

MongoDB - NoSQL

Practice – 3

Overview

In this practice session you will continue learning to work with MongoDB. Upon completion of this practice, you should be able to:

- *Delete unwanted document(s)*
- *Update document(s)*
 - *Changing an existing value*
 - *Incrementing an existing value*
 - *Removing an unwanted field*
 - *Rename field*
- *Perform group operations*
- *Use aggregate to perform*
 - *Count, Sum, Average, Maximum and Minimum*
- *Understand the optimized way of pipelining*

Hands-on

NOTE: Open a Command Window and start the **MongoDB server**. Don't forget to specify the path where the data (files) should be stored.

NOTE: Open yet another Command Window and start your **MongDB shell**.

1. Import the '**emps**' and '**depts**' collections which has been share with your **LabFiles** compressed file.

Identify the field names in both the collections

2. Count the number of documents in the depts collection

Remove a document from '**depts**' collection where the name of the department is '**Opeartions**'

Once again count the number of documents in the **depts** collection and confirm that the **Operations** department document is delete.

3. Due to the pandemic the organization has decided to fire the **Salesman**.

Thus remove all documents in the **emps** collection related to Salesman.

Confirm that the documents related to Saleman are deleted.

4. After the appraisal, it has been decided that the employee **James** who ID is **7900** needs a revised salary for his better performance.

The salary is revised to **\$1200**

Help the HR team to revise the salary of James.

Confirm that the salary has been revised.

5. What will happen if the **"\$set"** operator is not used while updating?

Test it out! Record your observation.

6. Find out the names and salaries of the **Managers** in the **emps** collection

Are the salaries same! If YES go to the next question.

If NO, set the salary of all **Manager's** to **\$3025**

Confirm the salaries are now same for all the Managers

7. A manager whoes ID 7566 is not happy with the revised salary, as he was the one who was get slightly more than the other managers. To please this manager (with ID 7566) the salary was further increment by \$25.

Perform the required action and check to find if the salary is incremented or not.

8. How can we increment the count of 'Analyst' by ONE?

Check what happens! Inasmuch we don't have a field by name **'count'** with these documents.

9. Repeat the incrementation of the count by ONE for **'Testers'**

Record your observation!

Include the 3rd argument to the update() method as {"upsert" : true}
Re-run the query and record your observation.

10. It is possible to remove unwanted fields from a document.
The same update() method will help us in doing so. However, we need to use the **"\$unset"** operator and specify which field to be removed.

For the Manager designation, if we have a 'count' field remove it.

11. Find out the different fields of the '**depts**' collection.

The HR team want the '**location**' field to be rename as '**city**' field.

Help the HR team to complete this task.

HINT: Use the "\$rename" operator.

Confirm the field has been renamed.

12. Identify the different groups of departments and designations.

HINT: Use the \$group operator

13. Count the number of employees in each of the departments

Similarly, count the number of employees in each designation

14. Find the department-wise sum of the salaries of employees

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15. Find average, minimum and maximum salaries department-wise

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16. Designation wise head count within a specific department. Assume the department with ID 20

17. Optimize the pipeline while performing the above task and arrange the head count in ascending order.