Mongo DB Exercises - With the Restaurants Data Set

mongoimport --db restaurants --collection addresses --file restaurants.json

**Exercise Questions**

1. Write a MongoDB query to display all the documents in the collection restaurants.

Ans) db. addresses.find()

2. Write a MongoDB query to display the fields restaurant\_id, name, borough and cuisine for all the documents in the collection restaurant.

Ans) db. addresses.find({},{"restaurant\_id" : 1,"name":1,"borough":1,"cuisine" :1})

3. Write a MongoDB query to display the fields restaurant\_id, name, borough and cuisine, but exclude the field \_id for all the documents in the collection restaurant.

Ans) db. addresses.find({},{"restaurant\_id" : 1,"name":1,"borough":1,"cuisine" :1,"\_id":0})

4. Write a MongoDB query to display the fields restaurant\_id, name, borough and zip code, but exclude the field \_id for all the documents in the collection restaurant.

Ans) db. addresses.find({},{"restaurant\_id" : 1,"name":1,"borough":1,"address.zipcode" :1,"\_id":0})

5. Write a MongoDB query to display the first 5 restaurant which is in the borough Bronx.

Ans) db. addresses.find({"borough": "Bronx"}).limit(5)

6. Write a MongoDB query to display all the restaurant which is in the borough Bronx.

Ans) db. addresses.find({"borough": "Bronx"})

7. Write a MongoDB query to display the next 5 restaurants after skipping first 5 which are in the borough Bronx.

Ans) db. addresses.find({"borough": "Bronx"}).skip(5).limit(5)

8. Write a MongoDB query to find the restaurants who achieved a score more than 90.

Ans) db. addresses.find({grades : { $elemMatch:{"score":{$gt : 90}}}})

9. Write a MongoDB query to find the restaurants that achieved a score, more than 80 but less than 100.

Ans) db. addresses.find({grades : { $elemMatch:{"score":{$gt : 80 , $lt :100}}}})

10. Write a MongoDB query to find the restaurants which locate in latitude value less than -95.754168.

Ans) db. addresses.find({"address.coord" : {$lt : -95.754168}})

11. Write a MongoDB query to find the restaurants that do not prepare any cuisine of 'American' and their grade score more than 70 and latitude less than -65.754168.

Ans) db. addresses.find(

{$and:

[

{"cuisine" : {$ne :"American "}},

{"grades.score" : {$gt : 70}},

{"address.coord" : {$lt : -65.754168}}

]

}

)

12. Write a MongoDB query to find the restaurants which do not prepare any cuisine of 'American' and achieved a score more than 70 and located in the longitude less than -65.754168.

Ans) db. addresses.find(

{

"cuisine" : {$ne : "American "},

"grades.score" :{$gt: 70},

"address.coord" : {$lt : -65.754168}

}

)

13. Write a MongoDB query to find the restaurants which do not prepare any cuisine of 'American ' and achieved a grade point 'A' not belongs to the borough Brooklyn. The document must be displayed according to the cuisine in descending order.

Ans) db. addresses.find( {

"cuisine" : {$ne : "American "},

"grades.grade" :"A",

"borough": {$ne : "Brooklyn"}

}

).sort({"cuisine":-1})

14. Write a MongoDB query to find the restaurant Id, name, borough and cuisine for those restaurants which contain 'Wil' as first three letters for its name.

Ans) db. addresses.find(

{name: /^Wil/},

{

"restaurant\_id" : 1,

"name":1,"borough":1,

"cuisine" :1

}

)

15. Write a MongoDB query to find the restaurant Id, name, borough and cuisine for those restaurants which contain 'ces' as last three letters for its name.

Ans) db.addresses.find({name: /ces$/},{\_id:0,name:1,restaurant\_id : 1,borough:1,cuisine :1}).pretty()

16. Write a MongoDB query to find the restaurant Id, name, borough and cuisine for those restaurants which contain 'Reg' as three letters somewhere in its name.

Ans) db.addresses.find({name: /.\*Reg.\*/},{\_id:0,name:1,restaurant\_id : 1,borough:1,cuisine :1}).pretty()

17. Write a MongoDB query to find the restaurants which belong to the borough Bronx and prepared either American or Chinese dish.

Ans) db.addresses.aggregate([{$match:{borough: "Bronx", cuisine:{$in:["American ","Chinese"]}}}, {$project:{cuisine:1,borough:1,\_id:0}}]).pretty()

18. Write a MongoDB query to find the restaurant Id, name, borough and cuisine for those restaurants which belong to the borough Staten Island or Queens or Bronxor Brooklyn.

Ans) db.addresses.aggregate([{$match:{borough :{$in :["Staten Island","Queens","Bronx","Brooklyn"]}}}, {$project:{cuisine:1,name:1,restaurant\_id : 1,borough:1,\_id:0}}]).pretty()

19. Write a MongoDB query to find the restaurant Id, name, borough and cuisine for those restaurants which are not belonging to the borough Staten Island or Queens or Bronxor Brooklyn.

Ans) db.addresses.aggregate([{$match:{borough :{$nin :["Staten Island","Queens","Bronx","Brooklyn"]}}}, {$project:{cuisine:1,name:1,restaurant\_id : 1,borough:1,\_id:0}}]).pretty()

20. Write a MongoDB query to find the restaurant Id, name, borough and cuisine for those restaurants which achieved a score which is not more than 10.

Ans) db.addresses.aggregate([{$match:{"grades.score":{$lte:10}}}, {$project:{cuisine:1,name:1,restaurant\_id : 1,borough:1,\_id:0}}]).pretty()

21. Write a MongoDB query to find the restaurant Id, name, borough and cuisine for those restaurants which prepared dish except 'American' and 'Chinees' or restaurant's name begins with letter 'Wil'.

Ans) db.addresses.find({$or: [{$and: [{cuisine : {$ne :"American "}}, {cuisine : {$ne :"Chinees"}}]},{name: /^Wil/}]},{restaurant\_id : 1,name:1,borough:1,cuisine :1,\_id:0}).pretty()

22. Write a MongoDB query to find the restaurant Id, name, and grades for those restaurants which achieved a grade of "A" and scored 11 on an ISODate "2014-08-11T00:00:00Z" among many of survey dates..

Ans) db.addresses.aggregate([{ $match : {"grades.date": ISODate("2014-08-11T00:00:00Z")}},{ $unwind : "$grades" },{ $match : {"grades.date": ISODate("2014-08-11T00:00:00Z"),"grades.grade":"A" , "grades.score" : 11}}, {$project:{name:1,restaurant\_id : 1,grades:1,\_id:0}}]).pretty()

23. Write a MongoDB query to find the restaurant Id, name and grades for those restaurants where the 2nd element of grades array contains a grade of "A" and score 9 on an ISODate "2014-08-11T00:00:00Z"

Ans) db.addresses.aggregate([{ $match : {"grades.1.date": ISODate("2014-08-11T00:00:00Z")}},{ $unwind : "$grades" },{ $match : {"grades.date": ISODate("2014-08-11T00:00:00Z"),"grades.grade":"A" , "grades.score" : 9}}, {$project:{name:1,restaurant\_id : 1,grades:1,\_id:0}}]).pretty()

24. Write a MongoDB query to find the restaurant Id, name, address and geographical location for those restaurants where 2nd element of coord array contains a value which is more than 42 and upto 52..

Ans) db.addresses.aggregate([{$match:{"address.coord.1": {$gt : 42, $lte : 52}}}, {$project:{name:1,restaurant\_id : 1,address:1,coord:1,\_id:0}}]).pretty()

25. Write a MongoDB query to arrange the name of the restaurants in ascending order along with all the columns.

Ans) db.addresses.aggregate([{$sort:{name:1}}]).pretty()

26. Write a MongoDB query to arrange the name of the restaurants in descending along with all the columns.

Ans) db.addresses.aggregate([{$sort:{name:-1}}]).pretty()

27. Write a MongoDB query to arranged the name of the cuisine in ascending order and for that same cuisine borough should be in descending order.

Ans) db.addresses.aggregate([{$sort:{cuisine:1,borough : -1}}]).pretty()

28. Write a MongoDB query to know whether all the addresses contains the street or not.

Ans) db.addresses.aggregate([{$match:{"address.street" :{ $exists : true }}}]).pretty()

29. Write a MongoDB query which will select all documents in the restaurants collection where the coord field value is Double.

Ans) db.addresses.aggregate([{$match:{"address.coord" :{$type : 1}}}]).pretty()

30. Write a MongoDB query which will select the restaurant Id, name and grades for those restaurants which returns 0 as a remainder after dividing the score by 7.

Ans) db.addresses.aggregate([{ $unwind : "$grades" },{ $match : {"grades.score" :{$mod : [7,0]}}}, {$project:{name:1,restaurant\_id : 1,grades:1,\_id:0}}]).pretty()

31. Write a MongoDB query to find the restaurant name, borough, longitude and attitude and cuisine for those restaurants which contains 'mon' as three letters somewhere in its name.

Ans) db.addresses.find({name: /.\*mon.\*/},{\_id:0,name:1,borough:1,cuisine :1,"address.coord":1}).pretty()

32. Write a MongoDB query to find the restaurant name, borough, longitude and latitude and cuisine for those restaurants which contain 'Mad' as first three letters of its name.

Ans) db.addresses.find({name: /^Mad/},{\_id:0,name:1,borough:1,cuisine :1,"address.coord":1}).pretty()