Database Assignment # 04

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1. Read Operations

Task 1:

```
db.restaurants.find({}).limit(1).pretty();
```

```
> db.restaurants.find().limit(1).pretty();
{
        "_id" : ObjectId("60cf3dc6568dc98f7a91292e"),
        "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"
```

Task 2:

```
db.restaurants.find({$and:[{"name":"Wendy'S"},
{"cuisine":"Hamburgers"},{"borough":"Bronx"}]}).pretty();
```

```
> db.restaurants.find({$and:[{"name":"Wendy'S"},{"cuisine":"Hamburgers"},{"borough":"Bronx"}]}).pretty();
{
        "_id" : ObjectId("60cf3dc6568dc98f7a912b92"),
        "address" : {
                "building" : "3636",
                "coord" : [
                        -73.8421735,
                        40.8794229
                ],
                "street" : "Boston Road",
                "zipcode" : "10469"
        },
        "borough" : "Bronx",
        "cuisine" : "Hamburgers",
        "grades" : [
                {
                        "date" : ISODate("2014-11-17T00:00:00Z"),
                        "grade" : "A",
                        "score" : 9
                },
                {
                        "date" : ISODate("2014-06-25T00:00:00Z"),
                        "grade" : "A",
                        "score" : 3
                },
                {
                        "date" : ISODate("2013-06-14T00:00:00Z"),
                        "grade" : "A",
                        "score" : 7
                },
                {
                        "date" : ISODate("2012-06-06T00:00:00Z"),
                        "grade" : "A",
                        "score" : 6
                },
                {
                        "date" : ISODate("2012-01-27T00:00:00Z"),
                        "grade" : "A",
```

Task 3:

```
db.restaurants.find({"grades":{$elemMatch:
{"grade":"A",score:2,"date":ISODate("2014-05-
08T00:00:00Z")}}}).pretty();
```

```
> db.restaurants.find({"grades":{$elemMatch:{"grade":"A",score:2,"date":ISODate("2014-05-08T00:00:00Z")}}}).pretty();
{
        "_id" : ObjectId("60cf3dc6568dc98f7a913616"),
        "address" : {
                "building" : "7624",
                "coord" : [
                        -73.9996999,
                        40.6138655
                ],
                "street" : "17 Avenue",
                "zipcode" : "11214"
        },
        "borough" : "Brooklyn",
        "cuisine" : "Pizza",
        "grades" : [
                {
                        "date" : ISODate("2014-05-08T00:00:00Z"),
                        "grade" : "A",
                        "score" : 2
                },
                {
                        "date" : ISODate("2013-09-12T00:00:00Z"),
                        "grade" : "B",
                        "score" : 18
                },
                {
                        "date" : ISODate("2013-04-02T00:00:00Z"),
                        "grade" : "A",
                        "score" : 12
                },
                {
                        "date" : ISODate("2012-02-24T00:00:00Z"),
                        "grade" : "A",
                        "score" : 9
                }
        ],
```

2. Update Operations

Task 1:

```
db.restaurants.updateMany({"restaurant_id":"50008124"},
{$set:{"name":"FAST"}});
```

```
> db.restaurants.updateMany({"restaurant_id":"50008124"},{$set:{"name":"FAST"}});
{ "acknowledged" : true, "matchedCount" : 1, "modifiedCount" : 0 }
>
```

Task 2:

```
db.restaurants.updateMany({"name":"Wendy'S Old Fashioned
Hamburgers"},{$set:{"cuisine":"Desi"}});
```

```
> db.restaurants.updateMany({"name":"Wendy'S Old Fashioned Hamburgers"},{$set:{"cuisine":"Desi"}});
{ "acknowledged" : true, "matchedCount" : 3, "modifiedCount" : 3 }
>
```

Task 3:

```
db.restaurants.updateMany({"borough":"Staten
Island","name":"Mcdonald'S"},{$set:{"cuisine":"Pizzas"}});
```

```
> db.restaurants.updateMany({"borough":"Staten Island","name":"Mcdonald'S"},{$set:{"cuisine":"Pizzas"}});
{ "acknowledged" : true, "matchedCount" : 8, "modifiedCount" : 8 }
>
```

3. Removing Operations

Task 1:

```
db.restaurants.deleteMany({"name":"Wendy'S Old Fashioned
Hamburgers"});
```

```
> db.restaurants.deleteMany({"name":"Wendy'S Old Fashioned Hamburgers"});
{ "acknowledged" : true, "deletedCount" : 3 }
>
```

Task 2:

```
db.restaurants.deleteMany({"cuisine":"Pizza"});
```

```
> db.restaurants.deleteMany({"cuisine":"Pizza"});
{ "acknowledged" : true, "deletedCount" : 1163 }
>
```

Task 3:

```
db.restaurants.deleteMany({"name":"Burger
King","borough":"Queens","cuisine":"Hamburgers"});
```

```
> db.restaurants.deleteMany({"name":"Burger King","borough":"Queens","cuisine":"Hamburgers"});
{ "acknowledged" : true, "deletedCount" : 20 }
>
```

4. Creating your own document

```
db.restaurants.insert({
"address" : {
"building" : "1111",
"coord" : [
-70.222222,
30.1223345
],
"street" : "xyz street",
"zipcode" : "110100"
},
"borough" : "abcxyz",
"cuisine" : "anything",
"grades" : [
{
"date" : ISODate("2014-11-18T00:00:00Z"),
"grade" : "A",
"score" : 7
},
{
"date" : ISODate("2014-05-08T00:00:00Z"),
"grade" : "A",
"score" : 2
}
],
"name" : "myRestaurant",
"restaurant_id" : "p19-0007"
});
```

Output:

```
> db.restaurants.insert({
... "address" : {
... "building" : "1111",
... "coord" : [
... -70.222222,
... 30.1223345
... ],
... "street" : "xyz street",
... "zipcode" : "110100"
... },
... "borough" : "abcxyz",
... "cuisine" : "anything",
... "grades" : [
... {
... "date" : ISODate("2014-11-18T00:00:00Z"),
... "grade" : "A",
... "score" : 7
... },
... {
... "date" : ISODate("2014-05-08T00:00:00Z"),
... "grade" : "A",
... "score" : 2
... }
... ],
... "name" : "myRestaurant",
... "restaurant_id" : "p19-0007"
... });
WriteResult({ "nInserted" : 1 })
>
```