

```
C:\windows\system32>cd C:\Program Files\MongoDB\Server\4.0\bin
```

Start MongoDB Server

```
C:\Program Files\MongoDB\Server\4.0\bin>net start mongod
```

The requested service has already been started.

More help is available by typing NET HELPMSG 2182.

```
C:\Program Files\MongoDB\Server\4.0\bin>mongo
```

MongoDB shell version v4.0.11

connecting to: mongod://127.0.0.1:27017/?gssapiServiceName=mongod

Implicit session: session { "id" : UUID("eb23acfe-e979-4c5a-8a61-812179b95122") }

MongoDB server version: 4.0.11

Welcome to the MongoDB shell.

.....

To enable free monitoring, run the following command: db.enableFreeMonitoring()

To permanently disable this reminder, run the following command: db.disableFreeMonitoring()

Show Databases

```
> show databases;
```

admin 0.000GB

becomps 0.000GB

config 0.000GB

local 0.000GB

Switch to a Particular Database

```
> use becomps;
```

switched to db becomps

Show Collections of Database

```
> show collections;
```

student

Create Collection

```
> db.createCollection("project");
```

```
{ "ok" : 1 }
```

Insert Into Collection

```
> db.project.insert({id:1,prjctname:"DNSSEC",p_domain:"security"});
```

```
WriteResult({ "nInserted" : 1 })
```

To Display all the contents of the Collection

```
> db.project.find();
```

```
{ "_id" : ObjectId("5d3e7e1e0f86bf80dd0841d7"), "id" : 1, "prjctname" : "DNSSEC", "p_domain" : "security" }
```

Insert

```
> db.project.insert({_id:2,prjctname:"splunk",p_domain:"security"});
```

```
WriteResult({ "nInserted" : 1 })
```

a. Insert - having Id in Collection(Duplicate Key Error)

```
> db.project.insert({_id:2,prjctname:"splunk",p_domain:"security"});
WriteResult({
  "nInserted" : 0,
  "writeError" : {
    "code" : 11000,
    "errmsg" : "E11000 duplicate key error collection: becomps.project index: _id_ dup key: { : 2.0 }"
  }
})
```

b. Insert – Not having Id in Collection(Auto Id is generated)

```
> db.project.insert({prjctname:"splunk",p_domain:"security"});
WriteResult({ "nInserted" : 1 })
```

> db.project.find();

```
{ "_id" : ObjectId("5d3e7e1e0f86bf80dd0841d7"), "id" : 1, "prjctname" : "DNSSEC", "p_domain" : "security" }
{ "_id" : ObjectId("5d3e7eaf0f86bf80dd0841d8"), "id" : 1, "prjctname" : "splunk", "p_domain" : "security" }
{ "_id" : 2, "prjctname" : "splunk", "p_domain" : "security" }
{ "_id" : ObjectId("5d3e802d0f86bf80dd0841d9"), "prjctname" : "splunk", "p_domain" : "security" }
```

c. Insert – Id doesn't exists in Collection(Insert)

```
> db.project.insert({_id:1,prjctname:"ehrms"});
WriteResult({ "nInserted" : 1 })
```

> db.project.find();

```
{ "_id" : ObjectId("5d3e7e1e0f86bf80dd0841d7"), "id" : 1, "prjctname" : "DNSSEC", "p_domain" : "security" }
{ "_id" : ObjectId("5d3e7eaf0f86bf80dd0841d8"), "id" : 1, "prjctname" : "splunk", "p_domain" : "security" }
{ "_id" : 2, "prjctname" : "elk", "p_domain" : "system security" }
{ "_id" : ObjectId("5d3e802d0f86bf80dd0841d9"), "prjctname" : "splunk", "p_domain" : "security" }
{ "_id" : ObjectId("5d3e80fa0f86bf80dd0841da"), "prjctname" : "nic", "p_domain" : "app" }
{ "_id" : 3, "prjctname" : "nic", "p_domain" : "app_development" }
{ "_id" : 1, "prjctname" : "ehrms" }
```

Save

a.Having Id in Collection(Update)

```
> db.project.save({_id:2,prjctname:"elk",p_domain:"system security"});
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
```

> db.project.find();

```
{ "_id" : ObjectId("5d3e7e1e0f86bf80dd0841d7"), "id" : 1, "prjctname" : "DNSSEC", "p_domain" : "security" }
{ "_id" : ObjectId("5d3e7eaf0f86bf80dd0841d8"), "id" : 1, "prjctname" : "splunk", "p_domain" : "security" }
{ "_id" : 2, "prjctname" : "elk", "p_domain" : "system security" }
{ "_id" : ObjectId("5d3e802d0f86bf80dd0841d9"), "prjctname" : "splunk", "p_domain" : "security" }
```

b.Not having Id in Collection(Insert)

```
> db.project.save({prjctname:"nic",p_domain:"app"});
WriteResult({ "nInserted" : 1 })
```

> db.project.find();

```
{ "_id" : ObjectId("5d3e7e1e0f86bf80dd0841d7"), "id" : 1, "prjctname" : "DNSSEC", "p_domain" : "security" }
{ "_id" : ObjectId("5d3e7eaf0f86bf80dd0841d8"), "id" : 1, "prjctname" : "splunk", "p_domain" : "security" }
{ "_id" : 2, "prjctname" : "elk", "p_domain" : "system security" }
{ "_id" : ObjectId("5d3e802d0f86bf80dd0841d9"), "prjctname" : "splunk", "p_domain" : "security" }
```

```
{ "_id" : ObjectId("5d3e80fa0f86bf80dd0841da"), "prjctname" : "nic", "p_domain" : "app" }
```

c. Id doesn't exists in Collection(Insert)

```
> db.project.save({_id:3,prjctname:"nic",p_domain:"app_development"});  
WriteResult({ "nMatched" : 0, "nUpserted" : 1, "nModified" : 0, "_id" : 3 })
```

```
> db.project.find();
```

```
{ "_id" : ObjectId("5d3e7e1e0f86bf80dd0841d7"), "id" : 1, "prjctname" : "DNSSEC", "p_domain" : "security" }  
{ "_id" : ObjectId("5d3e7eaf0f86bf80dd0841d8"), "id" : 1, "prjctname" : "splunk", "p_domain" : "security" }  
{ "_id" : 2, "prjctname" : "elk", "p_domain" : "system security" }  
{ "_id" : ObjectId("5d3e802d0f86bf80dd0841d9"), "prjctname" : "splunk", "p_domain" : "security" }  
{ "_id" : ObjectId("5d3e80fa0f86bf80dd0841da"), "prjctname" : "nic", "p_domain" : "app" }  
{ "_id" : 3, "prjctname" : "nic", "p_domain" : "app_development" }  
{ "_id" : 1, "prjctname" : "ehrms" }
```

Update

a.upsert(true) and id matches

```
> db.project.update({_id:2},{ $set:{prjctname:"abc"}},{upsert:true});  
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })  
> db.project.find();  
{ "_id" : ObjectId("5d3e7e1e0f86bf80dd0841d7"), "id" : 1, "prjctname" : "DNSSEC", "p_domain" : "security" }  
{ "_id" : ObjectId("5d3e7eaf0f86bf80dd0841d8"), "id" : 1, "prjctname" : "splunk", "p_domain" : "security" }  
{ "_id" : 2, "prjctname" : "abc", "p_domain" : "system security" }  
{ "_id" : ObjectId("5d3e802d0f86bf80dd0841d9"), "prjctname" : "splunk", "p_domain" : "security" }  
{ "_id" : ObjectId("5d3e80fa0f86bf80dd0841da"), "prjctname" : "nic", "p_domain" : "app" }  
{ "_id" : 3, "prjctname" : "nic", "p_domain" : "app_development" }  
{ "_id" : 1, "prjctname" : "ehrms" }
```

b.upsert(true) and no id matches(Insert new document)

```
> db.project.update({_id:4},{ $set:{prjctname:"abc"}},{upsert:true});  
WriteResult({ "nMatched" : 0, "nUpserted" : 1, "nModified" : 0, "_id" : 4 })  
> db.project.find();  
{ "_id" : ObjectId("5d3e7e1e0f86bf80dd0841d7"), "id" : 1, "prjctname" : "DNSSEC", "p_domain" : "security" }  
{ "_id" : ObjectId("5d3e7eaf0f86bf80dd0841d8"), "id" : 1, "prjctname" : "splunk", "p_domain" : "security" }  
{ "_id" : 2, "prjctname" : "abc", "p_domain" : "system security" }  
{ "_id" : ObjectId("5d3e802d0f86bf80dd0841d9"), "prjctname" : "splunk", "p_domain" : "security" }  
{ "_id" : ObjectId("5d3e80fa0f86bf80dd0841da"), "prjctname" : "nic", "p_domain" : "app" }  
{ "_id" : 3, "prjctname" : "nic", "p_domain" : "app_development" }  
{ "_id" : 1, "prjctname" : "ehrms" }  
{ "_id" : 4, "prjctname" : "abc" }
```

c.upsert(false) and no Id matches(No change)

```
> db.project.update({_id:5},{ $set:{prjctname:"abc"}});  
WriteResult({ "nMatched" : 0, "nUpserted" : 0, "nModified" : 0 })  
> db.project.find();  
{ "_id" : ObjectId("5d3e7e1e0f86bf80dd0841d7"), "id" : 1, "prjctname" : "DNSSEC", "p_domain" : "security" }  
{ "_id" : ObjectId("5d3e7eaf0f86bf80dd0841d8"), "id" : 1, "prjctname" : "splunk", "p_domain" : "security" }  
{ "_id" : 2, "prjctname" : "abc", "p_domain" : "system security" }
```

```
{ "_id" : ObjectId("5d3e802d0f86bf80dd0841d9"), "prjctname" : "splunk", "p_domain" : "security" }
{ "_id" : ObjectId("5d3e80fa0f86bf80dd0841da"), "prjctname" : "nic", "p_domain" : "app" }
{ "_id" : 3, "prjctname" : "nic", "p_domain" : "app_development" }
{ "_id" : 1, "prjctname" : "ehrms" }
{ "_id" : 4, "prjctname" : "abc" }
```

d.upsert(false) and Id matches(Update)

```
> db.project.update({_id:4},{ $set:{prjctname:"pqr"}});
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
> db.project.find();
{ "_id" : ObjectId("5d3e7e1e0f86bf80dd0841d7"), "id" : 1, "prjctname" : "DNSSEC", "p_domain" : "security" }
{ "_id" : ObjectId("5d3e7eaf0f86bf80dd0841d8"), "id" : 1, "prjctname" : "splunk", "p_domain" : "security" }
{ "_id" : 2, "prjctname" : "abc", "p_domain" : "system security" }
{ "_id" : ObjectId("5d3e802d0f86bf80dd0841d9"), "prjctname" : "splunk", "p_domain" : "security" }
{ "_id" : ObjectId("5d3e80fa0f86bf80dd0841da"), "prjctname" : "nic", "p_domain" : "app" }
{ "_id" : 3, "prjctname" : "nic", "p_domain" : "app_development" }
{ "_id" : 1, "prjctname" : "ehrms" }
{ "_id" : 4, "prjctname" : "pqr" }
```

e.multi(true)

//wherever the match is found that particular rows are updated

```
> db.project.update({id:1},{ $set:{prjctname:"Multi"}},{multi:true});
WriteResult({ "nMatched" : 2, "nUpserted" : 0, "nModified" : 2 })
> db.project.find();
{ "_id" : ObjectId("5d3e7e1e0f86bf80dd0841d7"), "id" : 1, "prjctname" : "Multi", "p_domain" : "security" }
{ "_id" : ObjectId("5d3e7eaf0f86bf80dd0841d8"), "id" : 1, "prjctname" : "Multi", "p_domain" : "security" }
{ "_id" : 2, "prjctname" : "abc", "p_domain" : "system security" }
{ "_id" : ObjectId("5d3e802d0f86bf80dd0841d9"), "prjctname" : "splunk", "p_domain" : "security" }
{ "_id" : ObjectId("5d3e80fa0f86bf80dd0841da"), "prjctname" : "nic", "p_domain" : "app" }
{ "_id" : 3, "prjctname" : "nic", "p_domain" : "app_development" }
{ "_id" : 1, "prjctname" : "ehrms" }
{ "_id" : 4, "prjctname" : "pqr" }
```

f.multi(false)

```
> db.project.update({id:1},{ $set:{prjctname:"Multi false"}},{multi:false});
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
> db.project.find();
{ "_id" : ObjectId("5d3e7e1e0f86bf80dd0841d7"), "id" : 1, "prjctname" : "Multi false", "p_domain" : "security" }
{ "_id" : ObjectId("5d3e7eaf0f86bf80dd0841d8"), "id" : 1, "prjctname" : "Multi", "p_domain" : "security" }
{ "_id" : 2, "prjctname" : "abc", "p_domain" : "system security" }
{ "_id" : ObjectId("5d3e802d0f86bf80dd0841d9"), "prjctname" : "splunk", "p_domain" : "security" }
{ "_id" : ObjectId("5d3e80fa0f86bf80dd0841da"), "prjctname" : "nic", "p_domain" : "app" }
{ "_id" : 3, "prjctname" : "nic", "p_domain" : "app_development" }
```

```
{ "_id" : 1, "prjctname" : "ehrms" }
{ "_id" : 4, "prjctname" : "pqr" }
```

Remove

a. With condition

```
> db.student.find();
{ "_id" : ObjectId("5d3e7c452192d5bcdb2bfdbf"), "roll_no" : 1, "sname" : "zoya" }
{ "_id" : ObjectId("5d3e7cd52192d5bcdb2bfdbc0"), "roll_no" : 2, "sname" : "Taniya", "dob" : "22-nov-1998" }
> db.student.remove({roll_no:1});
WriteResult({ "nRemoved" : 1 })
> db.student.find();
{ "_id" : ObjectId("5d3e7cd52192d5bcdb2bfdbc0"), "roll_no" : 2, "sname" : "Taniya", "dob" : "22-nov-1998" }
```

b. Without condition

```
> db.student.remove({});
WriteResult({ "nRemoved" : 1 })
```

STRING MATCHING

a. Start from 'P'

```
> db.student.find({s_name:/^P/});
{ "_id" : 1, "roll_no" : "s1", "s_name" : "Pranali" }
```

b. Ends with a

```
> db.student.find({s_name:/a$/});
{ "_id" : 2, "roll_no" : "s2", "s_name" : "Taniya" }
```

c. Has n in between

```
> db.student.find({s_name:/n/});
{ "_id" : 1, "roll_no" : "s1", "s_name" : "Pranali" }
{ "_id" : 2, "roll_no" : "s2", "s_name" : "Taniya" }

> db.becomp.find({sname:/z/});
{ "_id" : 1, "sname" : "zoya", "sub1" : "bda", "sub2" : "mis" }
{ "_id" : 3, "sname" : "nazmeen", "sub1" : "bda", "sub2" : "mis" }
{ "_id" : 7, "sname" : "nuzhat", "sub1" : "assdf", "sub2" : "csal" }
```

NEW DATABASE:

```
> db.becomp.find();
{ "_id" : 1, "sname" : "zoya", "sub1" : "bda", "sub2" : "mis" }
{ "_id" : 2, "sname" : "taniya", "sub1" : "bda", "sub2" : "mis" }
{ "_id" : 3, "sname" : "nazmeen", "sub1" : "bda", "sub2" : "mis" }
{ "_id" : 4, "sname" : "pranali", "sub1" : "bda", "sub2" : "mis" }
{ "_id" : 5, "sname" : "haamid", "sub1" : "assdf", "sub2" : "mis" }
{ "_id" : 6, "sname" : "ayesha", "sub1" : "assdf", "sub2" : "csal" }
{ "_id" : 7, "sname" : "nuzhat", "sub1" : "assdf", "sub2" : "csal" }
```

\$eq:

```
> db.becomp.find({sub2:{$eq:"csal"}});
```

```
{ "_id" : 6, "sname" : "ayesha", "sub1" : "assdf", "sub2" : "csal" }
{ "_id" : 7, "sname" : "nuzhat", "sub1" : "assdf", "sub2" : "csal" }
```

\$ne :

```
> db.becomp.find({sub1:{$ne:"bda"}});
{ "_id" : 5, "sname" : "haamid", "sub1" : "assdf", "sub2" : "mis" }
{ "_id" : 6, "sname" : "ayesha", "sub1" : "assdf", "sub2" : "csal" }
{ "_id" : 7, "sname" : "nuzhat", "sub1" : "assdf", "sub2" : "csal" }
```

\$gt :

```
> db.becomp.find({_id:{$gt:4}});
{ "_id" : 5, "sname" : "haamid", "sub1" : "assdf", "sub2" : "mis" }
{ "_id" : 6, "sname" : "ayesha", "sub1" : "assdf", "sub2" : "csal" }
{ "_id" : 7, "sname" : "nuzhat", "sub1" : "assdf", "sub2" : "csal" }
```

\$gte :

```
> db.becomp.find({_id:{$gte:3}});
{ "_id" : 3, "sname" : "nazmeen", "sub1" : "bda", "sub2" : "mis" }
{ "_id" : 4, "sname" : "pranali", "sub1" : "bda", "sub2" : "mis" }
{ "_id" : 5, "sname" : "haamid", "sub1" : "assdf", "sub2" : "mis" }
{ "_id" : 6, "sname" : "ayesha", "sub1" : "assdf", "sub2" : "csal" }
{ "_id" : 7, "sname" : "nuzhat", "sub1" : "assdf", "sub2" : "csal" }
```

\$lt :

```
> db.becomp.find({_id:{$lt:3}});
{ "_id" : 1, "sname" : "zoya", "sub1" : "bda", "sub2" : "mis" }
{ "_id" : 2, "sname" : "taniya", "sub1" : "bda", "sub2" : "mis" }
```

\$lte :

```
> db.becomp.find({_id:{$lte:3}});
{ "_id" : 1, "sname" : "zoya", "sub1" : "bda", "sub2" : "mis" }
{ "_id" : 2, "sname" : "taniya", "sub1" : "bda", "sub2" : "mis" }
{ "_id" : 3, "sname" : "nazmeen", "sub1" : "bda", "sub2" : "mis" }
```

\$in :

```
> db.becomp.find({sub1:{$in:['bda']}});
{ "_id" : 1, "sname" : "zoya", "sub1" : "bda", "sub2" : "mis" }
{ "_id" : 2, "sname" : "taniya", "sub1" : "bda", "sub2" : "mis" }
{ "_id" : 3, "sname" : "nazmeen", "sub1" : "bda", "sub2" : "mis" }
{ "_id" : 4, "sname" : "pranali", "sub1" : "bda", "sub2" : "mis" }
```

\$nin :

```
> db.becomp.find({sub1:{$nin:['bda']}});
{ "_id" : 5, "sname" : "haamid", "sub1" : "assdf", "sub2" : "mis" }
{ "_id" : 6, "sname" : "ayesha", "sub1" : "assdf", "sub2" : "csal" }
{ "_id" : 7, "sname" : "nuzhat", "sub1" : "assdf", "sub2" : "csal" }
```

AND

```
> db.becomp.find({$and:[{_id:1},{_id:3}]});
```

```
> db.becomp.find({$and:[{sub1:"assdf"},{sub2:"csal"}]});
{ "_id" : 6, "sname" : "ayesha", "sub1" : "assdf", "sub2" : "csal" }
{ "_id" : 7, "sname" : "nuzhat", "sub1" : "assdf", "sub2" : "csal" }
```

```
> db.becomp.find({$and:[{sub1:"assdf"},{sub2:"mis"}]});
{ "_id" : 5, "sname" : "haamid", "sub1" : "assdf", "sub2" : "mis" }
```

OR

```
> db.becomp.find({$or:[{sub1:"assdf"},{sub2:"csal"}]});
{ "_id" : 5, "sname" : "haamid", "sub1" : "assdf", "sub2" : "mis" }
{ "_id" : 6, "sname" : "ayesha", "sub1" : "assdf", "sub2" : null }
{ "_id" : 7, "sname" : "nuzhat", "sub1" : "assdf", "sub2" : "csal" }
```

null :

```
> db.becomp.update({_id:6,_id:7},{ $set:{sub2:null}});
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
```

```
> db.becomp.find({sub2:{ $eq:null}});
{ "_id" : 6, "sname" : "ayesha", "sub1" : "assdf", "sub2" : null }
{ "_id" : 7, "sname" : "nuzhat", "sub1" : "assdf", "sub2" : null }
```

count :

```
> db.becomp.count();
7
> db.becomp.count({sub1:"bda"});
4
> db.becomp.count({sub2:{ $eq:"mis"}});
5
> db.becomp.count({sub1:{ $eq:"assdf"}});
3
```

Count null :

```
> db.becomp.count({sub2:null});
2
> db.becomp.count({sub2:{ $eq:null}});
2
```

limit :

```
> db.becomp.find().limit(2);
{ "_id" : 1, "sname" : "zoya", "sub1" : "bda", "sub2" : "mis" }
{ "_id" : 2, "sname" : "taniya", "sub1" : "bda", "sub2" : "mis" }
```

skip :

```
> db.becomp.find().skip(4);
{ "_id" : 5, "sname" : "haamid", "sub1" : "assdf", "sub2" : "mis" }
{ "_id" : 6, "sname" : "ayesha", "sub1" : "assdf", "sub2" : null }
{ "_id" : 7, "sname" : "nuzhat", "sub1" : "assdf", "sub2" : null }
```

sort :

Ascending

```
> db.becomp.find().sort({sname:1});
```

```
{ "_id" : 6, "sname" : "ayesha", "sub1" : "assdf", "sub2" : null }
{ "_id" : 5, "sname" : "haamid", "sub1" : "assdf", "sub2" : "mis" }
{ "_id" : 3, "sname" : "nazmeen", "sub1" : "bda", "sub2" : "mis" }
{ "_id" : 7, "sname" : "nuzhat", "sub1" : "assdf", "sub2" : null }
{ "_id" : 4, "sname" : "pranali", "sub1" : "bda", "sub2" : "mis" }
{ "_id" : 2, "sname" : "taniya", "sub1" : "bda", "sub2" : "mis" }
{ "_id" : 1, "sname" : "zoya", "sub1" : "bda", "sub2" : "mis" }
```

```
> db.becomp.find().sort({_id:1});
```

```
{ "_id" : 1, "sname" : "zoya", "sub1" : "bda", "sub2" : "mis" }
{ "_id" : 2, "sname" : "taniya", "sub1" : "bda", "sub2" : "mis" }
{ "_id" : 3, "sname" : "nazmeen", "sub1" : "bda", "sub2" : "mis" }
{ "_id" : 4, "sname" : "pranali", "sub1" : "bda", "sub2" : "mis" }
{ "_id" : 5, "sname" : "haamid", "sub1" : "assdf", "sub2" : "mis" }
{ "_id" : 6, "sname" : "ayesha", "sub1" : "assdf", "sub2" : null }
{ "_id" : 7, "sname" : "nuzhat", "sub1" : "assdf", "sub2" : null }
```

Descending

```
> db.becomp.find().sort({sname:-1});
```

```
{ "_id" : 1, "sname" : "zoya", "sub1" : "bda", "sub2" : "mis" }
{ "_id" : 2, "sname" : "taniya", "sub1" : "bda", "sub2" : "mis" }
{ "_id" : 4, "sname" : "pranali", "sub1" : "bda", "sub2" : "mis" }
{ "_id" : 7, "sname" : "nuzhat", "sub1" : "assdf", "sub2" : null }
{ "_id" : 3, "sname" : "nazmeen", "sub1" : "bda", "sub2" : "mis" }
{ "_id" : 5, "sname" : "haamid", "sub1" : "assdf", "sub2" : "mis" }
{ "_id" : 6, "sname" : "ayesha", "sub1" : "assdf", "sub2" : null }
```

```
> db.becomp.find().sort({_id:-1});
```

```
{ "_id" : 7, "sname" : "nuzhat", "sub1" : "assdf", "sub2" : null }
{ "_id" : 6, "sname" : "ayesha", "sub1" : "assdf", "sub2" : null }
{ "_id" : 5, "sname" : "haamid", "sub1" : "assdf", "sub2" : "mis" }
{ "_id" : 4, "sname" : "pranali", "sub1" : "bda", "sub2" : "mis" }
{ "_id" : 3, "sname" : "nazmeen", "sub1" : "bda", "sub2" : "mis" }
{ "_id" : 2, "sname" : "taniya", "sub1" : "bda", "sub2" : "mis" }
{ "_id" : 1, "sname" : "zoya", "sub1" : "bda", "sub2" : "mis" }
```

```
> db.becomp.find().sort({_id:1}).limit(4);
```

```
{ "_id" : 1, "sname" : "zoya", "sub1" : "bda", "sub2" : "mis" }
{ "_id" : 2, "sname" : "taniya", "sub1" : "bda", "sub2" : "mis" }
{ "_id" : 3, "sname" : "nazmeen", "sub1" : "bda", "sub2" : "mis" }
{ "_id" : 4, "sname" : "pranali", "sub1" : "bda", "sub2" : "mis" }
```

```
> db.becomp.find().sort({_id:1}).skip(4);
```

```
{ "_id" : 5, "sname" : "haamid", "sub1" : "assdf", "sub2" : "mis" }
{ "_id" : 6, "sname" : "ayesha", "sub1" : "assdf", "sub2" : null }
{ "_id" : 7, "sname" : "nuzhat", "sub1" : "assdf", "sub2" : null }
```



```

> db.becomp.find().sort({_id:1,sname:-1});
{ "_id" : 1, "sname" : "zoya", "sub1" : "bda", "sub2" : "mis" }
{ "_id" : 2, "sname" : "taniya", "sub1" : "bda", "sub2" : "mis" }
{ "_id" : 3, "sname" : "nazmeen", "sub1" : "bda", "sub2" : "mis" }
{ "_id" : 4, "sname" : "pranali", "sub1" : "bda", "sub2" : "mis" }
{ "_id" : 5, "sname" : "haamid", "sub1" : "assdf", "sub2" : "mis" }
{ "_id" : 6, "sname" : "ayesha", "sub1" : "assdf", "sub2" : null }
{ "_id" : 7, "sname" : "nuzhat", "sub1" : "assdf", "sub2" : null }
> db.becomp.find().sort({_id:-1,sname:1});
{ "_id" : 7, "sname" : "nuzhat", "sub1" : "assdf", "sub2" : null }
{ "_id" : 6, "sname" : "ayesha", "sub1" : "assdf", "sub2" : null }
{ "_id" : 5, "sname" : "haamid", "sub1" : "assdf", "sub2" : "mis" }
{ "_id" : 4, "sname" : "pranali", "sub1" : "bda", "sub2" : "mis" }
{ "_id" : 3, "sname" : "nazmeen", "sub1" : "bda", "sub2" : "mis" }
{ "_id" : 2, "sname" : "taniya", "sub1" : "bda", "sub2" : "mis" }
{ "_id" : 1, "sname" : "zoya", "sub1" : "bda", "sub2" : "mis" }

```

Last 2 records:

```

> db.becomp.find().skip(db.becomp.count()-2);
{ "_id" : 6, "sname" : "ayesha", "sub1" : "assdf", "sub2" : null }
{ "_id" : 7, "sname" : "nuzhat", "sub1" : "assdf", "sub2" : null }

```

Last 3 records:

```

> db.becomp.find().skip(db.becomp.count()-3);
{ "_id" : 5, "sname" : "haamid", "sub1" : "assdf", "sub2" : "mis" }
{ "_id" : 6, "sname" : "ayesha", "sub1" : "assdf", "sub2" : null }
{ "_id" : 7, "sname" : "nuzhat", "sub1" : "assdf", "sub2" : null }

```

Arrays:

```

> db.food.insert({_id:1,fruits:['apple','mango','orange']});
WriteResult({ "nInserted" : 1 })
> db.food.insert({_id:2,fruits:['apple','mango','orange','banana']});
WriteResult({ "nInserted" : 1 })
> db.food.insert({_id:3,fruits:['apple','orange']});
WriteResult({ "nInserted" : 1 })
> db.food.insert({_id:4,fruits:['mango','orange']});
WriteResult({ "nInserted" : 1 })

```

```

> db.food.find();
{ "_id" : 1, "fruits" : [ "apple", "mango", "orange" ] }
{ "_id" : 2, "fruits" : [ "apple", "mango", "orange", "banana" ] }
{ "_id" : 3, "fruits" : [ "apple", "orange" ] }
{ "_id" : 4, "fruits" : [ "mango", "orange" ] }

```

```

> db.food.find({fruits:"apple"});
{ "_id" : 1, "fruits" : [ "apple", "mango", "orange" ] }
{ "_id" : 2, "fruits" : [ "apple", "mango", "orange", "banana" ] }
{ "_id" : 3, "fruits" : [ "apple", "orange" ] }

```

```
> db.food.find({fruits:"apple",fruits:"orange"});
{ "_id" : 1, "fruits" : [ "apple", "mango", "orange" ] }
{ "_id" : 2, "fruits" : [ "apple", "mango", "orange", "banana" ] }
{ "_id" : 3, "fruits" : [ "apple", "orange" ] }
{ "_id" : 4, "fruits" : [ "mango", "orange" ] }
```

```
> db.food.find({'fruits.1':"apple"});    // no match
```

```
> db.food.find({'fruits.1':"mango"});
{ "_id" : 1, "fruits" : [ "apple", "mango", "orange" ] }
{ "_id" : 2, "fruits" : [ "apple", "mango", "orange", "banana" ] }
```

```
> db.food.find({'fruits.0':"mango"});
{ "_id" : 4, "fruits" : [ "mango", "orange" ] }
```

```
> db.food.find({'fruits.2':"orange"});
{ "_id" : 1, "fruits" : [ "apple", "mango", "orange" ] }
{ "_id" : 2, "fruits" : [ "apple", "mango", "orange", "banana" ] }
```

size of array :

```
> db.food.find({'fruits':{$size:2}});
{ "_id" : 3, "fruits" : [ "apple", "orange" ] }
{ "_id" : 4, "fruits" : [ "mango", "orange" ] }
```

slice :

```
> db.food.find({_id:2},{fruits:{$slice:2}});
{ "_id" : 2, "fruits" : [ "apple", "mango" ] }
> db.food.find({_id:1},{fruits:{$slice:1}});
{ "_id" : 1, "fruits" : [ "apple" ] }
```

Update index values in array :

```
db.food.update({_id:2},{set: {'fruits.1': 'plum'}});
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
> db.food.update({_id:2},{set: {'fruits.0': 'Blueberries'}});
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
> db.food.find({_id:2});
{ "_id" : 2, "fruits" : [ "Blueberries", "plum", "orange", "banana" ] }
```