

Database Lab – HW9

- سوال: پایگاه داد هی 3 aut_ce در لیست گزارش شده موجود نیست. چرا؟
 زیرا تا زمانی که دیتایی وارد collection نکنیم آن در لیست گزارش ها اضافه نمیشود. به محض اضافه کردن یک واحد دیتا آن را دوباره در گزارش میبینیم.
- سوال: توابع (save(), findOneAndUpdate, updateOne و updateMany چه 11 عملیاتی را انجام میدهند؟
- تابع (Save) یک رکورد خاص را ذخیره میکند که با critaria مشخص شده است. تابع findOneAndUpdate دنبال یک رکورد با مشخصات داده شده گشته و فقط یکی از آنها را آپدیت میکند. تابع UpdateOne هم فقط بر روی یک رکورد آپدیت میکند اما تابع UpdateMany همه رکوردها با مشخصات داده شده را آپدیت میکند.

تمرین

(بخش اول)

The screenshot shows the MongoDB Compass interface and the MONGODB shell. The Compass window displays the 'restaurants.restaurants' collection with 3.8k documents. A document is selected, showing its details in the 'Documents' tab. The document structure is as follows:

```
{
  "_id": ObjectId("61ac550fa3738f8425ad997f"),
  "address": {
    "building": "1007",
    "coord": [ -73.856077, 40.848447 ],
    "street": "Morris Park Ave",
    "zipcode": "10462"
  },
  "borough": "Bronx",
  "cuisine": "Bakery",
  "grades": [
    { "date": "2014-03-03T00:00:00.000Z", "grade": "A", "score": 2 },
    { "date": "2013-09-11T00:00:00.000Z", "grade": "A", "score": 6 },
    { "date": "2013-01-24T00:00:00.000Z", "grade": "A", "score": 10 },
    { "date": "2011-11-23T00:00:00.000Z", "grade": "A", "score": 9 },
    { "date": "2011-03-10T00:00:00.000Z", "grade": "B", "score": 14 } ]
}
```

The MONGODB shell shows the following commands and output:

```
> use restaurants
switched to db restaurants
> db.restaurants.find()
{ "_id": ObjectId("61ac550fa3738f8425ad997f"),
  "address": {
    "building": "1007",
    "coord": [ -73.856077, 40.848447 ],
    "street": "Morris Park Ave",
    "zipcode": "10462"
  },
  "borough": "Bronx",
  "cuisine": "Bakery",
  "grades": [
    { "date": "2014-03-03T00:00:00.000Z", "grade": "A", "score": 2 },
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    { "date": "2013-01-24T00:00:00.000Z", "grade": "A", "score": 10 },
    { "date": "2011-11-23T00:00:00.000Z", "grade": "A", "score": 9 },
    { "date": "2011-03-10T00:00:00.000Z", "grade": "B", "score": 14 } ]
}
```

بخش دوم)

MongoDB Compass - localhost:27017/restaurants.restaurants

Connect View Collection Help

Local

5 DBS 3 COLLECTIONS

☆ FAVORITE

Filter your data

MoviesDB

admin

config

local

restaurants

restaurants.restaurants Documents

DOCUMENTS 3.8k TOTAL SIZE 1.8MB AVG. SIZE 470B INDEXES 1 TOTAL SIZE 102.4KB AVG. SIZE 102.4KB

Documents Aggregations Schema Explain Plan Indexes Validation

FILTER { field: 'value' } OPTIONS FIND RESET ...

ADD DATA VIEW

Displaying documents 1 - 20 of 3773 REFRESH

```

{
  "_id": ObjectId("61ac550fa3738f8425ad997f"),
  "address": {
    "building": "1007",
    "coord": [ -73.856077, 40.848447 ],
    "street": "Morris Park Ave",
    "zipcode": "10462"
  },
  "borough": "Bronx",
  "cuisine": "Bakery",
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    { date: 2013-01-24T00:00:00.000Z, grade: 'A', score: 10 },
    { date: 2011-11-23T00:00:00.000Z, grade: 'A', score: 9 },
    { date: 2011-03-10T00:00:00.000Z, grade: 'B', score: 14 }
  ]
}

```

>_MONGOSH

```

> db.restaurants.find({"borough": "Bronx"})
< { _id: ObjectId("61ac550fa3738f8425ad997f"),
  address: { building: '1007', coord: [ -73.856077, 40.848447 ], street: 'Morris Park Ave', zipcode: '10462' },
  borough: 'Bronx', cuisine: 'Bakery', grades: [ { date: 2014-03-03T00:00:00.000Z, grade: 'A', score: 2 }, { date: 2013-09-11T00:00:00.000Z, grade: 'A', score: 6 }, { date: 2013-01-24T00:00:00.000Z, grade: 'A', score: 10 }, { date: 2011-11-23T00:00:00.000Z, grade: 'A', score: 9 }, { date: 2011-03-10T00:00:00.000Z, grade: 'B', score: 14 } ] },

```

بخش سوم)

MongoDB Compass - localhost:27017/restaurants.restaurants

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  "borough": "Bronx",
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    { date: 2014-03-03T00:00:00.000Z, grade: 'A', score: 2 },
    { date: 2013-09-11T00:00:00.000Z, grade: 'A', score: 6 },
    { date: 2013-01-24T00:00:00.000Z, grade: 'A', score: 10 },
    { date: 2011-11-23T00:00:00.000Z, grade: 'A', score: 9 },
    { date: 2011-03-10T00:00:00.000Z, grade: 'B', score: 14 }
  ]
}

```

>_MONGOSH

```

> db.restaurants.find({"grades.score": {$lt: 30}})
< { _id: ObjectId("61ac550fa3738f8425ad997f"),
  address: { building: '1007', coord: [ -73.856077, 40.848447 ], street: 'Morris Park Ave', zipcode: '10462' },
  borough: 'Bronx', cuisine: 'Bakery', grades: [ { date: 2014-03-03T00:00:00.000Z, grade: 'A', score: 2 }, { date: 2013-09-11T00:00:00.000Z, grade: 'A', score: 6 }, { date: 2013-01-24T00:00:00.000Z, grade: 'A', score: 10 }, { date: 2011-11-23T00:00:00.000Z, grade: 'A', score: 9 }, { date: 2011-03-10T00:00:00.000Z, grade: 'B', score: 14 } ] },

```

MongoDB Compass - localhost:27017/restaurants.restaurants

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FILTER { field: 'value' } OPTIONS FIND RESET ↺ ⋮

ADD DATA VIEW { } ☰

Displaying documents 1 - 20 of 3773 < > C REFRESH

```

{
  "_id": ObjectId("61ac550fa3738f8425ad997f"),
  "address": {
    "borough": "Bronx",
    "cuisine": "Bakery",
    "grades": Array
  },
  "name": "Morris Park Bake Shop",
  "restaurant_id": "38875445"
}

```

> _MONGOSH

```

> db.restaurants.find({"cuisine": {$ne: "American"}, "grades.grade": "A"}).sort({"cuisine": -1})
< { _id: ObjectId("61ac5510a3738f8425ada08b"),
  address: {
    building: '89',
    coord: [ -73.9995899, 40.7168015 ],
    street: 'Baxter Street',
    zipcode: '10013' },
  borough: 'Manhattan',
  cuisine: 'Vietnamese/Cambodian/Malaysia',
  grades: [ { date: 2014-08-21T00:00:00.000Z, grade: 'A', score: 13 },
    { date: 2013-08-31T00:00:00.000Z, grade: 'A', score: 13 },
    { date: 2013-04-11T00:00:00.000Z, grade: 'C', score: 3 },
    { date: 2012-10-17T00:00:00.000Z, grade: 'A', score: 4 },
    { date: 2012-05-15T00:00:00.000Z, grade: 'A', score: 10 } ] }

```