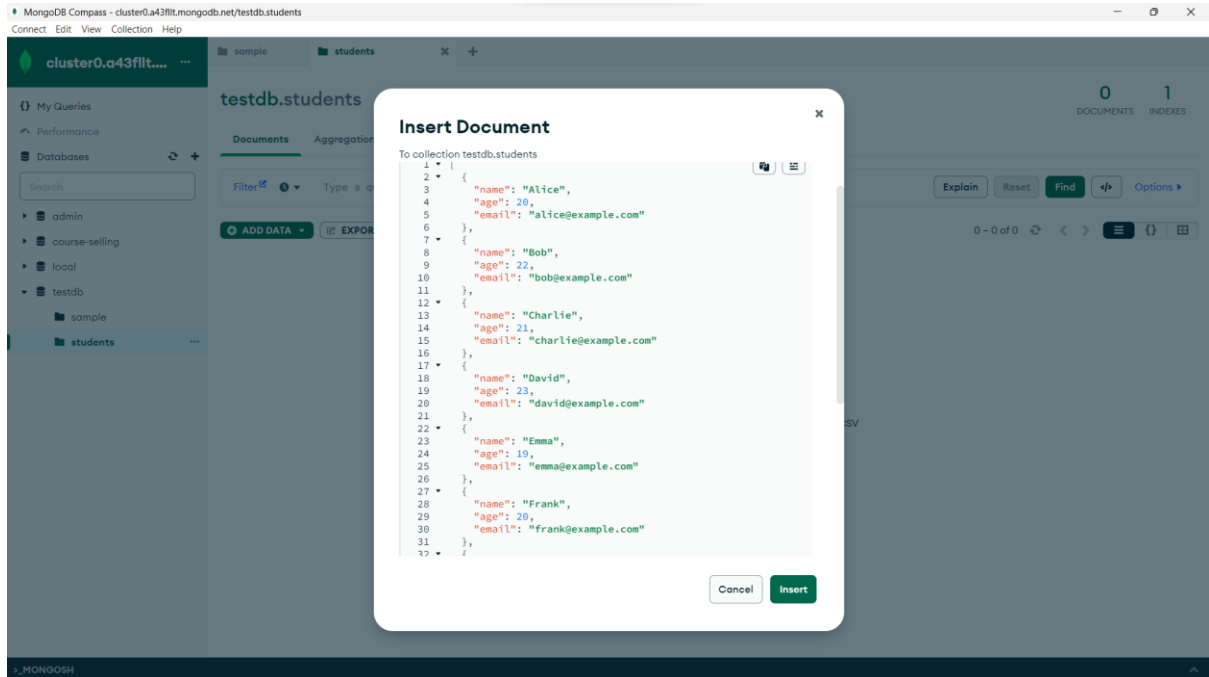
T2.



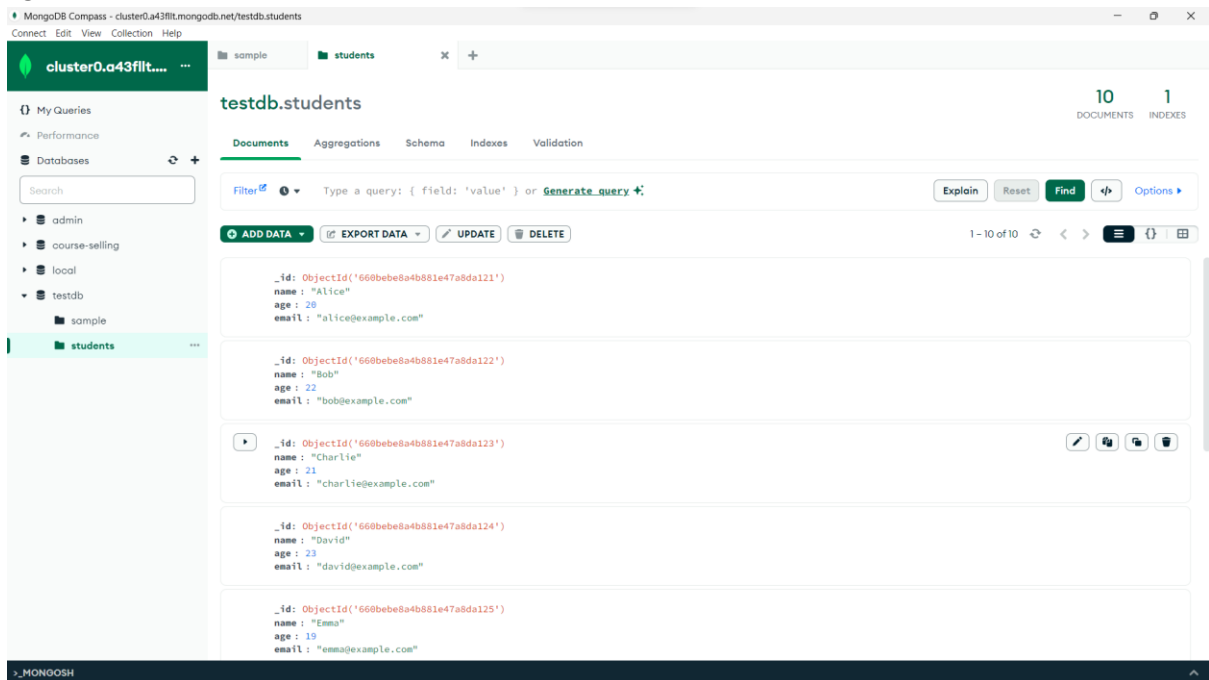
T3.



T4.



T5.



T6.

MongoDB Compass - cluster0.a43flit.mongod...
Connect Edit View Collection Help

cluster0.a43flit... sample students

testdb.students 10 DOCUMENTS 1 INDEXES

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 - 10 of 10

Document modified. CANCEL UPDATE

```
{ "_id": ObjectId("660bebe8a4b881e47a8da121"),  
  "name": "Alice",  
  "age": 30,  
  "email": "alice@example.com" }
```

```
{ "_id": ObjectId("660bebe8a4b881e47a8da122"),  
  "name": "Bob",  
  "age": 22,  
  "email": "bob@example.com" }
```

```
{ "_id": ObjectId("660bebe8a4b881e47a8da123"),  
  "name": "Charlie",  
  "age": 21,  
  "email": "charlie@example.com" }
```

```
{ "_id": ObjectId("660bebe8a4b881e47a8da124"),  
  "name": "David",  
  "age": 23,  
  "email": "david@example.com" }
```

```
{ "_id": ObjectId("660bebe8a4b881e47a8da125"),  
  "name": "Emma" }
```

> MONGODB Compass - cluster0.a43flit.mongod...
Connect Edit View Collection Help

cluster0.a43flit... sample students

testdb.students 10 DOCUMENTS 1 INDEXES

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 - 10 of 10

Document updated.

```
{ "_id": ObjectId("660bebe8a4b881e47a8da121"),  
  "name": "Alice",  
  "age": 30,  
  "email": "alice@example.com" }
```

```
{ "_id": ObjectId("660bebe8a4b881e47a8da122"),  
  "name": "Bob",  
  "age": 22,  
  "email": "bob@example.com" }
```

```
{ "_id": ObjectId("660bebe8a4b881e47a8da123"),  
  "name": "Charlie",  
  "age": 21,  
  "email": "charlie@example.com" }
```

```
{ "_id": ObjectId("660bebe8a4b881e47a8da124"),  
  "name": "David",  
  "age": 23,  
  "email": "david@example.com" }
```

```
{ "_id": ObjectId("660bebe8a4b881e47a8da125"),  
  "name": "Emma" }
```

> MONGODB

T7.

MongoDB Compass - cluster0.a43fllt.mongodb.net/testdb.students

Connect Edit View Collection Help

cluster0.a43fllt...

sample students

testdb.students

10 DOCUMENTS 1 INDEXES

Documents Aggregations Schema Indexes Validation

Filter {"name": "Bob"}

Generate query Explain Reset Find Options

ADD DATA EXPORT DATA UPDATE DELETE

1 - 1 of 1

Document flagged for deletion.

CANCEL DELETE

660bebe8a4b881e47a8da122

._id: ObjectId('660bebe8a4b881e47a8da122')
name: "Bob"
age: 22
email: "bob@example.com"

> MONGODB

MongoDB Compass - cluster0.a43fllt.mongodb.net/testdb.students

Connect Edit View Collection Help

cluster0.a43fllt...

sample students

testdb.students

9 DOCUMENTS 1 INDEXES

Documents Aggregations Schema Indexes Validation

Filter {"name": "Bob"}

Generate query Explain Reset Find Options

ADD DATA EXPORT DATA UPDATE DELETE

1 - 0 of 0

No results

Try modifying your query to get results.

36°C HAZE

ENG IN

17:01 02-04-2024

T8.

MongoDB Compass - cluster0.a43fitt.mongodb.net/testdb.students

Connect Edit View Collection Help

cluster0.a43fitt...

sample students

testdb.students

9 DOCUMENTS 1 INDEXES

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

0 Documents in the collection

Preview of documents

Stage 1 \$group

```
1 {
2   "_id": null,
3   "averageAge": { "$avg": "$age" }
4 }
5
```

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

```
_id: null
averageAge: 21.666666666666668
```

+ Add Stage

Learn more about aggregation pipeline stages

MONGODB

T9.

MongoDB Compass - cluster0.a43fllt.mongodb.net/testdb.students

Connect Edit View Collection Help

cluster0.a43fllt...

sample students

testdb.students

Documents Aggregations Schema **Indexes** Validation

Create Index Refresh

VIEWING INDEXES SEARCH INDEXES

9 DOCUMENTS 1 INDEXES

My Queries Performance Databases

Search

admin course-selling local testdb sample students

Create Index

testdb.students

Index fields

name 1 (asc)

Options

Cancel Create Index

MONGODB

MongoDB Compass - cluster0.a43fllt.mongodb.net/testdb.students

Connect Edit View Collection Help

cluster0.a43fllt...

sample students

testdb.students

Documents Aggregations Schema **Indexes** Validation

Create Index Refresh

VIEWING INDEXES SEARCH INDEXES

9 DOCUMENTS 1 INDEXES

My Queries Performance Databases

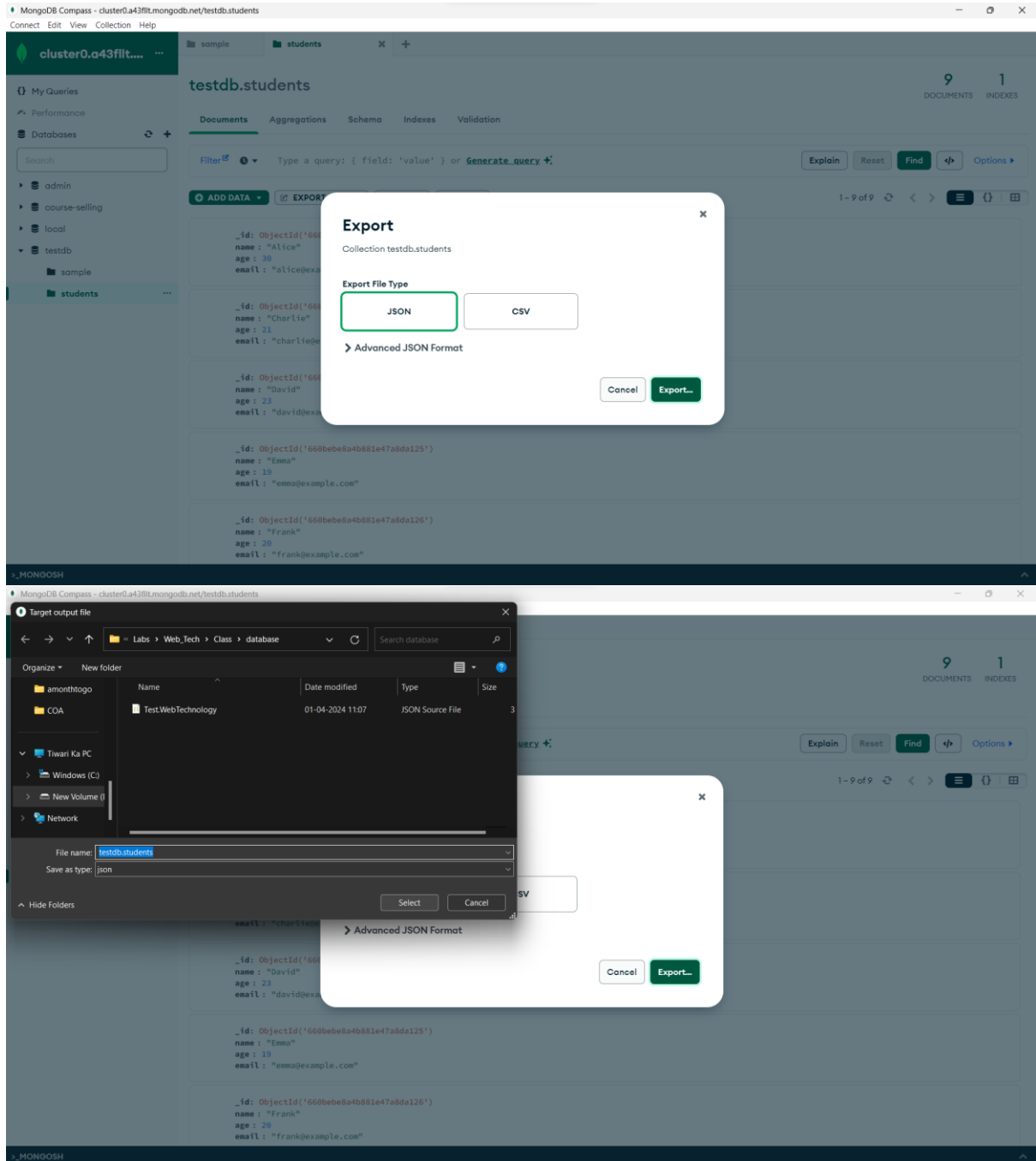
Search

admin course-selling local testdb sample students

Name and Definition	Type	Size	Usage	Properties
> _id_	REGULAR	36.9 KB	Usage data unavailable	UNIQUE
> name_1	REGULAR	20.5 KB	Usage data unavailable	

MONGODB

T10.



T11.

MongoDB Compass - cluster0.a43flit.mongodb.net/testdb.students

Connect Edit View Collection Help

cluster0.a43flit...

sample students

testdb.students

9 DOCUMENTS 1 INDEXES

Documents Aggregations Schema Indexes Validation

Pipeline Sort

Generate aggregation Explain Export Run Options

Untitled - modified SAVE CREATE NEW EXPORT TO LANGUAGE

PREVIEW STAGES TEXT WIZARD

0 Documents in the collection

Preview of documents

Stage 1 \$sort

```
1 {
2   "age": -1
3 }
```

Output after \$sort stage (Sample of 9 documents)

```
{ "_id": ObjectId("660bebe8a4b881e47a8da121"), "name": "Alice", "age": 30, "email": "alice@example.com" }
{ "_id": ObjectId("660bebe8a4b881e47a8da124"), "name": "David", "age": 23, "email": "david@example.com" }
```

+ Add Stage

Learn more about aggregation pipeline stages

MONGOOSH

MongoDB Compass - cluster0.a43flit.mongodb.net/testdb.students

Connect Edit View Collection Help

cluster0.a43flit...

sample students

testdb.students

9 DOCUMENTS 1 INDEXES

Documents Aggregations Schema Indexes Validation

Pipeline Sort \$limit

Generate aggregation Explain Export Run Options

Untitled - modified SAVE CREATE NEW EXPORT TO LANGUAGE

PREVIEW STAGES TEXT WIZARD

Stage 2 \$limit

```
1 5
```

Output after \$limit stage (Sample of 5 documents)

```
{ "_id": ObjectId("660bebe8a4b881e47a8da121"), "name": "Alice", "age": 30, "email": "alice@example.com" }
{ "_id": ObjectId("660bebe8a4b881e47a8da124"), "name": "David", "age": 23, "email": "david@example.com" }
{ "_id": ObjectId("660bebe8a4b881e47a8da125"), "name": "Grace", "age": 22, "email": "grace@example.com" }
```

+ Add Stage

Learn more about aggregation pipeline stages

MongoDB Compass - cluster0.a43fllt.mongodb.net/testdb.students

Connect Edit View Collection Help

cluster0.a43fllt....

samplestudents

My Queries

Performance

Databases

Search

admin

course-selling

local

testdb

sample

students

testdb.students

91DOCUMENTSINDEXES

testdb.students

DocumentsAggregationsSchemaIndexesValidation

PipelineSortLimitEdit

ExplainExportRunOptions

ALL RESULTSOUTPUT OPTIONS

Showing 1 - 5count resultsVIEW

_id: ObjectId('668bebe8a4b881e47a8da121')

name: "Alice"

age: 30

email: "alice@example.com"

_id: ObjectId('668bebe8a4b881e47a8da124')

name: "David"

age: 23

email: "david@example.com"

_id: ObjectId('668bebe8a4b881e47a8da127')

name: "Grace"

age: 22

email: "grace@example.com"

_id: ObjectId('668bebe8a4b881e47a8da128')

name: "Henry"

age: 21

email: "henry@example.com"

_id: ObjectId('668bebe8a4b881e47a8da123')

name: "Charlie"

age: 21

email: "charlie@example.com"

>_MONGOOSH

T12.

MongoDB Compass - cluster0.a43flit.mongodb.net/testdb.students

Connect Edit View Collection Help

cluster0.a43flit.... sample students

testdb.students

My Queries Performance Databases

Search

admin course-selling local testdb sample students

Update 9 documents

testdb.students

Filter {}

Update

Learn more about Update syntax

```
1 {
2   $set: {
3     location: {
4       type: "Point",
5       coordinates: [
6         { $subtract: [ { $multiply: [ { $rand: {} } ],
7         { $subtract: [ { $multiply: [ { $rand: {} } ],
8       } ]
9     }
10  }
11 }
12 }
13 }
```

Preview (sample of 3 documents)

```
{
  "_id": ObjectId("660bebe8a4b881e47a8da121"),
  "name": "Alice",
  "age": 38,
  "email": "alice@example.com",
  "location": {
    "type": "Point",
    "coordinates": [
      [42.83862424789648, 88.82974186604212]
    ]
  }
}
```

```
{
  "_id": ObjectId("660bebe8a4b881e47a8da123"),
  "name": "Charlie",
  "age": 21,
  "email": "charlie@example.com",
  "location": {
    "type": "Point",
    "coordinates": [
      [22.31334722448683, 87.8248397679641]
    ]
  }
}
```

```
{
  "_id": ObjectId("660bebe8a4b881e47a8da124")
}
```

Save Cancel Update 9 documents

MONGOOSH

MongoDB Compass - cluster0.a43flit.mongodb.net/testdb.students

Connect Edit View Collection Help

cluster0.a43flit.... sample students

testdb.students

Documents Aggregations Schema Indexes Validation

Create Index Refresh

Name and Definition

> _id_

> name_1

Create Index

testdb.students

Index fields

location 2dsphere

> Options

Cancel Create Index

9 documents have been updated. REFRESH

T13.

MongoDB Compass - cluster0-a43f1lt.mongodb.net/testdb.students

Connect Edit View Collection Help

cluster0-a43f1lt...

sample students

testdb.students

Documents Aggregations Schema Indexes Validation

Filter Type a query: { field: 'value' } or Generate query

Reset Analyze Options

This report is based on a sample of 9 documents. [Learn more](#)

location

coordinates

name

string

Alice Charlie Emma Ivy Grace David Frank Henry Jack

MONOOSH

T14.

My Queries students

testdb > students

Documents 9 Aggregations Schema Indexes 2 Validation

Validation Action Error Validation Level Strict

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

Sample documents

Passed validation

No Preview Documents

Failed validation

```
_id: ObjectId('660be1caaa128b67c0e7f95')
name: "Student2"
age: 22
email: "student2@example.com"
location: Object
```