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## WEB TECHNOLOGY

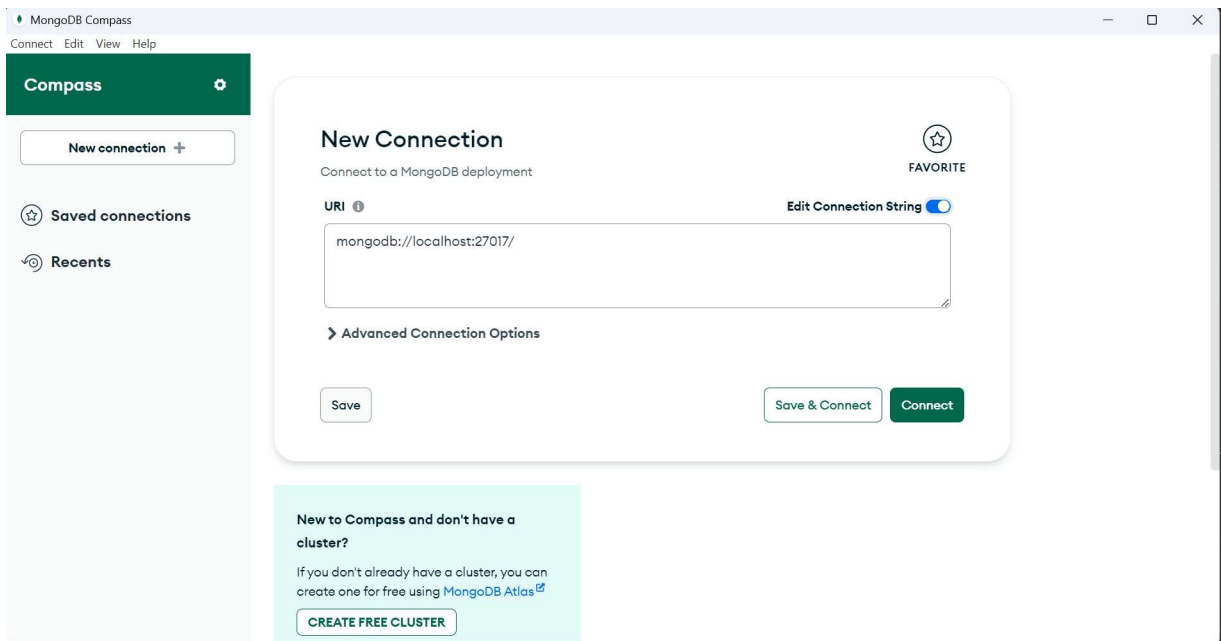
NAME- SARTHAK KASAUDHAN

ROLL.NO- 22MC3028

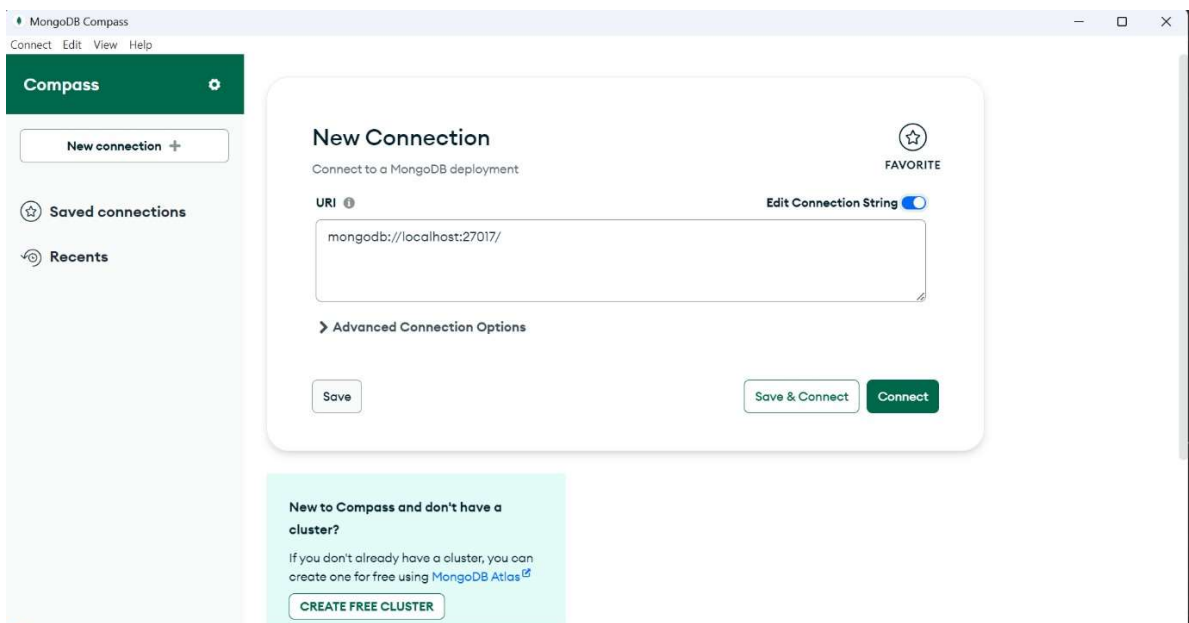
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### LAB-10

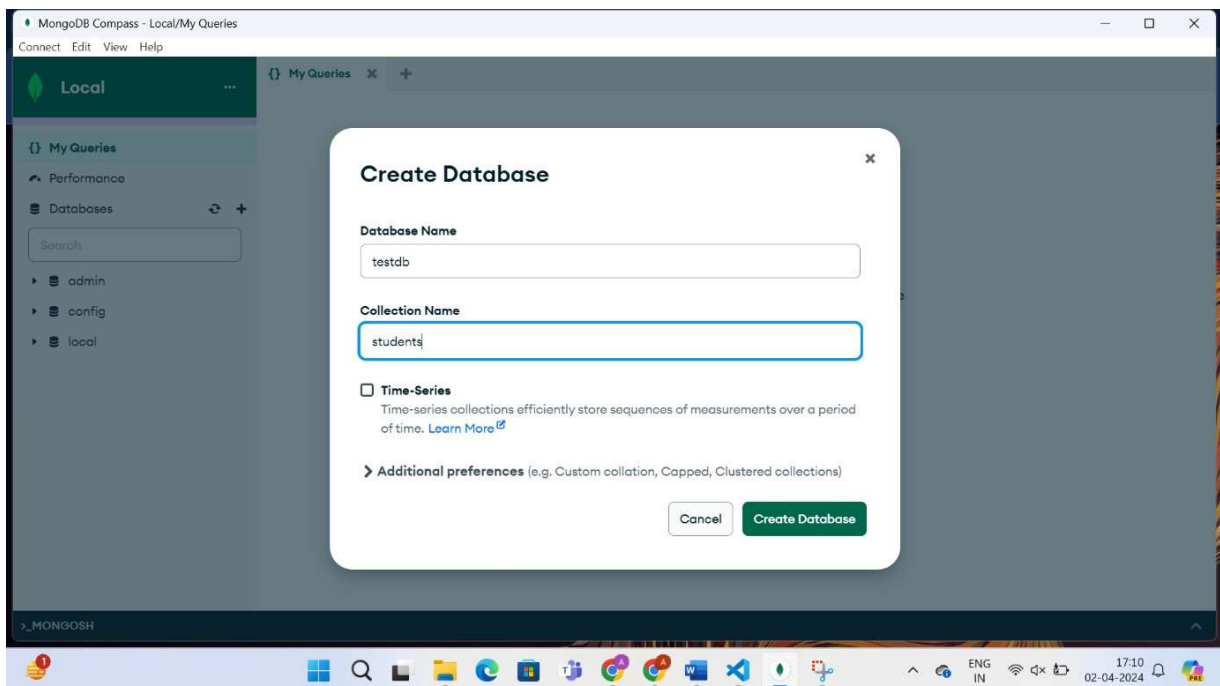
#### Connect to a MongoDB server using MongoDB Compass.



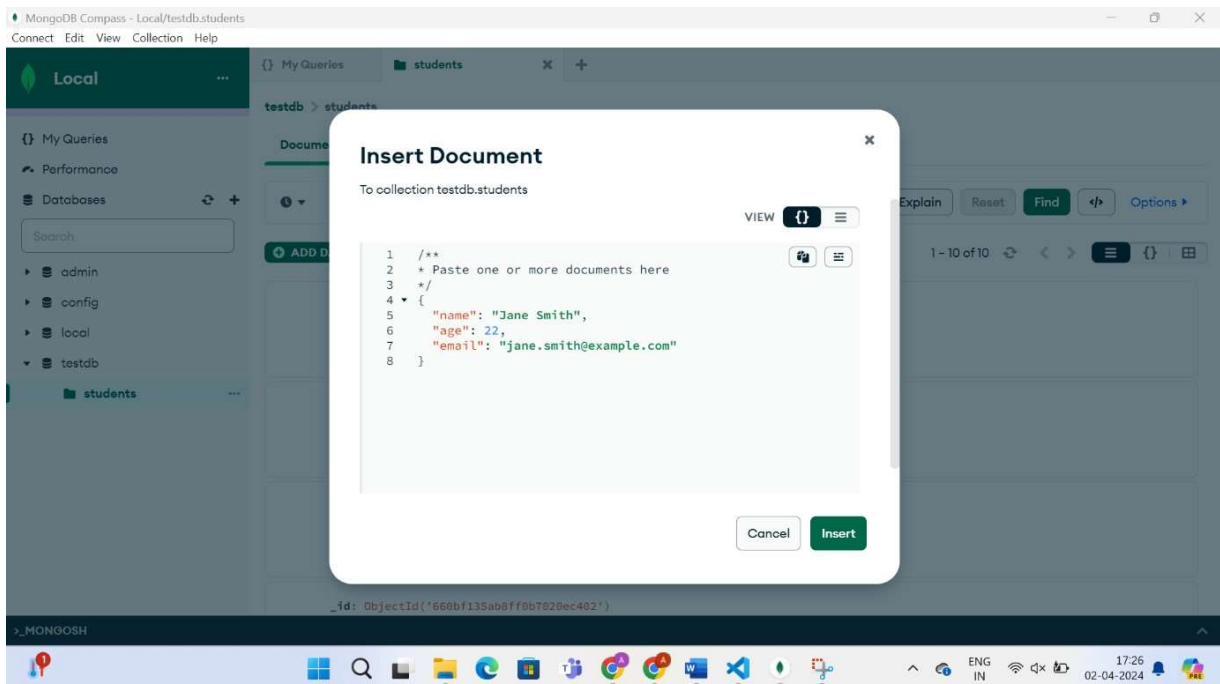
#### Create a new database named "testdb" in MongoDB Compass.



**Create a new collection named "students" in the "testdb" database.**



**Insert ten documents into the "students" collection with the following fields:**  
**name, age, and email.**



**View the contents of the "students" collection.**

MongoDB Compass - Local/testdb.students

Connect Edit View Collection Help

Local

My Queries Performance Databases Search

admin config local testdb students

My Queries students

testdb > students

Documents 10 Aggregations Schema Indexes 1 Validation

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

Explain Reset Find Options

ADD DATA EXPORT DATA UPDATE DELETE

1 - 10 of 10

	_id ObjectId	name String	age Int32	email String	
1	ObjectId('660bf0f7ab8ff9b...	"John Doe"	20	"john.doe@example.com"	
2	ObjectId('660bf113ab8ff9b...	"Jane Smith"	22	"jane.smith@example.com"	
3	ObjectId('660bf126ab8ff9b...	"Michael Johnson"	21	"michael.johnson@example.com"	
4	ObjectId('660bf135ab8ff9b...	"Emily Brown"	19	"emily.brown@example.com"	
5	ObjectId('660bf14dab8ff9b...	"David Wilson"	23	"david.wilson@example.com"	
6	ObjectId('660bf1b7ab8ff9b...	"Sarah Martinez"	20	"sarah.martinez@example.com"	
7	ObjectId('660bf1c9ab8ff9b...	"Christopher Taylor"	24	"christopher.taylor@example.com"	
8	ObjectId('660bf1daab8ff9b...	"Jessica Anderson"	22	"jessica.anderson@example.com"	
9	ObjectId('660bf1e8ab8ff9b...	"Ryan Thomas"	21	"ryan.thomas@example.com"	
10	ObjectId('660bf1f8ab8ff9b...	"Amanda Garcia"	20	"amanda.garcia@example.com"	

> MONGOSH

17:28 02-04-2024

## Update the age of a specific student in the "students" collection.

MongoDB Compass - Local/testdb.students

Connect Edit View Collection Help

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My Queries Performance Databases Search

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testdb > students

Documents 10 Aggregations Schema Indexes 1 Validation

Type a query: {} [Generate query](#)

Explain Reset Find Options

ADD DATA EXPORT DATA UPDATE DELETE

1 - 10 of 10

Document modified.

CANCEL UPDATE

```
{
  "_id": ObjectId('660bf0f7ab8ff9b7020ec3fc'),
  "name": "John Doe",
  "age": 25,
  "email": "john.doe@example.com"
}
```

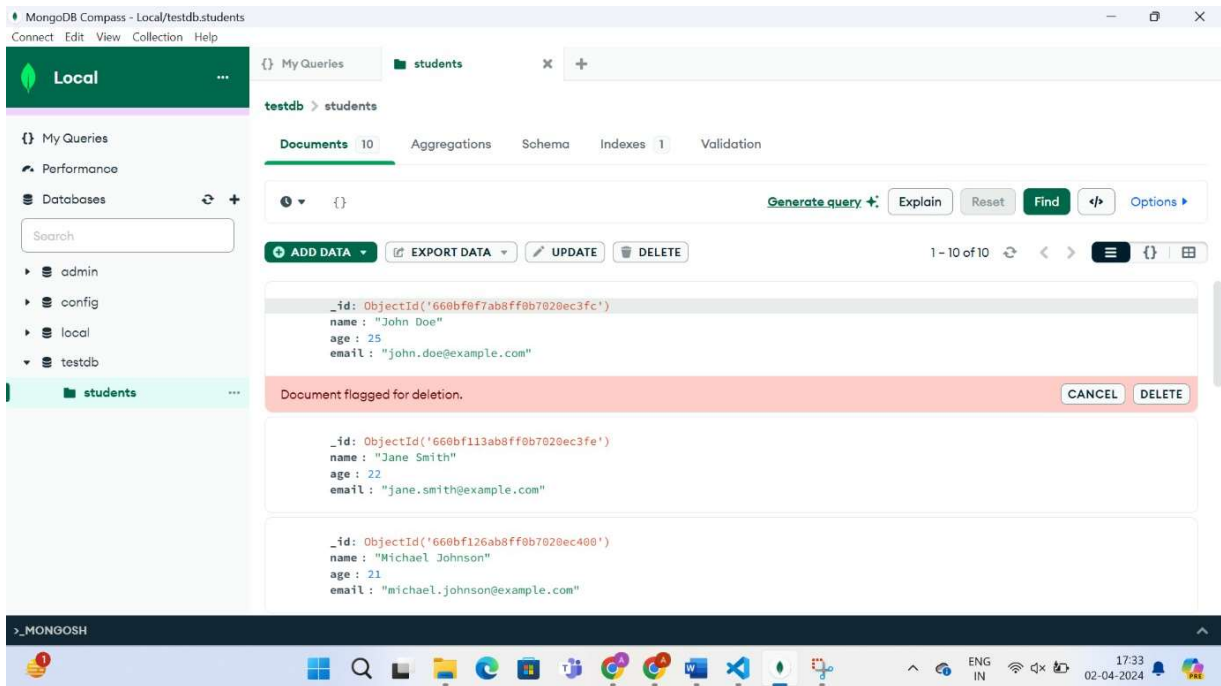
```
{
  "_id": ObjectId('660bf113ab8ff9b7020ec3fe'),
  "name": "Jane Smith",
  "age": 22,
  "email": "jane.smith@example.com"
}
```

```
{
  "_id": ObjectId('660bf126ab8ff9b7020ec400'),
  "name": "Michael Johnson",
  "age": 21,
  "email": "michael.johnson@example.com"
}
```

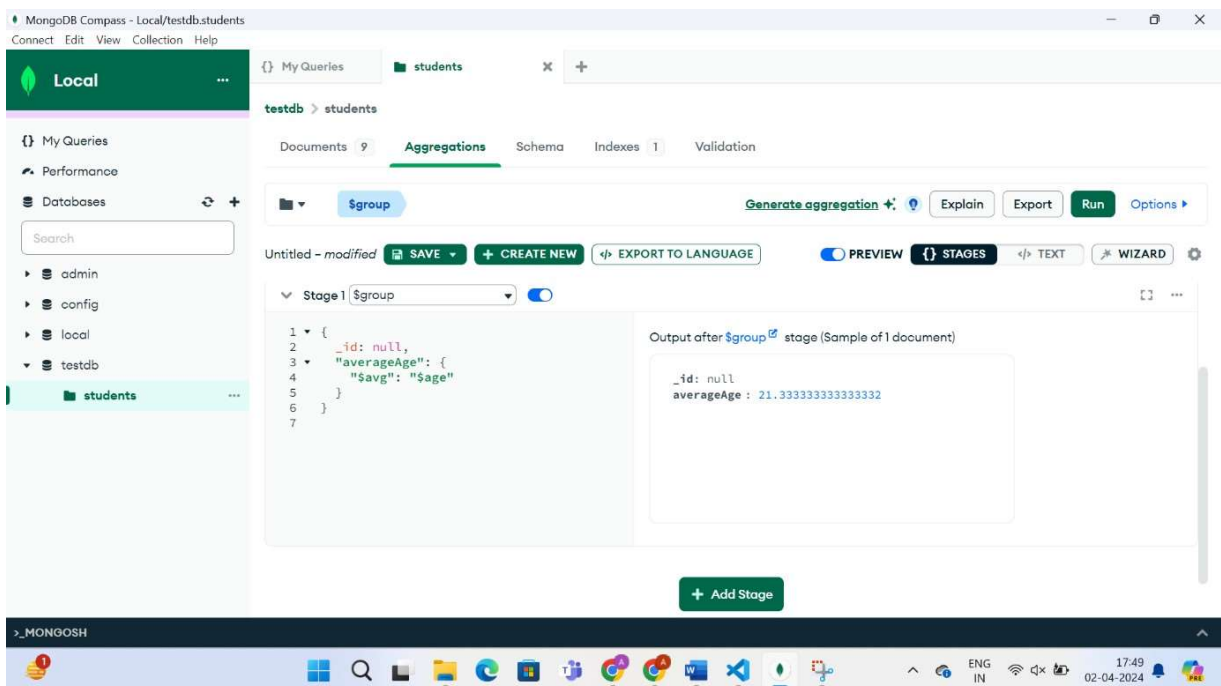
> MONGOSH

17:31 02-04-2024

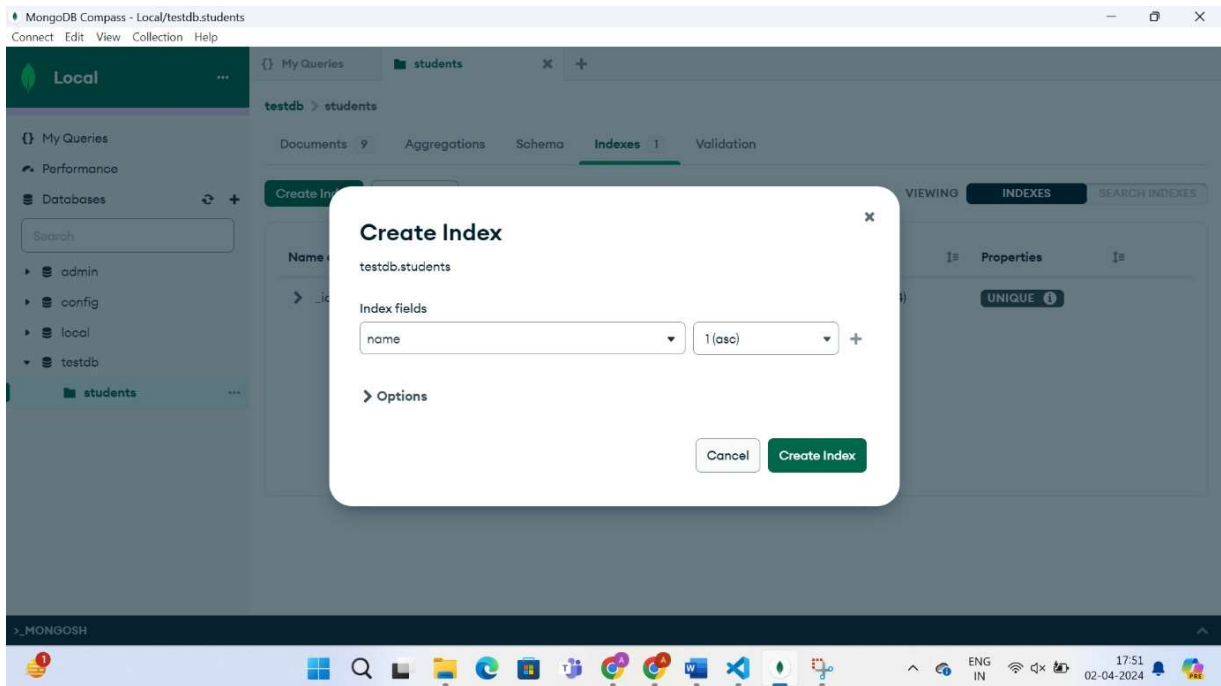
## Delete a document from the "students" collection based on a specific condition.



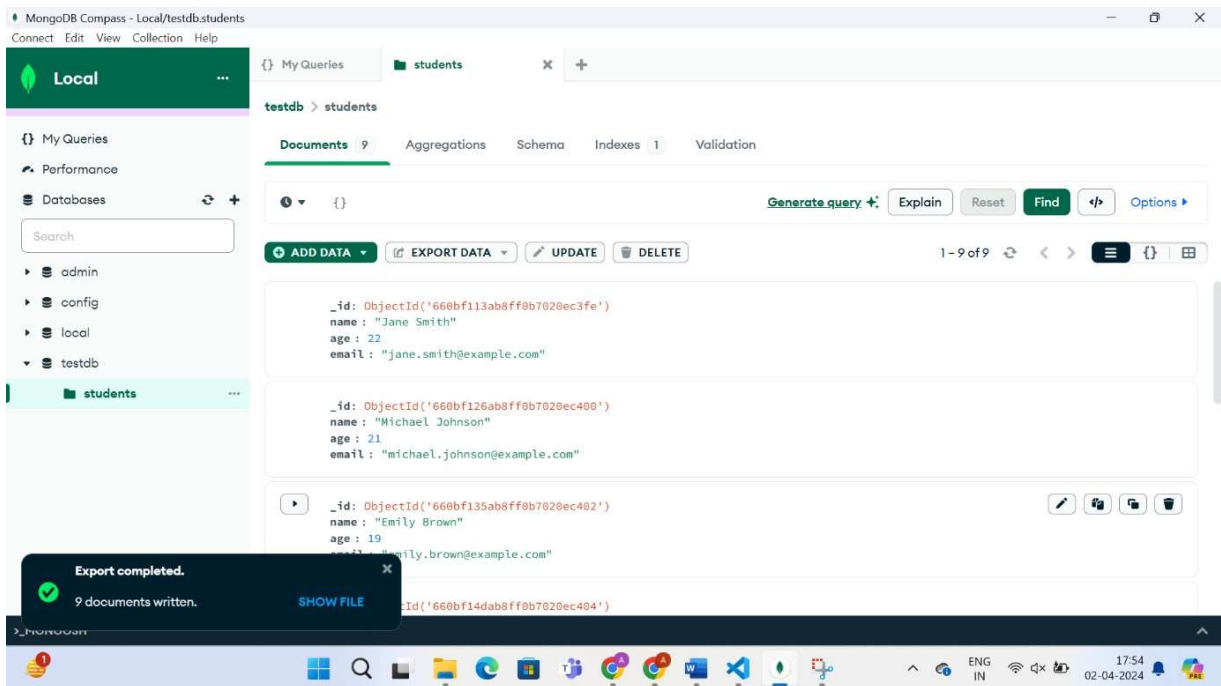
**Use the aggregation pipeline to calculate the average age of all students in the "students" collection.**



**Create an index on the "name" field in the "students" collection.**



### Export the contents of the "students" collection to a JSON file.



### Perform a complex aggregation operation to find the top 5 oldest students in the "students" collection.

MongoDB Compass - Local/testdb.students

Connect Edit View Collection Help

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students

testdb > students

Documents 9 Aggregations Schema Indexes 1 Validation

\$group \$sort

Generate aggregation Explain Export Run Options

Untitled - modified SAVE CREATE NEW EXPORT TO LANGUAGE PREVIEW STAGES TEXT WIZARD

Stage 2 \$sort

```
1 [
2   {
3     "$sort": {
4       "age": -1
5     }
6   },
7   {
8     "$limit": 5
9   }
10 ]
```

>\_MONGOSH

Windows taskbar: 17:55 02-04-2024

## Create a geospatial index on a field representing the location of students.

MongoDB Compass - Local/testdb.students

Connect Edit View Collection Help

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My Queries

Performance

Databases

Search

admin

config

local

testdb

students

testdb > students

Documents 9 Aggregations Schema Indexes 1 Validation

Create Index Refresh

VIEWING INDEXES SEARCH INDEXES

Name and Definition	Type	Size	Usage	Properties
> _id_	REGULAR	36.9 KB	13 (since Tue Apr 02 2024)	UNIQUE
> name_1	REGULAR	20.5 KB	0 (since Tue Apr 02 2024)	
> students_2dsphere	GEOSPATIAL	8.2 KB	0 (since Tue Apr 02 2024)	

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Windows taskbar: 17:59 02-04-2024