**Step I: Import Data from the attached file using “mongoimport”**

**Unzip the file “retaurants.zip” to get the json file containing 3000+ records**

**Then run the following from shell/terminal/command prompt. The json file (to be imported) should reside in the current folder. The mongo server should be running while running mongoimport.**

**mongoimport --db test --collection restaurants --drop --file <filename retaurants.json with complete path>**

**You will get a collection named 'restaurants' with the following structure**

{

"address": {

"building": "1007",

"coord": [ -73.856077, 40.848447 ],

"street": "Morris Park Ave",

"zipcode": "10462"

},

"borough": "Bronx",

"cuisine": "Bakery",

"grades": [

{ "date": { "$date": 1393804800000 }, "grade": "A", "score": 2 },

{ "date": { "$date": 1378857600000 }, "grade": "A", "score": 6 },

{ "date": { "$date": 1358985600000 }, "grade": "A", "score": 10 },

{ "date": { "$date": 1322006400000 }, "grade": "A", "score": 9 },

{ "date": { "$date": 1299715200000 }, "grade": "B", "score": 14 }

],

"name": "Morris Park Bake Shop",

"restaurant\_id": "30075445"

}

**Step II: Complete the following exercises using the collection that you imported in Step I**

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

db.restaurants.find();

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

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

1. 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.

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

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

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

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

db.restaurants.find({"borough": "Bronx"});

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

db.restaurants.find({"borough": "Bronx"}).limit(5);

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

db.restaurants.find({"borough": "Bronx"}).skip(5).limit(5);

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

db.restaurants.find({grades : { $elemMatch:{"score":{$gt : 90}}}});

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

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

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

db.restaurants.find({"address.coord" : {$lt : -95.754168}});

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

db.restaurants.find(

{$and:

[

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

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

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

]

}

);

1. Write a MongoDB query to find the restaurants which does not prepare any cuisine of 'American' and achieved a score more than 70 and not located in the longitude less than -65.754168. Note : Do this query without using $and operator.

db.restaurants.find(

{$query:

{

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

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

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

}

});

1. Write a MongoDB query to find the restaurants which does 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.

db.restaurants.find(

{$query:

{

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

"grades.grade" :"A",

"borough": "Brooklyn"

},

$orderby : {"cuisine":-1}

}

);

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

db.restaurants.find(

{name: /^Wil/},

{

"restaurant\_id" : 1,

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

"cuisine" :1

}

);

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

db.restaurants.find(

{name: /ces$/},

{

"restaurant\_id" : 1,

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

"cuisine" :1

}

);

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

db.restaurants.find(

{"name": /.\*Reg.\*/},

{

"restaurant\_id" : 1,

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

"cuisine" :1

}

);

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

db.restaurants.find(

{"name": /.\*Reg.\*/},

{

"restaurant\_id" : 1,

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

"cuisine" :1

}

);

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

db.restaurants.find(

{"borough" :{$in :["Staten Island","Queens","Bronx","Brooklyn"]}},

{

"restaurant\_id" : 1,

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

"cuisine" :1

}

);

1. 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.

db.restaurants.find(

{"borough" :{$nin :["Staten Island","Queens","Bronx","Brooklyn"]}},

{

"restaurant\_id" : 1,

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

"cuisine" :1

}

);

1. 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.

db.restaurants.find(

{"grades.score" :

{ $not:

{$gt : 10}

}

},

{

"restaurant\_id" : 1,

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

"cuisine" :1

}

1. 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'.

db.restaurants.find(

{$or: [

{name: /^Wil/},

{"$and": [

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

{"cuisine" : {$ne :"Chinees"}}

]}

]}

,{"restaurant\_id" : 1,"name":1,"borough":1,"cuisine" :1}

);

1. 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.

db.restaurants.find(

{

"grades.date": ISODate("2014-08-11T00:00:00Z"),

"grades.grade":"A" ,

"grades.score" : 11

},

{"restaurant\_id" : 1,"name":1,"grades":1}

);

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

db.restaurants.find(

{ "grades.1.date": ISODate("2014-08-11T00:00:00Z"),

"grades.1.grade":"A" ,

"grades.1.score" : 9

},

{"restaurant\_id" : 1,"name":1,"grades":1}

);

1. 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.

db.restaurants.find(

{

"address.coord.1": {$gt : 42, $lte : 52}

},

{"restaurant\_id" : 1,"name":1,"address":1,"coord":1}

);

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

db.restaurants.find().sort({"name":1});

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

db.restaurants.find().sort(

{"name":-1}

);

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

db.restaurants.find().sort(

{"cuisine":1,"borough" : -1,}

);

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

db.restaurants.find(

{"address.street" :

{ $exists : true }

}

);

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

db.restaurants.find(

{"address.coord" :

{$type : 1}

}

);

1. 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.

db.restaurants.find(

{"grades.score" :

{$mod : [7,0]}

},

{"restaurant\_id" : 1,"name":1,"grades":1}

);

1. 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.

db.restaurants.find(

{ name :

{ $regex : "mon.\*", $options: "i" }

},

{

"name":1,

"borough":1,

"address.coord":1,

"cuisine" :1

}

);

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

db.restaurants.find(

{ name :

{ $regex : /^Mad/i, }

},

{

"name":1,

"borough":1,

"address.coord":1,

"cuisine" :1

}

);