exercise-19

Outputs:

1.

```
data> db.restaurants.find(
... {$or: [
...     {name: /^Wil/},
...     {"$and": [
...          {"cuisine" : {$ne :"American "}},
...          {"cuisine" : {$ne :"Chinees"}}
...      ]}
... ]}
... ,{"restaurant_id" : 1,"name":1,"borough":1,"cuisine" :1}
... );
[
  {
    _id: ObjectId('664f59711d511629dccdcdfb'),
    borough: 'Bronx',
    cuisine: 'Bakery',
    name: 'Morris Park Bake Shop',
    restaurant_id: '30075445'
  },
  {
    _id: ObjectId('664f59711d511629dccdcdfc'),
    borough: 'Brooklyn',
    cuisine: 'Hamburgers',
    name: "Wendy'S",
    restaurant_id: '30112340'
  },
  {
    _id: ObjectId('664f59711d511629dccdcdfd'),
    borough: 'Manhattan',
    cuisine: 'Irish',
    name: 'Dj Reynolds Pub And Restaurant',
    restaurant_id: '30191841'
  },
  {
    _id: ObjectId('664f59711d511629dccdcdff'),
    borough: 'Queens',
    cuisine: 'Jewish/Kosher',
    name: 'Tov Kosher Kitchen',
    restaurant_id: '40356068'
  }
]
data>
```

2.

```
data> db.restaurants.find(
...                          {
...                           "grades.date": ISODate("2014-08-11T00:00:00Z"),
...                           "grades.grade":"A" ,
...                           "grades.score" : 11
...                          },
...                          {"restaurant_id" : 1,"name":1,"grades":1}
...                );
```

3.

```
data> db.restaurants.find(
...                          { "grades.1.date": ISODate("2014-08-11T00:00:00Z"),
...                            "grades.1.grade":"A" ,
...                            "grades.1.score" : 9
...                          },
...                            {"restaurant_id" : 1,"name":1,"grades":1}
...                );
```

4.

```
data> db.restaurants.find(
...                          {
...                           "address.coord.1": {$gt : 42, $lte : 52}
...                          },
...                            {"restaurant_id" : 1,"name":1,"address":1,"coord":1}
...                );
```

5.

```
data> db.restaurants.find().sort({"name":1});
[
  {
    _id: ObjectId('664f59711d511629dccdcdfd'),
    address: {
      building: '351',
      coord: [ -73.98513559999999, 40.7676919 ],
      street: 'West   57 Street',
      zipcode: '10019'
    },
    borough: 'Manhattan',
    cuisine: 'Irish',
    grades: [
      { date: { '$date': 1409961600000 }, grade: 'A', score: 2 },
      { date: { '$date': 1374451200000 }, grade: 'A', score: 11 },
      { date: { '$date': 1343692800000 }, grade: 'A', score: 12 },
      { date: { '$date': 1325116800000 }, grade: 'A', score: 12 }
    ],
    name: 'Dj Reynolds Pub And Restaurant',
    restaurant_id: '30191841'
  },
  {
    _id: ObjectId('664f59711d511629dccdcdfb'),
    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: { '$date': 1299715200000 }, grade: 'B', score: 14 }
    ],
    name: 'Morris Park Bake Shop',
    restaurant_id: '30075445'
  },
  {
    _id: ObjectId('664f59711d511629dccdcdfe'),
    address: {
      building: '2780',
      coord: [ -73.98241999999999, 40.579505 ],
      street: 'Stillwell Avenue',
      zipcode: '11224'
    },
    borough: 'Brooklyn',
    cuisine: 'American ',
    grades: [
      { date: { '$date': 1402358400000 }, grade: 'A', score: 5 },
```

```
        { date: { '$date': 1402358400000 }, grade: 'A', score: 5 },
        { date: { '$date': 1370390400000 }, grade: 'A', score: 7 },
        { date: { '$date': 1334275200000 }, grade: 'A', score: 12 },
        { date: { '$date': 1318377600000 }, grade: 'A', score: 12 }
      ],
      name: 'Riviera Caterer',
      restaurant_id: '40356018'
    },
    {
      _id: ObjectId('664f59711d511629dccdcdff'),
      address: {
        building: '97-22',
        coord: [ -73.8601152, 40.7311739 ],
        street: '63 Road',
        zipcode: '11374'
      },
      borough: 'Queens',
      cuisine: 'Jewish/Kosher',
      grades: [
        { date: { '$date': 1416787200000 }, grade: 'Z', score: 20 },
        { date: { '$date': 1358380800000 }, grade: 'A', score: 13 },
        { date: { '$date': 1343865600000 }, grade: 'A', score: 13 },
        { date: { '$date': 1323907200000 }, grade: 'B', score: 25 }
      ],
      name: 'Tov Kosher Kitchen',
      restaurant_id: '40356068'
    },
    {
      _id: ObjectId('664f59711d511629dccdcdfc'),
      address: {
        building: '469',
        coord: [ -73.961704, 40.662942 ],
        street: 'Flatbush Avenue',
        zipcode: '11225'
      },
      borough: 'Brooklyn',
      cuisine: 'Hamburgers',
      grades: [
        { date: { '$date': 1419897600000 }, grade: 'A', score: 8 },
        { date: { '$date': 1404172800000 }, grade: 'B', score: 23 },
        { date: { '$date': 1367280000000 }, grade: 'A', score: 12 },
        { date: { '$date': 1336435200000 }, grade: 'A', score: 12 }
      ],
      name: "Wendy'S",
      restaurant_id: '30112340'
    }
  ]
data> |
```

6.

```
data> db.restaurants.find().sort(
...                              {"name":-1}
...                              );
[
  {
    _id: ObjectId('664f59711d511629dccdcdfc'),
    address: {
      building: '469',
      coord: [ -73.961704, 40.662942 ],
      street: 'Flatbush Avenue',
      zipcode: '11225'
    },
    borough: 'Brooklyn',
    cuisine: 'Hamburgers',
    grades: [
      { date: { '$date': 1419897600000 }, grade: 'A', score: 8 },
      { date: { '$date': 1404172800000 }, grade: 'B', score: 23 },
      { date: { '$date': 1367280000000 }, grade: 'A', score: 12 },
      { date: { '$date': 1336435200000 }, grade: 'A', score: 12 }
    ],
    name: "Wendy'S",
    restaurant_id: '30112340'
  },
  {
    _id: ObjectId('664f59711d511629dccdcdff'),
    address: {
      building: '97-22',
      coord: [ -73.8601152, 40.7311739 ],
      street: '63 Road',
      zipcode: '11374'
    },
    borough: 'Queens',
    cuisine: 'Jewish/Kosher',
    grades: [
      { date: { '$date': 1416787200000 }, grade: 'Z', score: 20 },
      { date: { '$date': 1358380800000 }, grade: 'A', score: 13 },
      { date: { '$date': 1343865600000 }, grade: 'A', score: 13 },
      { date: { '$date': 1323907200000 }, grade: 'B', score: 25 }
    ],
    name: 'Tov Kosher Kitchen',
    restaurant_id: '40356068'
  },
  {
    _id: ObjectId('664f59711d511629dccdcdfe'),
    address: {
      building: '2780',
      coord: [ -73.98241999999999, 40.579505 ],
      street: 'Stillwell Avenue',
      zipcode: '11224'
    },
    borough: 'Brooklyn',
    cuisine: 'American ',
    grades: [
```

```
      { date: { '$date': 1402358400000 }, grade: 'A', score: 5 },
      { date: { '$date': 1370390400000 }, grade: 'A', score: 7 },
      { date: { '$date': 1334275200000 }, grade: 'A', score: 12 },
      { date: { '$date': 1318377600000 }, grade: 'A', score: 12 }
    ],
    name: 'Riviera Caterer',
    restaurant_id: '40356018'
  },
  {
    _id: ObjectId('664f59711d511629dccdcdfb'),
    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: { '$date': 1299715200000 }, grade: 'B', score: 14 }
    ],
    name: 'Morris Park Bake Shop',
    restaurant_id: '30075445'
  },
  {
    _id: ObjectId('664f59711d511629dccdcdfd'),
    address: {
      building: '351',
      coord: [ -73.98513559999999, 40.7676919 ],
      street: 'West   57 Street',
      zipcode: '10019'
    },
    borough: 'Manhattan',
    cuisine: 'Irish',
    grades: [
      { date: { '$date': 1409961600000 }, grade: 'A', score: 2 },
      { date: { '$date': 1374451200000 }, grade: 'A', score: 11 },
      { date: { '$date': 1343692800000 }, grade: 'A', score: 12 },
      { date: { '$date': 1325116800000 }, grade: 'A', score: 12 }
    ],
    name: 'Dj Reynolds Pub And Restaurant',
    restaurant_id: '30191841'
  }
]
data> |
```

7.

```
data> db.restaurants.find().sort(
...                                  {"cuisine":1,"borough" : -1,}
...                                );
[
  {
    _id: ObjectId('664f59711d511629dccdcdfe'),
    address: {
      building: '2780',
      coord: [ -73.98241999999999, 40.579505 ],
      street: 'Stillwell Avenue',
      zipcode: '11224'
    },
    borough: 'Brooklyn',
    cuisine: 'American ',
    grades: [
      { date: { '$date': 1402358400000 }, grade: 'A', score: 5 },
      { date: { '$date': 1370390400000 }, grade: 'A', score: 7 },
      { date: { '$date': 1334275200000 }, grade: 'A', score: 12 },
      { date: { '$date': 1318377600000 }, grade: 'A', score: 12 }
    ],
    name: 'Riviera Caterer',
    restaurant_id: '40356018'
  },
  {
    _id: ObjectId('664f59711d511629dccdcdfb'),
    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'
  },
  {
    _id: ObjectId('664f59711d511629dccdcdfc'),
    address: {
      building: '469',
      coord: [ -73.961704, 40.662942 ],
      street: 'Flatbush Avenue',
      zipcode: '11225'
    },
    borough: 'Brooklyn',
    cuisine: 'Hamburgers',
```

```
    grades: [
      { date: { '$date': 1419897600000 }, grade: 'A', score: 8 },
      { date: { '$date': 1404172800000 }, grade: 'B', score: 23 },
      { date: { '$date': 1367280000000 }, grade: 'A', score: 12 },
      { date: { '$date': 1336435200000 }, grade: 'A', score: 12 }
    ],
    name: "Wendy'S",
    restaurant_id: '30112340'
  },
  {
    _id: ObjectId('664f59711d511629dccdcdfd'),
    address: {
      building: '351',
      coord: [ -73.98513559999999, 40.7676919 ],
      street: 'West   57 Street',
      zipcode: '10019'
    },
    borough: 'Manhattan',
    cuisine: 'Irish',
    grades: [
      { date: { '$date': 1409961600000 }, grade: 'A', score: 2 },
      { date: { '$date': 1374451200000 }, grade: 'A', score: 11 },
      { date: { '$date': 1343692800000 }, grade: 'A', score: 12 },
      { date: { '$date': 1325116800000 }, grade: 'A', score: 12 }
    ],
    name: 'Dj Reynolds Pub And Restaurant',
    restaurant_id: '30191841'
  },
  {
    _id: ObjectId('664f59711d511629dccdcdff'),
    address: {
      building: '97-22',
      coord: [ -73.8601152, 40.7311739 ],
      street: '63 Road',
      zipcode: '11374'
    },
    borough: 'Queens',
    cuisine: 'Jewish/Kosher',
    grades: [
      { date: { '$date': 1416787200000 }, grade: 'Z', score: 20 },
      { date: { '$date': 1358380800000 }, grade: 'A', score: 13 },
      { date: { '$date': 1343865600000 }, grade: 'A', score: 13 },
      { date: { '$date': 1323907200000 }, grade: 'B', score: 25 }
    ],
    name: 'Tov Kosher Kitchen',
    restaurant_id: '40356068'
  }
]
data> |
```

8.

```
data> db.restaurants.find(
...                         {"address.street" :
...                             { $exists : true }
...                         }
...                     );
[
  {
    _id: ObjectId('664f59711d511629dccdcdfb'),
    address: {
      building: '1007',
      coord: [ -73.856077, 40.848447 ],
      street: 'Morris Park Ave',
      zipcode: '10462'
    },
    borough: 'Bronx',
    cuisine: 'Bakery',
    grades: [
      { date: { '$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'
  },
  {
    _id: ObjectId('664f59711d511629dccdcdfc'),
    address: {
      building: '469',
      coord: [ -73.961704, 40.662942 ],
      street: 'Flatbush Avenue',
      zipcode: '11225'
    },
    borough: 'Brooklyn',
    cuisine: 'Hamburgers',
    grades: [
      { date: { '$date': 1419897600000 }, grade: 'A', score: 8 },
      { date: { '$date': 1404172800000 }, grade: 'B', score: 23 },
      { date: { '$date': 1367280000000 }, grade: 'A', score: 12 },
      { date: { '$date': 1336435200000 }, grade: 'A', score: 12 }
    ],
    name: "Wendy'S",
    restaurant_id: '30112340'
  },
  {
    _id: ObjectId('664f59711d511629dccdcdfd'),
    address: {
      building: '351',
      coord: [ -73.98513559999999, 40.7676919 ],
      street: 'West   57 Street',
      zipcode: '10019'
```

      zipcode: '11224'
    },
    borough: 'Brooklyn',
    cuisine: 'American ',
    grades: [
      { date: { '$date': 1402358400000 }, grade: 'A', score: 5 },
      { date: { '$date': 1370390400000 }, grade: 'A', score: 7 },
      { date: { '$date': 1334275200000 }, grade: 'A', score: 12 },
      { date: { '$date': 1318377600000 }, grade: 'A', score: 12 }
    ],
    name: 'Riviera Caterer',
    restaurant_id: '40356018'
  },
  {
    _id: ObjectId('664f59711d511629dccdcdff'),
    address: {
      building: '97-22',
      coord: [-73.8601152, 40.7311739],
      street: '63 Road',
      zipcode: '11374'
    },
    borough: 'Queens',
    cuisine: 'Jewish/Kosher',
    grades: [
      { date: { '$date': 1416787200000 }, grade: 'Z', score: 20 },
      { date: { '$date': 1358380800000 }, grade: 'A', score: 13 },
      { date: { '$date': 1343865600000 }, grade: 'A', score: 13 },
      { date: { '$date': 1323907200000 }, grade: 'B', score: 25 }
    ],
    name: 'Tov Kosher Kitchen',
    restaurant_id: '40356068'
  }
]
data>

9.

```
data> db.restaurants.find(
...                      {"address.coord" :
...                          {$type : 1}
...                      }
...                  );
[
  {
    _id: ObjectId('664f59711d511629dccdcdfb'),
    address: {
      building: '1007',
      coord: [ -73.856077, 40.848447 ],
      street: 'Morris Park Ave',
      zipcode: '10462'
    },
    borough: 'Bronx',
    cuisine: 'Bakery',
    grades: [
      { date: { '$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'
  },
  {
    _id: ObjectId('664f59711d511629dccdcdfc'),
    address: {
      building: '469',
      coord: [ -73.961704, 40.662942 ],
      street: 'Flatbush Avenue',
      zipcode: '11225'
    },
    borough: 'Brooklyn',
    cuisine: 'Hamburgers',
    grades: [
      { date: { '$date': 1419897600000 }, grade: 'A', score: 8 },
      { date: { '$date': 1404172800000 }, grade: 'B', score: 23 },
      { date: { '$date': 1367280000000 }, grade: 'A', score: 12 },
      { date: { '$date': 1336435200000 }, grade: 'A', score: 12 }
    ],
    name: "Wendy'S",
    restaurant_id: '30112340'
  },
  {
    _id: ObjectId('664f59711d511629dccdcdfd'),
    address: {
      building: '351',
      coord: [ -73.98513559999999, 40.7676919 ],
      street: 'West    57 Street',
      zipcode: '10019'
```

```
    },
    borough: 'Brooklyn',
    cuisine: 'American ',
    grades: [
      { date: { '$date': 1402358400000 }, grade: 'A', score: 5 },
      { date: { '$date': 1370390400000 }, grade: 'A', score: 7 },
      { date: { '$date': 1334275200000 }, grade: 'A', score: 12 },
      { date: { '$date': 1318377600000 }, grade: 'A', score: 12 }
    ],
    name: 'Riviera Caterer',
    restaurant_id: '40356018'
  },
  {
    _id: ObjectId('664f59711d511629dccdcdff'),
    address: {
      building: '97-22',
      coord: [ -73.8601152, 40.7311739 ],
      street: '63 Road',
      zipcode: '11374'
    },
    borough: 'Queens',
    cuisine: 'Jewish/Kosher',
    grades: [
      { date: { '$date': 1416787200000 }, grade: 'Z', score: 20 },
      { date: { '$date': 1358380800000 }, grade: 'A', score: 13 },
      { date: { '$date': 1343865600000 }, grade: 'A', score: 13 },
      { date: { '$date': 1323907200000 }, grade: 'B', score: 25 }
    ],
    name: 'Tov Kosher Kitchen',
    restaurant_id: '40356068'
  }
]
data>
```

10.

```
data> db.restaurants.find(
...                             {"grades.score" :
...                                 {$mod : [7,0]}
...                             },
...                                 {"restaurant_id" : 1,"name":1,"grades":1}
...                         );
[
  {
    _id: ObjectId('664f59711d511629dccdcdfb'),
    grades: [
      { date: { '$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'
  },
  {
    _id: ObjectId('664f59711d511629dccdcdfe'),
    grades: [
      { date: { '$date': 1402358400000 }, grade: 'A', score: 5 },
      { date: { '$date': 1370390400000 }, grade: 'A', score: 7 },
      { date: { '$date': 1334275200000 }, grade: 'A', score: 12 },
      { date: { '$date': 1318377600000 }, grade: 'A', score: 12 }
    ],
    name: 'Riviera Caterer',
    restaurant_id: '40356018'
  }
]
data>
```

11.

```
data> db.restaurants.find(
...                             { name :
...                                 { $regex : "mon.*", $options: "i" }
...                             },
...                                 {
...                                     "name":1,
...                                     "borough":1,
...                                     "address.coord":1,
...                                     "cuisine" :1
...                                 }
...                         );
```

12.

```
data> db.restaurants.find(
...                     { name :
...                       { $regex : /^Mad/i, }
...                     },
...                       {
...                         "name":1,
...                         "borough":1,
...                         "address.coord":1,
...                         "cuisine" :1
...                       }
...                     );
```

13.

```
data> db.restaurants.find({ "grades.score": { $lt: 5 } })
[
  {
    _id: ObjectId('664f59711d511629dccdcdfb'),
    address: {
      building: '1007',
      coord: [ -73.856077, 40.848447 ],
      street: 'Morris Park Ave',
      zipcode: '10462'
    },
    borough: 'Bronx',
    cuisine: 'Bakery',
    grades: [
      { date: { '$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'
  },
  {
    _id: ObjectId('664f59711d511629dccdcdfd'),
    address: {
      building: '351',
      coord: [ -73.98513559999999, 40.7676919 ],
      street: 'West   57 Street',
      zipcode: '10019'
    },
    borough: 'Manhattan',
    cuisine: 'Irish',
    grades: [
      { date: { '$date': 1409961600000 }, grade: 'A', score: 2 },
      { date: { '$date': 1374451200000 }, grade: 'A', score: 11 },
      { date: { '$date': 1343692800000 }, grade: 'A', score: 12 },
      { date: { '$date': 1325116800000 }, grade: 'A', score: 12 }
    ],
    name: 'Dj Reynolds Pub And Restaurant',
    restaurant_id: '30191841'
  }
]
data>
```

14.

```
data> db.restaurants.find({ "grades.score": { $lt: 5 }, "borough": "Manhattan" })
[
  {
    _id: ObjectId('664f59711d511629dccdcdfd'),
    address: {
      building: '351',
      coord: [ -73.98513559999999, 40.7676919 ],
      street: 'West   57 Street',
      zipcode: '10019'
    },
    borough: 'Manhattan',
    cuisine: 'Irish',
    grades: [
      { date: { '$date': 1409961600000 }, grade: 'A', score: 2 },
      { date: { '$date': 1374451200000 }, grade: 'A', score: 11 },
      { date: { '$date': 1343692800000 }, grade: 'A', score: 12 },
      { date: { '$date': 1325116800000 }, grade: 'A', score: 12 }
    ],
    name: 'Dj Reynolds Pub And Restaurant',
    restaurant_id: '30191841'
  }
]
data>
```

15.

```
data> db.restaurants.find({
...     $and: [
...       {
...         $or: [
...           {borough: "Manhattan"},
...           {borough: "Brooklyn"}
...         ]
...       },
...       {
...         "grades.score": { $lt: 5 }
...       }
...     ]
... })
[
  {
    _id: ObjectId('664f59711d511629dccdcdfd'),
    address: {
      building: '351',
      coord: [ -73.98513559999999, 40.7676919 ],
      street: 'West   57 Street',
      zipcode: '10019'
    },
    borough: 'Manhattan',
    cuisine: 'Irish',
    grades: [
      { date: { '$date': 1409961600000 }, grade: 'A', score: 2 },
      { date: { '$date': 1374451200000 }, grade: 'A', score: 11 },
      { date: { '$date': 1343692800000 }, grade: 'A', score: 12 },
      { date: { '$date': 1325116800000 }, grade: 'A', score: 12 }
    ],
    name: 'Dj Reynolds Pub And Restaurant',
    restaurant_id: '30191841'
  }
]
data>
```

16.

```
data> db.restaurants.find({
...     $and: [
... { $or: [{ borough: "Manhattan" }, { borough: "Brooklyn" }] },
... { "grades.score": { $lt: 5 } },
... { cuisine: { $ne: "American" } }
...     ]
... })
[
  {
    _id: ObjectId('664f59711d511629dccdcdfd'),
    address: {
      building: '351',
      coord: [ -73.98513559999999, 40.7676919 ],
      street: 'West   57 Street',
      zipcode: '10019'
    },
    borough: 'Manhattan',
    cuisine: 'Irish',
    grades: [
      { date: { '$date': 1409961600000 }, grade: 'A', score: 2 },
      { date: { '$date': 1374451200000 }, grade: 'A', score: 11 },
      { date: { '$date': 1343692800000 }, grade: 'A', score: 12 },
      { date: { '$date': 1325116800000 }, grade: 'A', score: 12 }
    ],
    name: 'Dj Reynolds Pub And Restaurant',
    restaurant_id: '30191841'
  }
]
data>
```

17.

```
data> db.restaurants.find({$and: [{$or: [{borough: "Manhattan"},{borough: "Brooklyn"}]},{$nor: [{cuisine:
...    "American"},{cuisine: "Chinese"}]},{grades: {$elemMatch: {score: { $lt: 5 }}}}]})
[
  {
    _id: ObjectId('664f59711d511629dccdcdfd'),
    address: {
      building: '351',
      coord: [ -73.98513559999999, 40.7676919 ],
      street: 'West   57 Street',
      zipcode: '10019'
    },
    borough: 'Manhattan',
    cuisine: 'Irish',
    grades: [
      { date: { '$date': 1409961600000 }, grade: 'A', score: 2 },
      { date: { '$date': 1374451200000 }, grade: 'A', score: 11 },
      { date: { '$date': 1343692800000 }, grade: 'A', score: 12 },
      { date: { '$date': 1325116800000 }, grade: 'A', score: 12 }
    ],
    name: 'Dj Reynolds Pub And Restaurant',
    restaurant_id: '30191841'
  }
]
data>
```

18.

```
data> db.restaurants.find({
...      $or: [
... { "grades.score": 2 },
... { "grades.score": 6 }
...      ]
... })
[
  {
    _id: ObjectId('664f59711d511629dccdcdfb'),
    address: {
      building: '1007',
      coord: [ -73.856077, 40.848447 ],
      street: 'Morris Park Ave',
      zipcode: '10462'
    },
    borough: 'Bronx',
    cuisine: 'Bakery',
    grades: [
      { date: { '$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'
  },
  {
    _id: ObjectId('664f59711d511629dccdcdfd'),
    address: {
      building: '351',
      coord: [ -73.98513559999999, 40.7676919 ],
      street: 'West   57 Street',
      zipcode: '10019'
    },
    borough: 'Manhattan',
    cuisine: 'Irish',
    grades: [
      { date: { '$date': 1409961600000 }, grade: 'A', score: 2 },
      { date: { '$date': 1374451200000 }, grade: 'A', score: 11 },
      { date: { '$date': 1343692800000 }, grade: 'A', score: 12 },
      { date: { '$date': 1325116800000 }, grade: 'A', score: 12 }
    ],
    name: 'Dj Reynolds Pub And Restaurant',
    restaurant_id: '30191841'
  }
]
data> |
```

19.

```
data> db.restaurants.find({
...       $and: [
...          {
...              $or: [
... { "grades.score": 2 },
... { "grades.score": 6 }
...              ]
...          },
... { "borough": "Manhattan" }
...      ]
... })
[
  {
    _id: ObjectId('664f59711d511629dccdcdfd'),
    address: {
      building: '351',
      coord: [ -73.98513559999999, 40.7676919 ],
      street: 'West   57 Street',
      zipcode: '10019'
    },
    borough: 'Manhattan',
    cuisine: 'Irish',
    grades: [
      { date: { '$date': 1409961600000 }, grade: 'A', score: 2 },
      { date: { '$date': 1374451200000 }, grade: 'A', score: 11 },
      { date: { '$date': 1343692800000 }, grade: 'A', score: 12 },
      { date: { '$date': 1325116800000 }, grade: 'A', score: 12 }
    ],
    name: 'Dj Reynolds Pub And Restaurant',
    restaurant_id: '30191841'
  }
]
data>
```

20.

```
data> db.restaurants.find({$and: [{$or: [{ borough: "Manhattan" },{ borough: "Brooklyn" }]},
... {$or: [{ "grades.score": 2 },{ "grades.score": 6 }]}]})
[
  {
    _id: ObjectId('664f59711d511629dccdcdfd'),
    address: {
      building: '351',
      coord: [ -73.98513559999999, 40.7676919 ],
      street: 'West    57 Street',
      zipcode: '10019'
    },
    borough: 'Manhattan',
    cuisine: 'Irish',
    grades: [
      { date: { '$date': 1409961600000 }, grade: 'A', score: 2 },
      { date: { '$date': 1374451200000 }, grade: 'A', score: 11 },
      { date: { '$date': 1343692800000 }, grade: 'A', score: 12 },
      { date: { '$date': 1325116800000 }, grade: 'A', score: 12 }
    ],
    name: 'Dj Reynolds Pub And Restaurant',
    restaurant_id: '30191841'
  }
]
data>
```

21.

```
data> db.restaurants.find({$and: [{$or: [{ borough: "Manhattan" },{ borough: "Brooklyn" }]},
... {$or: [{ "grades.score": 2 },{ "grades.score": 6 }]},{cuisine: { $ne: "American" }}]})
[
  {
    _id: ObjectId('664f59711d511629dccdcdfd'),
    address: {
      building: '351',
      coord: [ -73.98513559999999, 40.7676919 ],
      street: 'West    57 Street',
      zipcode: '10019'
    },
    borough: 'Manhattan',
    cuisine: 'Irish',
    grades: [
      { date: { '$date': 1409961600000 }, grade: 'A', score: 2 },
      { date: { '$date': 1374451200000 }, grade: 'A', score: 11 },
      { date: { '$date': 1343692800000 }, grade: 'A', score: 12 },
      { date: { '$date': 1325116800000 }, grade: 'A', score: 12 }
    ],
    name: 'Dj Reynolds Pub And Restaurant',
    restaurant_id: '30191841'
  }
]
data>
```

22.

```
data> db.restaurants.find({$and: [{$or: [{ "grades.score": 2 },{ "grades.score": 6 }]},{$or: [{ borough:
... "Manhattan" },{ borough: "Brooklyn" }]},{$nor: [{ cuisine: "American" },{ cuisine: "Chinese" }]}]})
[
  {
    _id: ObjectId('664f59711d511629dccdcdfd'),
    address: {
      building: '351',
      coord: [ -73.98513559999999, 40.7676919 ],
      street: 'West   57 Street',
      zipcode: '10019'
    },
    borough: 'Manhattan',
    cuisine: 'Irish',
    grades: [
      { date: { '$date': 1409961600000 }, grade: 'A', score: 2 },
      { date: { '$date': 1374451200000 }, grade: 'A', score: 11 },
      { date: { '$date': 1343692800000 }, grade: 'A', score: 12 },
      { date: { '$date': 1325116800000 }, grade: 'A', score: 12 }
    ],
    name: 'Dj Reynolds Pub And Restaurant',
    restaurant_id: '30191841'
  }
]
```

23.

```
data> db.restaurants.find({
...     $and: [
...         {"grades.score": 2},
...         {"grades.score": 6}
...     ]
... })
[
  {
    _id: ObjectId('664f59711d511629dccdcdfb'),
    address: {
      building: '1007',
      coord: [ -73.856077, 40.848447 ],
      street: 'Morris Park Ave',
      zipcode: '10462'
    },
    borough: 'Bronx',
    cuisine: 'Bakery',
    grades: [
      { date: { '$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'
  }
]
data>
```