

VISHAL G

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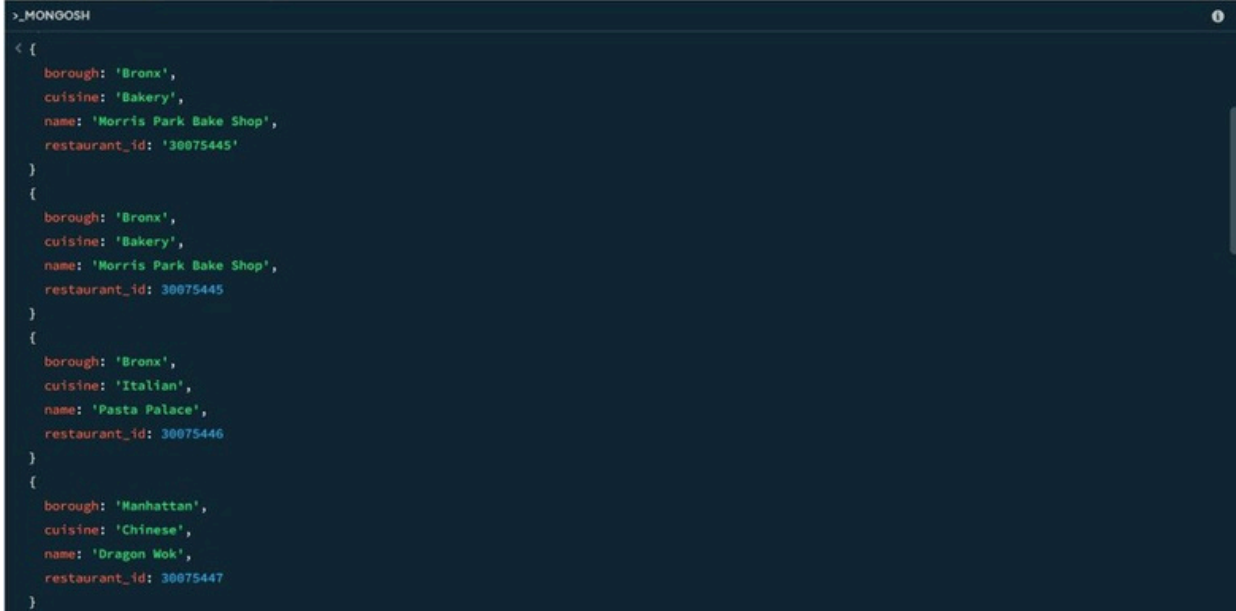
Ex.No.: 14	MONGODB
Date: 16.10.2024	

Structure of 'restaurants' collection:

```
{
  "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"
}
```

1. Write a MongoDB query to find the restaurant Id, name, borough and cuisine for those restaurants which prepare dishes except 'American' and 'Chinese' or restaurant's name begin with the letter 'Wil'.

```
db.restaurants.find({ $or: [{ cuisine: { $nin: ["American", "Chinees"] } }, { name: { $regex: /^Wil/i } } ] }, { restaurant_id: 1, name: 1, borough: 1, cuisine: 1, _id: 0 });
```



```
>_MONGOSH
< {
  borough: 'Bronx',
  cuisine: 'Bakery',
  name: 'Morris Park Bake Shop',
  restaurant_id: '30075445'
}
{
  borough: 'Bronx',
  cuisine: 'Bakery',
  name: 'Morris Park Bake Shop',
  restaurant_id: 30075445
}
{
  borough: 'Bronx',
  cuisine: 'Italian',
  name: 'Pasta Palace',
  restaurant_id: 30075446
}
{
  borough: 'Manhattan',
  cuisine: 'Chinese',
  name: 'Dragon Mok',
  restaurant_id: 30075447
}
```

2. 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 survey dates..

```
db.restaurants.find({ grades: {$elemMatch: {grade: "A", score: 11}}},{restaurant_id: 1,name: 1, grades: 1, _id: 0 });
```

```
< {
  grades: [
    {
      date: 2014-03-03T00:00:00.003Z,
      grade: 'A',
      score: 3
    },
    {
      date: 2013-09-11T00:00:00.003Z,
      grade: 'A',
      score: 7
    },
    {
      date: 2013-01-24T00:00:00.003Z,
      grade: 'A',
      score: 11
    },
    {
      date: 2011-11-23T00:00:00.003Z,
      grade: 'A',
      score: 5
    },
    {
      date: 2011-03-10T00:00:00.003Z,
      grade: 'B',
      score: 13
    }
  ],
}
```

3. 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".

```
db.restaurants.find({ "grades.1": {$elemMatch: {grade: "A",score: 9}}},{restaurant_id: 1, name: 1, grades: 1, _id: 0 });
```

4. 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..

```
db.restaurants.find({ "address.coord.1": { $gt: 42, $lte: 52 }},{restaurant_id: 1,name: 1, address: 1, _id: 0 });
```

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

```
db.restaurants.find().sort({ name: 1 });
```

SAMPLE OUTPUT:-

```
{ _id: ObjectId('671b5e6d56ec9972ca8f5dc4'), address: { building: 5566, coord:
[-73.867377,40.854047 ], street: '28th Avenue', zipcode: 10490 },
  borough: 'Bronx', cuisine: 'BBQ', grades: [{ date: 2014-03-03T00:00:00.028Z, grade: 'A',
score: 10 },
{ date: 2013-09-11T00:00:00.028Z, grade: 'A', score: 7},
{ date: 2013-01-24T00:00:00.028Z, grade: 'A', score: 11},
{ date: 2011-11-23T00:00:00.028Z, grade: 'A', score: 9},
{ date: 2011-03-10T00:00:00.028Z, grade: 'B', score: 15}],
  name: 'BBQ Haven', restaurant_id: 30075473 }
{ _id: ObjectId('671b5dab56ec9972ca8f5db0'), address: { building: 5566, coord: [ -73.859377,
40.850047
],
street: '8th Avenue',
zipcode: 10470
},
borough: 'Manhattan',
cuisine: 'French',
grades: [
{
date: 2014-03-03T00:00:00.008Z,
grade: 'A',
score: 7
},
{
date: 2013-09-11T00:00:00.008Z,
grade: 'A',
score: 9
},
{
date: 2013-01-24T00:00:00.008Z,
grade: 'A',
score: 10
},
{
date: 2011-03-10T00:00:00.008Z,
grade: 'A',
score: 6
}], name: 'Bistro Belle',
restaurant_id: 30075453
}
```

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

```
db.restaurants.find().sort({ name: -1 });
```

SAMPLE OUTPUT:-

```
{
  _id: ObjectId('671b5e9456ec9972ca8f5dc8'),
  address: {
    building: 9900,
    coord: [
      -73.868977,
      40.854847
    ],
    street: '32nd Avenue',
    zipcode: 10494
  },
  borough: 'Manhattan',
  cuisine: 'Russian',
  grades: [
    {
      date: 2014-03-03T00:00:00.032Z,
      grade: 'A',
      score: 10
    },
    {
      date: 2013-09-11T00:00:00.032Z,
      grade: 'B',
      score: 5
    },
    {
      date: 2013-01-24T00:00:00.032Z,
      grade: 'A',
      score: 9
    },
    {
      date: 2011-11-23T00:00:00.032Z,
      grade: 'A',
      score: 8
    },
    {
      date: 2011-03-10T00:00:00.032Z,
      grade: 'A',
      score: 11
    }
  ],
  name: "Tsar's Table",
}
```

```
restaurant_id: 30075477 } { _id:
ObjectId('671b5e6d56ec9972ca8f5dbe'),
address: { building: 9900, coord: [
-73.864977, 40.852847 ], street: '22nd
Avenue', zipcode: 10484 }, borough: 'Bronx',
cuisine: 'Italian', grades: [ { date: 2014-03-
03T00:00:00.022Z, grade: 'A', score: 8 }, {
date: 2013-09-11T00:00:00.022Z, grade: 'B',
score: 5 }, { date: 2013-01-
24T00:00:00.022Z, grade: 'A', score: 12 }, {
date: 2011-11-23T00:00:00.022Z, grade: 'A',
score: 9 }, { date: 2011-03-
10T00:00:00.022Z, grade: 'A', score: 14 } ],
name: 'Trattoria Bella', restaurant_id:
30075467 }
```

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

```
db.restaurants.find().sort({ cuisine: 1, borough: -1 });
```

SAMPLE OUTPUT:-

```
{
  _id: ObjectId('671b5d549d3d63480e0a64e9'),
  address: {
    building: 2233,
    coord: [
      -73.858177,
      40.849447
    ],
    street: '5th Avenue',
    zipcode: 10467
  },
  borough: 'Bronx',
  cuisine: 'American',
  grades: [
    {
      date: 2014-03-03T00:00:00.005Z,
      grade: 'A',
      score: 10
    },
    {
      date: 2013-09-11T00:00:00.005Z,
      grade: 'A',
      score: 6
    },
    {
      date: 2013-01-24T00:00:00.005Z,
      grade: 'B',
      score: 12
    },
    {
      date: 2011-11-23T00:00:00.005Z,
      grade: 'A',
      score: 9
    },
    {
      date: 2011-03-10T00:00:00.005Z,
      grade: 'A',
      score: 14
    }
  ]
}
```

```
], name: 'Burger Bistro', restaurant_id:
30075450 } { _id:
ObjectId('671b5e6d56ec9972ca8f5dc4'),
address: { building: 5566, coord: [
-73.867377, 40.854047 ], street: '28th
Avenue', zipcode: 10490 }, borough: 'Bronx',
cuisine: 'BBQ', grades: [ { date: 2014-03-
03T00:00:00.028Z, grade: 'A', score: 10 }, {
date: 2013-09-11T00:00:00.028Z, grade: 'A',
score: 7 }, { date: 2013-01-
24T00:00:00.028Z, grade: 'A', score: 11 }, {
date: 2011-11-23T00:00:00.028Z, grade: 'A',
score: 9 }, { date: 2011-03-
10T00:00:00.028Z, grade: 'B', score: 15 } ],
name: 'BBQ Haven', restaurant_id: 30075473
}
```


8. Write a MongoDB query to know whether all the addresses contain the street or not.

```
db.restaurants.find({"address.street": { $exists: false }});
```

```
> db.restaurants.find(
  {
    "address.street": { $exists: false }
  }
);
<
Customers >
```

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

```
db.restaurants.find( { "address.coord": { $type: "double" } });
```

SAMPLE OUTPUT:- { _id: ObjectId('671b92d339ec8a9bc8b6588b'), address: { building: '1007', coord: [-73.856077, 40.848447], street: 'Morris Park Ave', zipcode: '10462' }, borough: 'Bronx', cuisine: 'Bakery', grades: [{ date: 2014-03-03T00:00:00.000Z, grade: 'A', score: 2 }, {

```
date: 2013-09-11T00:00:00.000Z, grade:
'A', score: 6 }, { date: 2013-01-
24T00:00:00.000Z, grade: 'A', score: 10 },
{ date: 2011-11-23T00:00:00.000Z,
grade: 'A', score: 9 }, { date: 2011-03-
10T00:00:00.000Z, grade: 'B', score: 14 }
], name: 'Morris Park Bake Shop',
restaurant_id: '30075445' } { _id:
ObjectId('671b5d549d3d63480e0a64e5')
, address: { building: 1234, coord: [
-73.856577, 40.848647 ], street: '1st
Avenue', zipcode: 10463 }, borough:
'Bronx', cuisine: 'Italian', grades: [ { date:
2014-03-03T00:00:00.001Z, grade: 'A',
score: 5 }, { date: 2013-09-
11T00:00:00.001Z, grade: 'A', score: 8 },
```

```
{
  date: 2013-01-24T00:00:00.001Z,
  grade: 'B',
  score: 12
},
{
  date: 2011-11-23T00:00:00.001Z,
  grade: 'A',
  score: 7
},
{
  date: 2011-03-10T00:00:00.001Z,
  grade: 'A',
  score: 15
}
], name: 'Pasta Palace',
restaurant_id: 30075446
}
```

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

```
db.restaurants.find({"grades.score": { $mod: [7, 0] }},{restaurant_id: 1,name: 1,grades: 1,
_id: 0});
```

SAMPLE OUTPUT:-

```
{
  grades: [
    {
      date: 2014-03-03T00:00:00.000Z,
      grade: 'A',
      score: 2
    },
    {
      date: 2013-09-11T00:00:00.000Z,
      grade: 'A',
      score: 6
    },
    {
      date: 2013-01-24T00:00:00.000Z,
      grade: 'A',
      score: 10
    },
    {
      date: 2011-11-23T00:00:00.000Z,
```

```
      grade: 'A', score: 9 }, { date:
2011-03-10T00:00:00.000Z,
      grade: 'B', score: 14 } ], name:
'Morris Park Bake Shop',
      restaurant_id: '30075445' } {
grades: [ { date: 2014-03-
03T00:00:00.001Z, grade: 'A',
      score: 5 }, { date: 2013-09-
11T00:00:00.001Z, grade: 'A',
      score: 8 }, { date: 2013-01-
24T00:00:00.001Z, grade: 'B',
      score: 12 }, { date: 2011-11-
23T00:00:00.001Z, grade: 'A',
      score: 7 }, { date: 2011-03-
10T00:00:00.001Z, grade: 'A',
      score: 15 } ], name: 'Pasta
Palace',      restaurant_id:
30075446 }
```

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

```
db.restaurants.find({name: { $regex: /mon/i }},{name: 1, borough: 1,"address.coord.0": 1, "address.coord.1": 1, cuisine: 1, _id: 0});
```

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

```
db.restaurants.find({name: { $regex: /^Mad/i }},{name: 1,borough: 1,"address.coord.0": 1, "address.coord.1": 1, cuisine: 1,_id: 0});
```

13. Write a MongoDB query to find the restaurants that have at least one grade with a score of less than 5.

```
db.restaurants.find({"grades.score": { $lt: 5 }});
```

SAMPLE OUTPUT:-

```
{
  _id: ObjectId('671b92d339ec8a9bc8b6588b'),
  address: {
    building: '1007',
    coord: [
      -73.856077,
      40.848447
    ],
    street: 'Morris Park Ave',
    zipcode: '10462'
  },
  borough: 'Bronx',
  cuisine: 'Bakery',
  grades: [
    {
      date: 2014-03-03T00:00:00.000Z,
      grade: 'A',
      score: 2
    },
    {
      date: 2013-09-11T00:00:00.000Z,
      grade: 'A',
      score: 6
    },
    {
      date: 2013-01-24T00:00:00.000Z,
```

```
grade: 'A', score: 10 }, { date: 2011-11-23T00:00:00.000Z, grade: 'A', score: 9 }, {
date: 2011-03-10T00:00:00.000Z, grade:
'B', score: 14 } ], name: 'Morris Park Bake
Shop', restaurant_id: '30075445' } { _id:
ObjectId('671b5d549d3d63480e0a64e6')
, address: { building: 5678, coord: [
-73.856977, 40.848847 ], street: '2nd
Avenue', zipcode: 10464 }, borough:
'Manhattan', cuisine: 'Chinese', grades: [ {
date: 2014-03-03T00:00:00.002Z, grade:
'B', score: 4 }, { date: 2013-09-11T00:00:00.002Z, grade: 'A', score: 9 }, {
date: 2013-01-24T00:00:00.002Z, grade:
'A', score: 10 }, {
```

```

date: 2011-11-23T00:00:00.002Z,
grade: 'A',
score: 8
},
{
date: 2011-03-10T00:00:00.002Z,
grade: 'B',
score: 16
}
], name: 'Dragon Wok',
restaurant_id: 30075447
}

```

14. Write a MongoDB query to find the restaurants that have at least one grade with a score of less than 5 and that are located in the borough of Manhattan.
`db.restaurants.find({"grades.score": { $lt: 5 },borough: "Manhattan"});`

```

_id: ObjectId('671b5d549d3d63480e0a64e6'),
address: {
  building: 5678,
  coord: [
    -73.856977,
    40.848847
  ],
  street: '2nd Avenue',
  zipcode: 10464
},
borough: 'Manhattan',
cuisine: 'Chinese',
grades: [
  {
    date: 2014-03-03T00:00:00.002Z,
    grade: 'B',
    score: 4
  },
  {
    date: 2013-09-11T00:00:00.002Z,
    grade: 'A',
    score: 9
  },
  {
    date: 2013-01-24T00:00:00.002Z,
    grade: 'A',
    score: 10
  },
  {

```

15. Write a MongoDB query to find the restaurants that have at least one grade with a score of less than 5 and that are located in the borough of Manhattan or Brooklyn.

```
db.restaurants.find({"grades.score": { $lt: 5 },borough: { $in: ["Manhattan", "Brooklyn"] }});
```

```
_id: ObjectId('671b5d549d3d63480e0a64e6'),
address: {
  building: 5678,
  coord: [
    -73.856977,
    40.848847
  ],
  street: '2nd Avenue',
  zipcode: 10464
},
borough: 'Manhattan',
cuisine: 'Chinese',
grades: [
  {
    date: 2014-03-03T00:00:00.002Z,
    grade: 'B',
    score: 4
  },
  {
    date: 2013-09-11T00:00:00.002Z,
    grade: 'A',
    score: 9
  },
  {
    date: 2013-01-24T00:00:00.002Z,
    grade: 'A',
    score: 10
  },
]
```


16. Write a MongoDB query to find the restaurants that have at least one grade with a score of less than 5 and that are located in the borough of Manhattan or Brooklyn, and their cuisine is not American.

```
db.restaurants.find({"grades.score": { $lt: 5 },borough: { $in: ["Manhattan", "Brooklyn"]},  
cuisine: { $ne: "American" }});
```

```
_id: ObjectId('671b5d549d3d63480e0a64e6'),  
address: {  
  building: 5678,  
  coord: [  
    -73.856977,  
    40.848847  
  ],  
  street: '2nd Avenue',  
  zipcode: 10464  
},  
borough: 'Manhattan',  
cuisine: 'Chinese',  
grades: [  
  {  
    date: 2014-03-03T00:00:00.002Z,  
    grade: 'B',  
    score: 4  
  },  
  {  
    date: 2013-09-11T00:00:00.002Z,  
    grade: 'A',  
    score: 9  
  },  
  {  
    date: 2013-01-24T00:00:00.002Z,  
    grade: 'A',  
    score: 10  
  },  
  {
```

17. Write a MongoDB query to find the restaurants that have at least one grade with a score of less than 5 and that are located in the borough of Manhattan or Brooklyn, and their cuisine is not American or Chinese.

```
db.restaurants.find({"grades.score": { $lt: 5 },borough: { $in: ["Manhattan", "Brooklyn"]  
,cuisine: { $nin: ["American", "Chinese"] }});
```

18. Write a MongoDB query to find the restaurants that have a grade with a score of 2 and a grade with a score of 6.

```
db.restaurants.find({grades: {$all: [{ $elemMatch: { score: 2 } }, { $elemMatch: { score: 6 } }]});
```

SAMPLE OUTPUT:- { _id: ObjectId('671b92d339ec8a9bc8b6588b'), address: { building: '1007', coord: [-73.856077, 40.848447], street: 'Morris Park Ave', zipcode: '10462' }, borough: 'Bronx', cuisine: 'Bakery', grades: [{ date: 2014-03-03T00:00:00.000Z, grade: 'A', score: 2 }, { date: 2013-09-11T00:00:00.000Z, grade: 'A', score: 6 }, { date: 2013-01-24T00:00:00.000Z, grade: 'A', score: 10 }, { date: 2011-11-23T00:00:00.000Z, grade: 'A', score: 9 }, { date: 2011-03-10T00:00:00.000Z, grade: 'B', score: 14 }

```
    }, { name: 'Morris Park Bake Shop',  
    restaurant_id: '30075445' } { _id:  
    ObjectId('671b5c5f9d3d63480e0a64e4'),  
    address: { building: 1007, coord: [  
    -73.856077, 40.848447 ], street: 'Morris  
    Park Ave', zipcode: 10462 }, borough:  
    'Bronx', cuisine: 'Bakery', grades: [ { date:  
    2014-03-03T00:00:00.000Z, grade: 'A',  
    score: 2 }, { date: 2013-09-  
    11T00:00:00.000Z, grade: 'A', score: 6 }, {  
    date: 2013-01-24T00:00:00.000Z, grade:  
    'A', score: 10 }, { date: 2011-11-  
    23T00:00:00.000Z, grade: 'A', score: 9 }, {  
    date: 2011-03-10T00:00:00.000Z, grade:  
    'B', score: 14 } ], name: 'Morris Park Bake  
    Shop', restaurant_id: 30075445 }
```

19. Write a MongoDB query to find the restaurants that have a grade with a score of 2 and a grade with a score of 6 and are located in the borough of Manhattan.

```
db.restaurants.find({borough: "Manhattan",grades: {$all: [{ $elemMatch: { score: 2 } },{ $elemMatch: { score: 6 } }]});
```

20. Write a MongoDB query to find the restaurants that have a grade with a score of 2 and a grade with a score of 6 and are located in the borough of Manhattan or Brooklyn.

```
db.restaurants.find({borough: { $in: ["Manhattan", "Brooklyn"] },grades: {$all: [{ $elemMatch: { score: 2 } },{ $elemMatch: { score: 6 } }]});
```

21. Write a MongoDB query to find the restaurants that have a grade with a score of 2 and a grade with a score of 6 and are located in the borough of Manhattan or Brooklyn, and their cuisine is not American.

```
db.restaurants.find({borough: { $in: ["Manhattan", "Brooklyn"] },grades: {$all: [{ $elemMatch: { score: 2 } },{ $elemMatch: { score: 6 } }]},cuisine: { $ne: "American" } });
```

22. Write a MongoDB query to find the restaurants that have a grade with a score of 2 and a grade with a score of 6 and are located in the borough of Manhattan or Brooklyn, and their cuisine is not American or Chinese.

```
db.restaurants.find({borough: { $in: ["Manhattan", "Brooklyn"] },grades: {$all: [{ $elemMatch: { score: 2 } },{ $elemMatch: { score: 6 } }]},cuisine: { $nin: ["American", "Chinese"] } });
```

23. Write a MongoDB query to find the restaurants that have a grade with a score of 2 or a grade with a score of 6.

```
db.restaurants.find({$or: [{ "grades.score": 2 },{ "grades.score": 6 }]});
```

SAMPLE OUTPUT:- { _id:
ObjectId('671b5d549d3d63480e0a64e9'),
address: { building: 2233, coord: [-73.858177,
40.849447], street: '5th Avenue', zipcode:
10467 }, borough: 'Bronx', cuisine: 'American',
grades: [{ date: 2014-03-03T00:00:00.005Z,
grade: 'A', score: 10 }, { date: 2013-09-
11T00:00:00.005Z, grade: 'A', score: 6 }, {
date: 2013-01-24T00:00:00.005Z, grade: 'B',
score: 12 }, { date: 2011-11-
23T00:00:00.005Z, grade: 'A', score: 9 }, {
date: 2011-03-10T00:00:00.005Z, grade: 'A',
score: 14

```
} ], name: 'Burger Bistro', restaurant_id:
30075450 } { _id:
ObjectId('671b5dab56ec9972ca8f5daf'),
address: { building: 4455, coord: [
-73.858977, 40.849847 ], street: '7th
Avenue', zipcode: 10469 }, borough: 'Bronx',
cuisine: 'Thai', grades: [ { date: 2014-03-
03T00:00:00.007Z, grade: 'A', score: 9 }, {
date: 2013-09-11T00:00:00.007Z, grade:
'B', score: 6 }, { date: 2013-01-
24T00:00:00.007Z, grade: 'A', score: 12 }, {
date: 2011-11-23T00:00:00.007Z, grade:
'A', score: 8 }, { date: 2011-03-
10T00:00:00.007Z, grade: 'B', score: 14 } ],
name: 'Thai Delight', restaurant_id:
30075452 }
```

Sample document of 'movies' collection

```
{
  _id: ObjectId("573a1390f29313caabcd42e8"),
  plot: 'A group of bandits stage a brazen train hold-up, only to find a determined posse hot on their heels.',
  genres: [ 'Short', 'Western' ],
  runtime: 11,
  cast: [
    'A.C. Abadie',
    "Gilbert M. 'Broncho Billy' Anderson",
    'George Barnes',
    'Justus D. Barnes'
  ],
  poster: 'https://m.media-amazon.com/images/M/MV5BMTU3NjE5NzYtYTYyNS00MDVmLWIwYjgtMmYwYWIXZDYyNzU2XkEyXkFqcGdeQXVyNzQzNzQxNzI@._V1_SY1000_SX677_AL_.jpg',
  title: 'The Great Train Robbery',
  full plot: "Among the earliest existing films in American cinema - notable as the first film that presented a narrative story to tell - it depicts a group of cowboy outlaws who hold up a train and rob the passengers. They are then pursued by a Sheriff's posse. Several scenes have color included - all hand tinted.",
  languages: [ 'English' ],
  released: ISODate("1903-12-01T00:00:00.000Z"),
  directors: [ 'Edwin S. Porter' ],
  rated: 'TV-G',
  awards: { wins: 1, nominations: 0, text: '1 win.' },
  lastupdated: '2015-08-13 00:27:59.177000000',
  year: 1903,
  imdb: { rating: 7.4, votes: 9847, id: 439 },
  countries: [ 'USA' ],
  type: 'movie',
  tomatoes: {
    viewer: { rating: 3.7, numReviews: 2559, meter: 75 },
    fresh: 6,
    critic: { rating: 7.6, numReviews: 6, meter: 100 },
    rotten: 0,
    lastUpdated: ISODate("2015-08-08T19:16:10.000Z")
  }
}
```

1. Find all movies with full information from the 'movies' collection that released in the year 1893.

```
db.movies.find({ year: 1893 });
```

2. Find all movies with full information from the 'movies' collection that have a runtime greater than 120 minutes.

```
db.movies.find({ runtime: { $gt: 120 } });
```

```
SAMPLE          OUTPUT:-          {          _id:
  ObjectId('573a1390f29313caabcd42ec'), plot: 'An astronaut
    stranded on Mars must survive alone.', genres: [ 'Sci-Fi',
'Drama' ], runtime: 135, cast: [ 'Matt Damon', 'Jessica Chastain'
], poster: 'https://m.media-amazon.com/images/poster4.jpg',
  title: 'Mars Alone', fullplot: 'An astronaut, left alone on Mars,
    struggles to survive with limited resources while awaiting
rescue', languages: [ 'English' ], released: 2015-10-
02T00:00:00.000Z, directors: [ 'Ridley Scott' ], rated: 'PG-13',
  awards: { wins: 8, nominations: 6, text: '8 wins & 6
'2021-08-09
last updated: },
17:22:30.000000000', year: 2015, imdb: {
rating: 8,
votes: 25650,
```



```
id: 443 }, countries: [ 'USA' ], type:
'movie', tomatoes: { viewer: { rating:
4.5, numReviews: 2201, meter: 93 },
fresh: 18, critic: { rating: 8.5,
numReviews: 25, meter: 96 }, rotten:
1,      lastUpdated:      2021-07-
19T21:20:55.000Z }}
```

3. Find all movies with full information from the 'movies' collection that have the "Short" genre.

```
db.movies.find({ genres: "Short" });
```

SAMPLE OUTPUT:-

```
{
  _id: ObjectId('573a1390f29313caabcd42e8'),
  plot: 'A group of bandits stage a brazen train hold-up, only to find a
determined posse hot on their heels.',
  genres: [
    'Short',
    'Western'
  ],
  runtime: 11,
  cast: [
    'A.C. Abadie',
    "Gilbert M. 'Broncho Billy' Anderson",
    'George Barnes',
    'Justus D. Barnes'
  ], poster:
    'https://m.media-amazon.com/images/M/MV5BMTU3NjE5NzYtYTYyNS
00MDVmLWIwYjgtMmYwYWIXZDYyNzU2XkEyXkFqcGdeQXVyNzQzNz
QxNzI@._V1_SY1000_SX677_AL_.jpg',
  title: 'The Great Train Robbery',
  fullplot: "Among the earliest existing films in American cinema -
notable as the first film that presented a narrative story to tell - it
depicts a group of cowboy outlaws who hold up a train and rob the
passengers. They are then pursued by a Sheriff's posse. Several
scenes have color included - all hand tinted.",
  languages: [
    'English'
  ],
  released: 1903-12-01T00:00:00.000Z,
  directors: [
    'Edwin S. Porter'
  ],
  rated: 'TV-G',
  awards: {
    wins: 1,
    nominations: 0,
    text: '1 win.'
  },
  lastupdated: '2015-08-13 00:27:59.177000000',
  year: 1903,
```

```
imdb: { rating: 7.4, votes: 9847, id:
439 }, countries: [ 'USA' ], type:
'movie', tomatoes: { viewer: { rating:
3.7, numReviews: 2559, meter: 75 },
fresh: 6, critic: { rating: 7.6,
numReviews: 6, meter: 100 }, rotten:
0, lastUpdated: 2015-08-
08T19:16:10.000Z }}
```

4. Retrieve all movies from the 'movies' collection that were directed by “William K.L. Dickson” and include complete information for each movie.

```
db.movies.find({ directors: "William K.L. Dickson" });
```

6. Retrieve all movies from the 'movies' collection that were released in the USA and include complete information for each movie.

```
db.movies.find({ countries: "USA" });
```

```
<
  _id: ObjectId('573a1390f29313caabcd42e8'),
  plot: 'A group of bandits stage a brazen train hold-up, only to find a determined posse hot on their heels.',
  genres: [
    'Short',
    'Western'
  ],
  runtime: 11,
  cast: [
    'A.C. Abadie',
    "Gilbert M. 'Broncho Billy' Anderson",
    'George Barnes',
    'Justus D. Barnes'
  ],
  poster: 'https://m.media-amazon.com/images/M/MV5BMTU3NjE5NzYtYTUyNS00MDVmLWIwYjgtMmYwYWIxZDYyNzU2XkEyXkFqcGdeQXVyNzQzNzQxNzI@._V1_SV1000_',
  title: 'The Great Train Robbery',
  fullplot: "Among the earliest existing films in American cinema - notable as the first film that presented a narrative story to tell - it",
  languages: [
    'English'
  ],
  released: 1903-12-01T00:00:00.000Z,
  directors: [
```

7. Retrieve all movies from the 'movies' collection that have complete information and are rated as "UNRATED".

```
db.movies.find({ rated: "UNRATED" });
```

8. Retrieve all movies from the 'movies' collection that have complete information and have received more than 1000 votes on IMDb.

```
db.movies.find({ "imdb.votes": { $gt: 1000 } });
```

```
< {
  _id: ObjectId('573a1390f29313caabcd42e8'),
  plot: 'A group of bandits stage a brazen train hold-up, only to find a determined posse hot on their heels.',
  genres: [
    'Short',
    'Western'
  ],
  runtime: 11,
  cast: [
    'A.C. Abadie',
    "Gilbert M. 'Broncho Billy' Anderson",
    'George Barnes',
    'Justus D. Barnes'
  ],
  poster: 'https://m.media-amazon.com/images/M/MV5BMTU3NjESNzYtYTtyNS00MDVmLWIwYjgtMmYwYWIxZDYyNzU2XkEyXkFqcGdeQXVyNzQzNzQxNzI@._V1_SV1000',
  title: 'The Great Train Robbery',
  fullplot: "Among the earliest existing films in American cinema - notable as the first film that presented a narrative story to tell - i",
  languages: [
    'English'
  ],
  released: 1903-12-01T00:00:00.000Z,
  directors: [
    'Edwin S. Porter'
  ],
}
```

9. Retrieve all movies from the 'movies' collection that have complete information and have an IMDb rating higher than 7.

```
db.movies.find({ "imdb.rating": { $gt: 7 } });
```

```
> db.movies.find({ "imdb.rating": { $gt: 7 } });
< {
  _id: ObjectId('573a1390f29313caabcd42e8'),
  plot: 'A group of bandits stage a brazen train hold-up, only to find a determined posse hot on their heels.',
  genres: [
    'Short',
    'Western'
  ],
  runtime: 11,
  cast: [
    'A.C. Abadie',
    "Gilbert M. 'Broncho Billy' Anderson",
    'George Barnes',
    'Justus D. Barnes'
  ],
  poster: 'https://m.media-amazon.com/images/M/MV5BMTU3NjE5NzYtYTYyNS00MDVmLWIwYjgtMmYwYWIxZDZyNzU2XkEyXkFqcGdeQXVyNzQzNzQxNzI@._V1_SV1000',
  title: 'The Great Train Robbery',
  fullplot: "Among the earliest existing films in American cinema - notable as the first film that presented a narrative story to tell - i",
  languages: [
    'English'
  ],
  released: 1903-12-01T00:00:00.000Z,
  directors: [
    'Edwin S. Porter'
  ],
  rated: 'TV-G',
  awards: {
    wins: 1,
```

10. Retrieve all movies from the 'movies' collection that have complete information and have a viewer rating higher than 4 on Tomatoes.

```
db.movies.find({ "tomatoes.viewer.rating": { $gt: 4 } });
```

```
> db.movies.find({ "tomatoes.viewer.rating": { $gt: 4 } });
< {
  _id: ObjectId('573a1390f29313caabcd42ea'),
  plot: 'A chef tries to open a restaurant amidst a series of challenges.',
  genres: [
    'Drama',
    'Comedy'
  ],
  runtime: 120,
  cast: [
    'Emma Stone',
    'Chris Pratt',
    'Anna Kendrick'
  ],
  poster: 'https://m.media-amazon.com/images/poster2.jpg',
  title: 'The Culinary Dream',
  fullplot: "A chef's journey to make his dream restaurant come true, overcoming family and financial obstacles.",
  languages: [
    'English',
    'French'
  ],
  released: 2015-02-12T00:00:00.000Z,
  directors: [
    'Samantha Jones'
  ],
  rated: 'PG-13',
  awards: {
    wins: 1,
```

11. Retrieve all movies from the 'movies' collection that have received an award.

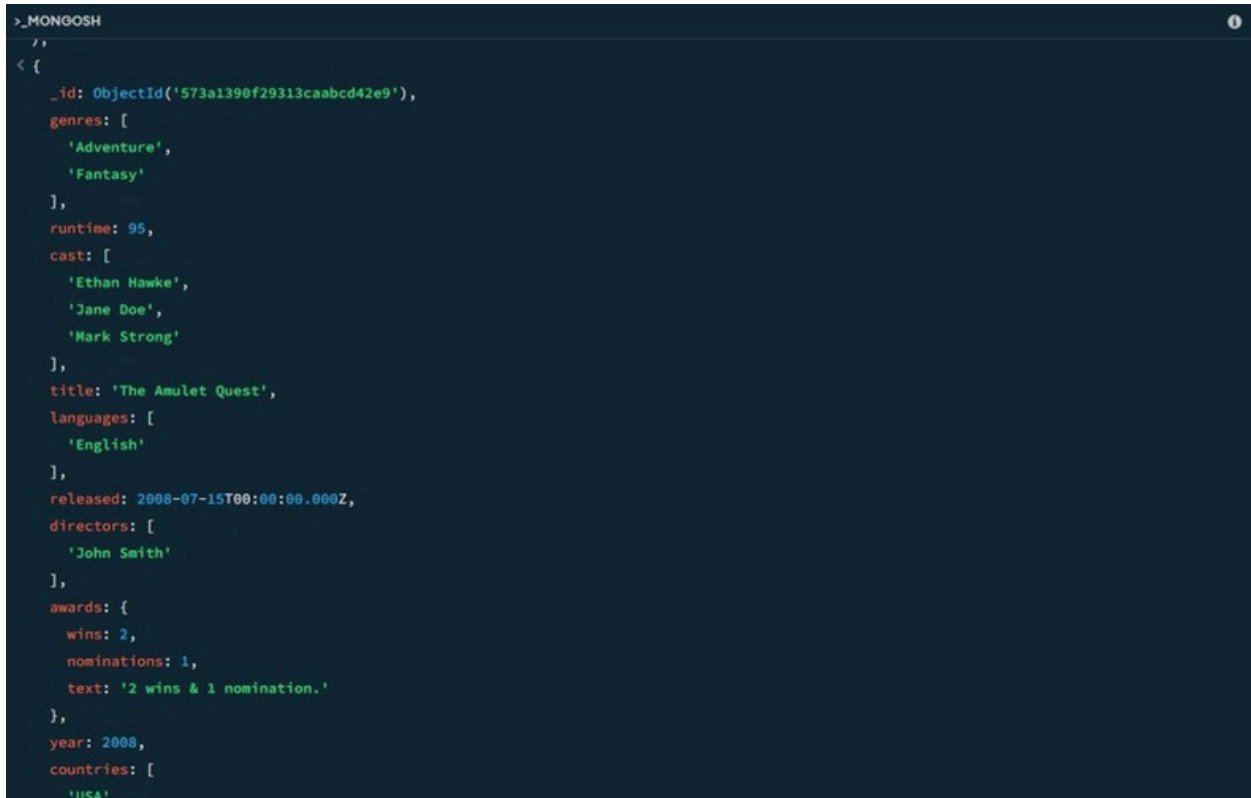
```
db.movies.find({ "awards.wins": { $gt: 0 } });
```

```
> db.movies.find({ "awards.wins": { $gt: 0 } });
< [
  {
    _id: ObjectId('573a1390f29313caabcd42e8'),
    plot: 'A group of bandits stage a brazen train hold-up, only to find a determined posse hot on their heels.',
    genres: [
      'Short',
      'Western'
    ],
    runtime: 11,
    cast: [
      'A.C. Abadie',
      'Gilbert M. 'Broncho Billy' Anderson',
      'George Barnes',
      'Justus D. Barnes'
    ],
    poster: 'https://m.media-amazon.com/images/M/MV5BNTU3NjE5NzYtYTYyNS00MDVhLWZlYjgtMmYwYWIXZDYyNzU2XkEyXkFqcGdeQXVyNzQzNzQxNzI@._V1_SY1000',
    title: 'The Great Train Robbery',
    fullplot: "Among the earliest existing films in American cinema - notable as the first film that presented a narrative story to tell - i
    languages: [
      'English'
    ],
    released: 1903-12-01T00:00:00.000Z,
    directors: [
      'Edwin S. Porter'
    ],
    rated: 'TV-G',
    awards: {
      wins: 1,

```


12. Find all movies with title, languages, released, directors, writers, awards, year, genres, runtime, cast, countries from the 'movies' collection in MongoDB that have at least one nomination.

```
db.movies.find({ "awards.nominations": { $gt: 0 }},{title: 1,languages: 1,released: 1,directors: 1, writers: 1,awards: 1,year: 1,genres: 1,runtime: 1,cast: 1,countries: 1});
```



The screenshot shows a MongoDB shell window with the following output:

```
>_MONGOSH
//
< {
  _id: ObjectId('573a1390f29313caabcd42e9'),
  genres: [
    'Adventure',
    'Fantasy'
  ],
  runtime: 95,
  cast: [
    'Ethan Hawke',
    'Jane Doe',
    'Mark Strong'
  ],
  title: 'The Amulet Quest',
  languages: [
    'English'
  ],
  released: 2008-07-15T00:00:00.000Z,
  directors: [
    'John Smith'
  ],
  awards: {
    wins: 2,
    nominations: 1,
    text: '2 wins & 1 nomination.'
  },
  year: 2008,
  countries: [
    'USA'
  ]
}
```

13. Find all movies with title, languages, released, directors, writers, awards, year, genres, runtime, cast, countries from the 'movies' collection in MongoDB with cast including "Charles Kayser".

```
db.movies.find({ cast: "Charles Kayser" },{title: 1,languages: 1,released: 1,directors: 1,writers: 1,awards: 1,year: 1,genres: 1,runtime: 1,cast: 1,countries: 1});
```

14. Retrieve all movies with title, languages, released, directors, writers, countries from the 'movies' collection in MongoDB that was released on May 9, 1893.

```
db.movies.find({ released: ISODate("1893-05-09T00:00:00Z") },{title: 1,languages: 1,released: 1,directors: 1,writers: 1,countries: 1});
```

15. Retrieve all movies with title, languages, released, directors, writers, countries from the 'movies' collection in MongoDB that have the word "scene" in the title.

```
db.movies.find({ title: { $regex: /scene/i } },{title: 1,languages: 1,released: 1,directors: 1,writers: 1,countries: 1});
```