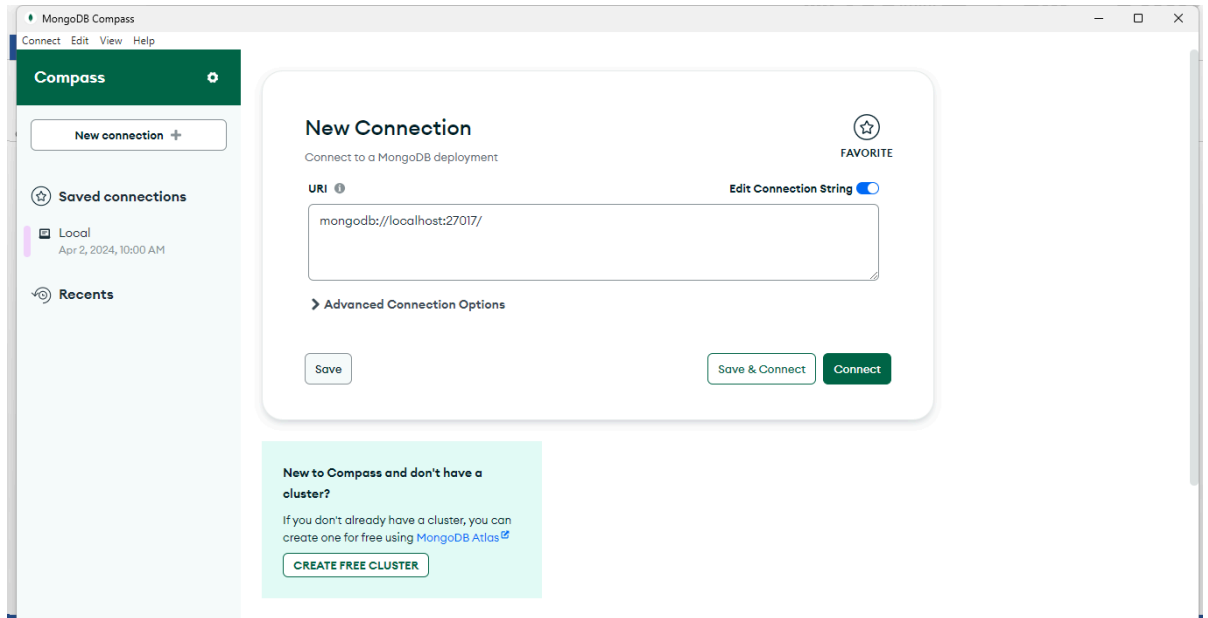


Name : Shubham Kumar

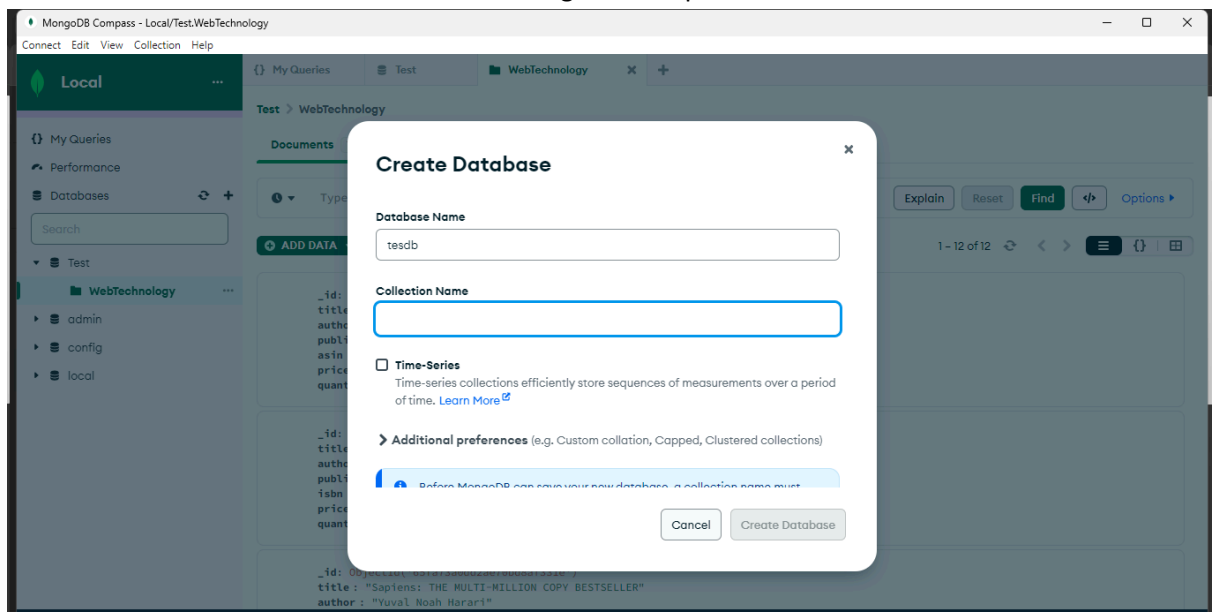
Roll No. : 22IT3051

## Lab 10

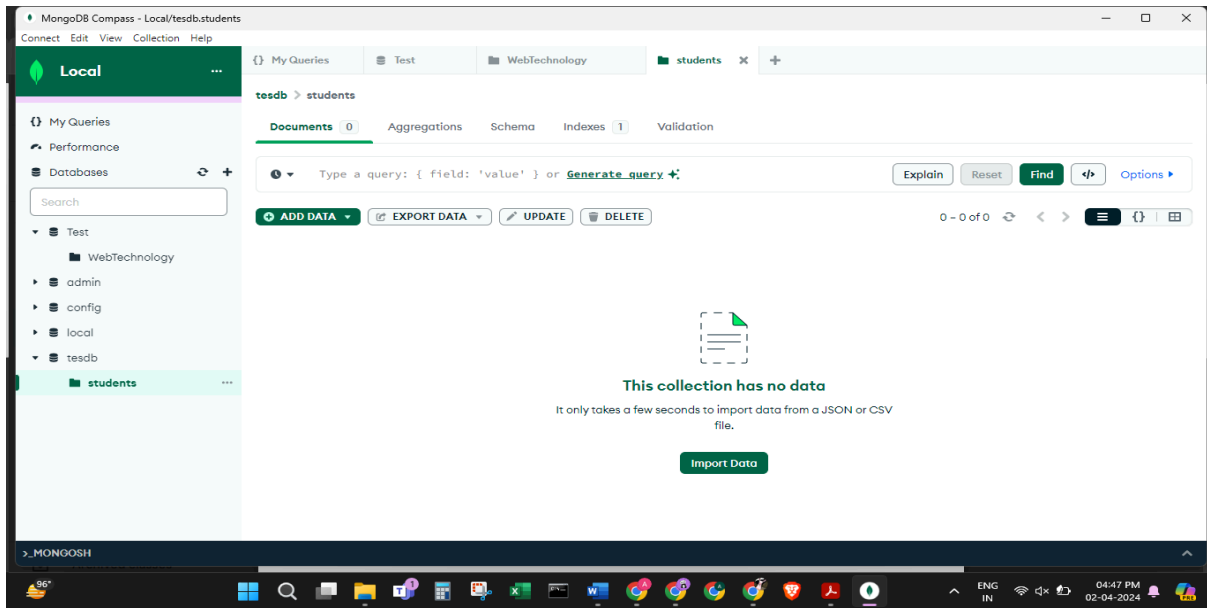
1. Connect to a MongoDB server using MongoDB Compass.



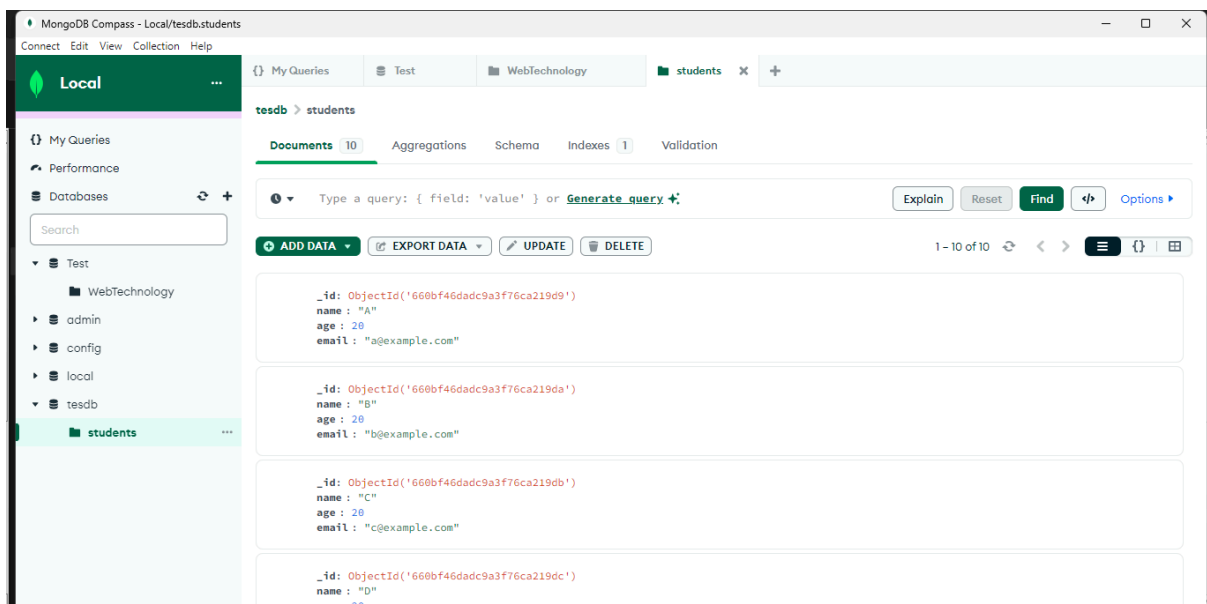
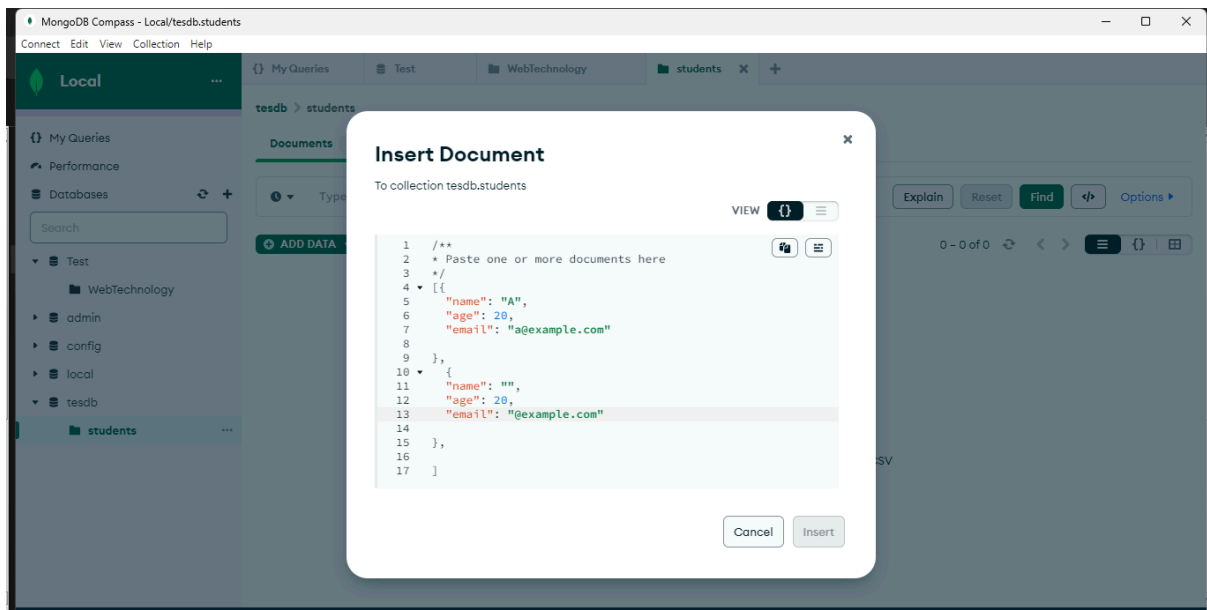
2. Create a new database named "testdb" in MongoDB Compass.



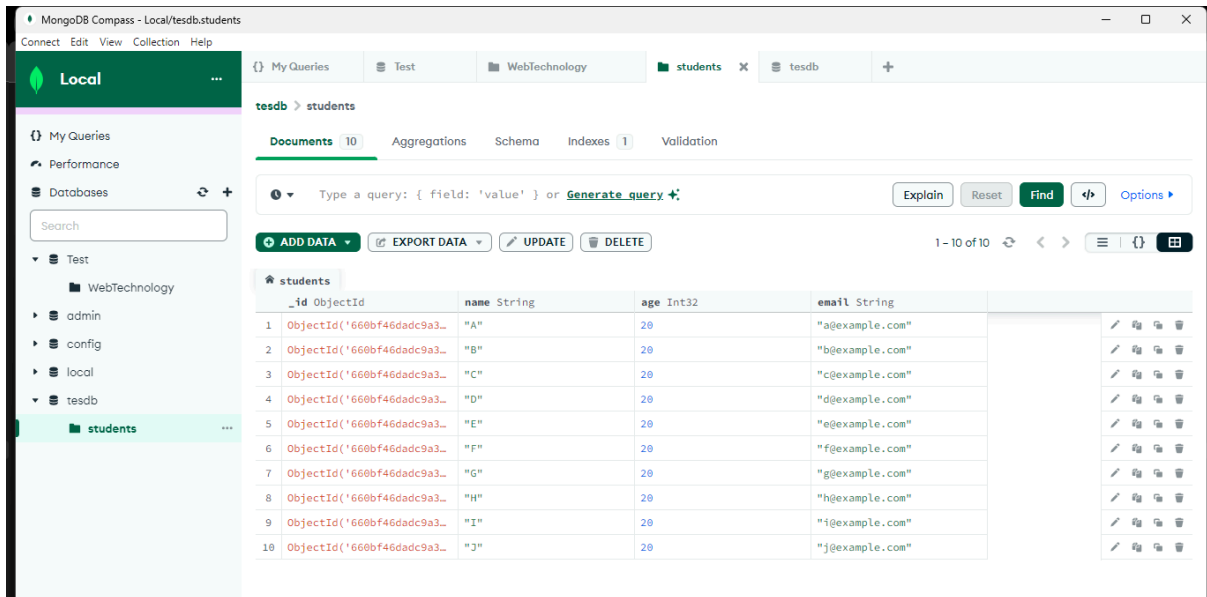
3. Create a new collection named "students" in the "testdb" database.



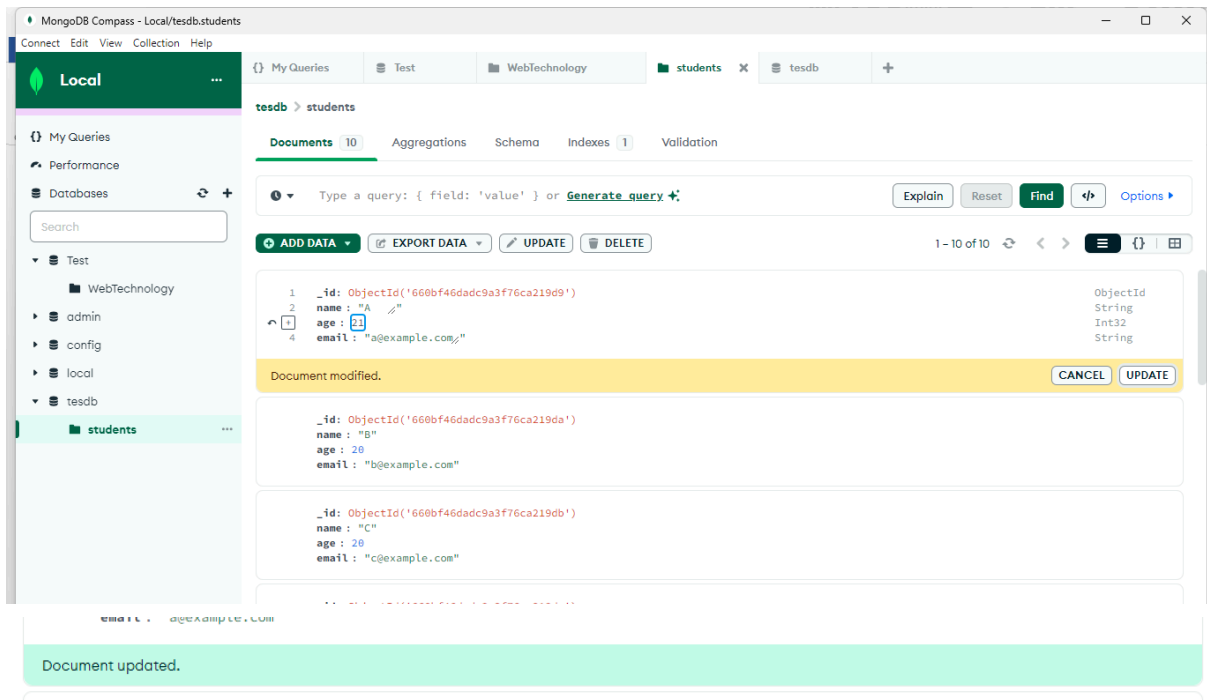
4. Insert ten documents into the "students" collection with the following fields: name, age, and email.



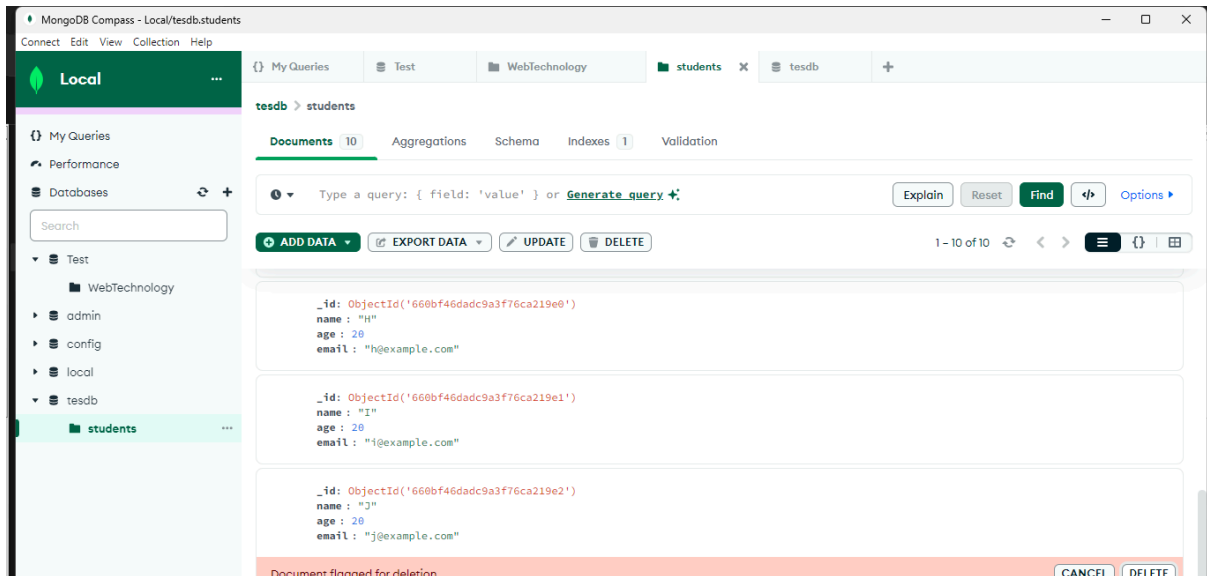
5. View the contents of the "students" collection.



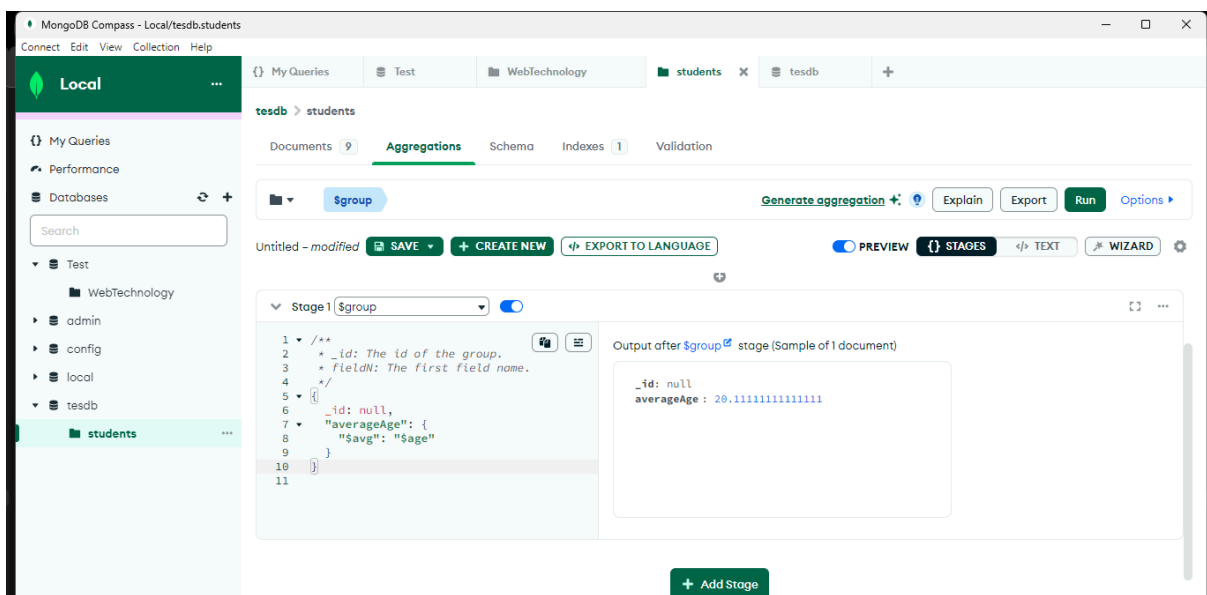
6. Update the age of a specific student in the "students" collection.



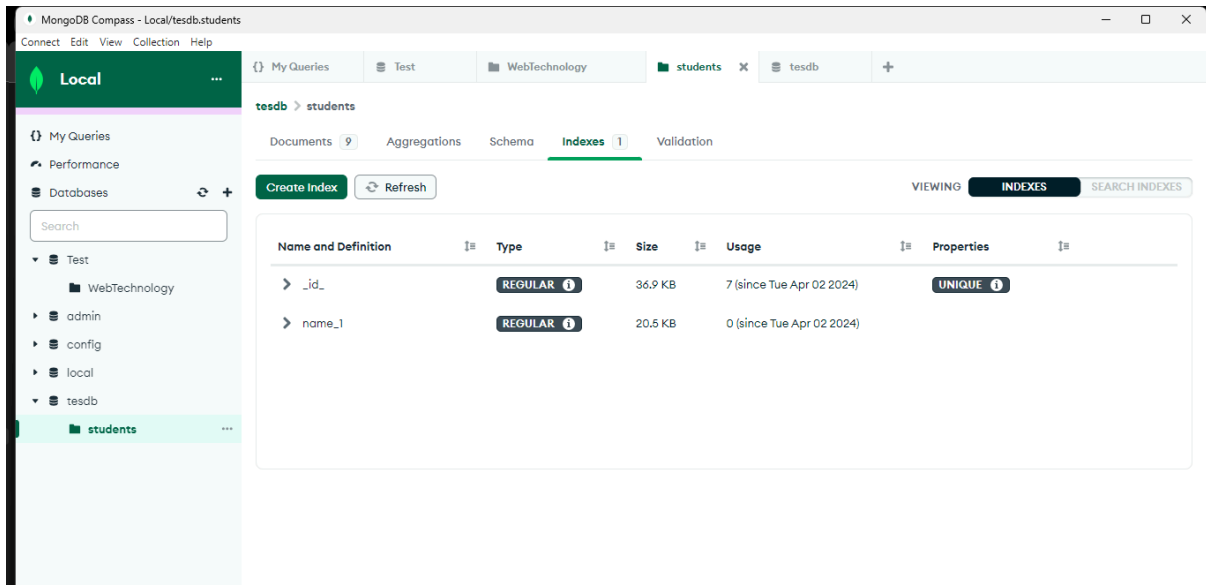
7. Delete a document from the "students" collection based on a specific condition.



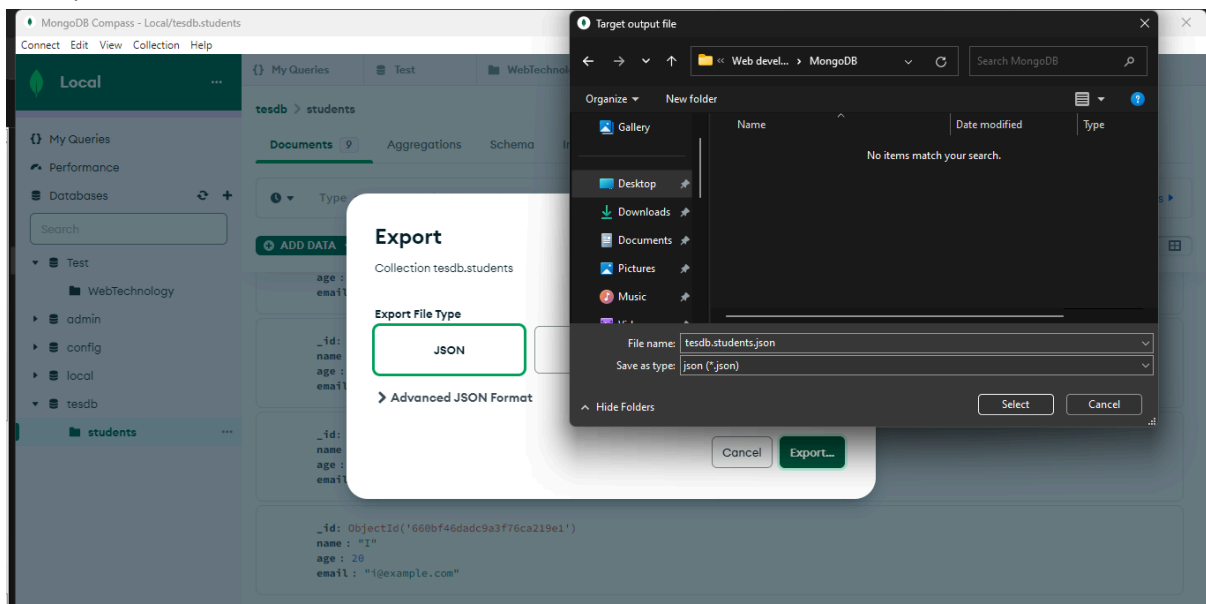
8. Use the aggregation pipeline to calculate the average age of all students in the "students" collection.



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



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



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

MongoDB Compass - Local/tesdb.students

Connect Edit View Collection Help

Local

My Queries Performance Databases Test WebTechnology admin config local tesdb students

tesdb > students

Documents 9 Aggregations Schema Indexes 1 Validation

\$sort Generate aggregation Explain Export Run Options

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

Stage 1 \$sort

```
1 [
2   {
3     "$sort": {
4       "age": -1
5     },
6     {
7       "$limit": 5
8     }
9   }
10 ]
11
```

Output after \$sort stage (Sample of 0 documents)

No Preview Documents

the \$sort key specification must be an object

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

MongoDB Compass - Local/tesdb.students

Connect Edit View Collection Help

Local

My Queries Performance Databases Test WebTechnology admin config local tesdb students

tesdb > students

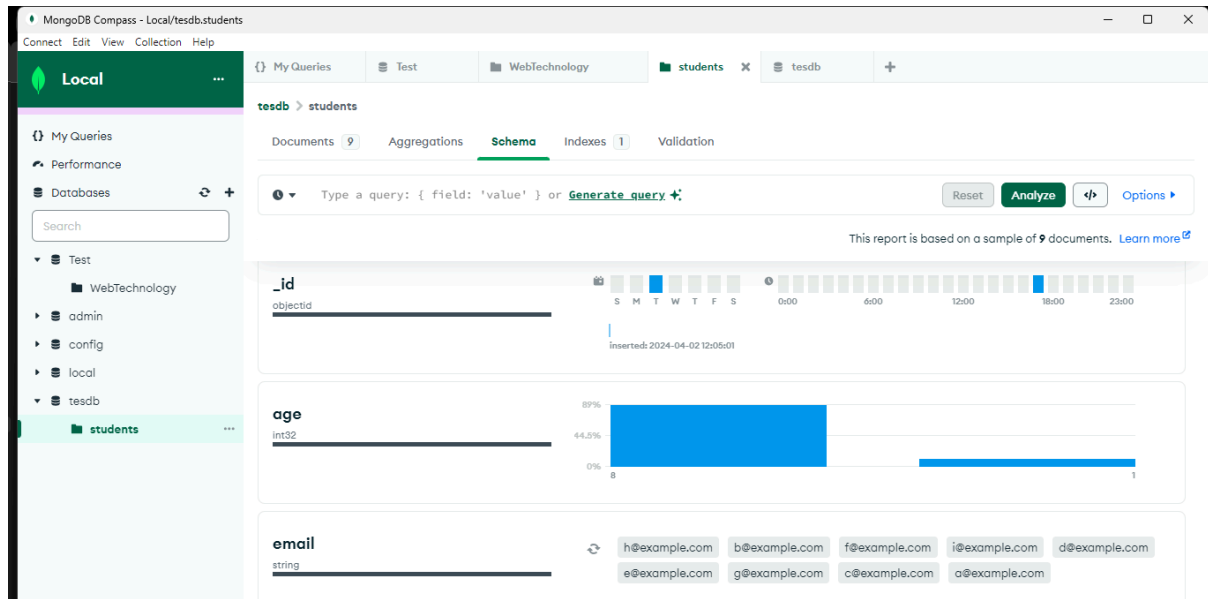
Documents 9 Aggregations Schema Indexes 1 Validation

Create Index Refresh

VIEWING INDEXES SEARCH INDEXES

Name and Definition	Type	Size	Usage	Properties
> _id_	REGULAR	36.9 KB	7 (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)	

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



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

