

MongoDB Assignment

Create Collection

```
JS db.createCollection("my_collection"); /home/dishita.tank@simform.dom/Desl ... {} Playground Result X
Connected to firstcluster.bgrug.mongodb.net
1 db.createCollection("my_collection");
2 {"ok": 1}
3
```

Get Collection Name

```
JS db.getCollectionNames() /home/dishita.tank@simform.dom, ... {} Playground Result X
Connected to firstcluster.bgrug.mongodb.net
1 db.getCollectionNames()
2 ["my_collection"]
3
```

Batch Create 100 Records in MongoDB

```
JS db.my_collection.insertMany([ /home/dishita.tank@simform.dom/Desktop/JS/Dishita-CalculJS, ... {} Playground Result X
Connected to firstcluster.bgrug.mongodb.net
db.my_collection.insertMany([
1 { name: "John", age: 28, city: "New York" },
2 { name: "Alice", age: 25, city: "Los Angeles" },
3 { name: "Bob", age: 30, city: "Chicago" },
4 { name: "Charlie", age: 35, city: "San Francisco" },
5 { name: "David", age: 40, city: "Miami" },
6 { name: "Emma", age: 22, city: "Boston" },
7 { name: "Frank", age: 50, city: "Seattle" },
8 { name: "Grace", age: 31, city: "Dallas" },
9 { name: "Hannah", age: 29, city: "Austin" },
10 { name: "Ivy", age: 45, city: "San Diego" },
11 { name: "Jack", age: 38, city: "Atlanta" },
12 { name: "Kenny", age: 60, city: "Seattle" },
13 { name: "Lily", age: 27, city: "Denver" },
14 { name: "Megan", age: 33, city: "Washington D.C." },
15 { name: "Nina", age: 24, city: "Phoenix" },
16 { name: "Olivia", age: 41, city: "Miami" },
17 { name: "Paul", age: 36, city: "Chicago" },
18 { name: "Quincy", age: 30, city: "Los Angeles" },
19 { name: "Rachel", age: 37, city: "Houston" },
20 { name: "Steve", age: 47, city: "San Francisco" },
21 { name: "Tina", age: 28, city: "New York" },
22 { name: "Ursula", age: 32, city: "Boston" },
23 { name: "Victor", age: 50, city: "Dallas" },
24 { name: "Wendy", age: 22, city: "Austin" },
25 { name: "Xander", age: 40, city: "Seattle" },
26 { name: "Yara", age: 26, city: "San Diego" },
27 { name: "Zach", age: 30, city: "Phoenix" },
28 { name: "Aiden", age: 27, city: "New York" },
29 { name: "Bella", age: 33, city: "Washington D.C." },
30 { name: "Cody", age: 42, city: "Dallas" },
31 { name: "Diana", age: 29, city: "Miami" },
32 { name: "Eli", age: 36, city: "San Francisco" },
33 { name: "Fiona", age: 50, city: "Seattle" },
34 { name: "Gavin", age: 34, city: "Los Angeles" },
35 { name: "Holly", age: 27, city: "Chicago" },
36 { name: "Isaac", age: 41, city: "Boston" },
37 { name: "Jasmine", age: 26, city: "Atlanta" },
38 { name: "Kyle", age: 34, city: "Houston" },
39 { name: "Lena", age: 31, city: "San Diego" },
40 { name: "Mark", age: 45, city: "Phoenix" },
41 { name: "Nadia", age: 38, city: "Dallas" },
42 { name: "Owen", age: 32, city: "Seattle" },
43 { name: "Penny", age: 29, city: "San Francisco" },
44 { name: "Quinn", age: 33, city: "Los Angeles" },
45 { name: "Reed", age: 40, city: "Chicago" },
46 { name: "Sophia", age: 25, city: "Miami" },
47 { name: "Tony", age: 37, city: "San Diego" },
48
49 {
50   "acknowledged": true,
51   "insertedIds": [
52     {
53       "$oid": "67a4953f96e8e42a986ae"
54     },
55     {
56       "$oid": "67a4953f96e8e42a986af"
57     },
58     {
59       "$oid": "67a4953f96e8e42a986b0"
60     },
61     {
62       "$oid": "67a4953f96e8e42a986b1"
63     },
64     {
65       "$oid": "67a4953f96e8e42a986b2"
66     },
67     {
68       "$oid": "67a4953f96e8e42a986b3"
69     },
70     {
71       "$oid": "67a4953f96e8e42a986b4"
72     },
73     {
74       "$oid": "67a4953f96e8e42a986b5"
75     },
76     {
77       "$oid": "67a4953f96e8e42a986b6"
78     },
79     {
80       "$oid": "67a4953f96e8e42a986b7"
81     },
82     {
83       "$oid": "67a4953f96e8e42a986b8"
84     },
85     {
86       "$oid": "67a4953f96e8e42a986b9"
87     },
88     {
89       "$oid": "67a4953f96e8e42a986ba"
90     },
91     {
92       "$oid": "67a4953f96e8e42a986bb"
93     },
94     {
95       "$oid": "67a4953f96e8e42a986bc"
96     },
97     {
98       "$oid": "67a4953f96e8e42a986bd"
99     }
100   ]
101 }
```

Batch Update Records with status= "Active" for those with age>30

```
JS db.my_collection.updateMany( /home/dishita.tank@simform.dom/ ▶ {} Playground Result x
    Connected to firstcluster.bgrug.mongodb.net
1 db.my_collection.updateMany(
2   { age: { $gt: 30 } },
3   { $set: { status: "Active" } }
4 );

1 {
2   "acknowledged": true,
3   "insertedId": null,
4   "matchedCount": 71,
5   "modifiedCount": 71,
6   "upsertedCount": 0
7 }
```

Before Indexing (age)

```
JS db.my_collection.find( /home/dishita.tank@simform.dom/Desktop/JS/Dishita-C ▶ {} Playground Result x
    Connected to firstcluster.bgrug.mongodb.net
1 db.my_collection.find(
2   {
3     age: { $gt: 30 }
4   }
5 ).explain("executionStats");

30 "executionStats": {
31   "executionSuccess": true,
32   "nReturned": 71,
33   "executionTimeMillis": 0,
34   "totalKeysExamined": 0,
35   "totalDocsExamined": 105,
36   "executionStages": {
37     "isCached": false,
38     "stage": "COLLSCAN",
39     "filter": {
40       "age": {
41         "$gt": 30
42       }
43     },
44     "nReturned": 71,
45     "executionTimeMillisEstimate": 0,
46     "works": 106,
47     "advanced": 71,
48     "needTime": 34,
49     "needYield": 0,
50     "saveState": 0,
51     "restoreState": 0,
52     "isEOF": 1,
53     "direction": "forward",
54     "docsExamined": 105
55   }
}
```

Create Index on 3 fields – name, city, age

```
JS db.my_collection.getIndexes(); /home/dishita.tank@simform.dom/Desktop/JS/Dishita-C ▶ {} Playground Result x
    Connected to firstcluster.bgrug.mongodb.net
1 db.my_collection.getIndexes();

1 {
2   "v": 2,
3   "key": {
4     "_id": 1
5   },
6   "name": "_id_"
7 },
8 {
9   "v": 2,
10  "key": {
11    "name": 1
12  },
13  "name": "name_1"
14 },
15 {
16  "v": 2,
17  "key": {
18    "age": 1
19  },
20  "name": "age_1"
21 },
22 {
23  "v": 2,
24  "key": {
25    "city": 1
26  },
27  "name": "city_1"
28 }
29
30
```

After Indexing (age)

```
JS db.my_collection.find( /home/dishita.tank@simform.dom/Desktop ...
Connected to firstcluster.bgrug.mongodb.net
1 db.my_collection.find(
2   {
3     age: {$gt:30}
4   }
5 ).explain("executionStats");

3 "queryPlanner": {
44 },
45 "executionStats": {
46   "executionSuccess": true,
47   "nReturned": 71,
48   "executionTimeMillis": 1,
49   "totalKeysExamined": 71,
50   "totalDocsExamined": 71,
51   "executionStages": {
52     "isCached": false,
53     "stage": "FETCH",
54     "nReturned": 71,
55     "executionTimeMillisEstimate": 0,
56     "works": 72,
57     "advanced": 71,
58     "needTime": 0,
59     "needYield": 0,
60     "saveState": 0,
61     "restoreState": 0,
62     "isEOF": 1,
63     "docsExamined": 71,
64     "alreadyHasObj": 0,
65     "inputStage": {
66       "stage": "IXSCAN",
67       "nReturned": 71,
68       "executionTimeMillisEstimate": 0,
69       "works": 72,
70       "advanced": 71,
71       "needTime": 0,
72       "needYield": 0,
73       "saveState": 0,
74       "restoreState": 0,
75       "isEOF": 1,
76       "keyPattern": {
77         "age": 1
78       },
79       "indexName": "age_1",
80       "isMultiKey": false,
81       "multiKeyPaths": {
82         "age": []
83       },
84       "isUnique": false,
85       "isSparse": false,
86       "isPartial": false,
87       "indexVersion": 2,
88       "direction": "forward",
89       "indexBounds": {
90         "age": [
91           "(30, inf.0]"
```

Finding Duplicate Values using Aggregation

```
JS db.my_collection.aggregate([ /home/dishita.tank@simform.dom/Desktop/JS/Dishi ... {} Playground Result x
Connected to firstcluster.bgrug.mongodb.net
1 db.my_collection.aggregate([
2   { $group: { _id: "$name", count: { $sum: 1 } } },
3   { $match: { count: { $gt: 1 } } },
4   { $project: { _id: 0, name: "$_id", count: 1 } },
5   { $sort: { count: -1 } }
6   ]);

1 [
2   {
3     "count": 2,
4     "name": "Grace"
5   },
6   {
7     "count": 2,
8     "name": "Zane"
9   },
10  {
11    "count": 2,
12    "name": "Kyle"
13  },
14  {
15    "count": 4,
16    "name": "Xander"
17  },
18  {
19    "count": 3,
20    "name": "Ursula"
21  },
22  {
23    "count": 2,
24    "name": "Jack"
25  },
26  {
27    "count": 3,
28    "name": "Quinn"
29  },
30  {
31    "count": 2,
32    "name": "David"
33  },
34  {
35    "count": 2,
36    "name": "Nina"
37  },
38  {
39    "count": 2,
40    "name": "Yara"
41  },
42  {
43    "count": 2,
44    "name": "Lena"
45  }
46  ]
```