

**Import a JSON file from the command line. Apply the following actions with the data present in the JSON file where, projection, aggregation, remove, count limit, skip and sort**

**Aim:**

To Import a JSON file from the command line. Apply the following actions with the data present in the JSON file where, projection, aggregation, remove, count, limit, skip and sort.

**Procedure:**

1. Open the terminal and run mongod. This will run the MongoDB server locally in your system.
2. In another terminal window run mongosh. This will activate the MongoDB Shell.
3. Create a database using the command use <database\_name>.
4. Then in another window run this command  

```
mongoimport --db test_db --collection student --file  
/path/to/student.json --jsonArray
```
5. The above command will import the JSON file into the database you created.
6. Then use the MongoDB commands to perform the given operations.

**Output:**

```
jesper — mongosh mongodb://127.0.0.1:27017/?directConnection=true&serverSelectionTimeoutMS=2000 — ?directConnection=true&__CFBundleIdentifier=com.a...
jesper@j ~ % mongosh
Current Mongosh Log ID: 66dd531a3c5f5603a67bd3df
Connecting to:   mongodb://127.0.0.1:27017/?directConnection=true&serverSelectionTimeoutMS=2000&appName=mongosh+2.3.1
Using MongoDB:   6.0.17
Using Mongosh:   2.3.1

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

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The server generated these startup warnings when booting
2024-09-08T12:50:10.503+05:30: Access control is not enabled for the database. Read and write access to data and configuration is unrestricted
-----

test>
```

mongo\_data.json — ~/Documents

```
mongo_data.json
1  [
2    {"name": "joe", "age":19, "mark":100},
3    {"name": "dora", "age":18, "mark":40},
4    {"name": "dog", "age":26, "mark":80},
5    {"name": "chad", "age":21, "mark":66},
6    {"name": "big_guy", "age":20, "mark":74}
7  ]
8
```

~/Documents/mongo\_data.json 4:40 LF UTF-8 JSON GitHub Git (0)

```
jesper — mongosh mongodb://127.0.0.1:27017/?directConnection=true&serverSelectionTimeoutMS=2000 — -zsh — 155x17
jesper@j ~ % mongoimport --db test_db --collection student --file /Users/jesper/Documents/mongo_data.json --jsonArray
2024-09-08T12:56:43.922+0530 connected to: mongodb://localhost/
2024-09-08T12:56:43.928+0530 5 document(s) imported successfully. 0 document(s) failed to import.
jesper@j ~ %
```

# 1. Find where :

```
jesper — mongosh mongodb://127.0.0.1:27017/?directConnection=true&serverSelectionTimeoutMS=2000 — ?directConnection=true&__CFBundleIdentifier=com.apple.Terminal — 181x42
test> use test_db;
switched to db test_db
test_db> db.student.find({$where:"this.age>20"});
[
  {
    _id: ObjectId('66dd51a448846d499cbe1eb'),
    name: 'chad',
    age: 21,
    mark: 66
  },
  {
    _id: ObjectId('66dd51a448846d499cbe1ed'),
    name: 'dog',
    age: 26,
    mark: 80
  },
  {
    _id: ObjectId('66dd51aa0bcf55c3e9ae0251'),
    name: 'dog',
    age: 26,
    mark: 80
  },
  {
    _id: ObjectId('66dd51aa0bcf55c3e9ae0254'),
    name: 'chad',
    age: 21,
    mark: 66
  },
  {
    _id: ObjectId('66dd51b331dc59520c23b192'),
    name: 'chad',
    age: 21,
    mark: 66
  },
  {
    _id: ObjectId('66dd51b331dc59520c23b193'),
    name: 'dog',
    age: 26,
    mark: 80
  }
]
test_db>
```

# 2. Projection :

```
jesper — mongosh mongodb://127.0.0.1:27017/?directConnection=true&serverSelectionTimeoutMS=2000 — ?direc...
test_db> db.student.find({}, { name: 1, age: 1, _id: 0 })
[
  { name: 'joe', age: 19 },
  { name: 'chad', age: 21 },
  { name: 'dora', age: 18 },
  { name: 'dog', age: 26 },
  { name: 'big_guy', age: 20 }
]
test_db>
```

# 3. Aggregation

```
jesper — mongosh mongodb://127.0.0.1:27017/?directConnection=true&serverSelectionTimeoutMS=2000 — ?directConnection=true&__CFBundleIdentifier=com.apple.Terminal — 181x13
test> use test_db;
switched to db test_db
test_db> db.student.aggregate([
...   {
...     $group: {
...       _id: null,
...       averageMark: { $avg: "$mark" }
...     }
...   }
... ])
[ { _id: null, averageMark: 72 } ]
test_db>
```

## 4. Remove

```
jesper — mongosh mongodb://127.0.0.1:27017/?directConnection=true&serverSelectionTimeoutMS=2000 — ?directCo...
{ name: 'big_guy', age: 20 }
]
test_db> db.student.deleteMany({ name: "joe" })
{ acknowledged: true, deletedCount: 1 }
test_db>
```

## 5. Count :

```
jesper — mongosh mongodb://127.0.0.1:27017/?directConnection=true&serverSelectionTimeoutMS=2000 — ?directConnection=true&__CFBundleIdentifier=com.apple.Terminal — 181x5
}
test_db> db.student.countDocuments({age:{$gt:20}});
2
test_db>
```

## 6. Sort :

```
jesper — mongosh mongodb://127.0.0.1:27017/?directConnection=true&serverSelectionTimeoutMS=2000 — ?direc...
test_db> db.student.find().sort({ age: 1 })
[
  {
    _id: ObjectId('66dd541f3ddec6010f6808c7'),
    name: 'dora',
    age: 18,
    mark: 40
  },
  {
    _id: ObjectId('66dd541f3ddec6010f6808c5'),
    name: 'joe',
    age: 19,
    mark: 100
  },
  {
    _id: ObjectId('66dd541f3ddec6010f6808c9'),
    name: 'big_guy',
    age: 20,
    mark: 74
  },
]
```

## 7. Skip :

```
jesper — mongosh mongodb://127.0.0.1:27017/?directConnection=true&serverSelectionTimeoutMS=2000 — ?directConnection=true&__CFBundleIdentifier=com.apple.Terminal — 181x22
test_db> db.student.find().skip(2)
[
  {
    _id: ObjectId('66dd541f3ddec6010f6808c7'),
    name: 'dora',
    age: 18,
    mark: 40
  },
  {
    _id: ObjectId('66dd541f3ddec6010f6808c8'),
    name: 'dog',
    age: 26,
    mark: 80
  },
  {
    _id: ObjectId('66dd541f3ddec6010f6808c9'),
    name: 'big_guy',
    age: 20,
    mark: 74
  }
]
test_db>
```

## 8. Limit :

A terminal window titled 'jesper — mongosh mongodb://127.0.0.1:27017/?directConnection=true&serverSelectionTimeoutMS=2000 — ?directConnection=true&\_\_CFBundleIdentifier=com.apple.Terminal — 181x22'. The prompt is 'test\_db>'. The command entered is 'db.student.find().limit(3)'. The output is a JSON array of three documents. The first document has \_id: ObjectId('66dd541f3ddec6010f6808c5'), name: 'joe', age: 19, and mark: 100. The second document has \_id: ObjectId('66dd541f3ddec6010f6808c6'), name: 'chad', age: 21, and mark: 66. The third document has \_id: ObjectId('66dd541f3ddec6010f6808c7'), name: 'dora', age: 18, and mark: 40. The prompt is now 'test\_db>'.

```
test_db> db.student.find().limit(3)
[
  {
    _id: ObjectId('66dd541f3ddec6010f6808c5'),
    name: 'joe',
    age: 19,
    mark: 100
  },
  {
    _id: ObjectId('66dd541f3ddec6010f6808c6'),
    name: 'chad',
    age: 21,
    mark: 66
  },
  {
    _id: ObjectId('66dd541f3ddec6010f6808c7'),
    name: 'dora',
    age: 18,
    mark: 40
  }
]
test_db>
```

## Result:

Thus the import a JSON file from the command line. Apply the following actions with the data present in the JSON file where, projection, aggregation, remove, count limit, skip and sort is successfully completed