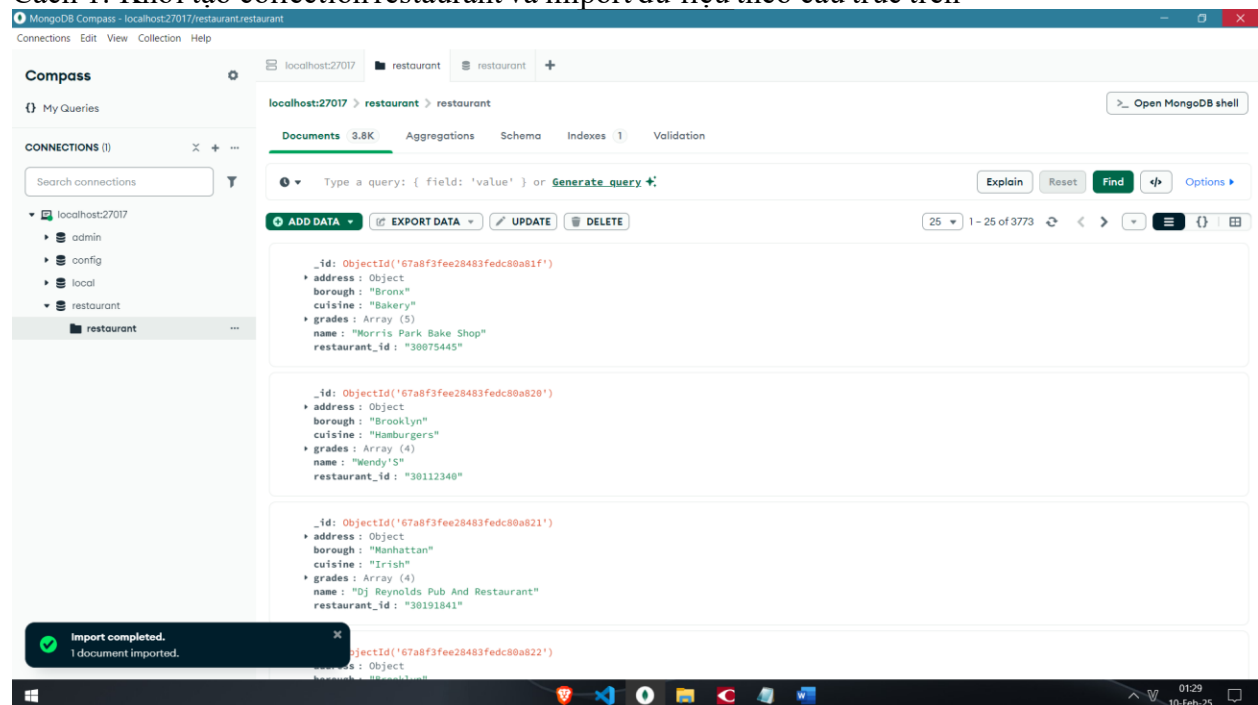


Bài 1: Mở tập tin restaurant_documents.txt và nhập dữ liệu theo cấu trúc

```
{
  "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"
}
```

Cách 1: Khởi tạo collection restaurant và import dữ liệu theo cấu trúc trên



Cách 2: Hoặc import từ terminal

```
mongoimport --db restaurant --collection restaurant --file
"C:\Users\KietDo\Desktop\restaurant_documents.txt" --jsonArray
```

2. Hiển thị tất cả document có trong restaurant

Sử dụng: `db.restaurant.find().pretty()`

```
> db.restaurant.find().pretty()
< {
  _id: ObjectId('67a9f62bd65c0aacab18964a'),
  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
    }
  ]
}
```

3. Hiển thị các key restaurant_id, name, borough, cuisine

Sử dụng: `db.restaurant.find({}, {restaurant_id: 1, name: 1, borough: 1, cuisine: 1, _id: 0}).pretty()`

```
>_MONGOSH
> db.restaurant.find({}, {restaurant_id: 1, name: 1, borough: 1, cuisine: 1, _id: 0}).pretty()
< {
  borough: 'Bronx',
  cuisine: 'Bakery',
  name: 'Morris Park Bake Shop',
  restaurant_id: '30075445'
}
{
  borough: 'Brooklyn',
  cuisine: 'Hamburgers',
  name: 'Wendy'S',
  restaurant_id: '30112340'
}
{
  borough: 'Manhattan',
  cuisine: 'Irish',
  name: 'Dj Reynolds Pub And Restaurant',
  restaurant_id: '30191841'
}
{
  borough: 'Brooklyn',
  cuisine: 'American ',
  name: 'Riviera Caterer',
  restaurant_id: '40356018'
}
{
  borough: 'Queens',
  cuisine: 'Jewish/Kosher',
  name: 'Tov Kosher Kitchen',
```

4. Hiển thị các key restaurant_id, name, borough, cuisine nhưng không hiển thị _id

Sử dụng: `db.restaurant.find({}, {restaurant_id: 1, name: 1, borough: 1, cuisine: 1, _id: 0}).pretty()`

```
> db.restaurant.find({}, {restaurant_id: 1, name: 1, borough: 1, cuisine: 1, _id: 0}).pretty()
< {
  borough: 'Bronx',
  cuisine: 'Bakery',
  name: 'Morris Park Bake Shop',
  restaurant_id: '30075445'
}
{
  borough: 'Brooklyn',
  cuisine: 'Hamburgers',
  name: 'Wendy'S',
  restaurant_id: '30112340'
}
{
  borough: 'Manhattan',
  cuisine: 'Irish',
  name: 'Dj Reynolds Pub And Restaurant',
  restaurant_id: '30191841'
}
{
  borough: 'Brooklyn',
  cuisine: 'American ',
  name: 'Riviera Caterer',
  restaurant_id: '40356018'
}
{
```

5. Hiện thị tất cả restaurant có borough là Bronx
Sử dụng: db.restaurant.find({borough: "Bronx"}).pretty()

```
> db.restaurant.find({borough: "Bronx"}).pretty()
< {
  _id: ObjectId('67a9f62bd65c0aacab18964a'),
  address: {
    building: '1007',
    coord: [
      -73.856077,
      40.848447
    ],
    street: 'Morris Park Ave',
    zipcode: '10462'
  },
  borough: 'Bronx',
  cuisine: 'Bakery',
  grades: [
    {
```

```
    ],  
    street: 'Southern Boulevard',  
    zipcode: '10460'  
  },  
  borough: 'Bronx',  
  cuisine: 'American ',  
  grades: [  
    {  
      date: 2014-05-28T00:00:00.000Z,  
      grade: 'A',  
      score: 11  
    },  
    {  
      date: 2013-06-19T00:00:00.000Z,  
      grade: 'A',  
      score: 4  
    },  
    {  
      date: 2012-06-15T00:00:00.000Z,  
      grade: 'A',  
      score: 3  
    }  
  ],  
  name: 'Wild Asia',  
  restaurant_id: '40357217'  
}
```

6. Hiển thị 5 restaurant đầu tiên có borough là Bronx
Sử dụng: `db.restaurant.find({borough: "Bronx"}).limit(5).pretty()`

```
> db.restaurant.find({borough: "Bronx"}).limit(5).pretty()
< {
  _id: ObjectId('67a9f62bd65c0aacab18964a'),
  address: {
    building: '1007',
    coord: [
      -73.856077,
      40.848447
    ],
    street: 'Morris Park Ave',
    zipcode: '10462'
  },
  borough: 'Bronx',
  cuisine: 'Bakery',
```

```
  },
  name: 'Morris Park Bake Shop',
  restaurant_id: '30075445'
}
{
  _id: ObjectId('67a9f62bd65c0aacab189654'),
  address: {
    building: '2300',
    coord: [
      -73.8786113,
      40.8502883
    ],
    street: 'Southern Boulevard',
    zipcode: '10460'
  },
  borough: 'Bronx',
  cuisine: 'American ',
  grades: [
    {
      date: 2014-05-28T00:00:00.000Z,
      grade: 'A',
      score: 11
    },
  ],
}
```

```
],
  name: 'Wild Asia',
  restaurant_id: '40357217'
}
{
  _id: ObjectId('67a9f62bd65c0aacab189669'),
  address: {
    building: '1006',
    coord: [
      -73.84856870000002,
      40.8903781
    ],
    street: 'East 233 Street',
    zipcode: '10466'
  },
  borough: 'Bronx',
  cuisine: 'Ice Cream, Gelato, Yogurt, Ices',
  grades: [
    {
      date: 2014-04-24T00:00:00.000Z,
      grade: 'A',
      score: 10
    },
    {
      date: 2013-09-05T00:00:00.000Z,
      grade: 'A',
```

```
_id: ObjectId('67a9f62bd65c0aacab18966d'),
address: {
  building: '1236',
  coord: [
    -73.8893654,
    40.81376179999999
  ],
  street: '238 Spofford Ave',
  zipcode: '10474'
},
borough: 'Bronx',
cuisine: 'Chinese',
grades: [
  {
    date: 2013-12-30T00:00:00.000Z,
    grade: 'A',
    score: 8
  },
  {
    date: 2013-01-08T00:00:00.000Z,
    grade: 'A',
    score: 10
  },
]
```

```
    ],  
    street: 'East Kingsbridge Road',  
    zipcode: '10458'  
  },  
  borough: 'Bronx',  
  cuisine: 'Chinese',  
  grades: [  
    {  
      date: 2014-03-03T00:00:00.000Z,  
      grade: 'A',  
      score: 10  
    },  
    {  
      date: 2013-09-26T00:00:00.000Z,  
      grade: 'A',  
      score: 10  
    },  
    {  
      date: 2013-03-19T00:00:00.000Z,  
      grade: 'A',  
      score: 10  
    },  
  ],  
}
```

7. Hiện thị 5 restaurant tiếp theo sau khi đã bỏ qua 5 restaurant đầu có borough là Bronx
Sử dụng: `db.restaurant.find({borough: "Bronx"}).skip(5).limit(5).pretty()`


```
> db.restaurant.find({borough: "Bronx"}).skip(5).limit(5).pretty()
< {
  _id: ObjectId('67a9f62bd65c0aacab189687'),
  address: {
    building: '658',
    coord: [
      -73.81363999999999,
      40.829411000000001
    ],
    street: 'Clarence Ave',
    zipcode: '10465'
  },
  borough: 'Bronx',
  cuisine: 'American ',
  grades: [
    {
      date: 2014-06-21T00:00:00.000Z,
      grade: 'A',
      score: 5
    },
    {
      date: 2012-07-11T00:00:00.000Z,
      grade: 'A',
      score: 10
    }
  ],
  name: 'Manhem Club',
  restaurant_id: '40364363'
}
```

```
  _id: ObjectId('67a9f62bd65c0aacab18969f'),
  address: {
    building: '2222',
    coord: [
      -73.84971759999999,
      40.8304811
    ],
    street: 'Haviland Avenue',
    zipcode: '10462'
  },
  borough: 'Bronx',
  cuisine: 'American ',
  grades: [
    {
      date: 2014-12-18T00:00:00.000Z,
      grade: 'A',
      score: 7
    },
    {
      date: 2014-05-01T00:00:00.000Z,
      grade: 'B',
      score: 17
    },
    {
      date: 2013-03-14T00:00:00.000Z,
```

```
    ],  
    name: 'The New Starling Athletic Club Of The Bronx',  
    restaurant_id: '40364956'  
  }  
  {  
    _id: ObjectId('67a9f62bd65c0aacab1896b7'),  
    address: {  
      building: '72',  
      coord: [  
        -73.92506,  
        40.8275556  
      ],  
      street: 'East 161 Street',  
      zipcode: '10451'  
    },  
    borough: 'Bronx',  
    cuisine: 'American ',  
    grades: [  
      {  
        date: 2014-04-15T00:00:00.000Z,  
        grade: 'A',  
        score: 10  
      }  
    ]  
  }  
]
```

```
    ],  
    name: 'Yankee Tavern',  
    restaurant_id: '40365499'  
  }  
  {  
    _id: ObjectId('67a9f62bd65c0aacab1896ca'),  
    address: {  
      building: '331',  
      coord: [  
        -73.87786539999999,  
        40.8724377  
      ],  
      street: 'East 204 Street',  
      zipcode: '10467'  
    },  
    borough: 'Bronx',  
    cuisine: 'Irish',  
    grades: [  
      {  
        date: 2014-08-26T00:00:00.000Z,  
        grade: 'A',  
        score: 10  
      }  
    ],  
    {  
      date: 2014-08-26T00:00:00.000Z,  
      grade: 'A',  
      score: 10  
    }  
  }  
]
```

```
],  
  name: 'Mcdwyers Pub',  
  restaurant_id: '40365893'  
}  
{  
  _id: ObjectId('67a9f62bd65c0aacab1896e3'),  
  address: {  
    building: '5820',  
    coord: [  
      -73.9002615,  
      40.885186  
    ],  
    street: 'Broadway',  
    zipcode: '10463'  
  },  
  borough: 'Bronx',  
  cuisine: 'American ',  
  grades: [  
    {  
      date: 2014-02-26T00:00:00.000Z,  
      grade: 'A',  
      score: 5  
    },  
    {  
      date: 2014-02-26T00:00:00.000Z,  
      grade: 'A',  
      score: 5  
    }  
  ],  
  name: 'Mcdwyers Pub',  
  restaurant_id: '40365893'  
}
```

```
    score: 35  
  }  
],  
  name: 'The Punch Bowl',  
  restaurant_id: '40366497'  
}
```

8. Cho biết những restaurant có điểm số > 90

Sử dụng: `db.restaurant.find({"grades.score": {$gt: 90}}).pretty()`

```
> db.restaurant.find({"grades.score": {$gt: 90}}).pretty()
< {
  _id: ObjectId('67a9f62bd65c0aacab1897a8'),
  address: {
    building: '65',
    coord: [
      -73.9782725,
      40.7624022
    ],
    street: 'West 54 Street',
    zipcode: '10019'
  },
  borough: 'Manhattan',
  cuisine: 'American ',
  grades: [
    {
      date: 2014-08-22T00:00:00.000Z,
      grade: 'A',
      score: 11
    },
    {
      date: 2014-03-28T00:00:00.000Z,
      grade: 'C',
      score: 131
    },
    {
      date: 2013-09-25T00:00:00.000Z,
      grade: 'A',
```

```
],  
  name: "Murals On 54/Randolphs'S",  
  restaurant_id: '40372466'  
}  
{  
  _id: ObjectId('67a9f62bd65c0aacab189849'),  
  address: {  
    building: '345',  
    coord: [  
      -73.9864626,  
      40.7266739  
    ],  
    street: 'East 6 Street',  
    zipcode: '10003'  
  },  
  borough: 'Manhattan',  
  cuisine: 'Indian',  
  grades: [  
    {  
      date: 2014-09-15T00:00:00.000Z,  
      grade: 'A',  
      score: 5  
    },  
    {  
      date: 2014-01-14T00:00:00.000Z
```

```
{
  date: 2012-04-06T00:00:00.000Z,
  grade: 'C',
  score: 92
},
{
  date: 2011-11-03T00:00:00.000Z,
  grade: 'C',
  score: 41
}
```

```
name: 'Gandhi',
restaurant_id: '40381295'
}
{
  _id: ObjectId('67a9f62bd65c0aacab1899ac'),
  address: {
    building: '130',
    coord: [
      -73.984758,
      40.7457939
    ],
    street: 'Madison Avenue',
    zipcode: '10016'
  },
  borough: 'Manhattan',
  cuisine: 'Pizza/Italian',
  grades: [
    {
      date: 2014-12-24T00:00:00.000Z,
      grade: 'Z',
      score: 31
    },
    {
      date: 2014-06-17T00:00:00.000Z,
      grade: 'C',
      score: 98
    }
  ]
}
```

```
>_MONGOSH
    date: 2014-12-24T00:00:00.000Z,
    grade: 'Z',
    score: 31
  },
  {
    date: 2014-06-17T00:00:00.000Z,
    grade: 'C',
    score: 98
  },
  {
    date: 2013-12-12T00:00:00.000Z,
    grade: 'C',
    score: 32
  },
  {
    date: 2013-05-22T00:00:00.000Z,
    grade: 'B',
    score: 21
  },
  {
    date: 2012-05-02T00:00:00.000Z,
    grade: 'A',
    score: 11
  }
],
name: 'Bella Napoli',
restaurant_id: '40393488'
}
```


9. Cho biết những restaurant có điểm số > 80 và < 100

Sử dụng: `db.restaurant.find({"grades.score": {$gt: 80, $lt: 100}}).pretty()`

```
> db.restaurant.find({"grades.score": {$gt: 80, $lt: 100}}).pretty()
< {
  _id: ObjectId('67a9f62bd65c0aacab1897a8'),
  address: {
    building: '65',
    coord: [
      -73.9782725,
      40.7624022
    ],
    street: 'West 54 Street',
    zipcode: '10019'
  },
  borough: 'Manhattan',
  cuisine: 'American ',
  grades: [
    {
      date: 2014-08-22T00:00:00.000Z,
      grade: 'A',
      score: 11
    },
    {
      date: 2014-03-28T00:00:00.000Z,
      grade: 'C',
      score: 131
    },
  ]
}
```

```
>_MONGOSH
{
  date: 2013-09-25T00:00:00.000Z,
  grade: 'A',
  score: 11
},
{
  date: 2013-04-08T00:00:00.000Z,
  grade: 'B',
  score: 25
},
{
  date: 2012-10-15T00:00:00.000Z,
  grade: 'A',
  score: 11
},
{
  date: 2011-10-19T00:00:00.000Z,
  grade: 'A',
  score: 13
}
],
name: "Murals On 54/Randolphs'S",
restaurant_id: '40372466'
}
{
  _id: ObjectId('67a9f62bd65c0aacab189849'),
  address: {
    building: '345',
    coord: [
```

```
    ],  
    street: 'East 6 Street',  
    zipcode: '10003'  
  },  
  borough: 'Manhattan',  
  cuisine: 'Indian',  
  grades: [  
    {  
      date: 2014-09-15T00:00:00.000Z,  
      grade: 'A',  
      score: 5  
    },  
    {  
      date: 2014-01-14T00:00:00.000Z,  
      grade: 'A',  
      score: 8  
    },  
    {  
      date: 2013-05-30T00:00:00.000Z,  
      grade: 'A',  
      score: 12  
    },  
    {  
      date: 2013-04-24T00:00:00.000Z,  
      grade: 'P',  
      score: 2  
    }  
  ]  
}
```

```
{
  date: 2012-04-06T00:00:00.000Z,
  grade: 'C',
  score: 92
},
{
  date: 2011-11-03T00:00:00.000Z,
  grade: 'C',
  score: 41
}
],
name: 'Gandhi',
restaurant_id: '40381295'
}
{
  _id: ObjectId('67a9f62bd65c0aacab1899ac'),
  address: {
    building: '130',
    coord: [
      -73.984758,
      40.7457939
    ],
    street: 'Madison Avenue',
    zipcode: '10016'
  },
  borough: 'Manhattan',
  cuisine: 'Pizza/Italian',
  grades: [
```

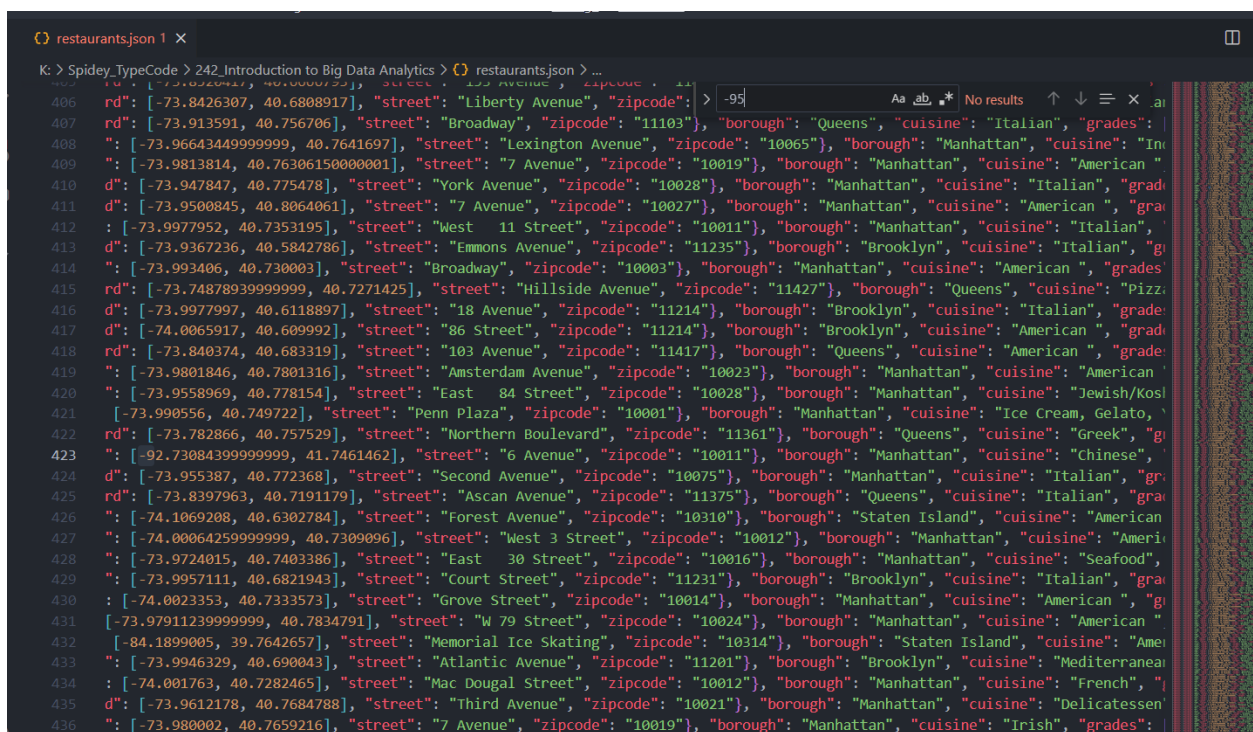
```
>_MONGOSH
{
  date: 2014-12-24T00:00:00.000Z,
  grade: 'Z',
  score: 31
},
{
  date: 2014-06-17T00:00:00.000Z,
  grade: 'C',
  score: 98
},
{
  date: 2013-12-12T00:00:00.000Z,
  grade: 'C',
  score: 32
},
{
  date: 2013-05-22T00:00:00.000Z,
  grade: 'B',
  score: 21
},
{
  date: 2012-05-02T00:00:00.000Z,
  grade: 'A',
  score: 11
}
],
name: 'Bella Napoli',
restaurant_id: '40393488'
```

```
restaurant_id: '40393488'  
}  
{  
  _id: ObjectId('67a9f62cd65c0aacab18a218'),  
  address: {  
    building: '',  
    coord: [  
      -74.0163793,  
      40.7167671  
    ],  
    street: 'Hudson River',  
    zipcode: '10282'  
  },  
  borough: 'Manhattan',  
  cuisine: 'American ',  
  grades: [  
    {  
      date: 2014-06-27T00:00:00.000Z,  
      grade: 'C',  
      score: 89  
    },  
    {  
      date: 2013-06-06T00:00:00.000Z,  
      grade: 'A',  
      score: 6  
    },  
    {  
      date: 2012-06-19T00:00:00.000Z,  
      grade: 'A',
```

```
],  
  name: 'West 79Th Street Boat Basin Cafe',  
  restaurant_id: '40756344'  
}
```

10. Cho biết restaurant có có tung độ (latitude) < -95.754.168
Sử dụng: `db.restaurant.find({"address.coord.1": {$lt: -95.754168}}).pretty()`

Tìm không có nên import vào mongodb cũng không tìm được tung độ như đề bài thay vào đó sẽ lấy số tung độ gần nhất là -92



```
K: > Spidey_TypeCode > 242_Introduction to Big Data Analytics > restaurants.json > ...  
406 rd: [-73.8426307, 40.6808917], "street": "Liberty Avenue", "zipcode": "11103", "borough": "Queens", "cuisine": "Italian", "grades":  
407 rd: [-73.913591, 40.756706], "street": "Broadway", "zipcode": "11103", "borough": "Queens", "cuisine": "Italian", "grades":  
408 ": [-73.96643449999999, 40.7641697], "street": "Lexington Avenue", "zipcode": "10065", "borough": "Manhattan", "cuisine": "Ind  
409 ": [-73.9813814, 40.76306150000001], "street": "7 Avenue", "zipcode": "10019", "borough": "Manhattan", "cuisine": "American",  
410 d: [-73.947847, 40.775478], "street": "York Avenue", "zipcode": "10028", "borough": "Manhattan", "cuisine": "Italian", "grade  
411 d: [-73.9500845, 40.8064061], "street": "7 Avenue", "zipcode": "10027", "borough": "Manhattan", "cuisine": "American", "grade  
412 ": [-73.9977952, 40.7353195], "street": "West 11 Street", "zipcode": "10011", "borough": "Manhattan", "cuisine": "Italian",  
413 d: [-73.9367236, 40.5842786], "street": "Emmons Avenue", "zipcode": "11235", "borough": "Brooklyn", "cuisine": "Italian", "g  
414 ": [-73.993406, 40.730003], "street": "Broadway", "zipcode": "10003", "borough": "Manhattan", "cuisine": "American", "grades  
415 rd: [-73.74878939999999, 40.7271425], "street": "Hillside Avenue", "zipcode": "11427", "borough": "Queens", "cuisine": "Pizz  
416 d: [-73.9977997, 40.6118897], "street": "18 Avenue", "zipcode": "11214", "borough": "Brooklyn", "cuisine": "Italian", "grade  
417 d: [-74.0065917, 40.609992], "street": "86 Street", "zipcode": "11214", "borough": "Brooklyn", "cuisine": "American", "grade  
418 rd: [-73.840374, 40.683319], "street": "103 Avenue", "zipcode": "11417", "borough": "Queens", "cuisine": "American", "grade  
419 ": [-73.9801846, 40.7801316], "street": "Amsterdam Avenue", "zipcode": "10023", "borough": "Manhattan", "cuisine": "American",  
420 ": [-73.9558969, 40.778154], "street": "East 84 Street", "zipcode": "10028", "borough": "Manhattan", "cuisine": "Jewish/Kosl  
421 [-73.990556, 40.749722], "street": "Penn Plaza", "zipcode": "10001", "borough": "Manhattan", "cuisine": "Ice Cream, Gelato",  
422 rd: [-73.782866, 40.757529], "street": "Northern Boulevard", "zipcode": "11361", "borough": "Queens", "cuisine": "Greek", "g  
423 ": [-92.73084399999999, 41.7461462], "street": "6 Avenue", "zipcode": "10011", "borough": "Manhattan", "cuisine": "Chinese",  
424 d: [-73.955387, 40.772368], "street": "Second Avenue", "zipcode": "10075", "borough": "Manhattan", "cuisine": "Italian", "gr  
425 rd: [-73.8397963, 40.7191179], "street": "Ascan Avenue", "zipcode": "11375", "borough": "Queens", "cuisine": "Italian", "gr  
426 ": [-74.1069208, 40.6302784], "street": "Forest Avenue", "zipcode": "10310", "borough": "Staten Island", "cuisine": "American  
427 ": [-74.00064259999999, 40.7309096], "street": "West 3 Street", "zipcode": "10012", "borough": "Manhattan", "cuisine": "Ameri  
428 ": [-73.9724015, 40.7403386], "street": "East 30 Street", "zipcode": "10016", "borough": "Manhattan", "cuisine": "Seafood",  
429 ": [-73.9957111, 40.6821943], "street": "Court Street", "zipcode": "11231", "borough": "Brooklyn", "cuisine": "Italian", "gr  
430 [-74.0023353, 40.7333573], "street": "Grove Street", "zipcode": "10014", "borough": "Manhattan", "cuisine": "American", "g  
431 [-73.97911239999999, 40.7834791], "street": "W 79 Street", "zipcode": "10024", "borough": "Manhattan", "cuisine": "American",  
432 [-84.1899005, 39.7642657], "street": "Memorial Ice Skating", "zipcode": "10314", "borough": "Staten Island", "cuisine": "Ameri  
433 ": [-73.9946329, 40.690043], "street": "Atlantic Avenue", "zipcode": "11201", "borough": "Brooklyn", "cuisine": "Mediterranean",  
434 [-74.001763, 40.7282465], "street": "Mac Dougal Street", "zipcode": "10012", "borough": "Manhattan", "cuisine": "French",  
435 d: [-73.9612178, 40.7684788], "street": "Third Avenue", "zipcode": "10021", "borough": "Manhattan", "cuisine": "Delicatessen",  
436 ": [-73.980002, 40.7659216], "street": "7 Avenue", "zipcode": "10019", "borough": "Manhattan", "cuisine": "Irish", "grades":
```

Với lệnh: `db.restaurant.find({"address.coord.0": {$lt: -92}})`

```
< {  
  _id: ObjectId('67a9f62bd65c0aacab1897f0'),  
  address: {  
    building: '464',  
    coord: [  
      -92.73084399999999,  
      41.7461462  
    ],  
    street: '6 Avenue',  
    zipcode: '10011'  
  },  
  borough: 'Manhattan',  
  cuisine: 'Chinese',  
  grades: [  
    {
```

11. Cho biết restaurant có borough là Brooklyn và có cuisine là American
Sử dụng 3 lệnh nhưng không tìm thấy:

```
> type 'c' for more  
> db.restaurants.find({ borough: "Brooklyn", cuisine: "American" })  
<  
> db.restaurants.find({ borough: { $regex: /Brooklyn/i }, cuisine: { $regex: /American/i } })  
<  
> db.restaurants.find({ borough: "Brooklyn", cuisine: "American" }).pretty()  
<  
restaurant >
```

12. Cho biết restaurant có borough là Manhattan và có grade là A
Sử dụng: db.restaurant.find({ borough: "Manhattan", "grades.grade": "A" })


```
> db.restaurant.find({ borough: "Manhattan", "grades.grade": "A" })
< {
  _id: ObjectId('67a9f62bd65c0aacab18964c'),
  address: {
    building: '351',
    coord: [
      -73.98513559999999,
      40.7676919
    ],
    street: 'West 57 Street',
    zipcode: '10019'
  },
  borough: 'Manhattan',
  cuisine: 'Irish',
  grades: [
    {
      date: 2014-09-06T00:00:00.000Z,
      grade: 'A',
      score: 2
    },
    {
      date: 2013-07-22T00:00:00.000Z,
      grade: 'A',
      score: 11
    },
    {
      date: 2013-07-31T00:00:00.000Z,
```

13. Cho biết có bao nhiêu restaurant theo borough
Sử dụng:

```
db.restaurant.aggregate([
  { $group: { _id: "$borough", total: { $sum: 1 } } }
])
```

```
> db.restaurant.aggregate([
  { $group: { _id: "$borough", total: { $sum: 1 } } }
])
< {
  _id: 'Brooklyn',
  total: 684
}
{
  _id: 'Manhattan',
  total: 1883
}
{
  _id: 'Bronx',
  total: 310
}
{
  _id: 'Queens',
  total: 738
}
{
  _id: 'Staten Island',
  total: 158
}
restaurant >
```

14. Cho biết tổng số score của các restaurant theo borough
Sử dụng:

```
db.restaurant.aggregate([
  { $unwind: "$grades" },
  { $group: { _id: "$borough", total_score: { $sum: "$grades.score" } } }
```

])

```

> db.restaurant.aggregate([
  { $unwind: "$grades" },
  { $group: { _id: "$borough", total_score: { $sum: "$grades.score" } } }
])
< {
  _id: 'Bronx',
  total_score: 17007
}
{
  _id: 'Brooklyn',
  total_score: 37648
}
{
  _id: 'Manhattan',
  total_score: 102925
}
{
  _id: 'Queens',
  total_score: 42340
}
{
  _id: 'Staten Island',
  total_score: 7443
}
restaurant> |
```

15. Cho biết tổng số score của các restaurant theo borough và chỉ lấy những score > 50
Sử dụng:

```
db.restaurant.aggregate([
  { $unwind: "$grades" },
  { $match: { "grades.score": { $gt: 50 } } },
  { $group: { _id: "$borough", total_score: { $sum: "$grades.score" } } }
])
```

```
> db.restaurant.aggregate([
  { $unwind: "$grades" },
  { $match: { "grades.score": { $gt: 50 } } },
  { $group: { _id: "$borough", total_score: { $sum: "$grades.score" } } }
])
< {
  _id: 'Brooklyn',
  total_score: 881
}
{
  _id: 'Bronx',
  total_score: 402
}
{
  _id: 'Staten Island',
  total_score: 110
}
{
  _id: 'Manhattan',
  total_score: 2226
}
{
  _id: 'Queens',
  total_score: 670
}
restaurant>
```

16. Cho biết tổng số score cho từng restaurant
Sử dụng:

```
db.restaurant.aggregate([
  { $unwind: "$grades" },
  { $group: { _id: "$name", total_score: { $sum: "$grades.score" } } }
])
```

```
> db.restaurant.aggregate([
  { $unwind: "$grades" },
  { $group: { _id: "$name", total_score: { $sum: "$grades.score" } } }
])
< {
  _id: 'Eastwood Manor',
  total_score: 66
}
{
  _id: 'Barnes & Noble Booksellers',
  total_score: 45
}
{
  _id: 'Lincoln Plaza Cinemas',
  total_score: 86
}
{
  _id: 'Hanson Gourmet Deli & Cafe',
  total_score: 86
}
{
  _id: 'Nonis Coffee Shop',
  total_score: 51
}
```

17. Cho biết số đánh giá (grade) của các restaurant theo từng borough
Sử dụng:

```
db.restaurant.aggregate([
  { $unwind: "$grades" },
  { $group: { _id: "$borough", total_grades: { $sum: 1 } } }
])
```

```
> db.restaurant.aggregate([
  { $unwind: "$grades" },
  { $group: { _id: "$borough", total_grades: { $sum: 1 } } }
])
< {
  _id: 'Bronx',
  total_grades: 1506
}
{
  _id: 'Queens',
  total_grades: 3649
}
{
  _id: 'Staten Island',
  total_grades: 668
}
{
  _id: 'Brooklyn',
  total_grades: 3276
}
{
  _id: 'Manhattan',
  total_grades: 9048
}
restaurant> |
```

18. Cho biết số đánh giá (grade) của từng restaurant.
Sử dụng:

```
db.restaurant.aggregate([
  { $unwind: "$grades" },
  { $group: { _id: "$name", total_grades: { $sum: 1 } } }
```

])

```
> db.restaurant.aggregate([
  { $unwind: "$grades" },
  { $group: { _id: "$name", total_grades: { $sum: 1 } } }
])
< {
  _id: 'St Lucian Paradise',
  total_grades: 3
}
{
  _id: 'Jimmy Max Restaurant',
  total_grades: 6
}
{
  _id: 'Pam'S Bakery',
  total_grades: 6
}
{
  _id: 'The Campbell Apartment - In Grand Central',
  total_grades: 4
}
{
  _id: 'Mayer, Brown & Platt',
  total_grades: 4
}
```