NOME CORSO

Fintech Software Developer

Unità Formativa (UF): Basi di dati SQL

Docente: Durando Giulio

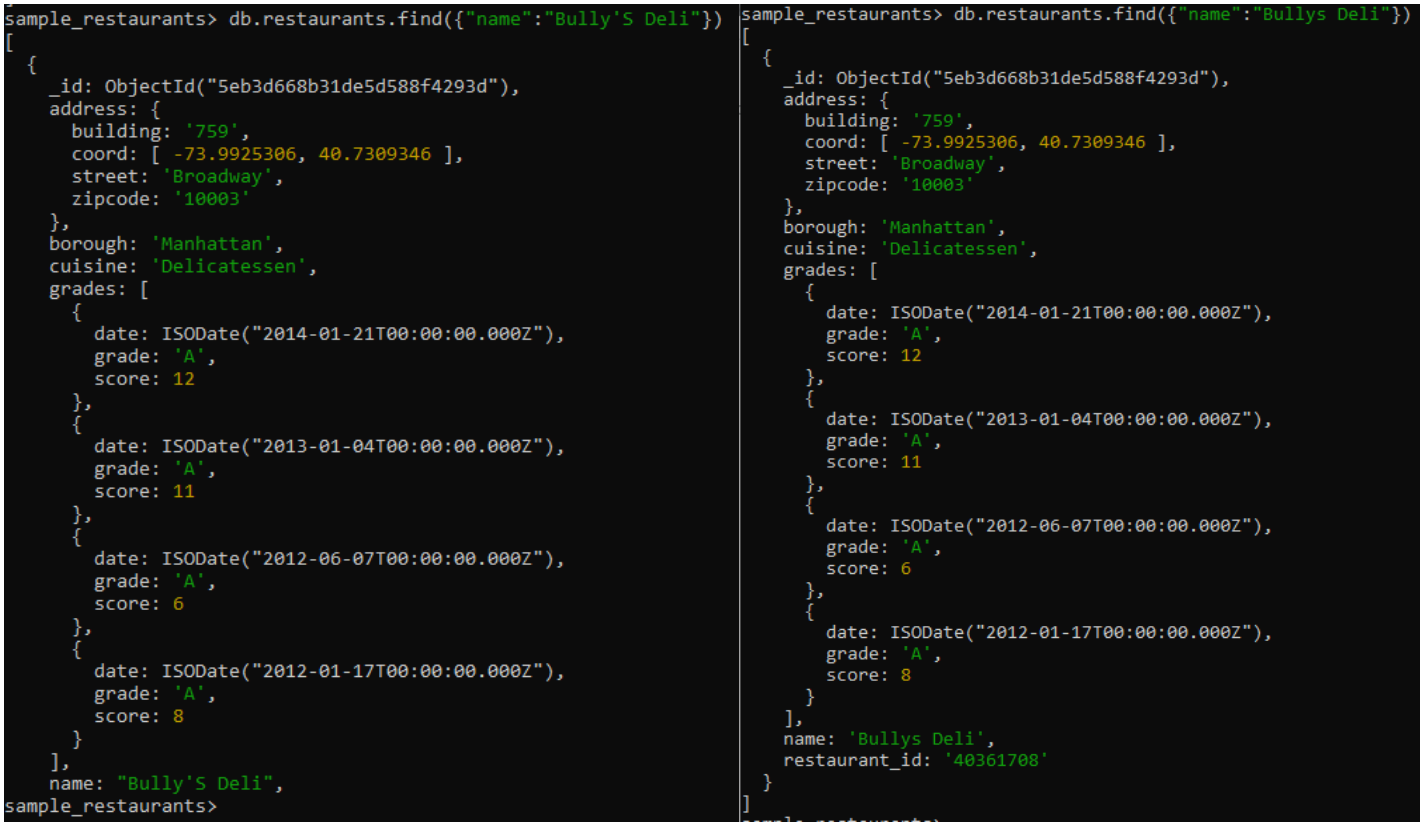
Titolo argomento: Verifica intermedia

Alunno: Brian Junior Potosi Ccuno

Usando il database sample_restaurants in cui i documenti hanno la seguente struttura


```
{
 "address": {
            "building": "1007",
            "coord": [ -73.856077, 40.848447 ],
            "street": "Morris Park Ave",
            "zipcode": "10462"
 }
 ,
 "borough": "Bronx",
 "cuisine": "Bakery",
 "grades": [
            { “date”: ISODate(yyyy-MM-ddTHH:mm:ss. SSSZ"),"grade": "A", "score": 2 },   {
          "date": ISODate(yyyy-MM-ddTHH:mm:ss. SSSZ"), "grade": "A", "score": 6 },   {
          "date": ISODate(yyyy-MM-ddTHH:mm:ss. SSSZ"), "grade": "A", "score": 10 },   {
          "date": ISODate(yyyy-MM-ddTHH:mm:ss. SSSZ"), "grade": "A", "score": 9 },   {
          "date": ISODate(yyyy-MM-ddTHH:mm:ss. SSSZ"), "grade": "B", "score": 14 }   ]
 ,
 "name": "Morris Park Bake Shop",
 "restaurant_id": "30075445"
}
```


1. Scrivere una query MongoDB che modifichi il nome del ristorante da “Bully’S Deli” a Bullys Deli”



```
sample_restaurants> db.restaurants.find({"name":"Bully'S Deli"})
[
  {
    _id: ObjectId("5eb3d668b31de5d588f4293d"),
    address: {
      building: '759',
      coord: [ -73.9925306, 40.7309346 ],
      street: 'Broadway',
      zipcode: '10003'
    },
    borough: 'Manhattan',
    cuisine: 'Delicatessen',
    grades: [
      {
        date: ISODate("2014-01-21T00:00:00.000Z"),
        grade: 'A',
        score: 12
      },
      {
        date: ISODate("2013-01-04T00:00:00.000Z"),
        grade: 'A',
        score: 11
      },
      {
        date: ISODate("2012-06-07T00:00:00.000Z"),
        grade: 'A',
        score: 6
      },
      {
        date: ISODate("2012-01-17T00:00:00.000Z"),
        grade: 'A',
        score: 8
      }
    ],
    name: "Bully'S Deli",
sample_restaurants>
```

```
sample_restaurants> db.restaurants.find({"name":"Bullys Deli"})
[
  {
    _id: ObjectId("5eb3d668b31de5d588f4293d"),
    address: {
      building: '759',
      coord: [ -73.9925306, 40.7309346 ],
      street: 'Broadway',
      zipcode: '10003'
    },
    borough: 'Manhattan',
    cuisine: 'Delicatessen',
    grades: [
      {
        date: ISODate("2014-01-21T00:00:00.000Z"),
        grade: 'A',
        score: 12
      },
      {
        date: ISODate("2013-01-04T00:00:00.000Z"),
        grade: 'A',
        score: 11
      },
      {
        date: ISODate("2012-06-07T00:00:00.000Z"),
        grade: 'A',
        score: 6
      },
      {
        date: ISODate("2012-01-17T00:00:00.000Z"),
        grade: 'A',
        score: 8
      }
    ],
    name: 'Bullys Deli',
    restaurant_id: '40361708'
  }
]
```

db.restaurants.update({"name": "Bully'S Deli"}, {$set:{ "name":"Bullys Deli"}})

2. Scrivere una query MongoDB che modifichi il campo street dell'indirizzo di quei ristoranti che si trovano sulla "5 Avenue" da "5 Avenue" a "Fifth Avenue""

```
sample_restaurants> db.restaurants.find({ "address.street": "5 Avenue" }, {"name":1, "address.street": 1 })
[
  {
    _id: ObjectId("5eb3d668b31de5d588f42949"),
    address: { street: '5 Avenue' },
    name: 'Mejlander & Mulgannon'
  },
  {
    _id: ObjectId("5eb3d668b31de5d588f429b0"),
    address: { street: '5 Avenue' },
    name: 'Fifth Avenue Bingo'
  },
  {
```

db.restaurants.update({"address.street": "5 Avenue"}, {$set:{ "address.street":"Fifth Avenue"}})

```
sample_restaurants> db.restaurants.find({ "address.street": "Fifth Avenue" }, {"name":1, "address.street": 1 })
[
  {
    _id: ObjectId("5eb3d668b31de5d588f42949"),
    address: { street: 'Fifth Avenue' },
    name: 'Mejlander & Mulgannon'
  },
  {
    _id: ObjectId("5eb3d668b31de5d588f429b0"),
    address: { street: 'Fifth Avenue' },
    name: 'Fifth Avenue Bingo'
  },
  {
```

3. Scrivere una query MongoDB che visualizzi l'ID ristorante, il nome, il tipo di cucina e il quartiere per tutti i ristoranti che o si trovano nel quartiere di "Manhattan" o fanno un tipo di cucina "American"

```
sample_restaurants> db.restaurants.find({$or:[{"borough":"Manhattan"},{"cousine":"American"}]},{"restaurant_id":1,"name":1,"cuisine":1,"borough":1 })
[
  {
    _id: ObjectId("5eb3d668b31de5d588f42937"),
    borough: 'Manhattan',
    cuisine: 'American',
    name: '1 East 66Th Street Kitchen',
    restaurant_id: '40359480'
  },
  {
    _id: ObjectId("5eb3d668b31de5d588f42939"),
    borough: 'Manhattan',
    cuisine: 'Irish',
    name: 'Dj Reynolds Pub And Restaurant',
    restaurant_id: '30191841'
  },
  {
    _id: ObjectId("5eb3d668b31de5d588f4293d"),
    borough: 'Manhattan',
    cuisine: 'Delicatessen',
    name: 'Bullys Deli',
    restaurant_id: '40361708'
  },
  {
    _id: ObjectId("5eb3d668b31de5d588f42940"),
    borough: 'Manhattan',
    cuisine: 'American',
    name: 'Glorious Food',
    restaurant_id: '40361521'
  },
  {
```

db.restaurants.find({$or:[{"borough":"Manhattan"},{"cuisine":"American"}]},{" restaurant_id":1,"name":1,"cousine":1,"borough":1 })

4. Scrivere una query MongoDB che visualizzi il nome, il quartiere, la strada e il tipo di cucina di quei ristoranti che si trovano sulla “5 Avenue” (o “Fifth Avenue” se già eseguito esercizio 2) e la cui cucina sia “Pizza” e li visualizzi per name in ordine crescente.

```
sample_restaurants> db.restaurants.find({$and:[{"address.street":"Fifth Avenue"},{"cuisine":"Pizza"}]},{"name":1
,"borough":1,"address.street":1,"cuisine":1}).sort({"name":1})
[
  {
    _id: ObjectId("5eb3d668b31de5d588f43269"),
    address: { street: 'Fifth Avenue' },
    borough: 'Brooklyn',
    cuisine: 'Pizza',
    name: 'Bayridge Pizza'
  },
  {
    _id: ObjectId("5eb3d668b31de5d588f43538"),
    address: { street: 'Fifth Avenue' },
    borough: 'Brooklyn',
    cuisine: 'Pizza',
    name: 'Charles Pizzeria'
  },
  {
    _id: ObjectId("5eb3d668b31de5d588f435be"),
    address: { street: 'Fifth Avenue' },
    borough: 'Brooklyn',
    cuisine: 'Pizza',
    name: "Domino'S Pizza"
  },
  {
    _id: ObjectId("5eb3d668b31de5d588f434e9"),
    address: { street: 'Fifth Avenue' },
    borough: 'Brooklyn',
    cuisine: 'Pizza',
    name: 'Elegante Pizza'
```

db.restaurants.find({$and:[{"address.street":"Fifth Avenue"},{"cuisine":"Pizza"}]},{"name":1,"borough":1,"address.street":1,"cuisine":1}).sort({"name":1})

5. Scrivere una query MongoDB che visualizzi l'ID ristorante, il nome e la posizione geografica per quei ristoranti in cui il 1° elemento dell'array coord sia compreso tra -120 e -60 e il 2° elemento dell'array coord sia compreso tra 10 e 50 e li visualizzi per restaurant_id in ordine decrescente.

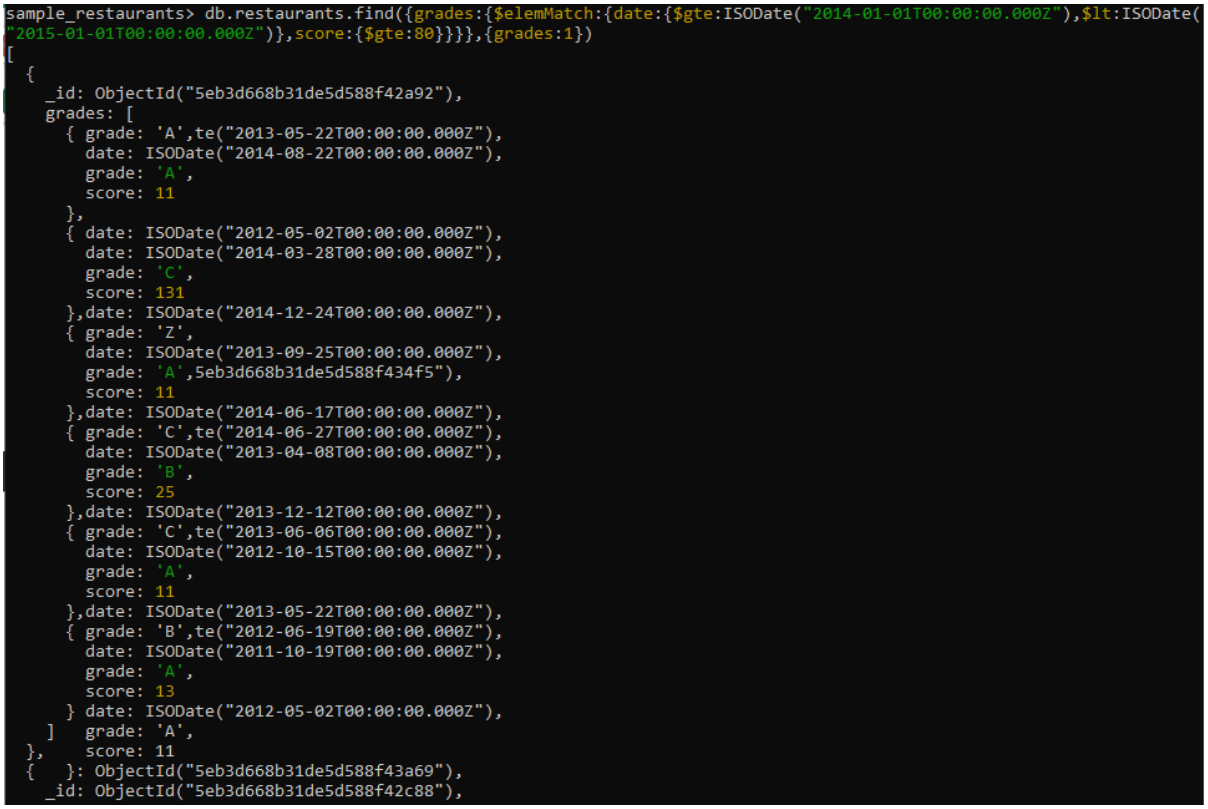
```
sample_restaurants> db.restaurants.find({"address.coord.0": {$gt : -120, $lte : -60}, "address.coord.1": {$gt :
 10, $lte : 50}}, {"restaurant_id":1, "name":1, "address.coord":1}).sort({restaurant_id:-1})
[
  {
    _id: ObjectId("5eb3d669b31de5d588f48c36"),
    address: { coord: [ -73.9691347, 40.6389857 ] },
    name: "Cold Press'D",73.830457, 40.7593244 ] },
    restaurant_id: '50018995'
  },restaurant_id: '50018984'
  {
    _id: ObjectId("5eb3d669b31de5d588f48c38"),
    address: { coord: [ -74.138492, 40.631136 ] },
    name: 'Indian Oven',-73.8299791, 40.75881330000001 ] },
    restaurant_id: '50018994'
  },restaurant_id: '50018982'
  {
    _id: ObjectId("5eb3d669b31de5d588f48c31"),
    address: { coord: [ -73.906438, 40.669367 ] },
    name: '',{ coord: [ -73.921341, 40.760346 ] },
    restaurant_id: '50018993'
  },restaurant_id: '50018980'
  {
    _id: ObjectId("5eb3d669b31de5d588f48c37"),
    address: { coord: [ -73.99514429999999, 40.7521509 ] },
    name: 'Fairfield Inn Suites Penn Station',1 ] },
```

db.restaurants.find({"address.coord.0": {$gt : -120, $lte : -60}, "address.coord.1": {$gt : 10, ltelte : 50}}, {"restaurant_id":1, "name":1, "address.coord":1}).sort({restaurant_id:-1})

6. Scrivere una query MongoDB che visualizzi i ristoranti di Manhattan che abbiano avuto almeno una recensione nell'anno 2015

db.restaurants.find({$and:[{"borough":"Manhattan"},{"grades.dates":"ISODate(2015)"}]})

7. Scrivere una query MongoDB che visualizzi il nome e tutte le recensioni di quei ristoranti che abbiano avuto almeno una recensione con un punteggio maggiore a 80 nell'anno 2014



```
sample_restaurants> db.restaurants.find({grades:{$elemMatch:{date:{$gte:ISODate("2014-01-01T00:00:00.000Z"),$lt:ISODate(
"2015-01-01T00:00:00.000Z")},score:{$gte:80}}}},{grades:1})
[
  {
    _id: ObjectId("5eb3d668b31de5d588f42a92"),
    grades: [
      { grade: 'A',te("2013-05-22T00:00:00.000Z"),
        date: ISODate("2014-08-22T00:00:00.000Z"),
        grade: 'A',
        score: 11
      },
      { date: ISODate("2012-05-02T00:00:00.000Z"),
        date: ISODate("2014-03-28T00:00:00.000Z"),
        grade: 'C',
        score: 131
      },date: ISODate("2014-12-24T00:00:00.000Z"),
      { grade: 'Z',
        date: ISODate("2013-09-25T00:00:00.000Z"),
        grade: 'A',5eb3d668b31de5d588f434f5"),
        score: 11
      },date: ISODate("2014-06-17T00:00:00.000Z"),
      { grade: 'C',te("2014-06-27T00:00:00.000Z"),
        date: ISODate("2013-04-08T00:00:00.000Z"),
        grade: 'B',
        score: 25
      },date: ISODate("2013-12-12T00:00:00.000Z"),
      { grade: 'C',te("2013-06-06T00:00:00.000Z"),
        date: ISODate("2012-10-15T00:00:00.000Z"),
        grade: 'A',
        score: 11
      },date: ISODate("2013-05-22T00:00:00.000Z"),
      { grade: 'B',te("2012-06-19T00:00:00.000Z"),
        date: ISODate("2011-10-19T00:00:00.000Z"),
        grade: 'A',
        score: 13
      } date: ISODate("2012-05-02T00:00:00.000Z"),
    ]   grade: 'A',
  },    score: 11
  {   }: ObjectId("5eb3d668b31de5d588f43a69"),
    _id: ObjectId("5eb3d668b31de5d588f42c88"),
```

db.restaurants.find({grades:{$elemMatch:{date:{$gte:ISODate("2014-01-01T00:00:00.000Z"),$lt:ISODate("2015-01-01T00:00:00.000Z")},score:{$gte:80}}}},{grades:1})