



Practical - 8

2CS702 – Big Data Analytics

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19BCE059

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

Import Restaurants dataset into mongodb environment.

```
C:\Program Files\MongoDB\Server\4.0\bin>mongoimport --db bda --collection "restaurant" --drop --type json --host "localhost:27017" --file C:\Users\Dell\Desktop\restaurants.json
2022-11-18T01:40:57.189+0530      connected to: localhost:27017
2022-11-18T01:40:57.193+0530      dropping: bda.restaurant
2022-11-18T01:40:59.256+0530      [#####] bda.restaurant
1.14MB/1.94MB (58.9%)
2022-11-18T01:40:59.443+0530      [#####] bda.restaurant
1.94MB/1.94MB (100.0%)
2022-11-18T01:40:59.444+0530      imported 3772 documents
```

CRUD Operations:

Create:

```
> show dbs
admin      0.000GB
config     0.000GB
local      0.000GB
> use restaurant
switched to db restaurant
> db
restaurant
> db.createCollection('restaurants')
{ "ok" : 1 }
> show collections
restaurants
> db.restaurants.find()
>
```

Creation of restaurant database and restaurants collection

Inserting a row in restaurants collections using InsertOne

```
> db.restaurants.insertOne({
... 'borough': 'Bronx',
... 'cuisine': 'American',
... 'name': 'US Pizza',
... 'restaurants_id': '1'
... });
{
  "acknowledged" : true,
  "insertedId" : ObjectId("63886dc3d81b29dc9f157caa")
}
> db.restaurants.find()
{ "_id" : ObjectId("63886dc3d81b29dc9f157caa"), "borough" : "Bronx", "cuisine" : "American", "name" : "US Pizza", "restaurants_id" : "1" }
> db.restaurants.find().pretty()
{
  "_id" : ObjectId("63886dc3d81b29dc9f157caa"),
  "borough" : "Bronx",
  "cuisine" : "American",
  "name" : "US Pizza",
  "restaurants_id" : "1"
}
```

Using InsertMany option

```
> db.restaurants.insertMany([
... {
... 'borough': 'Bronx',
... 'cuisine': 'American',
... 'name': 'Real Paprika',
... 'restaurant_id': '2'
... },
... {
... 'borough': 'Bronx',
... 'cuisine': 'Indian',
... 'name': 'Octane Pizza',
... 'restaurant_id': '3'
... }
... ]);
{
  "acknowledged" : true,
  "insertedIds" : [
    ObjectId("63886f30d81b29dc9f157cab"),
    ObjectId("63886f30d81b29dc9f157cac")
  ]
}
```

Read:

```

> db.restaurants.find().pretty()
{
  "_id" : ObjectId("63886dc3d81b29dc9f157caa"),
  "borough" : "Bronx",
  "cuisine" : "American",
  "name" : "US Pizza",
  "restaurants_id" : "1"
}
{
  "_id" : ObjectId("63886f30d81b29dc9f157cab"),
  "borough" : "Bronx",
  "cuisine" : "American",
  "name" : "Real Paprika",
  "restaurant_id" : "2"
}
{
  "_id" : ObjectId("63886f30d81b29dc9f157cac"),
  "borough" : "Bronx",
  "cuisine" : "Indian",
  "name" : "Octane Pizza",
  "restaurant_id" : "3"
}
>

```

```

> db.restaurants.find().count()
3
> db.restaurants.find({cuisine: 'Indian'})
{ "_id" : ObjectId("63886f30d81b29dc9f157cac"), "borough" : "Bronx",
  "restaurant_id" : "3" }
> db.restaurants.find({cuisine: 'Indian'}).pretty()
{
  "_id" : ObjectId("63886f30d81b29dc9f157cac"),
  "borough" : "Bronx",
  "cuisine" : "Indian",
  "name" : "Octane Pizza",
  "restaurant_id" : "3"
}

```

```

> db.restaurants.find().limit(2)
{ "_id" : ObjectId("63886dc3d81b29dc9f157caa"), "borough" : "Bronx",
  "restaurants_id" : "1" }
{ "_id" : ObjectId("63886f30d81b29dc9f157cab"), "borough" : "Bronx",
  "restaurant_id" : "2" }
> db.restaurants.find().limit(2).pretty()
{
  "_id" : ObjectId("63886dc3d81b29dc9f157caa"),
  "borough" : "Bronx",
  "cuisine" : "American",
  "name" : "US Pizza",
  "restaurants_id" : "1"
}
{
  "_id" : ObjectId("63886f30d81b29dc9f157cab"),
  "borough" : "Bronx",
  "cuisine" : "American",
  "name" : "Real Paprika",
  "restaurant_id" : "2"
}
>

```

Update:

```

> db.restaurants.updateOne({name: 'US Pizza'},
... {$set: {established_since_years: 4}})
{ "acknowledged" : true, "matchedCount" : 1, "modifiedCount" : 1 }

```

```

> db.restaurants.find({name: 'US Pizza'}).pretty()
{
  "_id" : ObjectId("63886dc3d81b29dc9f157caa"),
  "borough" : "Bronx",
  "cuisine" : "American",
  "name" : "US Pizza",
  "restaurants_id" : "1",
  "restaurant_id" : 4,
  "established_since_years" : 4
}

```

```
> db.restaurants.find({name: 'US Pizza'}).pretty()
{
  "_id" : ObjectId("63886dc3d81b29dc9f157caa"),
  "borough" : "Bronx",
  "cuisine" : "American",
  "name" : "US Pizza",
  "restaurants_id" : "1",
  "restaurant_id" : 4,
  "established_since_years" : 4
}
```

```
> db.restaurants.updateOne({name: 'Real Paprika'},
... {$set : {'name': 'Balaji Sandwich',
... 'cuisine': 'Indian',
... 'borough': 'Khirasara'
... }}, {upsert: true})
{ "acknowledged" : true, "matchedCount" : 1, "modifiedCount" : 1 }
```

```
> db.restaurants.find().pretty()
{
  "_id" : ObjectId("63886dc3d81b29dc9f157caa"),
  "borough" : "Bronx",
  "cuisine" : "American",
  "name" : "US Pizza",
  "restaurants_id" : "1"
}
{
  "_id" : ObjectId("63886f30d81b29dc9f157cab"),
  "borough" : "Khirasara",
  "cuisine" : "Indian",
  "name" : "Balaji Sandwich",
  "restaurant_id" : "2"
}
{
  "_id" : ObjectId("63886f30d81b29dc9f157cac"),
  "borough" : "Bronx",
  "cuisine" : "Indian",
  "name" : "Octane Pizza",
  "restaurant_id" : "3"
}
```

Since we changed restaurant from Real Paprika to Balaji Sandwich, there will be no update and modified count will be 0.

```
> db.restaurants.updateOne({name: 'Real Paprika'}, {$inc: {'restaurant_id': 4}})
{ "acknowledged" : true, "matchedCount" : 0, "modifiedCount" : 0 }
```

Delete:

```
> db.restaurants.remove({name: 'US Pizza'})
WriteResult({ "nRemoved" : 1 })
> db.restaurants.find().pretty()
{
  "_id" : ObjectId("63886f30d81b29dc9f157cab"),
  "borough" : "Khirasara",
  "cuisine" : "Indian",
  "name" : "Balaji Sandwich",
  "restaurant_id" : "2"
}
{
  "_id" : ObjectId("63886f30d81b29dc9f157cac"),
  "borough" : "Bronx",
  "cuisine" : "Indian",
  "name" : "Octane Pizza",
  "restaurant_id" : "3"
}
```

```
> db.restaurants.drop()
true
> db
restaurant
> show collections
> db.dropDatabase()
{ "ok" : 1 }
> show dbs
admin    0.000GB
config  0.000GB
local    0.000GB
>
```