## **Exercise Questions**

1. Write a MongoDB query to display all the documents in the collection restaurants.

```
Atlas atlas-w4167a-shard-0 [primary] addresses> db.restaurants.find();
   _id: ObjectId("61f01914c0aa4384fc005a97"),
   address: {
     building: '1007',
     coord: [ -73.856077, 40.848447 ],
     street: 'Morris Park Ave',
     zipcode: '10462'
   borough: 'Bronx',
   cuisine: 'Bakery',
   grades: [
       date: ISODate("2014-03-03T00:00:00.000Z"),
       grade: 'A',
       score: 2
     },
       date: ISODate("2013-09-11T00:00:00.000Z"),
       grade: 'A',
       score: 6
       date: ISODate("2013-01-24T00:00:00.000Z"),
       grade: 'A',
       score: 10
     },
       date: ISODate("2011-11-23T00:00:00.000Z"),
       grade: 'A',
       score: 9
     },
       date: ISODate("2011-03-10T00:00:00.000Z"),
       grade: 'B',
score: 14
   ],
   name: 'Morris Park Bake Shop',
   restaurant_id: '30075445'
   _id: ObjectId("61f01914c0aa4384fc005a98"),
   address: {
     building: '469',
     coord: [ -73.961704, 40.662942 ],
```

2. Write a MongoDB query to display the fields restaurant\_id, name, borough and cuisine for all the documents in the collection restaurant.

```
tlas atlas-w4167a-shard-0 [primary] addresses> db.restaurants.find({},{restaurant_id:1,name:1,borough:1,cuisine:1});
   _id: ObjectId("61f01914c0aa4384fc005a97"),
   borough: 'Bronx',
   cuisine: 'Bakery',
   name: 'Morris Park Bake Shop',
   restaurant_id: '30075445'
   _id: ObjectId("61f01914c0aa4384fc005a98"),
   borough: 'Brooklyn',
   cuisine: 'Hamburgers',
   name: "Wendy'S",
   restaurant_id: '30112340'
   _id: ObjectId("61f01914c0aa4384fc005a99"),
   borough: 'Manhattan',
   cuisine: 'Irish',
   name: 'Dj Reynolds Pub And Restaurant',
   restaurant_id: '30191841'
   _id: ObjectId("61f01914c0aa4384fc005a9a"),
   borough: 'Brooklyn',
   cuisine: 'American ',
  name: 'Riviera Caterer',
   restaurant_id: '40356018'
tlas atlas-w4167a-shard-0 [primary] addresses>
   _id: ObjectId("61f01914c0aa4384fc005a9b"),
   borough: 'Queens',
   cuisine: 'Jewish/Kosher',
   name: 'Tov Kosher Kitchen',
   restaurant id: '40356068'
   _id: ObjectId("61f01914c0aa4384fc005a9c"),
   borough: 'Queens',
   cuisine: 'American ',
   name: 'Brunos On The Boulevard',
   restaurant_id: '40356151'
   _id: ObjectId("61f01914c0aa4384fc005a9d"),
   borough: 'Staten Island',
   cuisine: 'Jewish/Kosher'
```

3. Write a MongoDB query to display the fields restaurant\_id, name, borough and cuisine, but exclude the field \_id for all the documents in the collection restaurant.

```
Atlas atlas-w4167a-shard-0 [primary] addresses> db.restaurants.find({},{restaurant_id:1,name:1,borough:1,cuisine:1,_id:0});
    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',
   restaurant_id: '40356068'
   borough: 'Queens',
   cuisine: 'American ',
   name: 'Brunos On The Boulevard',
   restaurant id: '40356151'
   borough: 'Staten Island',
cuisine: 'Jewish/Kosher',
   name: 'Kosher Island',
    restaurant_id: '40356442'
    _id: ObjectId("61f01914c0aa4384fc005a9b"),
```

4. Write a MongoDB query to display the fields restaurant\_id, name, borough and zip code, but exclude the field \_id for all the documents in the collection restaurant.

```
Atlas atlas-w4167a-shard-0 [primary] addresses> db.restaurants.find({},{restaurant_id:1,name:1,borough:1,cuisine:1,address:{zipcode:1},_id:0});
   address: { zipcode: '10462' },
   borough: 'Bronx',
   cuisine: 'Bakery',
name: 'Morris Park Bake Shop',
   restaurant_id: '30075445'
    address: { zipcode: '11225' },
   borough: 'Brooklyn',
   cuisine: 'Hamburgers',
   name: "Wendy'S",
restaurant_id: '30112340'
    address: { zipcode: '10019' },
   borough: 'Manhattan',
Atlas atlas-w4167a-shard-0 [primary] addresses> 💂
   name: 'Dj Reynolds Pub And Restaurant',
   restaurant_id: '30191841'
    address: { zipcode: '11224' },
   borough: 'Brooklyn',
   cuisine: 'American ',
   name: 'Riviera Caterer',
   restaurant_id: '40356018'
    address: { zipcode: '11374' },
   borough: 'Queens',
```

5. Write a MongoDB query to display the first 5 restaurant which is in the borough Bronx.

```
Atlas atlas-w4167a-shard-0 [primary] addresses> db.restaurants.aggregate([{$match:{borough:"Bronx"}},{$limit:5}]);
    _id: ObjectId("61f01914c0aa4384fc005a97"),
   address: {
     building: '1007',
     coord: [ -73.856077, 40.848447 ],
     street: 'Morris Park Ave',
     zipcode: '10462'
   borough: 'Bronx',
   cuisine: 'Bakery',
   grades: [
       date: ISODate("2014-03-03T00:00:00.000Z"),
       grade: 'A',
       score: 2
       date: ISODate("2013-09-11T00:00:00.000Z"),
       grade: 'A',
       score: 6
      },
       date: ISODate("2013-01-24T00:00:00.000Z"),
       grade: 'A',
       score: 10
       date: ISODate("2011-11-23T00:00:00.000Z"),
       grade: 'A',
       score: 9
      },
       date: ISODate("2011-03-10T00:00:00.000Z"),
       grade: 'B',
       score: 14
   name: 'Morris Park Bake Shop',
   restaurant id: '30075445'
    _id: ObjectId("61f01914c0aa4384fc005aa1"),
   address: {
     building: '2300',
     coord: [ -73.8786113, 40.8502883 ],
     street: 'Southern Boulevard',
     zipcode: '10460'
```

6. Write a MongoDB query to display all the restaurant which is in the borough Bronx.

```
Atlas atlas-w4167a-shard-0 [primary] addresses> db.restaurants.aggregate([{$match:{borough:"Bronx"}}]);
        grade: 'A',
        score: 12
    _id: ObjectId("61f01914c0aa4384fc005a97"),
   address: {
     building: '1007',2012-08-29T00:00:00.000Z"),
     coord: [ -73.856077, 40.848447 ],
     street: 'Morris Park Ave',
     zipcode: '10462'
   borough: 'Bronx',("2012-02-13T00:00:00.000Z"),
   cuisine: 'Bakery',
   grades: [: 16
       date: ISODate("2014-03-03T00:00:00.000Z"),
       grade: 'A',e',
        score: 2d: '40366748'
       date: ISODate("2013-09-11T00:00:00.000Z"),
       grade: 'A',
        score: 6'4340',
      },ord: [ -73.8194559, 40.8899176 ],
     {treet: 'Boston Road',
       date: ISODate("2013-01-24T00:00:00.000Z"),
        grade: 'A',
        score: 10nx',
     },ine: 'Pancakes/Waffles',
      {des: [
       date: ISODate("2011-11-23T00:00:00.000Z"),
       grade: 'A',te("2014-09-22T00:00:00.000Z"),
       score: 9A',
     },score: 11
     {,
       date: ISODate("2011-03-10T00:00:00.000Z"),
       grade: 'B',te("2014-05-16T00:00:00.000Z"),
        score: 14',
     } score: 9
   ],},
   name: 'Morris Park Bake Shop',
   restaurant_id: '30075445'0-30T00:00:00.000Z"),
        grade: 'A',
        score: 3
   id: ObjectId("61f01914c0aa4384fc005aa1"),
   address: {
     building: '2300',2013-06-05T00:00:00.000Z"),
     coord: [ -73.8786113, 40.8502883 ],
```

7. Write a MongoDB query to display the next 5 restaurants after skipping first 5 which are in the borough Bronx.

```
Atlas atlas-w4167a-shard-0 [primary] addresses> db.restaurants.aggregate([{$match:{borough:"Bronx"}},{$skip:5},{$limit:5}]);
    _id: ObjectId("61f01914c0aa4384fc005ad4"),
   address: {
     building: '658',
     coord: [ -73.81363999999999, 40.82941100000001 ],
     street: 'Clarence Ave',
     zipcode: '10465'
   borough: 'Bronx',
   cuisine: 'American ',
    grades: [
       date: ISODate("2014-06-21T00:00:00.000Z"),
       grade: 'A',
        score: 5
       date: ISODate("2012-07-11T00:00:00.000Z"),
       grade: 'A',
        score: 10
   name: 'Manhem Club',
   restaurant id: '40364363'
    id: ObjectId("61f01914c0aa4384fc005aec"),
   address: {
     building: '2222',
     coord: [ -73.84971759999999, 40.8304811 ],
     street: 'Haviland Avenue',
     zipcode: '10462'
   borough: 'Bronx',
   cuisine: 'American ',
   grades: [
       date: ISODate("2014-12-18T00:00:00.000Z"),
       grade: 'A',
       score: 7
       date: ISODate("2014-05-01T00:00:00.000Z"),
       grade: 'B',
        score: 17
```

8. Write a MongoDB query to find the restaurants who achieved a score more than 90.

```
Atlas atlas-w4167a-shard-0 [primary] addresses> db.restaurants.aggregate([{$match:{"grades.score":{$gt:90}}}]);
    _id: ObjectId("61f01914c0aa4384fc005bf5"),
    address: {
      building: '65',
      coord: [ -73.9782725, 40.7624022 ], street: 'West 54 Street',
      zipcode: '10019'
    borough: 'Manhattan',
cuisine: 'American',
    grades: [
        date: ISODate("2014-08-22T00:00:00.000Z"),
        grade: 'A',
        score: 11
        date: ISODate("2014-03-28T00:00:00.000Z"),
        grade: 'C',
score: 131
      },
        date: ISODate("2013-09-25T00:00:00.000Z"),
        grade: 'A',
        score: 11
      },
        date: ISODate("2013-04-08T00:00:00.000Z"),
        grade: 'B',
        score: 25
        date: ISODate("2012-10-15T00:00:00.000Z"),
        grade: 'A',
        score: 11
        date: ISODate("2011-10-19T00:00:00.000Z"),
        grade: 'A',
        score: 13
    ],
    name: "Murals On 54/Randolphs'S",
    restaurant_id: '40372466'
```

9. Write a MongoDB query to find the restaurants that achieved a score, more than 80 but less than 100.

```
Atlas atlas-w4167a-shard-0 [primary] addresses> db.restaurants.find({grades:{$elemMatch:{"score":{$gt:80,$lt:100}}}});
   _id: ObjectId("61f01914c0aa4384fc005c96"),
   address: {
     building: '345',
coord: [ -73.9864626, 40.7266739 ],
     street: 'East 6 Street',
     zipcode: '10003'
   borough: 'Manhattan',
   cuisine: 'Indian',
   grades: [
       date: ISODate("2014-09-15T00:00:00.000Z"),
       grade: 'A',
       score: 5
       date: ISODate("2014-01-14T00:00:00.000Z"),
       grade: 'A',
       score: 8
Atlas atlas-w4167a-shard-0 [primary] addresses> 🕳
       grade: 'A',
       score: 12
       date: ISODate("2013-04-24T00:00:00.000Z"),
       grade: 'P',
       score: 2
       date: ISODate("2012-10-01T00:00:00.000Z"),
       grade: 'A',
       score: 9
       date: ISODate("2012-04-06T00:00:00.000Z"),
       grade: 'C',
       score: 92
       date: ISODate("2011-11-03T00:00:00.000Z"),
       grade: 'C',
       score: 41
```

10. Write a MongoDB query to find the restaurants which locate in latitude value less than -95.754168.

```
Atlas atlas-w4167a-shard-0 [primary] addresses> db.restaurants.find({"address.coord":{$lt:-95.754168}});
    _id: ObjectId("61f01915c0aa4384fc0060df"),
   address: {
     building: '3707',
     coord: [ -101.8945214, 33.5197474 ],
     street: '82 Street',
     zipcode: '11372'
   borough: 'Queens',
   cuisine: 'American
   grades: [
       date: ISODate("2014-06-04T00:00:00.000Z"),
       grade: 'A',
       score: 12
     },
       date: ISODate("2013-11-07T00:00:00.000Z"),
       grade: 'B',
       score: 19
     },
       date: ISODate("2013-05-17T00:00:00.000Z"),
       grade: 'A',
       score: 11
     { date: ISODate("2012-08-29T00:00:00.000Z"),
       date: ISODate("2012-08-29T00:00:00.000Z"),
       grade: 'A',
       score: 11
     { date: ISODate("2012-04-03T00:00:00.000Z"),
       date: ISODate("2012-04-03T00:00:00.000Z"),
       grade: 'A',
       score: 12
     { date: ISODate("2011-11-16T00:00:00.000Z"),
       date: ISODate("2011-11-16T00:00:00.000Z"),
       grade: 'A',
       score: 7
   ],me: 'Burger King',
   name: 'Burger King',4067'
    restaurant_id: '40534067'
```

11. Write a MongoDB query to find the restaurants that do not prepare any cuisine of 'American' and their grade score more than 70 and latitude less than -65.754168.

```
Atlas atlas-w4167a-shard-0 [primary] addresses> db.restaurants.find({$and:[{"cuisine":{$ne:"American "}},{"grades.score":{$gt:70}},,{"address.coord":{$1t:-65.754168}}]});
    _id: ObjectId("61f01914c0aa4384fc005c96"),
   address: {
     building: '345',
coord: [ -73.9864626, 40.7266739 ],
     street: 'East 6 Street',
     zipcode: '10003'
   borough: 'Manhattan',
   grades: [
       date: ISODate("2014-09-15T00:00:00.000Z"),
       grade: 'A',
       date: ISODate("2014-01-14T00:00:00.000Z"),
       grade: 'A',
       date: ISODate("2013-05-30T00:00:00.000Z"),
       grade: 'A',
       score: 12
       date: ISODate("2013-04-24T00:00:00.000Z"),
       grade: 'P',
       date: ISODate("2012-10-01T00:00:00.000Z"),
       grade: 'A',
       date: ISODate("2012-04-06T00:00:00.000Z"),
       grade: 'C',
       score: 92
                                                                                                                                                                              Activa
       date: ISODate("2011-11-03T00:00:00.000Z"),
       grade: 'C',
       score: 41
```

12. Write a MongoDB query to find the restaurants which do not prepare any cuisine of 'American' and achieved a score more than 70 and located in the longitude less than -65.754168.

```
Atlas atlas-w4167a-shard-0 [primary] addresses> db.restaurants.find({$and:[{"cuisine":{$ne:"American "}},{"grades.score":{$gt:70}},{"address.coord":{$lt:-65.754168}}]});
    _id: ObjectId("61f01914c0aa4384fc005c96"),
   address: {
     building: '345',
coord: [ -73.9864626, 40.7266739 ],
     street: 'East 6 Street',
     zipcode: '10003'
   borough: 'Manhattan',
   cuisine: 'Indian',
   grades: [
        date: ISODate("2014-09-15T00:00:00.000Z"),
        score: 5
        date: ISODate("2014-01-14T00:00:00.000Z"),
       grade: 'A',
        score: 8
        date: ISODate("2013-05-30T00:00:00.000Z"),
       grade: 'A',
       score: 12
       date: ISODate("2013-04-24T00:00:00.000Z"),
        grade: 'P',
        score: 2
        date: ISODate("2012-10-01T00:00:00.000Z"),
       grade: 'A',
       score: 9
        date: ISODate("2012-04-06T00:00:00.000Z"),
       grade: 'C', score: 92
        date: ISODate("2011-11-03T00:00:00.000Z"),
        grade: 'C',
       score: 41
```

13. Write a MongoDB query to find the restaurants which do not prepare any cuisine of 'American' and achieved a grade point 'A' not belongs to the borough Brooklyn. The document must be displayed

according to the cuisine in descending order.

```
Atlas atlas-w4167a-shard-0 [primary] addresses> db.restaurants.find({$and:[{"cuisine":{$ne:"American "}},{"grades.grade":"A"},{borough:{$ne:"Brooklyn"}}]}).sort({"cuisine":-1});
   _id: ObjectId("61f01915c0aa4384fc0061a3"),
   address: {
     building: '89',
coord: [ -73.9995899, 40.7168015 ],
     street: 'Baxter Street',
     zipcode: '10013'
   borough: 'Manhattan',
   cuisine: 'Vietnamese/Cambodian/Malaysia',
   grades: [
       date: ISODate("2014-08-21T00:00:00.000Z"),
       grade: 'A',
       score: 13
       date: ISODate("2013-08-31T00:00:00.000Z"),
       grade: 'A',
       score: 13
       date: ISODate("2013-04-11T00:00:00.000Z"),
       grade: 'C',
       score: 3
       date: ISODate("2012-10-17T00:00:00.000Z"),
       grade: 'A',
       score: 4
       date: ISODate("2012-05-15T00:00:00.000Z"),
       grade: 'A',
       score: 10
   name: 'Thai Son',
   restaurant_id: '40559606'
```

14. Write a MongoDB query to find the restaurant Id, name, borough and cuisine for those restaurants which contain 'Wil' as first three letters for its name.

```
tlas atlas-w4167a-shard-0 [primary] addresses> db.restaurants.find({name:/^Wil/},{restaurant_id:1,name:1,borough:1,cuisine:1});
   _id: ObjectId("61f01914c0aa4384fc005a9e"),
   borough: 'Brooklyn',
   cuisine: 'Delicatessen',
   name: "Wilken'S Fine Food",
restaurant_id: '40356483'
   _id: ObjectId("61f01914c0aa4384fc005aa1"),
   borough: 'Bronx',
   cuisine: 'American ',
   name: 'Wild Asia',
   restaurant_id: '40357217'
   _id: ObjectId("61f01916c0aa4384fc0068a6"),
   borough: 'Bronx',
   cuisine: 'Pizza',
   name: 'Wilbel Pizza',
   restaurant_id: '40871979'
tlas atlas-w4167a-shard-0 [primary] addresses>
```

15. Write a MongoDB query to find the restaurant Id, name, borough and cuisine for those restaurants which contain 'ces' as last three letters for its name.

```
Atlas atlas-w4167a-shard-0 [primary] addresses> db.restaurants.find({name:/ces$/}},{restaurant_id:1,name:1,borough:1,cuisine:1});
    _id: ObjectId("61f01915c0aa4384fc005f2a"),
   borough: 'Manhattan',
   cuisine: 'American ',
   name: 'Pieces',
   restaurant_id: '40399910'
    _id: ObjectId("61f01915c0aa4384fc005fe9"),
   borough: 'Queens',
   cuisine: 'American ',
   name: 'S.M.R Restaurant Services',
   restaurant_id: '40403857'
    _id: ObjectId("61f01915c0aa4384fc005fef"),
   borough: 'Manhattan',
   cuisine: 'American ',
name: 'Good Shepherd Services',
   restaurant_id: '40403989'
    _id: ObjectId("61f01915c0aa4384fc0064a2"),
   borough: 'Queens',
   cuisine: 'Ice Cream, Gelato, Yogurt, Ices',
   name: "The Ice Box-Ralph'S Famous Italian Ices",
   restaurant_id: '40690899'
    _id: ObjectId("61f01916c0aa4384fc0066a4"),
   borough: 'Brooklyn',
   cuisine: 'Jewish/Kosher',
   name: 'Alices',
restaurant_id: '40782042'
    _id: ObjectId("61f01916c0aa4384fc0068c0"),
   borough: 'Manhattan',
   cuisine: 'American ',
   name: 'Re: Sources',
   restaurant_id: '40876068'
```

16. Write a MongoDB query to find the restaurant Id, name, borough and cuisine for those restaurants which contain 'Reg' as three letters somewhere in its name.

```
Atlas atlas-w4167a-shard-0 [primary] addresses> db.restaurants.find({name:/Reg/},{restaurant_id:1,name:1,borough:1,cuisine:1});
    _id: ObjectId("61f01914c0aa4384fc005a9f"),
   borough: 'Brooklyn',
   cuisine: 'American ',
   name: 'Regina Caterers',
   restaurant id: '40356649'
   _id: ObjectId("61f01914c0aa4384fc005b9c"),
   borough: 'Manhattan',
   cuisine: 'Café/Coffee/Tea',
   name: 'Caffe Reggio',
   restaurant id: '40369418'
   _id: ObjectId("61f01914c0aa4384fc005cab"),
   borough: 'Manhattan',
   cuisine: 'American ',
   name: 'Regency Hotel',
   restaurant_id: '40382679'
   _id: ObjectId("61f01915c0aa4384fc005fc8"),
   borough: 'Manhattan',
   cuisine: 'American ',
   name: 'Regency Whist Club',
   restaurant_id: '40402377'
   _id: ObjectId("61f01915c0aa4384fc0060ab"),
   borough: 'Queens',
   cuisine: 'American ',
   name: 'Rego Park Cafe',
   restaurant_id: '40523342'
   _id: ObjectId("61f01916c0aa4384fc006719"),
   borough: 'Queens',
   cuisine: 'Pizza',
   name: 'Regina Pizza',
   restaurant_id: '40801325'
   _id: ObjectId("61f01916c0aa4384fc006930"),
   borough: 'Manhattan',
```

17. Write a MongoDB query to find the restaurants which belong to the borough Bronx and prepared either American or Chinese dish.

```
las atlas-w4167a-shard-0 [primary] addresses> db.restaurants.find({borough:"Bronx",$or:[{cuisine:"American "},{cuisine:"chinese"}]});
  _id: ObjectId("61f01914c0aa4384fc005aa1"),
 address: {
   building: '2300',
   coord: [ -73.8786113, 40.8502883 ],
   street: 'Southern Boulevard',
   zipcode: '10460'
 borough: 'Bronx',
 cuisine: 'American',
 grades: [
     date: ISODate("2014-05-28T00:00:00.000Z"),
     grade: 'A',
     score: 11
     date: ISODate("2013-06-19T00:00:00.000Z"),
     grade: 'A',
     score: 4
   },
     date: ISODate("2012-06-15T00:00:00.000Z"),
     grade: 'A',
     score: 3
 name: 'Wild Asia',
 restaurant_id: '40357217'
  _id: ObjectId("61f01914c0aa4384fc005ad4"),
 address: {
   building: '658',
   coord: [ -73.81363999999999, 40.82941100000001 ],
   street: 'Clarence Ave',
   zipcode: '10465'
 borough: 'Bronx',
 cuisine: 'American',
 grades: [
     date: ISODate("2014-06-21T00:00:00.000Z"),
     grade: 'A',
      score: 5
```

18. Write a MongoDB query to find the restaurant Id, name, borough and cuisine for those restaurants which belong to the borough Staten Island or Queens or Bronxor Brooklyn.

```
Atlas atlas-w4167a-shard-0 [primary] addresses> db.restaurants.find({borough:{$in:["Staten Island","Wueens","Bronx","Brooklyn"]}},{restaurant_id:1,name:1,borough:1,cuisine:1});
    _id: ObjectId("61f01914c0aa4384fc005a97"),
   borough: 'Bronx',
   cuisine: 'Bakery',
   name: 'Morris Park Bake Shop',
   restaurant id: '30075445'
    _id: ObjectId("61f01914c0aa4384fc005a98"),
   borough: 'Brooklyn',
   cuisine: 'Hamburgers',
   name: "Wendy'S",
   restaurant_id: '30112340'
   _id: ObjectId("61f01914c0aa4384fc005a9a"),
   borough: 'Brooklyn',
   cuisine: 'American',
   name: 'Riviera Caterer',
   restaurant_id: '40356018
   _id: ObjectId("61f01914c0aa4384fc005a9d"),
   borough: 'Staten Island',
   cuisine: 'Jewish/Kosher',
   name: 'Kosher Island',
   restaurant id: '40356442'
   _id: ObjectId("61f01914c0aa4384fc005a9e"),
   borough: 'Brooklyn',
   cuisine: 'Delicatessen',
   name: "Wilken'S Fine Food",
   restaurant_id: '40356483'
   _id: ObjectId("61f01914c0aa4384fc005a9f"),
   borough: 'Brooklyn',
   cuisine: 'American',
   name: 'Regina Caterers',
   restaurant_id: '40356649'
```

19. Write a MongoDB query to find the restaurant Id, name, borough and cuisine for those restaurants which are not belonging to the borough Staten Island or Queens or Bronxor Brooklyn.

```
Atlas atlas-w4167a-shard-0 [primary] addresses> db.restaurants.find({borough:{$nin:["Staten Island","Wueens","Bronx","Brooklyn"]}},{restaurant_id:1,name:1,borough:1,cuisine:1}
   _id: ObjectId("61f01914c0aa4384fc005a99"),
   borough: 'Manhattan',
   cuisine: 'Irish',
   name: 'Dj Reynolds Pub And Restaurant',
   restaurant_id: '30191841'
   _id: ObjectId("61f01914c0aa4384fc005a9b"),
   borough: 'Queens',
   cuisine: 'Jewish/Kosher',
   name: 'Tov Kosher Kitchen',
   restaurant_id: '40356068'
   _id: ObjectId("61f01914c0aa4384fc005a9c"),
   borough: 'Queens',
   cuisine: 'American',
   name: 'Brunos On The Boulevard',
   restaurant_id: '40356151'
   _id: ObjectId("61f01914c0aa4384fc005aa4"),
   borough: 'Manhattan',
   cuisine: 'American',
   name: '1 East 66Th Street Kitchen',
   restaurant_id: '40359480'
   _id: ObjectId("61f01914c0aa4384fc005aa7"),
   borough: 'Queens',
   cuisine: 'Ice Cream, Gelato, Yogurt, Ices',
   name: 'Carvel Ice Cream',
   restaurant_id: '40361322'
   _id: ObjectId("61f01914c0aa4384fc005aa9"),
   borough: 'Manhattan',
  cuisine: 'American ',
   name: 'Glorious Food',
   restaurant_id: '40361521'
```

20. Write a MongoDB query to find the restaurant Id, name, borough and cuisine for those restaurants which achieved a score which is not more than 10.

```
Atlas atlas-w4167a-shard-0 [primary] addresses> db.restaurants.find({"grades.score":{$not:{$gt:10}}},{restaurant_id:1,name:1,borough:1,cuisine:1});
    _id: ObjectId("61f01914c0aa4384fc005aa2"),
   borough: 'Brooklyn',
   cuisine: 'American ',
   name: 'C & C Catering Service',
   restaurant_id: '40357437'
    _id: ObjectId("61f01914c0aa4384fc005aa4"),
   borough: 'Manhattan',
   cuisine: 'American ',
name: '1 East 66Th Street Kitchen',
   restaurant_id: '40359480'
   _id: ObjectId("61f01914c0aa4384fc005aa8"),
   borough: 'Brooklyn',
   cuisine: 'Delicatessen',
   name: 'Nordic Delicacies',
   restaurant_id: '40361390'
   _id: ObjectId("61f01914c0aa4384fc005ab1"),
   borough: 'Brooklyn',
   cuisine: 'Hamburgers',
   name: 'White Castle',
   restaurant_id: '40362344'
   _id: ObjectId("61f01914c0aa4384fc005ac4"),
   borough: 'Brooklyn',
   cuisine: 'American ',
   name: "Sonny'S Heros",
   restaurant_id: '40363744'
    _id: ObjectId("61f01914c0aa4384fc005ad4"),
   borough: 'Bronx',
   cuisine: 'American ',
```

21. Write a MongoDB query to find the restaurant Id, name, borough and cuisine for those restaurants which prepared dish except 'American' and 'Chinees' or restaurant's name begins with letter 'Wil'.

```
tlas atlas-w4167a-shard-0 [primary] addresses> db.restaurants.find(($or:[{name:/~Wil/},{"$and":[{"cuisine":{$ne:"American "}},{"cuisine":{$ne:"Chinees"}}}}}},{restaurant_id:1,name:1,borough:1,cuisine::1});
   _id: ObjectId("61f01914c0aa4384fc005a97"),
  borough: 'Bronx',
  name: 'Morris Park Bake Shop',
  restaurant_id: '30075445'
   _id: ObjectId("61f01914c0aa4384fc005a98"),
  borough: 'Brooklyn',
  cuisine: 'Hamburgers',
  name: "Wendy'S",
restaurant_id: '30112340'
  _id: ObjectId("61f01914c0aa4384fc005a99"),
  borough: 'Manhattan',
  cuisine: 'Irish',
name: 'Dj Reynolds Pub And Restaurant',
  restaurant_id: '30191841'
  _id: ObjectId("61f01914c0aa4384fc005a9b"),
  borough: 'Queens',
  name: 'Tov Kosher Kitchen',
  restaurant_id: '40356068'
  _id: ObjectId("61f01914c0aa4384fc005a9d"),
  borough: 'Staten Island',
  cuisine: 'Jewish/Kosher',
  name: 'Kosher Island',
  restaurant_id: '40356442'
   _id: ObjectId("61f01914c0aa4384fc005a9e"),
  borough: 'Brooklyn',
  cuisine: 'Delicatessen',
  name: "Wilken'S Fine Food",
                                                                                                                                                                               Activate Windows
  restaurant_id: '40356483'
```

22. Write a MongoDB query to find the restaurant Id, name, and grades for those restaurants which achieved a grade of "A" and scored 11 on an ISODate "2014-08-11T00:00:00Z" among many of survey dates..

```
Atlas atlas-w4167a-shard-0 [primary] addresses> db.restaurants.find({"grades.date":ISODate("2014-08-11T00:00:00Z"), "grades.grade":"A", "grades.score":11},{restaurant_id : 1,name:1,grades.
   cuisine: 'Ice Cream, Gelato, Yogurt, Ices',
   name: 'Taste The Tropics Ice Cream',
   _id: ObjectId("61f01914c0aa4384fc005b15"),
   grades: [
       date: ISODate("2014-08-11T00:00:00.000Z"),
       grade: 'A',',
       score: 13rican ',
      },: 'Wild Asia',
      {taurant_id: '40357217'
       date: ISODate("2013-07-22T00:00:00.000Z"),
       score: 9d("61f01914c0aa4384fc005aa3"),
      },ugh: 'Brooklyn',
      {sine: 'Chinese',
       date: ISODate("2013-03-14T00:00:00.000Z"),
       grade: 'A','40358429'
       score: 12
      {: ObjectId("61f01914c0aa4384fc005aa5"),
       date: ISODate("2012-07-02T00:00:00.000Z"),
       grade: 'A',h/Kosher',
       score: 11Foods',
      },aurant_id: '40360045'
       date: ISODate("2012-02-02T00:00:00.000Z"),
       grade: 'A',61f01914c0aa4384fc005aa6"),
       score: 10oklyn',
     },ine: 'Ice Cream, Gelato, Yogurt, Ices',
     {e: 'Carvel Ice Cream',
       date: ISODate("2011-08-24T00:00:00.000Z"),
       grade: 'A',
       score: 11
     }: ObjectId("61f01914c0aa4384fc005aa7"),
   ],rough: 'Queens',
name: "Neary'S Pub", Gelato, Yogurt, Ices',
   restaurant id: '40365871
  },restaurant_id: '40361322'
   _id: ObjectId("61f01914c0aa4384fc005bf0"),
                                                                                                                                                                               Activate W
   grades: [ctId("61f01914c0aa4384fc005aa8"),
      {ough: 'Brooklyn',
```

23. Write a MongoDB query to find the restaurant Id, name and grades for those restaurants where the 2nd element of grades array contains a grade of "A" and score 9 on an ISODate "2014-08-11T00:00:00Z"

```
tlas atlas-w4167a-shard-0 [primary] addresses> db.restaurants.find({"grades.date":ISODate("2014-08-11700.00:002"),"grades.grade":"A","grades.score":11},{restaurant_id : 1,name:1,grades:1});
   cuisine: 'Ice Cream, Gelato, Yogurt, Ices',
  name: 'Taste The Tropics Ice Cream',
   _id: ObjectId("61f01914c0aa4384fc005b15"),
   grades: [
       date: ISODate("2014-08-11T00:00:00.000Z"),
      grade: 'A',',
       score: 13rican ',
     },: 'Wild Asia',
     {taurant_id: '40357217'
       date: ISODate("2013-07-22T00:00:00.000Z"),
       score: 9d("61f01914c0aa4384fc005aa3"),
     },ugh: 'Brooklyn',
     {sine: 'Chinese',
      date: ISODate("2013-03-14T00:00:00.000Z"),
       grade: 'A','40358429'
       score: 12
     {: ObjectId("61f01914c0aa4384fc005aa5"),
       date: ISODate("2012-07-02T00:00:00.000Z"),
      grade: 'A',h/Kosher',
      score: 11Foods',
     },aurant_id: '40360045'
      date: ISODate("2012-02-02T00:00:00.000Z"),
      grade: 'A',61f01914c0aa4384fc005aa6"),
      score: 10oklyn',
     },ine: 'Ice Cream, Gelato, Yogurt, Ices',
     {e: 'Carvel Ice Cream',
      date: ISODate("2011-08-24T00:00:00.000Z"),
       grade: 'A',
      score: 11
    }: ObjectId("61f01914c0aa4384fc005aa7"),
  ],rough: 'Queens',
name: "Neary'S Pub", Gelato, Yogurt, Ices',
   restaurant_id: '4036587
  restaurant_id: '40361322'
   _id: ObjectId("61f01914c0aa4384fc005bf0"),
                                                                                                                                                                            Activate Windo
   grades: [ctId("61f01914c0aa4384fc005aa8"),
     {ough: 'Brooklyn',
```

24. Write a MongoDB query to find the restaurant Id, name, address and geographical location for those restaurants where 2nd element of coord array contains a value which is more than 42 and upto 52..

```
tlas atlas-w4167a-shard-0 [primary] addresses> db.restaurants.find({"address.coord.1":{$gt:42,$lte:52}},{restaurant_id : 1,name:1,address:1,coord:1});
   _id: ObjectId("61f01914c0aa4384fc005d39"),
   address: {
     building: '47',
     coord: [ -78.877224, 42.89546199999999 ],
     street: 'Broadway @ Trinity Pl',
     zipcode: '10006'
   name: "T.G.I. Friday'S",
   restaurant_id: '40387990'
   _id: ObjectId("61f01914c0aa4384fc005d65"),
   address: {
    building: '1',
    coord: [ -0.7119979, 51.6514664 ],
     street: 'Pennplaza E, Penn Sta',
     zipcode: '10001'
   name: 'T.G.I. Fridays',
   restaurant_id: '40388936'
   _id: ObjectId("61f01915c0aa4384fc005fbe"),
   address: {
     building: '3000',
    coord: [ -87.86567699999999, 42.61150920000001 ],
     street: '47 Avenue',
     zipcode: '11101'
   name: "Di Luvio'S Deli",
   restaurant_id: '40402284'
   _id: ObjectId("61f01915c0aa4384fc0061f3"),
   address: {
     building: '21972199',
    coord: [ -78.589606, 42.8912372 ],
street: 'Broadway',
     zipcode: '10024'
   name: 'La Caridad 78',
   restaurant_id: '40568285'
```

25. Write a MongoDB query to arrange the name of the restaurants in ascending order along with all the columns.

```
tlas atlas-w4167a-shard-0 [primary] addresses> db.restaurants.find().sort({name:1})
   _id: ObjectId("61f01916c0aa4384fc006727"),
  address: {
    building: '129',
    coord: [ -73.962943, 40.685007 ],
    street: 'Gates Avenue',
    zipcode: '11238'
   borough: 'Brooklyn',
   cuisine: 'Italian',
   grades: [
      date: ISODate("2014-03-06T00:00:00.000Z"),
      grade: 'A',
       score: 5
      date: ISODate("2013-08-29T00:00:00.000Z"),
      grade: 'A',
       score: 2
      date: ISODate("2013-03-08T00:00:00.000Z"),
      grade: 'A',
       score: 7
      date: ISODate("2012-06-27T00:00:00.000Z"),
      grade: 'A',
       score: 7
      date: ISODate("2011-11-17T00:00:00.000Z"),
      grade: 'A',
      score: 12
  name: '(Lewis Drug Store) Locanda Vini E Olii',
   restaurant_id: '40804423'
   _id: ObjectId("61f01914c0aa4384fc005aa4"),
```

26. Write a MongoDB query to arrange the name of the restaurants in descending along with all the columns.

```
Atlas atlas-w4167a-shard-0 [primary] addresses> db.restaurants.find().sort({"name":-1})
    id: ObjectId("61f01914c0aa4384fc005b56"),
   address: {
     building: '6946',
     coord: [ -73.8811834, 40.7017759 ],
     street: 'Myrtle Avenue',
     zipcode: '11385'
   borough: 'Queens',
   cuisine: 'German',
   grades: [
       date: ISODate("2014-09-24T00:00:00.000Z"),
       grade: 'A',
       score: 11
       date: ISODate("2014-04-17T00:00:00.000Z"),
       grade: 'A',
       score: 7
       date: ISODate("2013-03-12T00:00:00.000Z"),
       grade: 'A',
       score: 13
       date: ISODate("2012-10-02T00:00:00.000Z"),
       grade: 'A',
       score: 9
       date: ISODate("2012-05-09T00:00:00.000Z"),
       grade: 'A',
       score: 13
        date: ISODate("2011-12-28T00:00:00.000Z"),
```

27. Write a MongoDB query to arranged the name of the cuisine in ascending order and for that same cuisine borough should be in descending order.

```
Atlas atlas-w4167a-shard-0 [primary] addresses> db.restaurants.find().sort({cuisine:1,borough:-1,})
    _id: ObjectId("61f01915c0aa4384fc006182"),
   address: {
     building: '1345',
     coord: [ -73.959249, 40.768076 ],
     street: '2 Avenue',
     zipcode: '10021'
   borough: 'Manhattan',
   cuisine: 'Afghan',
    grades: [
       date: ISODate("2014-10-07T00:00:00.000Z"),
       grade: 'A',
       score: 9
       date: ISODate("2013-10-23T00:00:00.000Z"),
       grade: 'A',
       score: 8
       date: ISODate("2012-10-26T00:00:00.000Z"),
       grade: 'A',
       score: 13
       date: ISODate("2012-04-26T00:00:00.000Z"),
       grade: 'A',
       score: 7
       date: ISODate("2012-01-12T00:00:00.000Z"),
       grade: 'P',
       score: 10
   name: 'Afghan Kebab House',
   restaurant_id: '40552806'
```

28. Write a MongoDB query to know whether all the addresses contains the street or not.

```
Atlas atlas-w4167a-shard-0 [primary] addresses> db.restaurants.find( {"address.street":{$exists:true}});
   _id: ObjectId("61f01914c0aa4384fc005a97"),
   address: {
     building: '1007',
     coord: [ -73.856077, 40.848447 ],
     street: 'Morris Park Ave',
     zipcode: '10462'
   borough: 'Bronx',
   cuisine: 'Bakery',
   grades: [
       date: ISODate("2014-03-03T00:00:00.000Z"),
       grade: 'A',
       score: 2
       date: ISODate("2013-09-11T00:00:00.000Z"),
       grade: 'A',
       score: 6
       date: ISODate("2013-01-24T00:00:00.000Z"),
       grade: 'A',
       score: 10
       date: ISODate("2011-11-23T00:00:00.000Z"),
       grade: 'A',
       score: 9
       date: ISODate("2011-03-10T00:00:00.000Z"),
       grade: 'B',
       score: 14
   name: 'Morris Park Bake Shop',
   restaurant_id: '30075445'
```

29. Write a MongoDB query which will select all documents in the restaurants collection where the coord field value is Double.

```
tlas atlas-w4167a-shard-0 [primary] addresses> db.restaurants.find({"address.coord":{$type:1}});
  _id: ObjectId("61f01914c0aa4384fc005a97"),
  address: {
    building: '1007',
    coord: [ -73.856077, 40.848447 ],
    street: 'Morris Park Ave',
    zipcode: '10462'
  borough: 'Bronx',
  cuisine: 'Bakery',
  grades: [
      date: ISODate("2014-03-03T00:00:00.000Z"),
      grade: 'A',
      score: 2
      date: ISODate("2013-09-11T00:00:00.000Z"),
      grade: 'A',
      score: 6
      date: ISODate("2013-01-24T00:00:00.000Z"),
      grade: 'A',
      score: 10
      date: ISODate("2011-11-23T00:00:00.000Z"),
      grade: 'A',
      score: 9
      date: ISODate("2011-03-10T00:00:00.000Z"),
      grade: 'B',
score: 14
  ],
  name: 'Morris Park Bake Shop',
  restaurant_id: '30075445'
  _id: ObjectId("61f01914c0aa4384fc005a98"),
```

30. Write a MongoDB query which will select the restaurant Id, name and grades for those restaurants which returns 0 as a remainder after dividing the score by 7.

```
Atlas atlas-w4167a-shard-0 [primary] addresses> db.restaurants.find({"grades.score":{$mod:[7,0]}},,{"restaurant_id":1,"name":1,"grades":1})
   _id: ObjectId("61f01914c0aa4384fc005a97"),
   grades: [
       date: ISODate("2014-03-03T00:00:00.000Z"),
       grade: 'A',
       score: 2
       date: ISODate("2013-09-11T00:00:00.000Z"),
       grade: 'A',
       score: 6
       date: ISODate("2013-01-24T00:00:00.000Z"),
       grade: 'A',
       score: 10
       date: ISODate("2011-11-23T00:00:00.000Z"),
       grade: 'A',
       score: 9
       date: ISODate("2011-03-10T00:00:00.000Z"),
       grade: 'B',
       score: 14
   name: 'Morris Park Bake Shop',
   restaurant_id: '30075445'
   _id: ObjectId("61f01914c0aa4384fc005a9a"),
   grades: [
       date: ISODate("2014-06-10T00:00:00.000Z"),
       grade: 'A',
       score: 5
       date: ISODate("2013-06-05T00:00:00.000Z"),
```

31. Write a MongoDB query to find the restaurant name, borough, longitude and attitude and cuisine for those restaurants which contains 'mon' as three letters somewhere in its name.

```
Atlas atlas-w4167a-shard-0 [primary] addresses> db.restaurants.find({name:{$regex:"mon.*",$options:"i"}},{name:1,borough:1,"address.coord":1,cuisine:1});
   _id: ObjectId("61f01914c0aa4384fc005b2b"),
   address: { coord: [ -73.98306099999999, 40.7441419 ] },
   borough: 'Manhattan',
   cuisine: 'American',
   name: "Desmond'S Tavern"
   _id: ObjectId("61f01914c0aa4384fc005b34"),
   address: { coord: [ -73.8221418, 40.7272376 ] },
   borough: 'Queens',
   cuisine: 'Jewish/Kosher',
   name: 'Shimons Kosher Pizza'
   _id: ObjectId("61f01914c0aa4384fc005b40"),
   address: { coord: [ -74.10465599999999, 40.58834 ] },
   borough: 'Staten Island',
   cuisine: 'American',
   name: 'Richmond County Country Club'
   _id: ObjectId("61f01914c0aa4384fc005b6b"),
   address: { coord: [ -73.9812843, 40.5947365 ] },
   borough: 'Brooklyn',
   cuisine: 'Pizza/Italian',
   name: 'Lb Spumoni Gardens'
   _id: ObjectId("61f01914c0aa4384fc005bbd"),
   address: { coord: [ -73.951199, 40.7166026 ] },
   borough: 'Brooklyn',
   cuisine: 'Italian',
   name: "Bamonte'S Restaurant"
   _id: ObjectId("61f01914c0aa4384fc005bf4"), address: { coord: [ -73.924072, 40.76108900000001 ] },
   borough: 'Queens',
   cuisine: 'Greek',
   name: 'Omonia Cafe'
```

32. Write a MongoDB query to find the restaurant name, borough, longitude and latitude and cuisine for those restaurants which contain 'Mad' as first three letters of its name

```
Atlas atlas-w4167a-shard-0 [primary] addresses> db.restaurants.find({name:{$regex:/^Mad/i,}},{name:1,borough:1,"address.coord":1,cuisicuisine:1});
    _id: ObjectId("61f01915c0aa4384fc005fd3"),
   address: { coord: [ -73.9860597, 40.7431194 ] },
   borough: 'Manhattan',
   cuisine: 'American ',
   name: 'Madison Square'
    _id: ObjectId("61f01915c0aa4384fc0060a1"),
   address: { coord: [ -73.98302199999999, 40.742313 ] },
   borough: 'Manhattan',
   cuisine: 'Indian',
   name: 'Madras Mahal
    _id: ObjectId("61f01915c0aa4384fc00634f"),
   address: { coord: [ -74.000002, 40.72735 ] },
   borough: 'Manhattan',
   cuisine: 'American ',
   name: 'Madame X'
    _id: ObjectId("61f01915c0aa4384fc0063ff"),
   address: { coord: [ -73.98171959999999, 40.7499406 ] },
   borough: 'Manhattan',
   cuisine: 'French',
   name: 'Madison Bistro'
    _id: ObjectId("61f01915c0aa4384fc006488"),
   address: { coord: [ -73.9717845, 40.6897199 ] },
   borough: 'Brooklyn',
   cuisine: 'African',
   name: 'Madiba'
    _id: ObjectId("61f01916c0aa4384fc00678d"),
   address: { coord: [ -73.9040753, 40.9069011 ] },
   borough: 'Bronx',
   cuisine: 'Italian
```