MongoDB – Complex Queries

Mongo DB Exercises - With the Restaurants Data Set

C:\Users\AKASH\Desktop\Capgemini Assignments\MongoDB\Assignment 3>mongoimport --db restaurants --collection addresses --file restaurants.json

2021-01-15T11:29:26.876+0530   connected to: mongodb://localhost/

2021-01-15T11:29:27.172+0530   3772 document(s) imported successfully. 0 document(s) failed to import.

> show dbs

admin   0.000GB

comments   0.000GB

config   0.000GB

local   0.000GB

mongo_practice 0.000GB

population   0.002GB

restaurants   0.001GB

> use restaurants

switched to db restaurants

> db.addresses.find()

{ "_id" : ObjectId("60012f3ecf4ce0a5f341af1c"), "address" : { "building" : "1007", "coord" : [-73.856077, 40.848447], "street" : "Morris Park Ave", "zipcode" : "10462" }, "borough" : "Bronx", "cuisine" : "Bakery", "grades" : [{ "date" : ISODate("2014-03-03T00:00:00Z"), "grade" : "A", "score" : 2 }, { "date" : ISODate("2013-09-11T00:00:00Z"), "grade" : "A", "score" : 6 }, { "date" : ISODate("2013-01-24T00:00:00Z"), "grade" : "A", "score" : 10 }, { "date" : ISODate("2011-11-23T00:00:00Z"), "grade" : "A", "score" : 9 }, { "date" : ISODate("2011-03-10T00:00:00Z"), "grade" : "B", "score" : 14 }], "name" : "Morris Park Bake Shop", "restaurant_id" : "30075445" }

{ "_id" : ObjectId("60012f3ecf4ce0a5f341af1d"), "address" : { "building" : "2206", "coord" : [-74.1377286, 40.6119572], "street" : "Victory Boulevard", "zipcode" : "10314" }, "borough" : "Staten Island", "cuisine" : "Jewish/Kosher", "grades" : [{ "date" : ISODate("2014-10-06T00:00:00Z"), "grade" : "A", "score" : 9 }, { "date" : ISODate("2014-05-20T00:00:00Z"), "grade" : "A", "score" : 12 }, { "date" : ISODate("2013-04-04T00:00:00Z"), "grade" : "A", "score" : 12 }, { "date" : ISODate("2012-01-24T00:00:00Z"), "grade" : "A", "score" : 9 }], "name" : "Kosher Island", "restaurant_id" : "40356442" }

{ "_id" : ObjectId("60012f3ecf4ce0a5f341af1e"), "address" : { "building" : "97-22", "coord" : [-73.8601152, 40.7311739], "street" : "63 Road", "zipcode" : "11374" }, "borough" : "Queens", "cuisine" : "Jewish/Kosher", "grades" : [{ "date" : ISODate("2014-11-24T00:00:00Z"), "grade" : "Z", "score" : 20 }, { "date" : ISODate("2013-01-17T00:00:00Z"), "grade" : "A", "score" : 13 }, { "date" :

ISODate("2012-08-02T00:00:00Z"), "grade" : "A", "score" : 13 }, { "date" : ISODate("2011-12-15T00:00:00Z"), "grade" : "B", "score" : 25 }], "name" : "Tov Kosher Kitchen", "restaurant_id" : "40356068" }

{ "_id" : ObjectId("60012f3ecf4ce0a5f341af1f"), "address" : { "building" : "6409", "coord" : [-74.00528899999999, 40.628886], "street" : "11 Avenue", "zipcode" : "11219" }, "borough" : "Brooklyn", "cuisine" : "American ", "grades" : [{ "date" : ISODate("2014-07-18T00:00:00Z"), "grade" : "A", "score" : 12 }, { "date" : ISODate("2013-07-30T00:00:00Z"), "grade" : "A", "score" : 12 }, { "date" : ISODate("2013-02-13T00:00:00Z"), "grade" : "A", "score" : 11 }, { "date" : ISODate("2012-08-16T00:00:00Z"), "grade" : "A", "score" : 2 }, { "date" : ISODate("2011-08-17T00:00:00Z"), "grade" : "A", "score" : 11 }], "name" : "Regina Caterers", "restaurant_id" : "40356649" }

{ "_id" : ObjectId("60012f3ecf4ce0a5f341af20"), "address" : { "building" : "1839", "coord" : [-73.9482609, 40.6408271], "street" : "Nostrand Avenue", "zipcode" : "11226" }, "borough" : "Brooklyn", "cuisine" : "Ice Cream, Gelato, Yogurt, Ices", "grades" : [{ "date" : ISODate("2014-07-14T00:00:00Z"), "grade" : "A", "score" : 12 }, { "date" : ISODate("2013-07-10T00:00:00Z"), "grade" : "A", "score" : 8 }, { "date" : ISODate("2012-07-11T00:00:00Z"), "grade" : "A", "score" : 5 }, { "date" : ISODate("2012-02-23T00:00:00Z"), "grade" : "A", "score" : 8 }], "name" : "Taste The Tropics Ice Cream", "restaurant_id" : "40356731" }

{ "_id" : ObjectId("60012f3ecf4ce0a5f341af21"), "address" : { "building" : "2300", "coord" : [-73.8786113, 40.8502883], "street" : "Southern Boulevard", "zipcode" : "10460" }, "borough" : "Bronx", "cuisine" : "American ", "grades" : [{ "date" : ISODate("2014-05-28T00:00:00Z"), "grade" : "A", "score" : 11 }, { "date" : ISODate("2013-06-19T00:00:00Z"), "grade" : "A", "score" : 4 }, { "date" : ISODate("2012-06-15T00:00:00Z"), "grade" : "A", "score" : 3 }], "name" : "Wild Asia", "restaurant_id" : "40357217" }

{ "_id" : ObjectId("60012f3ecf4ce0a5f341af22"), "address" : { "building" : "7114", "coord" : [-73.9068506, 40.6199034], "street" : "Avenue U", "zipcode" : "11234" }, "borough" : "Brooklyn", "cuisine" : "Delicatessen", "grades" : [{ "date" : ISODate("2014-05-29T00:00:00Z"), "grade" : "A", "score" : 10 }, { "date" : ISODate("2014-01-14T00:00:00Z"), "grade" : "A", "score" : 10 }, { "date" : ISODate("2013-08-03T00:00:00Z"), "grade" : "A", "score" : 8 }, { "date" : ISODate("2012-07-18T00:00:00Z"), "grade" : "A", "score" : 10 }, { "date" : ISODate("2012-03-09T00:00:00Z"), "grade" : "A", "score" : 13 }, { "date" : ISODate("2011-10-14T00:00:00Z"), "grade" : "A", "score" : 9 }], "name" : "Wilken'S Fine Food", "restaurant_id" : "40356483" }

{ "_id" : ObjectId("60012f3ecf4ce0a5f341af23"), "address" : { "building" : "7715", "coord" : [-73.9973325, 40.61174889999999], "street" : "18 Avenue", "zipcode" : "11214" }, "borough" : "Brooklyn", "cuisine" : "American ", "grades" : [{ "date" : ISODate("2014-04-16T00:00:00Z"), "grade" : "A", "score" : 5 }, { "date" : ISODate("2013-04-23T00:00:00Z"), "grade" : "A", "score" : 2 }, { "date" : ISODate("2012-04-24T00:00:00Z"), "grade" : "A", "score" : 5 }, { "date" : ISODate("2011-12-16T00:00:00Z"), "grade" : "A", "score" : 2 }], "name" : "C & C Catering Service", "restaurant_id" : "40357437" }

{ "_id" : ObjectId("60012f3ecf4ce0a5f341af24"), "address" : { "building" : "1269", "coord" : [-73.871194, 40.6730975], "street" : "Sutter Avenue", "zipcode" : "11208" }, "borough" : "Brooklyn", "cuisine" : "Chinese", "grades" : [{ "date" : ISODate("2014-09-16T00:00:00Z"), "grade" : "B", "score" : 21 }, { "date" : ISODate("2013-08-28T00:00:00Z"), "grade" : "A", "score" : 7 }, { "date" : ISODate("2013-04-02T00:00:00Z"), "grade" : "C", "score" : 56 }, { "date" : ISODate("2012-08-

15T00:00:0Z"), "grade" : "B", "score" : 27 }, { "date" : ISODate("2012-03-28T00:00:00Z"), "grade" : "B", "score" : 27 }], "name" : "May May Kitchen", "restaurant_id" : "40358429" }

{ "_id" : ObjectId("60012f3ecf4ce0a5f341af25"), "address" : { "building" : "1", "coord" : [-73.96926909999999, 40.7685235], "street" : "East   66 Street", "zipcode" : "10065" }, "borough" : "Manhattan", "cuisine" : "American ", "grades" : [{ "date" : ISODate("2014-05-07T00:00:00Z"), "grade" : "A", "score" : 3 }, { "date" : ISODate("2013-05-03T00:00:00Z"), "grade" : "A", "score" : 4 }, { "date" : ISODate("2012-04-30T00:00:00Z"), "grade" : "A", "score" : 6 }, { "date" : ISODate("2011-12-27T00:00:00Z"), "grade" : "A", "score" : 0 }], "name" : "1 East 66Th Street Kitchen", "restaurant_id" : "40359480" }

{ "_id" : ObjectId("60012f3ecf4ce0a5f341af26"), "address" : { "building" : "203", "coord" : [-73.97822040000001, 40.6435254], "street" : "Church Avenue", "zipcode" : "11218" }, "borough" : "Brooklyn", "cuisine" : "Ice Cream, Gelato, Yogurt, Ices", "grades" : [{ "date" : ISODate("2014-02-10T00:00:00Z"), "grade" : "A", "score" : 2 }, { "date" : ISODate("2013-01-02T00:00:00Z"), "grade" : "A", "score" : 13 }, { "date" : ISODate("2012-01-09T00:00:00Z"), "grade" : "A", "score" : 3 }, { "date" : ISODate("2011-11-07T00:00:00Z"), "grade" : "P", "score" : 12 }, { "date" : ISODate("2011-07-21T00:00:00Z"), "grade" : "A", "score" : 13 }], "name" : "Carvel Ice Cream", "restaurant_id" : "40360076" }

{ "_id" : ObjectId("60012f3ecf4ce0a5f341af27"), "address" : { "building" : "265-15", "coord" : [-73.7032601, 40.7386417], "street" : "Hillside Avenue", "zipcode" : "11004" }, "borough" : "Queens", "cuisine" : "Ice Cream, Gelato, Yogurt, Ices", "grades" : [{ "date" : ISODate("2014-10-28T00:00:00Z"), "grade" : "A", "score" : 9 }, { "date" : ISODate("2013-09-18T00:00:00Z"), "grade" : "A", "score" : 10 }, { "date" : ISODate("2012-09-20T00:00:00Z"), "grade" : "A", "score" : 13 }], "name" : "Carvel Ice Cream", "restaurant_id" : "40361322" }

{ "_id" : ObjectId("60012f3ecf4ce0a5f341af28"), "address" : { "building" : "8825", "coord" : [-73.8803827, 40.7643124], "street" : "Astoria Boulevard", "zipcode" : "11369" }, "borough" : "Queens", "cuisine" : "American ", "grades" : [{ "date" : ISODate("2014-11-15T00:00:00Z"), "grade" : "Z", "score" : 38 }, { "date" : ISODate("2014-05-02T00:00:00Z"), "grade" : "A", "score" : 10 }, { "date" : ISODate("2013-03-02T00:00:00Z"), "grade" : "A", "score" : 7 }, { "date" : ISODate("2012-02-10T00:00:00Z"), "grade" : "A", "score" : 13 }], "name" : "Brunos On The Boulevard", "restaurant_id" : "40356151" }

{ "_id" : ObjectId("60012f3ecf4ce0a5f341af29"), "address" : { "building" : "351", "coord" : [-73.98513559999999, 40.7676919], "street" : "West   57 Street", "zipcode" : "10019" }, "borough" : "Manhattan", "cuisine" : "Irish", "grades" : [{ "date" : ISODate("2014-09-06T00:00:00Z"), "grade" : "A", "score" : 2 }, { "date" : ISODate("2013-07-22T00:00:00Z"), "grade" : "A", "score" : 11 }, { "date" : ISODate("2012-07-31T00:00:00Z"), "grade" : "A", "score" : 12 }, { "date" : ISODate("2011-12-29T00:00:00Z"), "grade" : "A", "score" : 12 }], "name" : "Dj Reynolds Pub And Restaurant", "restaurant_id" : "30191841" }

{ "_id" : ObjectId("60012f3ecf4ce0a5f341af2a"), "address" : { "building" : "705", "coord" : [-73.9653967, 40.6064339], "street" : "Kings Highway", "zipcode" : "11223" }, "borough" : "Brooklyn", "cuisine" : "Jewish/Kosher", "grades" : [{ "date" : ISODate("2014-11-10T00:00:00Z"), "grade" : "A", "score" : 11 }, { "date" : ISODate("2013-10-10T00:00:00Z"), "grade" : "A", "score" : 13 }, { "date" : ISODate("2012-10-04T00:00:00Z"), "grade" : "A", "score" : 7 }, { "date" : ISODate("2012-05-21T00:00:00Z"), "grade" : "A", "score" : 9 }, { "date" : ISODate("2011-12-30T00:00:00Z"), "grade" : "B", "score" : 19 }], "name" : "Seuda Foods", "restaurant_id" : "40360045" }

{ "_id" : ObjectId("60012f3ecf4ce0a5f341af2b"), "address" : { "building" : "2780", "coord" : [-73.98241999999999, 40.579505], "street" : "Stillwell Avenue", "zipcode" : "11224" }, "borough" : "Brooklyn", "cuisine" : "American ", "grades" : [{ "date" : ISODate("2014-06-10T00:00:00Z"), "grade" : "A", "score" : 5 }, { "date" : ISODate("2013-06-05T00:00:00Z"), "grade" : "A", "score" : 7 }, { "date" : ISODate("2012-04-13T00:00:00Z"), "grade" : "A", "score" : 12 }, { "date" : ISODate("2011-10-12T00:00:00Z"), "grade" : "A", "score" : 12 }], "name" : "Riviera Caterer", "restaurant_id" : "40356018" }

{ "_id" : ObjectId("60012f3ecf4ce0a5f341af2c"), "address" : { "building" : "129-08", "coord" : [-73.839297, 40.78147], "street" : "20 Avenue", "zipcode" : "11356" }, "borough" : "Queens", "cuisine" : "Delicatessen", "grades" : [{ "date" : ISODate("2014-08-16T00:00:00Z"), "grade" : "A", "score" : 12 }, { "date" : ISODate("2013-08-27T00:00:00Z"), "grade" : "A", "score" : 9 }, { "date" : ISODate("2012-09-20T00:00:00Z"), "grade" : "A", "score" : 7 }, { "date" : ISODate("2011-09-29T00:00:00Z"), "grade" : "A", "score" : 10 }], "name" : "Sal'S Deli", "restaurant_id" : "40361618" }

{ "_id" : ObjectId("60012f3ecf4ce0a5f341af2d"), "address" : { "building" : "759", "coord" : [-73.9925306, 40.7309346], "street" : "Broadway", "zipcode" : "10003" }, "borough" : "Manhattan", "cuisine" : "Delicatessen", "grades" : [{ "date" : ISODate("2014-01-21T00:00:00Z"), "grade" : "A", "score" : 12 }, { "date" : ISODate("2013-01-04T00:00:00Z"), "grade" : "A", "score" : 11 }, { "date" : ISODate("2012-06-07T00:00:00Z"), "grade" : "A", "score" : 6 }, { "date" : ISODate("2012-01-17T00:00:00Z"), "grade" : "A", "score" : 8 }], "name" : "Bully'S Deli", "restaurant_id" : "40361708" }

{ "_id" : ObjectId("60012f3ecf4ce0a5f341af2e"), "address" : { "building" : "284", "coord" : [-73.9829239, 40.6580753], "street" : "Prospect Park West", "zipcode" : "11215" }, "borough" : "Brooklyn", "cuisine" : "American ", "grades" : [{ "date" : ISODate("2014-11-19T00:00:00Z"), "grade" : "A", "score" : 11 }, { "date" : ISODate("2013-11-14T00:00:00Z"), "grade" : "A", "score" : 2 }, { "date" : ISODate("2012-12-05T00:00:00Z"), "grade" : "A", "score" : 13 }, { "date" : ISODate("2012-05-17T00:00:00Z"), "grade" : "A", "score" : 11 }], "name" : "The Movable Feast", "restaurant_id" : "40361606" }

{ "_id" : ObjectId("60012f3ecf4ce0a5f341af2f"), "address" : { "building" : "6909", "coord" : [-74.0259567, 40.6353674], "street" : "3 Avenue", "zipcode" : "11209" }, "borough" : "Brooklyn", "cuisine" : "Delicatessen", "grades" : [{ "date" : ISODate("2014-08-21T00:00:00Z"), "grade" : "A", "score" : 4 }, { "date" : ISODate("2014-03-05T00:00:00Z"), "grade" : "A", "score" : 3 }, { "date" : ISODate("2013-01-10T00:00:00Z"), "grade" : "A", "score" : 10 }], "name" : "Nordic Delicacies", "restaurant_id" : "40361390" }

Type "it" for more

So on..

Exercise Questions

1. > db.addresses.find().pretty()

2. > db.addresses.find({},{restaurant_id:1, name:1, borough:1, cuisine:1}).pretty()

3. > db.addresses.find({},{_id:0,restaurant_id:1, name:1, borough:1, cuisine:1}).pretty()

4. > db.addresses.find({},{_id:0,restaurant_id:1, name:1, borough:1, "address.zipcode":1}).pretty()

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

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6. > db.addresses.find({borough:"Bronx"}).pretty()

7. > db.addresses.find({borough:"Bronx"}).skip(5).limit(5).pretty()

8. > db.addresses.find({"grades.score":{$gt:90}}).pretty()

9. > db.addresses.find({$and : [{"grades.score":{$gt:90}}, {"grades.score":{$lt:100}}]}).pretty()

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

11. > db.addresses.find({$and : [{"grades.score":{$gt:70}}, {"address.coord":{$lt:- -65.754168}},
{cuisine:{$ne:"American "}} ]}).pretty()

12. > db.addresses.find({$and : [{"grades.score":{$gt:70}}, {"address.coord":{$lt:- -65.754168}},
{cuisine:{$ne:"American "}} ]}).pretty()

13. > db.addresses.find({"grades.grade":"A", cuisine:{$ne:"American "},
borough:{$ne:"Brooklyn"}}).sort({borough:-1}).pretty()

14. > db.addresses.find({name: /^Wil/},{restaurant_id:1, name:1, borough:1, cuisine:1}).pretty()

15. > db.addresses.find({name: /ces$/},{restaurant_id:1, name:1, borough:1, cuisine:1}).pretty()

16. > db.addresses.find({name: /Reg/},{restaurant_id:1, name:1, borough:1, cuisine:1}).pretty()

17. > db.addresses.find({$or: [{cuisine:"American "}, {cuisine:"Chinese"}],
borough:"Bronx"}).pretty()

18. > db.addresses.find({$or: [{borough:"Staten Island"}, { borough:"Queens"}, {
borough:"Bronxor Brooklyn"}]},{restaurant_id:1, name:1, borough:1, cuisine:1}).pretty()

19. > db.addresses.find({$or: [{borough:{$ne:"Staten Island"}}, { borough:{$ne:"Queens"}}, {
borough:{$ne:"Bronxor Brooklyn"}}]},{restaurant_id:1, name:1, borough:1, cuisine:1}).pretty()

20. > db.addresses.find({"grades.score":{$lte:10}}, {restaurant_id:1, name:1, borough:1,
cuisine:1}).pretty()

21. > db.addresses.find({$or: [{$and: [{cuisine:{$ne:"American "}}, {cuisine:{$ne:"Chinese"}}]} ,
{name: /^Wil/}] }, {restaurant_id:1, name:1, borough:1, cuisine:1}).pretty()

22. > db.addresses.find({grades:{$elemMatch:{grade: "A", score:11, date: ISODate("2014-08-
11T00:00:00Z")}}}, {restaurant_id:1, name:1, grades:1}).pretty()

23. > db.addresses.find({"grades.1.grade": "A", "grades.1.score":9, "grades.1.date":
ISODate("2014-08-11T00:00:00Z")}, {restaurant_id:1, name:1, grades:1}).pretty()

24. > db.addresses.find({$and:[{"address.coord.1": {$gt:42}},  {"address.coord.1": {$lte:52}}]},
{restaurant_id:1, name:1, address:1, coord:1}).pretty()

25. > db.addresses.find().sort({name:1}).pretty()

26. > db.addresses.find().sort({name:-1}).pretty()

27. > db.addresses.find().sort({cuisine:1, borough:-1}).pretty()

28. > db.addresses.find({ "address.street" : { "$exists" : true }}).pretty();

29. > db.addresses.find({ "address.coord" : { $type : 1 }}).pretty();
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30. db.addresses.find({"grades.score": {$mod: [7, 0]}}, {restaurant_id:1,name:1,grades:1}).pretty()

31. db.addresses.find({name:{$regex:"mon", $options:"i"}},{name:1,borough:1,"address.coord":1, cuisine:1}).pretty()

32. db.addresses.find({name:{$regex:"^Mad", $options:"i"}},{name:1,borough:1,"address.coord": 1, cuisine:1}).pretty()