Web Technology

Lab Assignment 9

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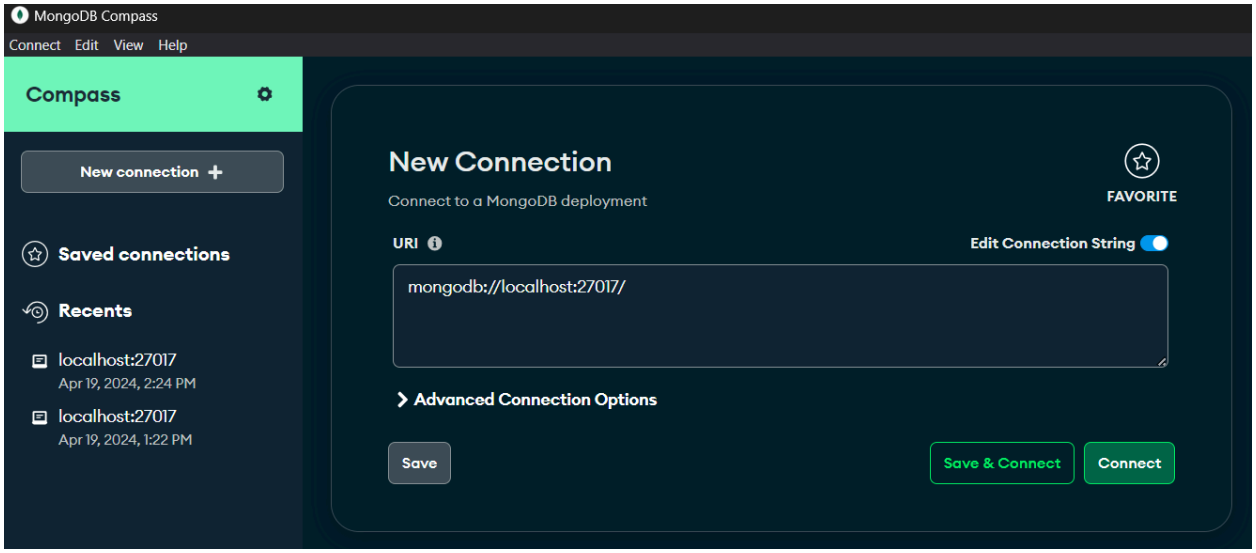
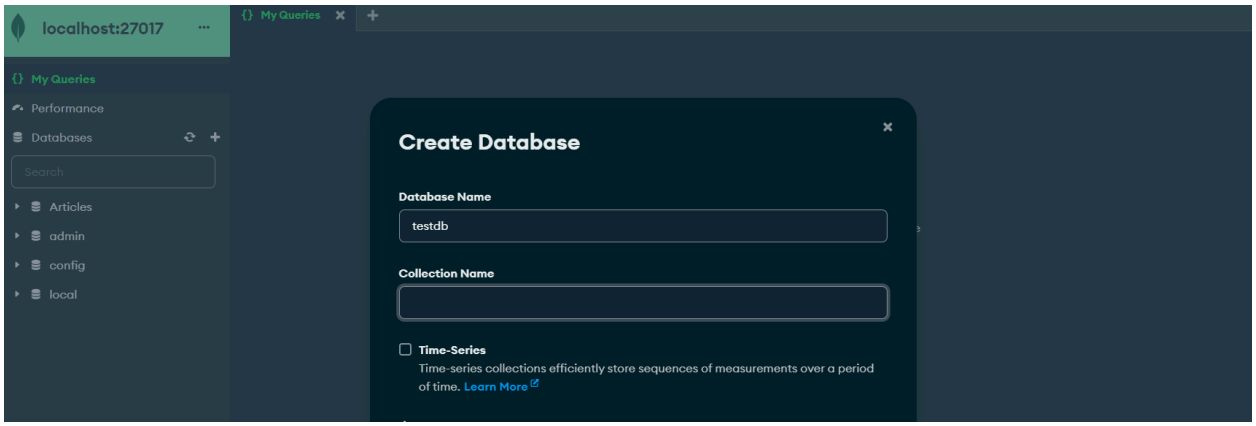
Q1 Connect to a MongoDB server using MongoDB Compass.

Ans

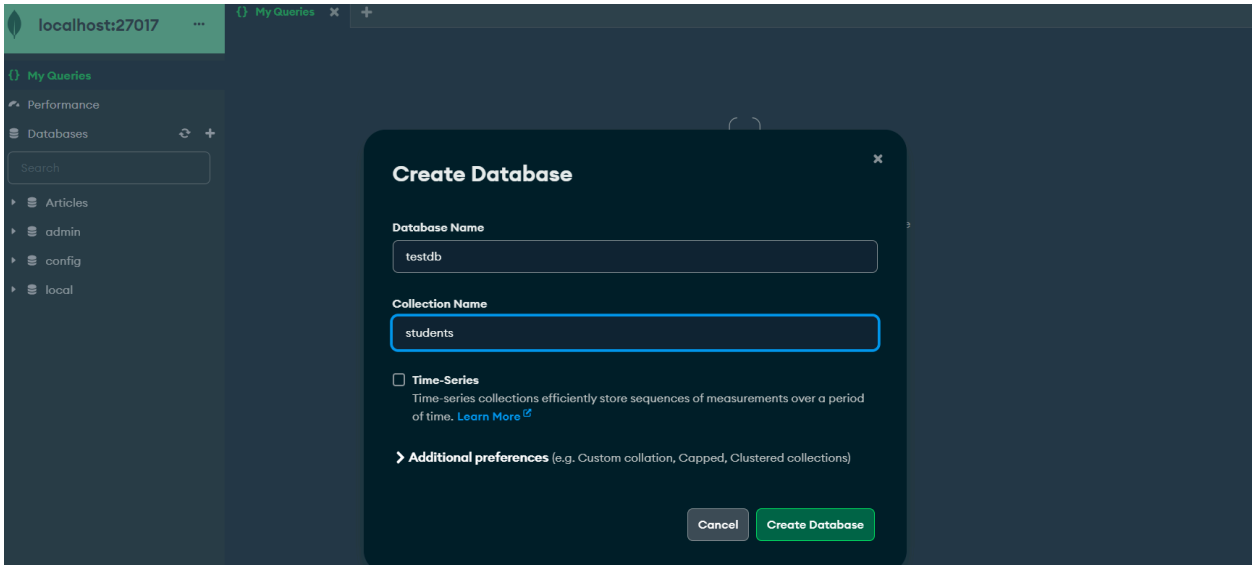


Q2. Create a new database named "testdb" in MongoDB Compass.

Ans



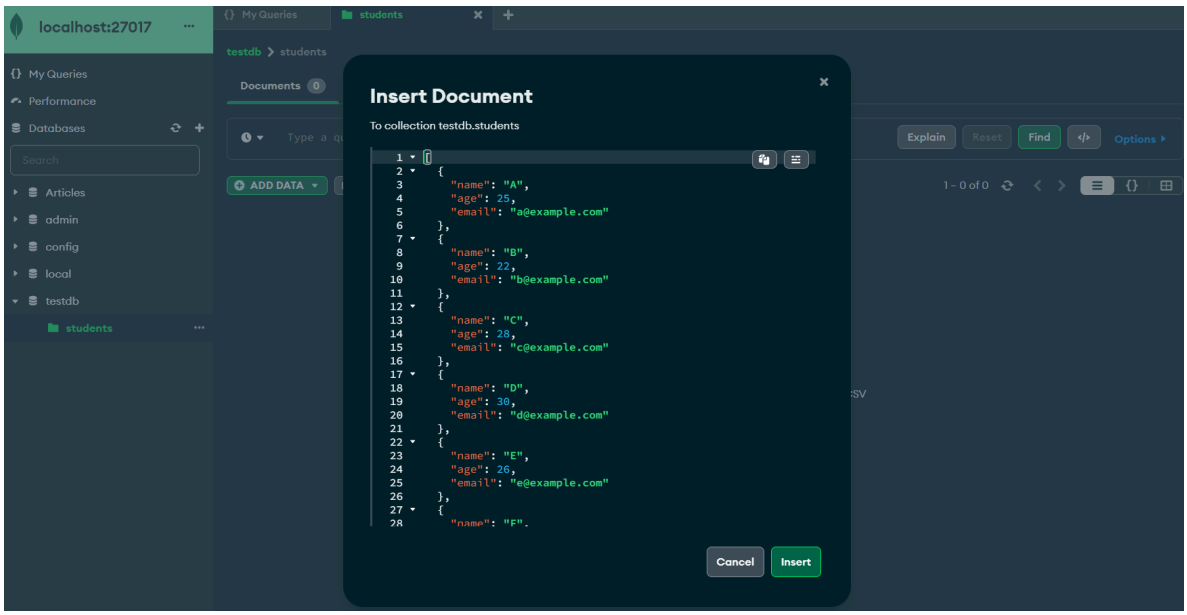
Q3. Create a new collection named "students" in the "testdb" database.
Ans



Q4. Insert ten documents into the "students" collection with the following fields:
name, age, and email.
Ans

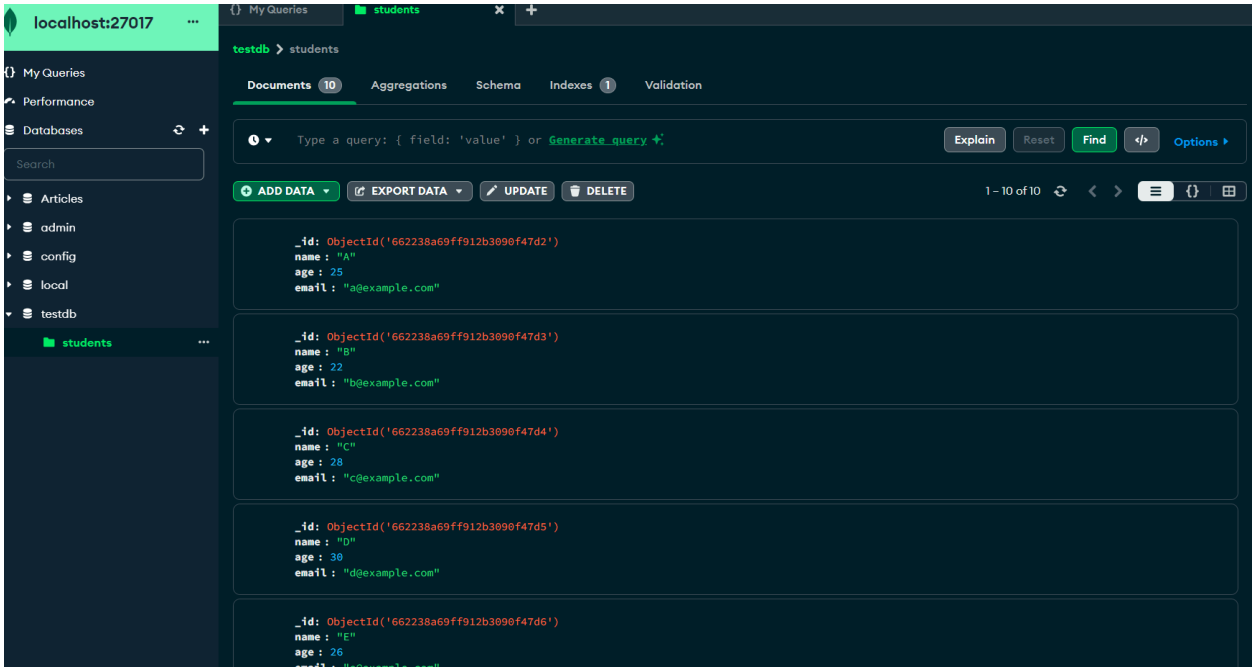
```
[
 {
  "name": "A",
  "age": 25,
  "email": "a@example.com"
 },
 {
  "name": "B",
  "age": 22,
  "email": "b@example.com"
 },
 {
  "name": "C",
  "age": 28,
  "email": "c@example.com"
 },
 {
  "name": "D",
  "age": 30,
  "email": "d@example.com"
 },
 {
```

```
  "name": "E",
  "age": 26,
  "email": "e@example.com"
 },
 {
  "name": "F",
  "age": 24,
  "email": "f@example.com"
 },
 {
  "name": "G",
  "age": 27,
  "email": "g@example.com"
 },
 {
  "name": "H",
  "age": 29,
  "email": "h@example.com"
 },
 {
  "name": "I",
  "age": 23,
  "email": "i@example.com"
 },
 {
  "name": "J",
  "age": 31,
  "email": "j@example.com"
 }
]
```



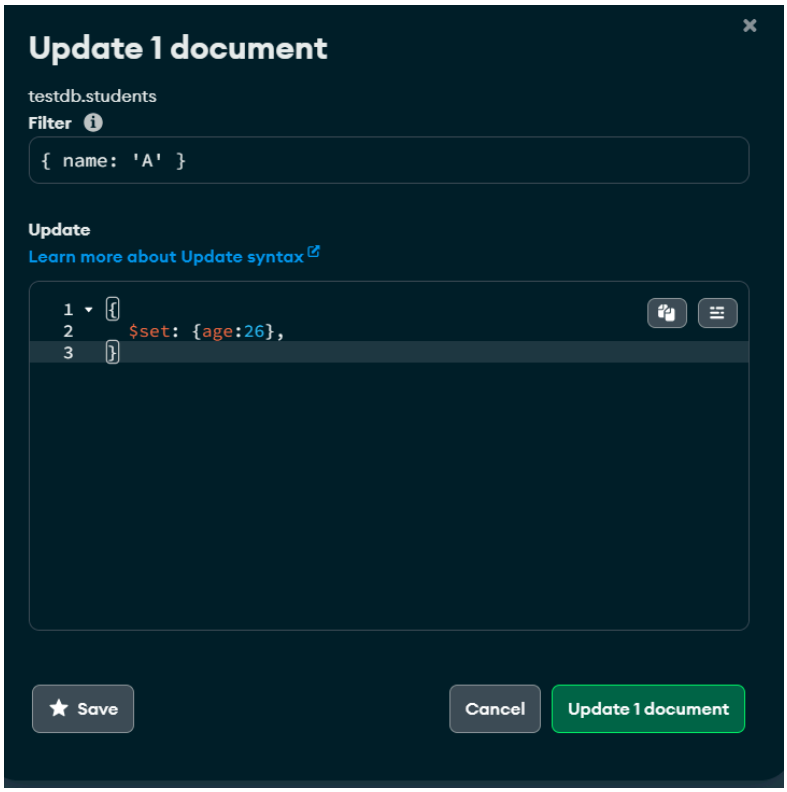
Q5. View the contents of the "students" collection.

Ans

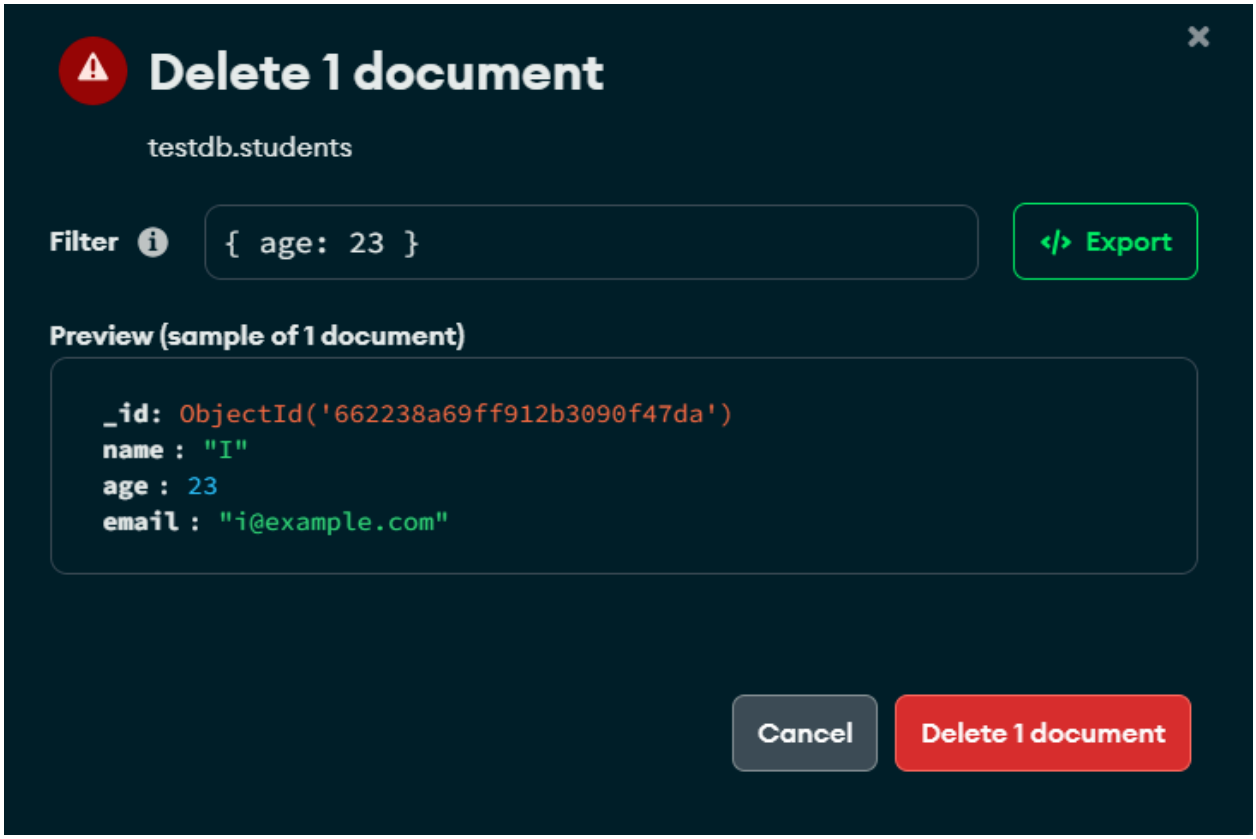


Q6. Update the age of a specific student in the "students" collection.

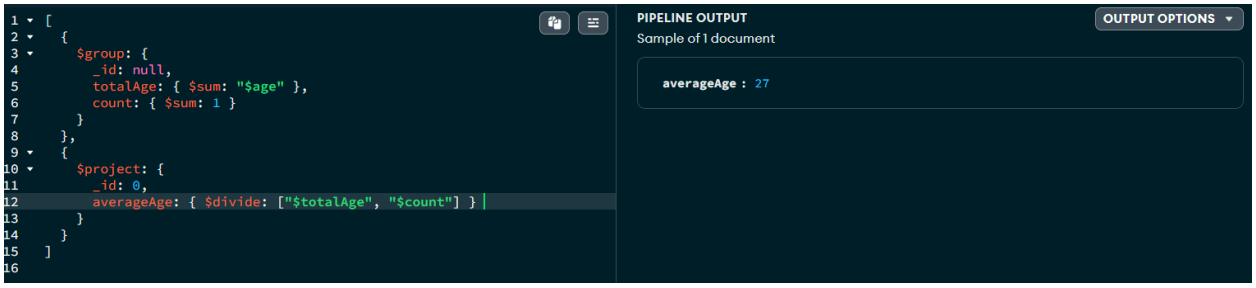
Ans



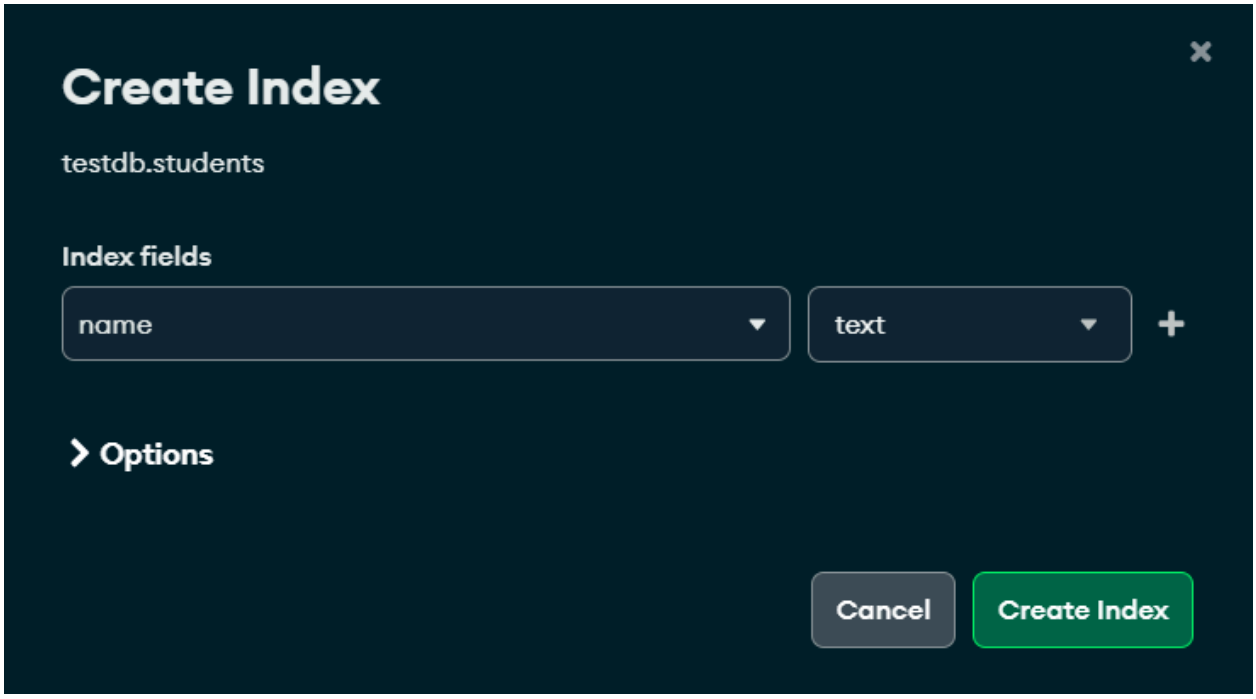
Q7. Delete a document from the "students" collection based on a specific condition.
Ans



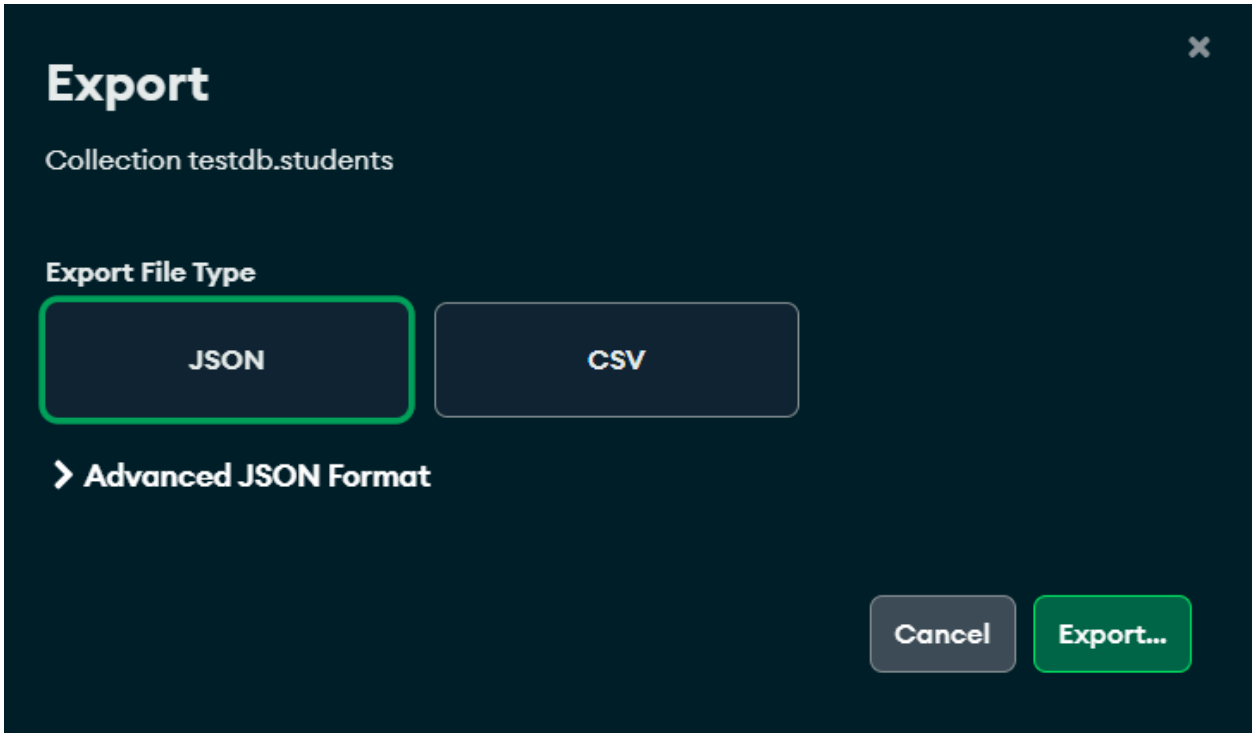
Q8. Use the aggregation pipeline to calculate the average age of all students in the "students" collection.
Ans



Q9. Create an index on the "name" field in the "students" collection.
Ans

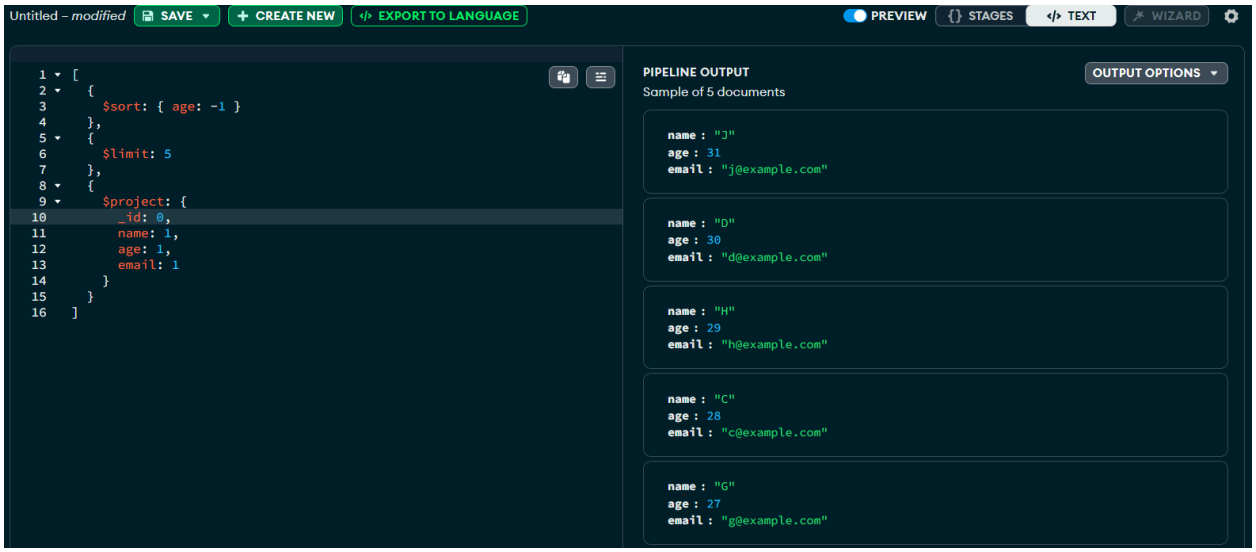


Q10. Export the contents of the "students" collection to a JSON file.
Ans



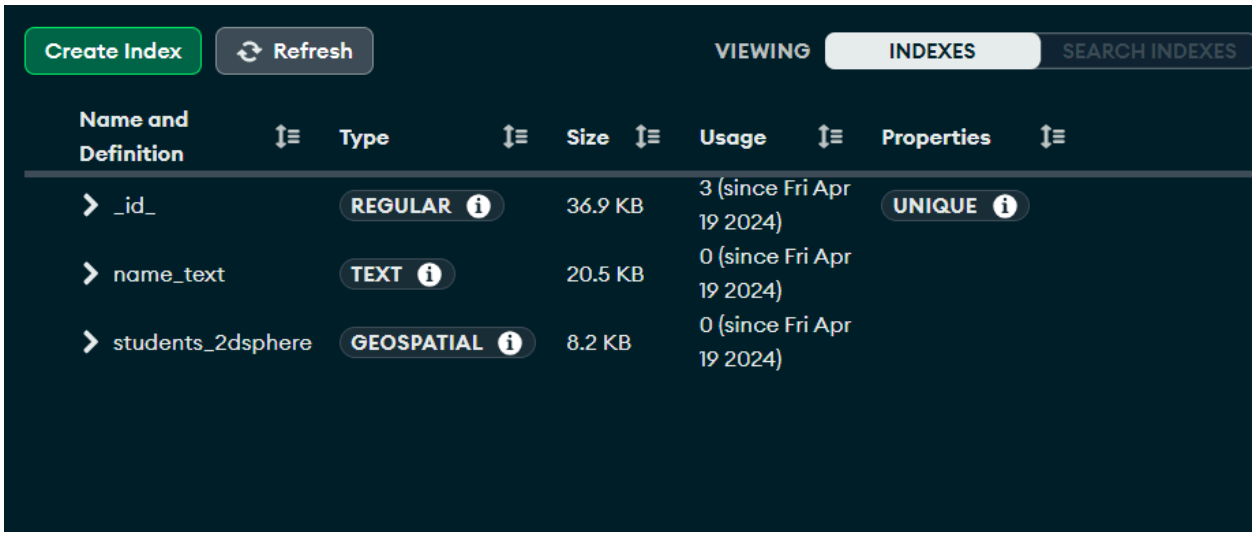
Q11. Perform a complex aggregation operation to find the top 5 oldest students in the "students" collection.

Ans



Q12. Create a geospatial index on a field representing the location of students.

Ans



Q13. Use MongoDB Compass to visualize the data distribution in the "students" collection.

Ans

Q14. Set up a data validation rule to ensure that documents in the "students" collection must have a non-empty name field.

Ans