Practical-8

Name   : Yash Marthak

Roll No.   : 19BCE122

Couse Name   : Big Data Analytics

Aim:

Setup MongoDB environment in your system. Import Restaurant Dataset and perform CRUD operation.

-> Make database through MONGOSH:

```
>_MONGOSH

> use test
< 'already on db test'
```

-> Importing Restaurant database

```
>_MONGOSH
> db.restaurants.insert(
    {
    "address" : {
    "street" : "2 Avenue",
    "zipcode" : "10075",
    "building" : "1480",
    "coord" : [ -73.9557413, 40.7720266 ],
    },
    "borough" : "Manhattan",
    "cuisine" : "Italian",
    "grades" : [
    {
    "date" : ISODate("2014-10-01T00:00:00Z"),
    "grade" : "A",
    "score" : 11
    },
    {
    "date" : ISODate("2014-01-16T00:00:00Z"),
    "grade" : "B",
    "score" : 17
    }
    ],
    "name" : "Vella",
    "restaurant_id" : "41704620"
    }
)
< 'DeprecationWarning: Collection.insert() is deprecated. Use insertOne, insertMany, or bulkWrite.'
```

```
< { acknowledged: true,
    insertedIds: { '0': ObjectId("637600a60ba1fcac3879abc0") } }
```

Create: -

-> Insert a data

```
> db.restaurants.insertOne({
    "address" : {
    "street" : "14 Silverstate",
    "zipcode" : "90041",
    "building" : "265",
    "coord" : [ -45.4557413, 49.4581256 ],
    },
    "borough" : "California",
    "cuisine" : "Mexican",
   "grades" : [
    {
    "date" : ISODate("2018-06-01T00:00:00Z"),
    "grade" : "B",
    "score" : 7
    },
    {
    "date" : ISODate("2019-06-16T00:00:00Z"),
    "grade" : "C+",
    "score" : 4
    }
    ],
    "name" : "The Villa",
    "restaurant_id" : "41704621"
    })
< { acknowledged: true,
    insertedId: ObjectId("637a1fbde926d1ea54db5347") }
```

Read: -

-> Find the all data in database

```
> db.restaurants.find()
< { _id: ObjectId("637600a60ba1fcac3879abc0"),
    address:
     { street: '2 Avenue',
       zipcode: '10075',
       building: '1480',
       coord: [ -73.9557413, 40.7720266 ] },
    borough: 'Manhattan',
    cuisine: 'Italian',
    grades:
     [ { date: 2014-10-01T00:00:00.000Z, grade: 'A', score: 11 },
       { date: 2014-01-16T00:00:00.000Z, grade: 'B', score: 17 } ],
    name: 'Vella',
    restaurant_id: '41704620' }
  { _id: ObjectId("637a1fbde926d1ea54db5347"),
    address:
     { street: '14 Silverstate',
       zipcode: '90041',
       building: '265',
       coord: [ -45.4557413, 49.4581256 ] },
    borough: 'California',
    cuisine: 'Mexican',
    grades:
     [ { date: 2018-06-01T00:00:00.000Z, grade: 'B', score: 7 },
       { date: 2019-06-16T00:00:00.000Z, grade: 'C+', score: 4 } ],
    name: 'The Villa',
    restaurant_id: '41704621' }
```

-> Find specific data like the following operation finds documents whose borough field equals "Manhattan".

```
> db.restaurants.find( { "borough": "Manhattan" } )
< { _id: ObjectId("637600a60ba1fcac3879abc0"),
    address:
     { street: '2 Avenue',
       zipcode: '10075',
       building: '1480',
       coord: [ -73.9557413, 40.7720266 ] },
    borough: 'Manhattan',
    cuisine: 'Italian',
    grades:
     [ { date: 2014-10-01T00:00:00.000Z, grade: 'A', score: 11 },
       { date: 2014-01-16T00:00:00.000Z, grade: 'B', score: 17 } ],
    name: 'Vella',
    restaurant_id: '41704620' }
```

```
> db.restaurants.find( { "borough": "California" } )
< { _id: ObjectId("637a1fbde926d1ea54db5347"),
    address:
     { street: '14 Silverstate',
       zipcode: '90041',
       building: '265',
       coord: [ -45.4557413, 49.4581256 ] },
    borough: 'California',
    cuisine: 'Mexican',
    grades:
     [ { date: 2018-06-01T00:00:00.000Z, grade: 'B', score: 7 },
       { date: 2019-06-16T00:00:00.000Z, grade: 'C+', score: 4 } ],
    name: 'The Villa',
    restaurant_id: '41704621' }
```

-> The following operation finds documents whose grades field equals "B".

```
> db.restaurants.find( { "grades.grade": "B" } )
< { _id: ObjectId("637600a60ba1fcac3879abc0"),
    address:
     { street: '2 Avenue',
       zipcode: '10075',
       building: '1480',
       coord: [ -73.9557413, 40.7720266 ] },
    borough: 'Manhattan',
    cuisine: 'Italian',
    grades:
     [ { date: 2014-10-01T00:00:00.000Z, grade: 'A', score: 11 },
       { date: 2014-01-16T00:00:00.000Z, grade: 'B', score: 17 } ],
    name: 'Vella',
    restaurant_id: '41704620' }
  { _id: ObjectId("637a1fbde926d1ea54db5347"),
    address:
     { street: '14 Silverstate',
       zipcode: '90041',
       building: '265',
       coord: [ -45.4557413, 49.4581256 ] },
    borough: 'California',
    cuisine: 'Mexican',
    grades:
     [ { date: 2018-06-01T00:00:00.000Z, grade: 'B', score: 7 },
       { date: 2019-06-16T00:00:00.000Z, grade: 'C+', score: 4 } ],
    name: 'The Villa',
    restaurant_id: '41704621' }
```

Update: -

```
> db.restaurants.update(
    { "name" : "The Villa" },
    {
    $set: { "cuisine": "American (New)" },
    $currentDate: { "lastModified": true }
    }
  )
< { acknowledged: true,
    insertedId: null,
    matchedCount: 1,
    modifiedCount: 1,
    upsertedCount: 0 }
```

New collection: -

```
> db.restaurants.find({name: "The Villa"})
< { _id: ObjectId("637a1fbde926d1ea54db5347"),
    address:
     { street: '14 Silverstate',
       zipcode: '90041',
       building: '265',
       coord: [ -45.4557413, 49.4581256 ] },
    borough: 'California',
    cuisine: 'American (New)',
    grades:
     [ { date: 2018-06-01T00:00:00.000Z, grade: 'B', score: 7 },
       { date: 2019-06-16T00:00:00.000Z, grade: 'C+', score: 4 } ],
    name: 'The Villa',
    restaurant_id: '41704621',
    lastModified: 2022-11-20T12:47:40.016Z }
test >
```

Delete: -

```
> db.restaurants.deleteOne({name:"Vella"})
< { acknowledged: true, deletedCount: 1 }
```

Before Delete: -

```
> db.restaurants.find()
< { _id: ObjectId("637600a60ba1fcac3879abc0"),
    address:
     { street: '2 Avenue',
       zipcode: '10075',
       building: '1480',
       coord: [ -73.9557413, 40.7720266 ] },
    borough: 'Manhattan',
    cuisine: 'Italian',
    grades:
     [ { date: 2014-10-01T00:00:00.000Z, grade: 'A', score: 11 },
       { date: 2014-01-16T00:00:00.000Z, grade: 'B', score: 17 } ],
    name: 'Vella',
    restaurant_id: '41704620' }
  { _id: ObjectId("637a1fbde926d1ea54db5347"),
    address:
     { street: '14 Silverstate',
       zipcode: '90041',
       building: '265',
       coord: [ -45.4557413, 49.4581256 ] },
    borough: 'California',
    cuisine: 'American (New)',
    grades:
     [ { date: 2018-06-01T00:00:00.000Z, grade: 'B', score: 7 },
       { date: 2019-06-16T00:00:00.000Z, grade: 'C+', score: 4 } ],
    name: 'The Villa',
    restaurant_id: '41704621',
```

After Delete: -

```
> db.restaurants.find()
< { _id: ObjectId("637a1fbde926d1ea54db5347"),
    address:
     { street: '14 Silverstate',
       zipcode: '90041',
       building: '265',
       coord: [ -45.4557413, 49.4581256 ] },
    borough: 'California',
    cuisine: 'American (New)',
    grades:
     [ { date: 2018-06-01T00:00:00.000Z, grade: 'B', score: 7 },
       { date: 2019-06-16T00:00:00.000Z, grade: 'C+', score: 4 } ],
    name: 'The Villa',
    restaurant_id: '41704621',
    lastModified: 2022-11-20T12:47:40.016Z }
```