

## EXERCISE 18

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 prepared dish except 'American' and 'Chinees' or

restaurant's name begins with letter 'W'

*db.restaurants.find({\$or: [{name: {\$regex: /^W/}}, {cuisine: {\$nin: ['American', 'Chinees']}}]})*

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 of survey dates..

*db.restaurants.find({grades: {\$elemMatch: {grade: "A", score: 11, date: ISODate("2014-08-11T00:00:00Z")}}})*

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: {grade: "A", score: 9, date: ISODate("2014-08-11T00:00:00Z")}}})*

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.restaurant.find({"address.coord": {"\$gt": 42, "\$lte": 52}}  
{restaurant\_id: 1, name: 1, address: 1});

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

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

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

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

7. 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.

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

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

db.restaurants.find({"address.street": {"\$exists": true}});

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"}});

10. 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.

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

11. 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.

db.restaurant.find({"name": {"\$regex": /'Mad/i}}, {"name": 1, borough: 1, "address.coord": 1, cuisine: 1});

12. 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.

db.restaurants.find({"name": {"name": {"\$regex": /'Mad/i}}, {"name": 1, borough: 1, "address.coord": 1, latitude: 1, cuisine: 1});



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}});

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({"borough": "Manhattan", "grades.score": {"\$lt": 5}});

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

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

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({"borough": {"\$in": ["Manhattan", "Brooklyn"]}, "cuisine": {"\$in": ["American", "Chinese"]}, "grades.score": {"\$lt": 5}});

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.score": {"\$all": [2, 6]}});

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.score": {"\$all": [2, 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.

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"], cuisine: "American", grades: { \$and: { score: 2, score: 6 } } );*

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"], cuisine: { \$in: ["American", "Chinese"] }, grades: { \$and: { score: 2, score: 6 } } );*

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.restaurant.find ({ 'grades.score': { \$in: [2, 6] } });*

### 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/MV5BMTU3NjE5NzYtYTYyNS00MDVmLWlwYjgtMmYwYWlxdDYyNzU2XkEyXkFqcGdeQXVyNzQzNzQxNzI@._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: 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}})*

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

*db.movies.find({genre: "Short"})*



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"})`

5. 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"})`

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

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

7. 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}})`

8. 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}})`

9. 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}})`

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

`db.movies.find({awards_wins:{gt:0}})`

11. 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({award_nominations:{gt:0}})`

12. 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"})
```

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

```
db.movies.find({released: ISODate("1893-05-09T00:00:00Z")})
```

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

```
db.movies.find({title: /scene/i})
```



Evaluation Procedure	Marks awarded
PL/SQL Procedure(5)	5
Program/Execution (5)	5
Viva(5)	5
Total (15)	15
Faculty Signature	