



BIG DATA ANALYTICS


Practical 8

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

Prepared By

18BCE151 - Parth Kapadia

Install Mongodb Shell and Compass



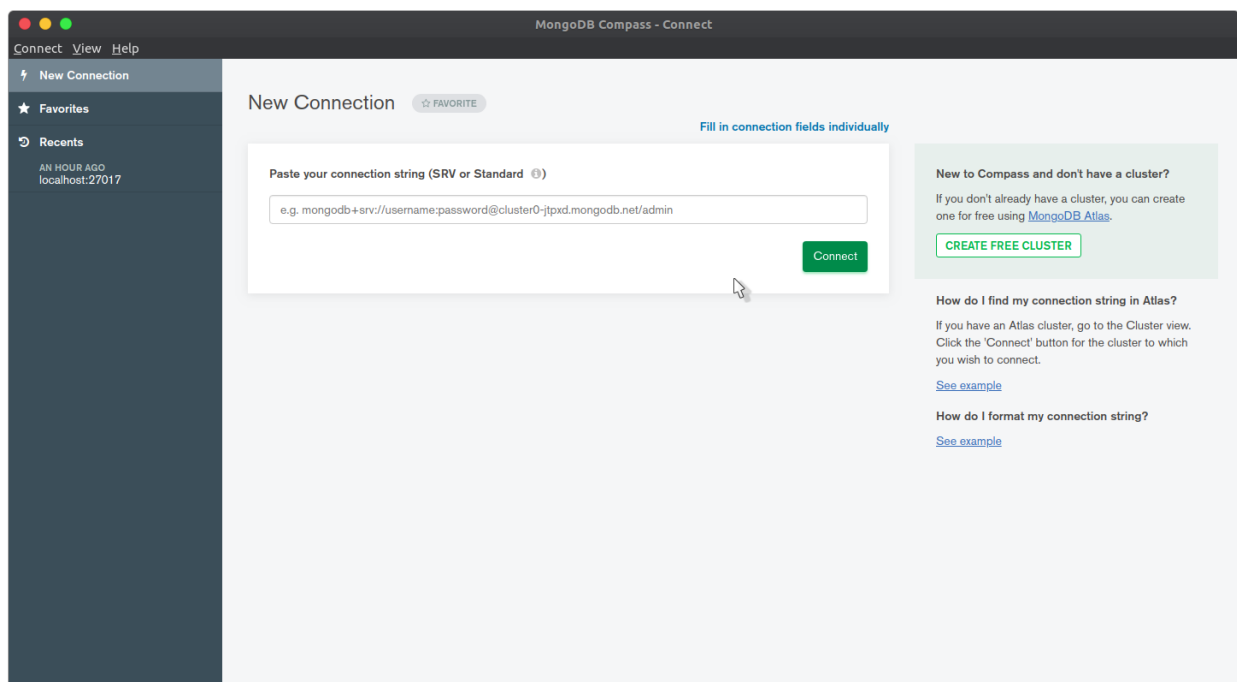
The screenshot shows a terminal window titled "mongosh mongodb://127.0.0.1:27017/?directConnection=true&serverSelectionTimeoutMS=2000". The prompt is "parth@exter:~\$ mongosh". The output shows the current MongoDB Log ID, the connection string, and the versions of MongoDB (5.0.3) and mongosh (1.1.1). It also provides a link to the MongoDB shell documentation. Below this, it displays startup warnings from the server, including a recommendation to use the XFS filesystem and a note that access control is not enabled. The prompt "test>" is visible at the bottom.

```
parth@exter:~$ mongosh
Current MongoDB Log ID: 6188aa8cd96d733515576c7f
Connecting to: mongodb://127.0.0.1:27017/?directConnection=true&serverSelectionTimeoutMS=2000
Using MongoDB: 5.0.3
Using Mongosh: 1.1.1

For mongosh info see: https://docs.mongodb.com/mongodb-shell/

-----
  The server generated these startup warnings when booting:
  2021-11-08T09:15:00.570+05:30: Using the XFS filesystem is strongly recommended with the WiredTiger storage engine. See http://do
chub.mongodb.org/core/prodnotes-filesystem
  2021-11-08T09:15:01.881+05:30: Access control is not enabled for the database. Read and write access to data and configuration is
unrestricted
-----

test>
```



Commands to Run

- **Mongoimport**
- **Find**
- **Insert**
- **InsertMany**
- **Sort**
- **Pretty**
- **Update**
- **Upsert**
- **\$set**
- **Remove**

```
1  ## Import from json
2
3  mongoimport --db bda_restaurant --collection restaurants --file /home/parth/parth/practicals/BDA/prac8/restaurant.json --jsonArray
4
5  -----
6
7  ## Find all
8  db.restaurants.find()
9  db.restaurants.find().pretty()
10
11 -----
12
13 ## Find with where clause
14 db.restaurants.find({"id":11})
15
16 -----
17
18 ## Insert one
19 db.restaurants.insert({
20   "id" : 11,
21   "name" : "La Pinoz"
22 })
23
24 -----
25
26 ## Insert many
27 db.restaurants.insertMany([
28   {
29     "id" : 12,
30     "name" : "La Milano"
31   },
32   {
33     "id" : 13,
34     "name" : "Tasty"
35   }
36 ])
37
38 -----
39
40 ## sort
41 # 1 for ascending -1 for descending
42
43 db.restaurants.find().sort({"id":1})
44 db.restaurants.find().sort({"id":-1})
45
46 -----
```

```

48 ## Update (Replace entire obj with new)
49
50 db.restaurants.update({"id":11},
51 {
52     "id" : 11,
53     "name" : "La Pinoz",
54     "reviews": [{
55         "name": "Sally",
56         "date": "October 26, 2016",
57         "rating": 4,
58         "comments": "One of the tastiest and most unique ramen places I've been to in NYC, but also the priciest. I think overall its worth the try. No
59     }
60 ]
61 },
62 {
63     upsert:true
64 }
65 )
66
67 - gives error: MongoInvalidArgumentError: Update document requires atomic operators
68 Why?
69
70 ## Update (only change specified fields)
71
72 db.restaurants.update({"id":11},
73 {
74     $set : {
75         "reviews": [{
76             "name": "Sally",
77             "date": "October 26, 2016",
78             "rating": 4,
79             "comments": "One of the tastiest and most unique ramen places I've been to in NYC, but also the priciest. I think overall its worth the try. No
80         }
81     ]
82 }
83 })
84
85 -----
86
87 ## Delete
88
89 db.restaurants.remove({'id:12})
90
91 -----

```

Output

```
Using MongoDB: 5.0.3
Using Mongosh: 1.1.1
bda_restaurant> db
bda_restaurant
bda_restaurant> show collections
restaurant
bda_restaurant> db.restaurant.find()
[
  {
    _id: ObjectId("617bcff96cd703b9e9f2cab"),
    restaurants: [
      {
        id: 1,
        name: 'Mission Chinese Food',
        neighborhood: 'Manhattan',
        photograph: '1.jpg',
        address: '171 E Broadway, New York, NY 10002',
        latlng: { lat: 40.713829, lng: -73.989667 },
        cuisine_type: 'Asian',
        operating_hours: {
          Monday: '5:30 pm - 11:00 pm',
          Tuesday: '5:30 pm - 12:00 am',
          Wednesday: '5:30 pm - 12:00 am',
          Thursday: '5:30 pm - 12:00 am',
          Friday: '5:30 pm - 12:00 am',
          Saturday: '12:00 pm - 4:00 pm, 5:30 pm - 12:00 am',
          Sunday: '12:00 pm - 4:00 pm, 5:30 pm - 11:00 pm'
        },
        reviews: [
          {
            name: 'Steve',
            date: 'October 26, 2016',
            rating: 4,
            comments: 'Mission Chinese food has grown up from its scrappy Orchard Street days into a big, two story restaurant equipped with a pizza oven, a prime rib cart, and a much broader menu. Yes, it still has all the hits - the kung pao pastrami, the thrice cooked bacon -but chef/proprietor Danny Bowlen and executive chef Angela Dinayuga have also added a raw bar, two generous family-style set menus, and showstoppers like duck baked in clay. And you can still get a lot of food without breaking the bank.'
          },
          {
            name: 'Morgan',
            date: 'October 26, 2016',
            rating: 4,
            comments: 'This place is a blast. Must orders: GREEN TEA NOODS, sounds gross (to me at least) but these were incredible! Kung pao pastrami (but you already knew that), beef tartare was a fun appetizer that we decided to try, the spicy na po tofu SUPER spicy but delicious, egg rolls and scallion pancake I could have passed on... I wish we would have gone with a larger group, so much more I would have liked to try!'
          },
          {
            name: 'Jason',
            date: 'October 26, 2016',
            rating: 3,
            comments: 'I was VERY excited to come here after seeing and hearing so many good things about this place. Having read much, I knew going into it that it was not going to be authentic Chinese. The place was edgy, had a punk rock throwback attitude, and generally delivered the desired atmosphere. Things went downhill from there though. The food was okay at best and the best qualities were easily overshadowed by what I believe to be poor decisions by the kitchen staff.'
          }
        ]
      }
    ]
  }
]
```

```

]
bda_restaurant> db.restaurant.find().pretty()
[
  {
    _id: ObjectId("617bcff96cd703b9e9f2cab"),
    restaurants: [
      {
        id: 1,
        name: 'Mission Chinese Food',
        neighborhood: 'Manhattan',
        photograph: '1.jpg',
        address: '171 E Broadway, New York, NY 10002',
        latlng: { lat: 40.713829, lng: -73.989667 },
        cuisine_type: 'Asian',
        operating_hours: {
          Monday: '5:30 pm - 11:00 pm',
          Tuesday: '5:30 pm - 12:00 am',
          Wednesday: '5:30 pm - 12:00 am',
          Thursday: '5:30 pm - 12:00 am',
          Friday: '5:30 pm - 12:00 am',
          Saturday: '12:00 pm - 4:00 pm, 5:30 pm - 12:00 am',
          Sunday: '12:00 pm - 4:00 pm, 5:30 pm - 11:00 pm'
        },
        reviews: [
          {
            name: 'Steve',
            date: 'October 26, 2016',
            rating: 4,
            comments: 'Mission Chinese Food has grown up from its scrappy Orchard Street days into a big, two story restaurant equipped with a pizza oven, a prime rib cart, and a much broader menu. Yes, it still has all the hits - the kung pao pastrami, the thrice cooked bacon -but chef/proprietor Danny Bowlen and executive chef Angela Dinayuga have also added a raw bar, two generous family-style set menus, and showstoppers like duck baked in clay. And you can still get a lot of food without breaking the bank.'
          },
          {
            name: 'Morgan',
            date: 'October 26, 2016',
            rating: 4,
            comments: 'This place is a blast. Must orders: GREEN TEA NOODS, sounds gross (to me at least) but these were incredible! Kung pao pastrami (but you already knew that), beef tartare was a fun appetizer that we decided to try, the spicy na po tofu SUPER spicy but delicious, egg rolls and scallion pancake I could have passed on... I wish we would have gone with a larger group, so much more I would have liked to try!'
          },
          {
            name: 'Jason',
            date: 'October 26, 2016',
            rating: 3,
            comments: 'I was VERY excited to come here after seeing and hearing so many good things about this place. Having read much, I knew going into it that it was not going to be authentic Chinese. The place was edgy, had a punk rock throwback attitude, and generally delivered the desired atmosphere. Things went downhill from there though. The food was okay at best and the best qualities were easily overshadowed by what I believe to be poor decisions by the kitchen staff.'
          }
        ]
      },
      {
        id: 2,
        name: 'Felix',
        neighborhood: 'Brooklyn',
        photograph: '2.jpg',

```

```
mongosh mongodb://127.0.0.1:27017/?directConnection=true&serverSelectionTimeoutMS=2000
bda_restaurant> db.createCollection('restaurants')
{ ok: 1 }
bda_restaurant> show collections
restaurants
bda_restaurant> db.restaurants.find()
[
  {
    _id: ObjectId("6188a26d32ff113ccf60e0e0"),
    id: 1,
    name: 'Mission Chinese Food',
    neighborhood: 'Manhattan',
    photograph: '1.jpg',
    address: '112 E Broadway, New York, NY 10002',
    latlng: { lat: 40.713829, lng: -73.989667 },
    cuisine_type: 'Asian',
    operating_hours: {
      Monday: '5:30 pm - 11:00 pm',
      Tuesday: '5:30 pm - 12:00 am',
      Wednesday: '5:30 pm - 12:00 am',
      Thursday: '5:30 pm - 12:00 am',
      Friday: '9:30 pm - 12:00 am',
      Saturday: '12:00 pm - 4:00 pm, 5:30 pm - 12:00 am',
      Sunday: '12:00 pm - 4:00 pm, 5:30 pm - 11:00 pm'
    },
    reviews: [
      {
        name: 'Steve',
        date: 'October 20, 2016',
        rating: 4,
        comments: 'Mission Chinese Food has grown up from its scrappy Orchard Street days into a big, two story restaurant equipped with a pizza oven, a prime rib cart, and a much broader menu. Yes, it s
till has all the hits - the kung pao pastrami, the thrice cooked bacon -but chef/proprietor Danny Bowien and executive chef Angela Dinayuga have also added a raw bar, two generous family-style set menus,
and showstoppers like duck baked in clay. And you can still get a lot of food without breaking the bank.'
      },
      {
        name: 'Morgan',
        date: 'October 20, 2016',
        rating: 4,
        comments: 'This place is a blast. Must orders: GREEN TEA NOODS, sounds gross (to me at least) but these were incredible! Kung pao pastrami (but you already knew that), beef tartare was a fun app
etizer that we decided to try, the spicy ma po tofu SUPER spicy but delicious, egg rolls and scallion pancake i could have passed on... I wish we would have gone with a larger group, so much more I would
have liked to try!'
      },
      {
        name: 'Jason',
        date: 'October 20, 2016',
        rating: 3,
        comments: 'I was VERY excited to come here after seeing and hearing so many good things about this place. Having read much, I knew going into it that it was not going to be authentic Chinese. The
place was edgy, had a punk rock throwback attitude, and generally delivered the desired atmosphere. Things went downhill from there though. The food was okay at best and the best qualities were easily o
vershadowed by what I believe to be poor decisions by the kitchen staff.'
      }
    ]
  },
  {
    _id: ObjectId("6188a26d32ff113ccf60e0e1"),

```

```
mongosh mongodb://127.0.0.1:27017/?directConnection=true&serverSelectionTimeoutMS=2000
bda_restaurant> db.restaurants.find({'id':11})
[
  {
    _id: ObjectId("6188a35163a4db16ecb00247"),
    id: 11,
    name: 'La Pinta'
  }
]
bda_restaurant> db.restaurants.insertMany([
  ...
  {
    "id": 12,
    "name": "La Milano"
  },
  ...
  {
    "id": 13,
    "name": "Tasty"
  }
  ...
])
{
  acknowledged: true,
  insertedIds: {
    '0': ObjectId("6188a43a63a4db16ecb00248"),
    '1': ObjectId("6188a43a63a4db16ecb00249")
  }
}
bda_restaurant> db.find().pretty()
```

```

mongosh mongodb://127.0.0.1:27017/?directConnection=true&serverSelectionTimeoutMS=2000
},
{
  "_id": ObjectId("6188a43a63a4db16ecb00249"), id: 13, name: 'Tasty' }
]
bda_restaurant> db.restaurants.find().sort({ 'id':1})
[
  {
    _id: ObjectId("6188a26d32ff113ccf60e0e0"),
    id: 1,
    name: 'Mission Chinese Food',
    neighborhood: 'Manhattan',
    photograph: '1.jpg',
    address: '171 E Broadway, New York, NY 10002',
    latlng: { lat: 40.713829, lng: -73.989667 },
    cuisine_type: 'Asian',
    operating_hours: {
      Monday: '5:30 pm - 11:00 pm',
      Tuesday: '5:30 pm - 12:00 am',
      Wednesday: '5:30 pm - 12:00 am',
      Thursday: '5:30 pm - 12:00 am',
      Friday: '5:30 pm - 12:00 am',
      Saturday: '12:00 pm - 4:00 pm, 5:30 pm - 12:00 am',
      Sunday: '12:00 pm - 4:00 pm, 5:30 pm - 11:00 pm'
    },
    reviews: [
      {
        name: 'Steve',
        date: 'October 26, 2016',
        rating: 4,
        comments: 'Mission Chinese Food has grown up from its scrappy Orchard Street days into a big, two story restaurant equipped with a pizza oven, a prime rib cart, and a much broader menu. Yes, it s
            still has all the hits - the kung pao pastrami, the thrice cooked bacon -but chef/proprietor Danny Bowten and executive chef Angela Dinayuga have also added a raw bar, two generous family-style set menus
            and showstoppers like duck baked in clay. And you can still get a lot of food without breaking the bank.'
      },
      {
        name: 'Morgan',
        date: 'October 26, 2016',
        rating: 4,
        comments: 'This place is a blast. Must orders: GREEN TEA NOODS, sounds gross (to me at least) but these were incredible! Kung pao pastrami (but you already knew that), beef tartare was a fun app
            etizer that we decided to try, the spicy ma po tofu SUPER spicy but delicious, egg rolls and scallion pancake I could have passed on... I wish we would have gone with a larger group, so much more I would
            have liked to try!'
      },
      {
        name: 'Jason',
        date: 'October 26, 2016',
        ratings: 3,
        comments: 'I was VERY excited to come here after seeing and hearing so many good things about this place. Having read much, I knew going into it that it was not going to be authentic Chinese. The
    
```

```

mongosh mongodb://127.0.0.1:27017/?directConnection=true&serverSelectionTimeoutMS=2000
bda_restaurant> db.restaurants.update({'_id':11},
... {
.....   $set : {
.....     "reviews": [ {
.....       "name": 'Sally',
.....       "date": 'October 26, 2016',
.....       "rating": 4,
.....       "comments": 'One of the tastiest and most unique ramen places I've been to in NYC, but also the priciest. I think overall its worth the try. Not an everyday casual ramen shop though.'
.....     }
.....   ]
..... }
..... })
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 1,
  modifiedCount: 1,
  upsertedCount: 0
}
bda_restaurant> db.restaurants.find({'_id':11})
[
  {
    _id: ObjectId("6188a35163a4db16ecb00247"),
    id: 11,
    name: 'La Pinza',
    reviews: [
      {
        name: 'Sally',
        date: 'October 26, 2016',
        rating: 4,
        comments: 'One of the tastiest and most unique ramen places I've been to in NYC, but also the priciest. I think overall its worth the try. Not an everyday casual ramen shop though.'
      }
    ]
  }
]
bda_restaurant> db.restaurants.find({'_id':12})
[
  {
    _id: ObjectId("6188a43a63a4db16ecb00248"),
    id: 12,
    name: 'La Milano'
  }
]
bda_restaurant> db.restaurants.remove({'_id':12})
{ acknowledged: true, deletedCount: 1 }

```