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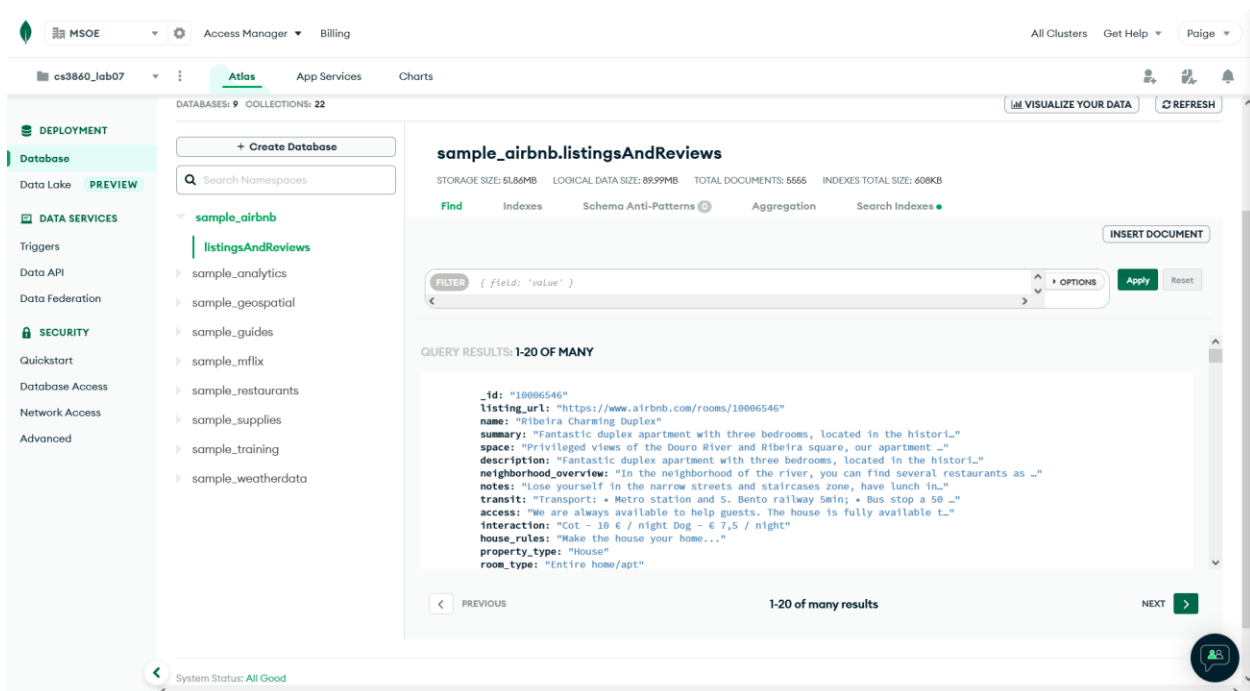
CS 3860 041

Dr. Magana

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Lab 07 – Designing a Nonrelational Database Application

Part 1 – Load Sample Data



The screenshot above shows one collection from the database 'sample_airbnb', which demonstrates that I was able to load the sample data into my database.

Part 2 – CRUD Tutorial

Step 7: Run the Connection class

```
{
  "name": "sample_airbnb",
  "sizeOnDisk": 55001088,
  "empty": false
},
{
  "name": "sample_analytics",
  "sizeOnDisk": 9572352,
  "empty": false
},
{
  "name": "sample_geospatial",
  "sizeOnDisk": 1449984,
  "empty": false
},
{
  "name": "sample_guides",
  "sizeOnDisk": 40960,
  "empty": false
},
{
  "name": "sample_mflix",
  "sizeOnDisk": 49885184,
  "empty": false
},
{
  "name": "sample_restaurants",
  "sizeOnDisk": 8843264,
  "empty": false
},
{
  "name": "sample_supplies",
  "sizeOnDisk": 1171456,
  "empty": false
},
{
  "name": "sample_training",
  "sizeOnDisk": 59105280,
  "empty": false
},
{
  "name": "sample_weatherdata",
  "sizeOnDisk": 2924544,
  "empty": false
},
{
  "name": "admin",
  "sizeOnDisk": 344064,
  "empty": false
},
{
  "name": "local",
  "sizeOnDisk": 2729824256,
  "empty": false
}
```

The screenshot above displays the results of running the Connection class from the tutorial repository.

Step 11: Add a student to the document with id > 10000

The screenshot shows the MongoDB Compass interface for a database named 'sample_training.grades'. The top bar displays statistics: STORAGE SIZE: 8.46MB, LOGICAL DATA SIZE: 22.22MB, TOTAL DOCUMENTS: 100011, and INDEXES TOTAL SIZE: 3.68MB. Below the statistics are tabs for Find, Indexes, Schema Anti-Patterns (0), Aggregation, and Search Indexes (1). The 'Find' tab is active, showing a filter bar with the query `{ "student_id": 20000 }`. Below the filter bar, the query results are displayed as 'QUERY RESULTS: 1-1 OF 1'. The result is a single document with the following fields: `_id` (ObjectId), `student_id` (20000), `class_id` (1), and `scores` (Array).

The above screenshot shows the results of filtering the 'sample_training' database for the student I added, with id - 20000. This proves that inserting a new student was successful.

Step 12: Read with filter (id = 20000)

```
"C:\Program Files\Eclipse Adoptium\jdk-11.0.16-hotspot\bin\java.exe" ...  
Added student : {"_id": {"$oid": "63632bc84f890a49c172fb50"}, "student_id": 20000.0, "class_id": 1.0, "scores": [{"type": "exam", "score": 56.89451952071462}, {"type": "quiz", "s  
Process finished with exit code 0
```

The screenshot above shows my program output after modifying the 'Read' class to filter for the student document I added in Step 11.

Step 15: Verify added comment (Update)

The screenshot shows the MongoDB Compass interface for the 'sample_training.grades' collection. The top bar displays collection statistics: STORAGE SIZE: 8.46MB, LOGICAL DATA SIZE: 22.22MB, TOTAL DOCUMENTS: 100011, and INDEXES TOTAL SIZE: 3.68MB. Navigation tabs include Find, Indexes, Schema Anti-Patterns (0), Aggregation, and Search Indexes (●). An 'INSERT DOCUMENT' button is in the top right. A filter bar contains the query `{ "student_id": 20000 }` with 'FILTER' and 'OPTIONS' buttons, and 'Apply' and 'Reset' buttons. Below the filter bar, it says 'QUERY RESULTS: 1-1 OF 1'. The result is a single document shown in a collapsed state:

```
_id: ObjectId('63632bc84f890a49c172fb50')
student_id: 20000
class_id: 1
> scores: Array
comment: "PANCAKE SOCK"
```

The above screenshot shows the results of filtering for my student (from Step 11) after updating the document to include the field, 'comment', with the value, 'PANCAKE SOCK'.

Step 16: Delete added student (id = 20000)

The screenshot shows the MongoDB Compass interface for the 'sample_training.grades' collection, identical to the previous one. The filter bar still contains the query `{ "student_id": 20000 }`. However, the results section now says 'QUERY RESULTS: 0', indicating that no documents were found, which confirms the successful deletion of the student with id 20000.

The screenshot above shows the results of searching for my added student after editing the 'Delete' class to delete my added student. The results are empty which confirms that the delete was successful.

