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CSCI3287

Homework 6

April 9th, 2020

Section 1

1.
```
> use mydb
switched to db mydb
```

2.
```
> use mydb
switched to db mydb
> db.dropDatabase()
{ "ok" : 1 }
```

3.
```
> use mydb
switched to db mydb
> db.createCollection("test_collection")
{ "ok" : 1 }
```

4.
```
> use mydb
switched to db mydb
> db.test_collection.insert({ title: "Mongo Db practice",
... description: "this is my first MongoDB document" })
WriteResult({ "nInserted" : 1 })
```

5.
```
> use mydb
switched to db mydb
> db.test_collection.drop()
true
```

6.
```
> db.test_collection.find()
{ "_id" : ObjectId("5e8ee69a416ed2ce433812fa"), "title" : "Mongo Db practice", "description" : "this is my first MongoDB document" }
> db.test_collection.find().pretty()
{
        "_id" : ObjectId("5e8ee69a416ed2ce433812fa"),
        "title" : "Mongo Db practice",
        "description" : "this is my first MongoDB document"
}
```

7.
```
> db.test_collection.update({'title':'Mongo Db practice'},{'title':'updated'})
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
> db.test_collection.find().pretty()
{ "_id" : ObjectId("5e8ee69a416ed2ce433812fa"), "title" : "updated" }
>
```

8.
```
> db.test_collection.remove({'title':'updated'})
WriteResult({ "nRemoved" : 1 })
>
```

Section 2

1. **How many restaurants are there in this collection?**

```
> db.restaurants.count()
25359
```

2. **List in alphabetical order each different (distinct) cuisine represented in this collection**

```
db.restaurants.distinct("cuisine").sort()

      "Afghan",
      "African",
      "American",
      "Armenian",
      "Asian",
      "Australian",
      "Bagels/Pretzels",
      "Bakery",
      "Bangladeshi",
      "Barbecue",
      "Bottled beverages, including water, sodas, juices, etc.",
      "Brazilian",
      "CafÃ©/Coffee/Tea",
      "Café/Coffee/Tea",
      "Cajun",
      "Californian",
      "Caribbean",
      "Chicken",
      "Chilean",
      "Chinese",
      "Chinese/Cuban",
      "Chinese/Japanese",
      "Continental",
      "Creole",
      "Creole/Cajun",
      "Czech",
      "Delicatessen",
      "Donuts",
      "Eastern European",
      "Egyptian",
      "English",
      "Ethiopian",
      "Filipino",
      "French",
      "Fruits/Vegetables",
      "German",
      "Greek",
      "Hamburgers",
      "Hawaiian",
      "Hotdogs",
      "Hotdogs/Pretzels",
      "Ice Cream, Gelato, Yogurt, Ices",
      "Indian",
      "Indonesian",
      "Iranian",
      "Irish",
      "Italian",
      "Japanese",
      "Jewish/Kosher",
      "Juice, Smoothies, Fruit Salads",
      "Korean",
      "Latin (Cuban, Dominican, Puerto Rican, South & Central American)",
      "Mediterranean",
      "Mexican",
      "Middle Eastern",
      "Moroccan",
      "Not Listed/Not Applicable",
      "Nuts/Confectionary",
      "Other",
      "Pakistani",
      "Pancakes/Waffles",
      "Peruvian",
      "Pizza",
      "Pizza/Italian",
      "Polish",
      "Polynesian",
      "Portuguese",
      "Russian",
      "Salads",
      "Sandwiches",
      "Sandwiches/Salads/Mixed Buffet",
      "Scandinavian",
      "Seafood",
      "Soul Food",
      "Soups",
      "Soups & Sandwiches",
      "Southwestern",
      "Spanish",
      "Steak",
      "Tapas",
      "Tex-Mex",
      "Thai",
      "Turkish",
      "Vegetarian",
      "Vietnamese/Cambodian/Malaysia"
```

3. **Return the name of all restaurants with zip code 11215 which serve Indian cuisine.**

```
> db.restaurants.find({'cuisine':'Indian','address.zipcode':"11215" },{name:1, _id:0})
{ "name" : "Kinara Indian Restaurant" }
{ "name" : "Baluchi'S" }
{ "name" : "Kanan Indian Restaurant" }
{ "name" : "New Aarpan" }
{ "name" : "Indian Spice" }
```

4. **Return the count of restaurants in the Bronx that serve either Chinese or American Food.**

```
> db.restaurants.find( { $and: [{'borough':'Bronx'}, {$or: [{'cuisine':'Chinese'},{'cuisine':'American'}]}]}).count()
734
```

5. **Return a list of restaurants (names) which have the string “Food” in their name.**

```
> db.restaurants.find({'name': {$in: [/Food/]}},{'name':1, '_id':0})
{ "name" : "Wilken'S Fine Food" }
{ "name" : "Seuda Foods" }
{ "name" : "Glorious Food" }
{ "name" : "American Museum Of Natural History Food Court" }
{ "name" : "Pax Wholesome Foods" }
{ "name" : "Pax Wholesome Foods" }
{ "name" : "Fordham Fried Chicken & Sea Food" }
{ "name" : "Downtown Bakery Ii Mexican Food" }
{ "name" : "Columbus Gourmet Food" }
{ "name" : "Food For Thought Library Cafe" }
{ "name" : "Food Mart Deli" }
{ "name" : "Food Merchants" }
{ "name" : "Metropolitan Food Cafe Of Brooklyn College" }
{ "name" : "Food Fair Deli & Pizza" }
{ "name" : "Tasty Fast Food" }
{ "name" : "The Food Hut" }
{ "name" : "Food For Thought Catered Events" }
{ "name" : "Tandoori Food & Bakery" }
{ "name" : "Snack Bar (Located Between A-B Between Fancy Food And Masters)" }
{ "name" : "Reliable Food" }
Type "it" for more
> it
{ "name" : "Housing Works Food" }
{ "name" : "Saji'S Japanese Food" }
{ "name" : "Giacomo Fine Foods" }
{ "name" : "Marathon Food Shop" }
{ "name" : "Community Food And Juice" }
{ "name" : "Yb Food Market" }
{ "name" : "Dante'S Gourmet Food" }
{ "name" : "Goody'S Spanish Food" }
{ "name" : "Sarajevo Fast Food" }
{ "name" : "New York University - Palladium Food Court" }
{ "name" : "Tasty Fast Food" }
{ "name" : "Scott'S Food & Deli" }
{ "name" : "La Morena Food" }
{ "name" : "Food Hut Restaurant & Bakery" }
{ "name" : "Great Taystee Gardens Chinese Food" }
{ "name" : "Mooncake Foods" }
{ "name" : "Fu Long Food Products" }
{ "name" : "Fancy Food Deli" }
{ "name" : "Pax Wholesome Foods" }
{ "name" : "Bright Star Chinese Food" }
```

6. **Return a list of boroughs ranked by the number of Italian restaurants in the borough. That is for each borough, find how many restaurants serve italian cuisine and print the brough and the number of such restaurants sorted by descending by this number. (HINT: use the aggregate method, and use a $group and a $sum))**

```
> db.restaurants.aggregate([{$match:{'cuisine':'Italian'}} , {$group:{_id:"$borough", count:{$sum:1}}} ,{$sort:{count:-1}}])
{ "_id" : "Manhattan", "count" : 621 }
{ "_id" : "Brooklyn", "count" : 192 }
{ "_id" : "Queens", "count" : 131 }
{ "_id" : "Staten Island", "count" : 73 }
{ "_id" : "Bronx", "count" : 52 }
```

7. **Find the top 5 French restaurants in Manhattan that have the highest total score. Return for each restaurant the restaurant's name and the total score. (HINT: use the aggregate method with the $unwind to parse out the scores array, followed by a $group and a $sum)**

```
> db.restaurants.aggregate([{$match:{'cuisine':'Italian'}}, {$unwind:"$grades"}, {$group: {_id:"$name", totalScore:{$sum:"$grades.score"}}} ,{$sort:{totalScore:-1}}, {$limit:5}])

{ "_id" : "Nanni Restaurant", "totalScore" : 225 }
{ "_id" : "Bocca Di Bacco", "totalScore" : 216 }
{ "_id" : "Lasagna Restaurant", "totalScore" : 202 }
{ "_id" : "Coppola'S", "totalScore" : 202 }
{ "_id" : "Giovanni'S Restaurant", "totalScore" : 187 }
```