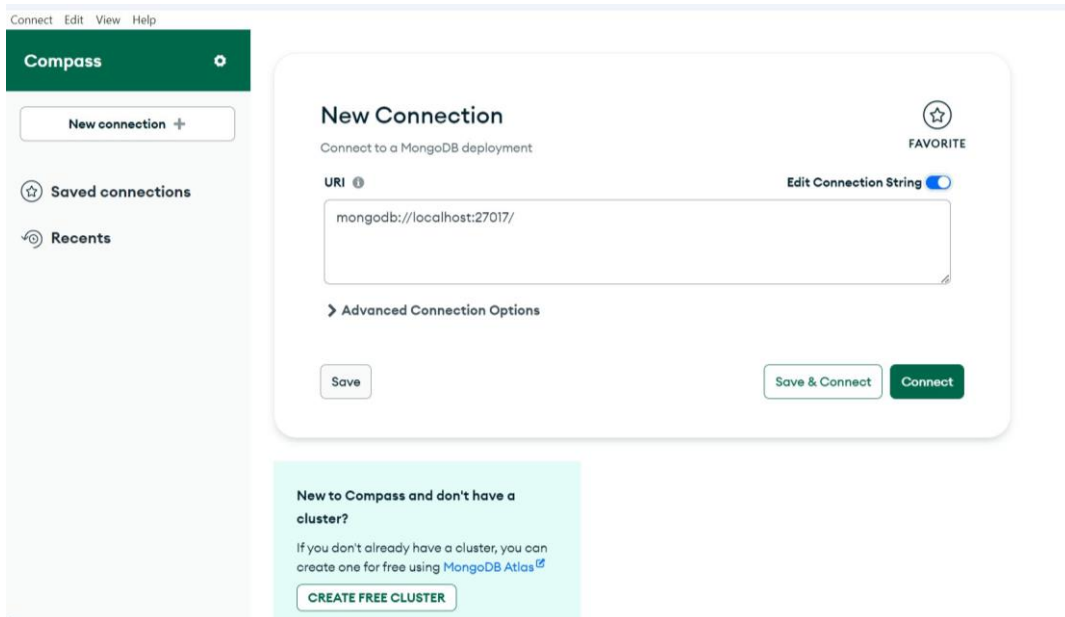


# Lab Assignment 9

Name-Anushka Nema

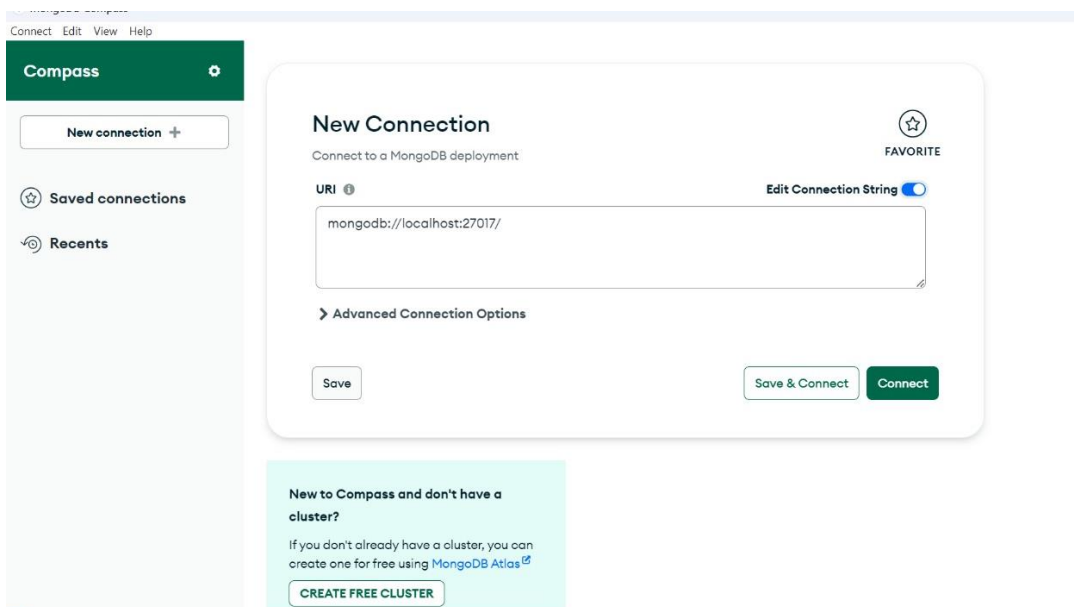
Roll no.- 22IT3008

## Q.1



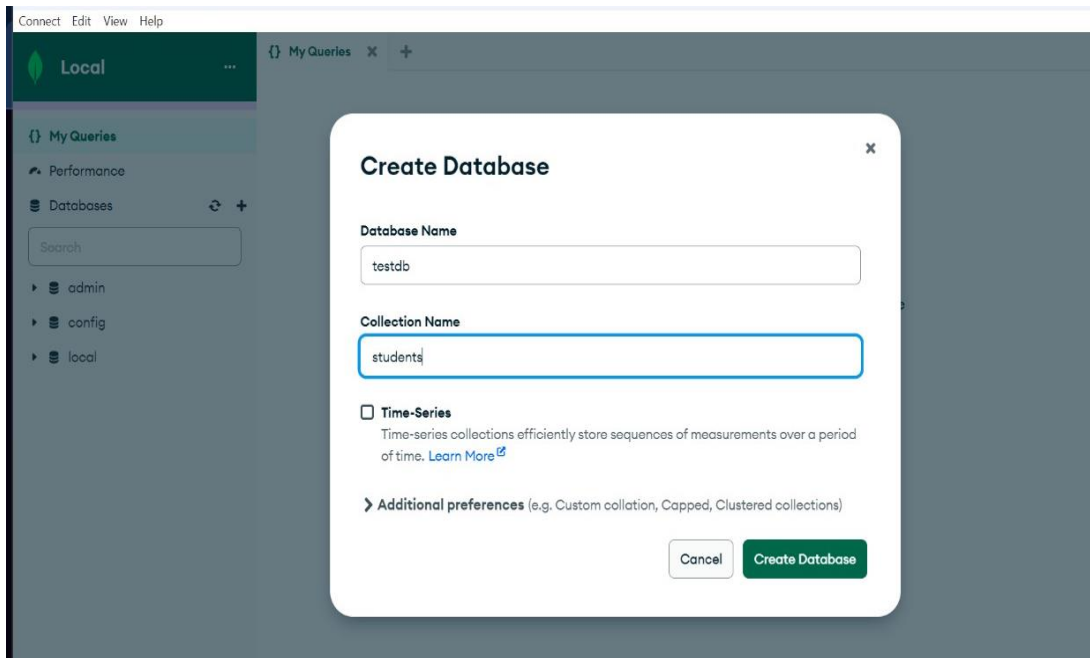
The screenshot shows the MongoDB Compass interface. On the left is a sidebar with a green header 'Compass' and a settings gear icon. Below the header are three buttons: 'New connection +', 'Saved connections' (with a star icon), and 'Recents' (with a circular arrow icon). The main area is titled 'New Connection' with a subtitle 'Connect to a MongoDB deployment'. In the top right corner of this area is a star icon labeled 'FAVORITE'. Below the title is a 'URI' field with an information icon, containing the text 'mongodb://localhost:27017/'. To the right of the URI field is a toggle switch for 'Edit Connection String' which is currently turned on. Below the URI field is a link '> Advanced Connection Options'. At the bottom of the main area are three buttons: 'Save', 'Save & Connect', and 'Connect'. Below the main area is a light blue informational box with the text 'New to Compass and don't have a cluster?' followed by 'If you don't already have a cluster, you can create one for free using [MongoDB Atlas](#)'. At the bottom of this box is a button 'CREATE FREE CLUSTER'.

## Q.2

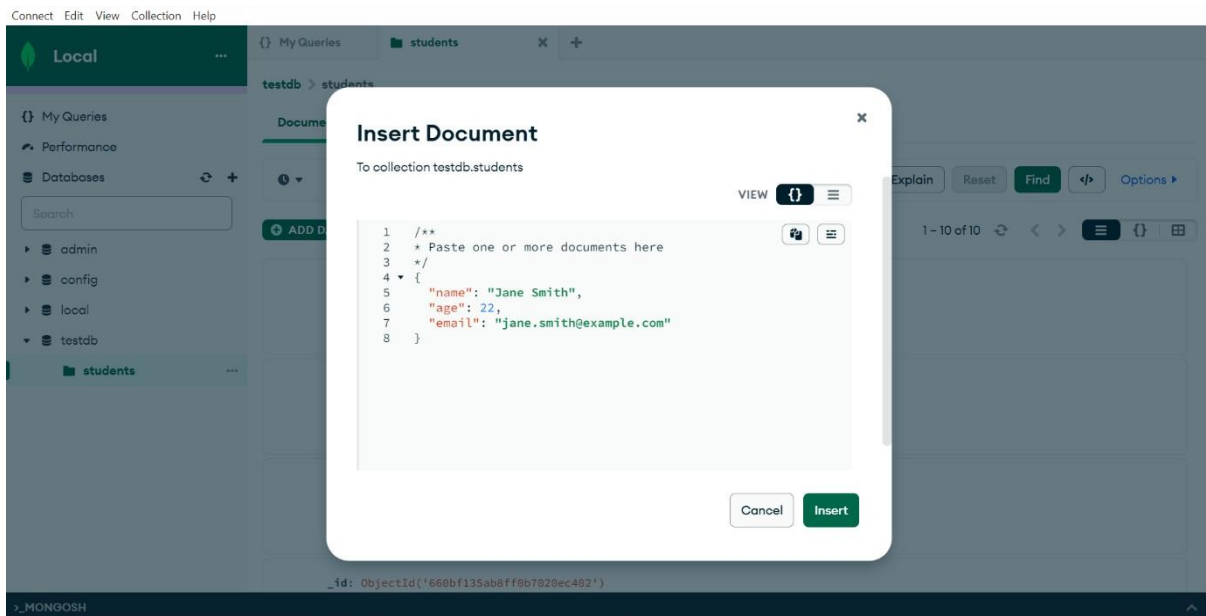


This screenshot is identical to the one for Q.1, showing the MongoDB Compass 'New Connection' dialog. It includes the same sidebar with 'Compass', 'New connection +', 'Saved connections', and 'Recents'. The main panel shows the 'New Connection' title, 'Connect to a MongoDB deployment' subtitle, 'FAVORITE' star icon, 'URI' field with 'mongodb://localhost:27017/', 'Edit Connection String' toggle, '> Advanced Connection Options' link, and 'Save', 'Save & Connect', and 'Connect' buttons. The bottom informational box also matches, with the text 'New to Compass and don't have a cluster?', the MongoDB Atlas link, and the 'CREATE FREE CLUSTER' button.

### Q.3



### Q.4



Q.5

Connect Edit View Collection Help

Local

My Queries

Performance

Databases

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('660bf0f7ab8ff0b...	"John Doe"	20	"john.doe@example.com"	
2	ObjectId('660bf113ab8ff0b...	"Jane Smith"	22	"jane.smith@example.com"	
3	ObjectId('660bf126ab8ff0b...	"Michael Johnson"	21	"michael.johnson@example...	
4	ObjectId('660bf135ab8ff0b...	"Emily Brown"	19	"emily.brown@example.com"	
5	ObjectId('660bf14dab8ff0b...	"David Wilson"	23	"david.wilson@example.com"	
6	ObjectId('660bf1b7ab8ff0b...	"Sarah Martinez"	20	"sarah.martinez@example.c...	
7	ObjectId('660bf1c9ab8ff0b...	"Christopher Taylor"	24	"christopher.taylor@examp...	
8	ObjectId('660bf1daab8ff0b...	"Jessica Anderson"	22	"jessica.anderson@example...	
9	ObjectId('660bf1e8ab8ff0b...	"Ryan Thomas"	21	"ryan.thomas@example.com"	
10	ObjectId('660bf1f8ab8ff0b...	"Amanda Garcia"	20	"amanda.garcia@example.co...	

Q.6

Connect Edit View Collection Help

Local

My Queries

Performance

Databases

admin

config

local

testdb

students

My Queries

students

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

1

2

3

4

\_id: ObjectId('660bf0f7ab8ff0b7028ec3fc')

name: "John Doe"

age: 20

email: "john.doe@example.com"

Document modified.

CANCEL

UPDATE

\_id: ObjectId('660bf113ab8ff0b7028ec3fe')

name: "Jane Smith"

age: 22

email: "jane.smith@example.com"

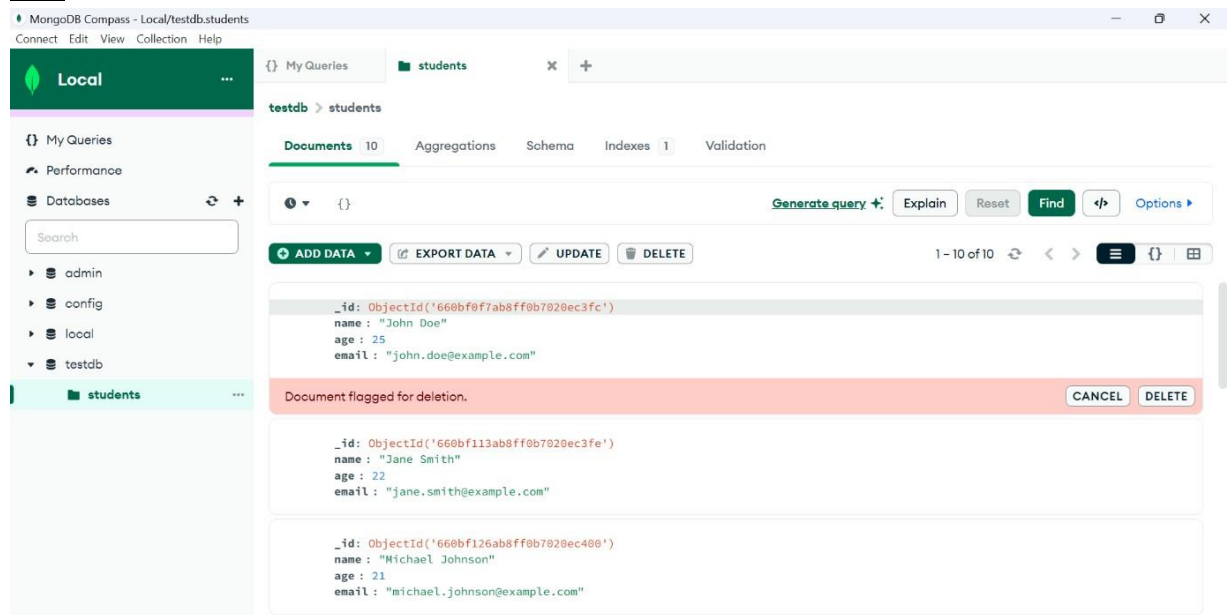
\_id: ObjectId('660bf126ab8ff0b7028ec400')

name: "Michael Johnson"

age: 21

email: "michael.johnson@example.com"

## Q.7



MongoDB Compass - Local/testdb.students

Connect Edit View Collection Help

Local

My Queries Performance Databases Search

admin config local testdb

students

testdb > students

Documents 10 Aggregations Schema Indexes 1 Validation

Generate query + Explain Reset Find Options

ADD DATA EXPORT DATA UPDATE DELETE 1 - 10 of 10

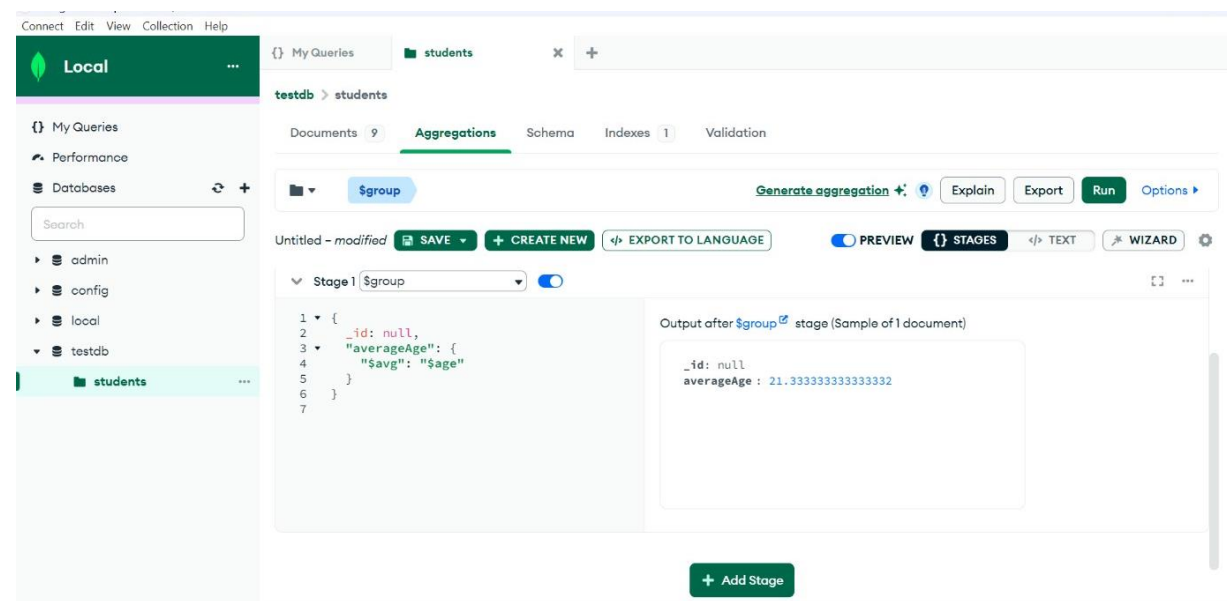
Document flagged for deletion. CANCEL DELETE

```
{
  "_id": ObjectId("660bf0f7ab8ff0b7020ec3fc"),
  "name": "John Doe",
  "age": 25,
  "email": "john.doe@example.com"
}
```

```
{
  "_id": ObjectId("660bf113ab8ff0b7020ec3fe"),
  "name": "Jane Smith",
  "age": 22,
  "email": "jane.smith@example.com"
}
```

```
{
  "_id": ObjectId("660bf126ab8ff0b7020ec400"),
  "name": "Michael Johnson",
  "age": 21,
  "email": "michael.johnson@example.com"
}
```

## Q.8



MongoDB Compass - Local/testdb.students

Connect Edit View Collection Help

Local

My Queries Performance Databases Search

admin config local testdb

students

testdb > students

Documents 9 Aggregations Schema Indexes 1 Validation

Generate aggregation + Explain Export Run Options

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

Stage1 \$group

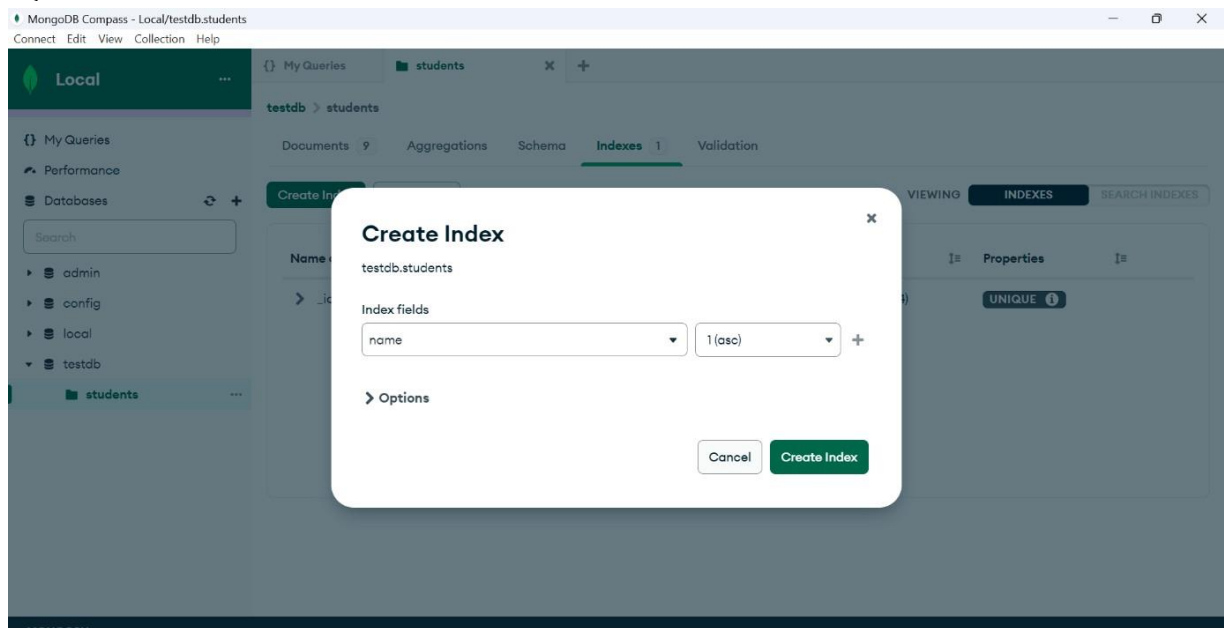
```
1 {
2   _id: null,
3   "averageAge": {
4     "$avg": "$age"
5   }
6 }
7
```

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

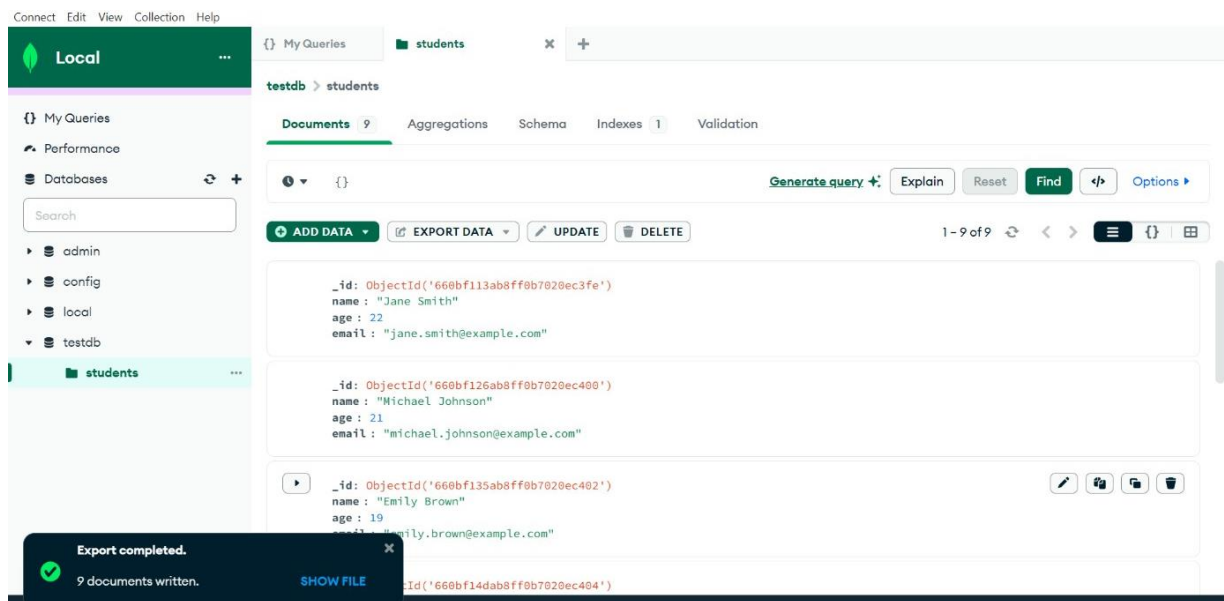
```
{
  "_id": null,
  "averageAge": 21.333333333333332
}
```

+ Add Stage

## Q.9



## Q.10



## Q.11

Connect Edit View Collection Help

Local

My Queries

Performance

Databases

Search

admin

config

local

testdb

students

My Queries

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 {

4 {

5 {

6 }

7 {

8 {

9 }

10 }

## Q.12

Local

My Queries

Performance

Databases

Search

admin

config

local

testdb

students

My Queries

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)	