```
test> db.createCollection("students")
                                                                         test> db.students.find()
{ ok: 1 }
                                                                         [
                                                                            _id: ObjectId("669f47ef61bbe242162b2c18"),
db.students.insertMany([{name:"Raj",age:22,subject:["Math",
                                                                           name: 'Raj',
"Science"],gratuated:false},{name:"Priya",age:24,subject:["Hi
                                                                           age: 22.
story", "Literature"], gratuated: true}, {name: "Anil", age: 23, subje
                                                                           subject: [ 'Math', 'Science' ],
ct:["Math","Literature"],gratuated:false},{name:"Sita",age:25,s
                                                                           gratuated: false
ubject:["Math","Science"],gratuated:true}])
 acknowledged: true,
                                                                            _id: ObjectId("669f47ef61bbe242162b2c19"),
 insertedIds: {
                                                                           name: 'Priya',
  '0': ObjectId("669f47ef61bbe242162b2c18"),
                                                                           subject: [ 'History', 'Literature' ],
  '1': ObjectId("669f47ef61bbe242162b2c19"),
  '2': ObjectId("669f47ef61bbe242162b2c1a"),
                                                                           gratuated: true
  '3': ObjectId("669f47ef61bbe242162b2c1b")
                                                                            id: ObjectId("669f47ef61bbe242162b2c1a"),
}
                                                                           name: 'Anil',
                                                                           age: 23.
test> db.students.find()
                                                                           subject: [ 'Math', 'Literature' ],
                                                                           gratuated: false
   id: ObjectId("669f47ef61bbe242162b2c18"),
  name: 'Rai'.
                                                                            _id: ObjectId("669f47ef61bbe242162b2c1b"),
  age: 22,
  subject: [ 'Math', 'Science' ],
                                                                           name: 'Sita',
  gratuated: false
                                                                           age: 25,
                                                                           subject: [ 'Math', 'Science' ],
                                                                           gratuated: true
   id: ObjectId("669f47ef61bbe242162b2c19"),
  name: 'Priya',
  age: 24,
                                                                            id: ObjectId("669f494c61bbe242162b2c1c"),
  subject: [ 'History', 'Literature' ],
                                                                           name: 'Reema',
  gratuated: true
                                                                           age: 21,
                                                                           subject: [ 'Math', 'Science' ],
                                                                           gratuated: false
   _id: ObjectId("669f47ef61bbe242162b2c1a"),
  name: 'Anil',
  age: 23.
                                                                         test> db.runCommand( { collMod: "users",
  subject: [ 'Math', 'Literature' ],
                                                                             validator: {
  gratuated: false
                                                                                $isonSchema: {
                                                                                 bsonType: "object",
required: [ "username", "password" ],
   id: ObjectId("669f47ef61bbe242162b2c1b"),
                                                                                 properties: {
                                                                         ...
                                                                                   username: {
  name: 'Sita',
                                                                                     bsonType: "string",
  age: 25,
                                                                         ...
  subject: [ 'Math', 'Science' ],
                                                                                     description: "must be a string and is required"
  gratuated: true
                                                                         ...
                                                                                   password: {
                                                                                     bsonType: "string",
                                                                         ...
                                                                                     minLength: 12,
                                                                                     description: "must be a string of at least 12
test> var binsert = db.students.initializeUnorderedBulkOp();
                                                                         characters, and is required"
binsert.insert({name:"Reema",age:21,subject:["Math","Scienc
e"],gratuated:false});
                                                                               }
{ nInsertOps: 1, nUpdateOps: 0, nRemoveOps: 0, nBatches:
                                                                             }
                                                                         db.runCommand({collMod:"students",validator:{$jsonSchem
test> binsert.execute()
                                                                         a:{bsonType:"object",required:["name","age","subject","gratu
                                                                         ated"],properties:{name:{bsonType:"string"},age:{bsonType:"i
 acknowledged: true,
 insertedCount: 1,
                                                                         nt"},subject:{bsonType:"object"},gratuated:{bsonType:"bool"}}
 insertedIds: [ { index: 0, _id:
                                                                         }}})
ObjectId("669f494c61bbe242162b2c1c") } ],
                                                                         { ok: 1 }
 matchedCount: 0,
                                                                         test> db.students.deleteOne({name:"raj"})
 modifiedCount: 0,
                                                                         { acknowledged: true, deletedCount: 0 }
 deletedCount: 0,
                                                                         test> db.students.deleteOne({name:"Raj"})
 upsertedCount: 0,
                                                                         { acknowledged: true, deletedCount: 1 }
 upsertedIds: []
                                                                         test> db.students.find()
```

```
matchedCount: 1,
   _id: ObjectId("669f47ef61bbe242162b2c19"),
                                                                          modifiedCount: 1,
  name: 'Priya',
                                                                          upsertedCount: 0
  age: 24,
  subject: [ 'History', 'Literature' ],
                                                                         test> db.students.find()
  gratuated: true
                                                                            _id: ObjectId("669f47ef61bbe242162b2c19"),
   id: ObjectId("669f47ef61bbe242162b2c1a"),
                                                                           name: 'Priya',
  name: 'Anil',
                                                                           age: 24,
  age: 23,
                                                                           subject: ['History', 'Philosophy'],
  subject: [ 'Math', 'Literature' ],
                                                                           gratuated: true
  gratuated: false
                                                                            _id: ObjectId("669f47ef61bbe242162b2c1b"),
   _id: ObjectId("669f47ef61bbe242162b2c1b"),
                                                                           name: 'Sita',
  name: 'Sita',
                                                                           age: 25,
  age: 25,
                                                                           subject: [ 'Math', 'Science' ],
  subject: ['Math', 'Science'],
                                                                           gratuated: true
  gratuated: true
                                                                            _id: ObjectId("669f494c61bbe242162b2c1c"),
   _id: ObjectId("669f494c61bbe242162b2c1c"),
                                                                           name: 'Reema',
  name: 'Reema'.
                                                                           age: 21.
  age: 21,
                                                                           subject: ['Math', 'Science'],
  subject: [ 'Math', 'Science' ],
                                                                           gratuated: false
  gratuated: false
                                                                         test> db.students.updateMany({},{$set:{hasMaths:false}})
test> db.students.deleteOne({gratuation:false})
{ acknowledged: true, deletedCount: 0 }
                                                                          acknowledged: true,
test> db.students.deleteOne({gratuated:false})
                                                                          insertedId: null,
{ acknowledged: true, deletedCount: 1 }
                                                                          matchedCount: 3,
test> db.students.find()
                                                                          modifiedCount: 3,
                                                                          upsertedCount: 0
   _id: ObjectId("669f47ef61bbe242162b2c19"),
  name: 'Priya',
                                                                         db.students.updateMany({subject:{$in:["Math"]}},{$set:{hasM
  age: 24,
                                                                         aths:true}})
  subject: [ 'History', 'Literature' ],
  gratuated: true
                                                                          acknowledged: true,
                                                                          insertedId: null,
                                                                          matchedCount: 2,
   id: ObjectId("669f47ef61bbe242162b2c1b"),
                                                                          modifiedCount: 2,
  name: 'Sita',
                                                                          upsertedCount: 0
  age: 25,
  subject: [ 'Math', 'Science' ],
                                                                         test> db.students.find()
  gratuated: true
                                                                            _id: ObjectId("669f47ef61bbe242162b2c19"),
                                                                           name: 'Priya',
    id: ObjectId("669f494c61bbe242162b2c1c"),
  name: 'Reema',
                                                                           age: 24,
                                                                           subject: [ 'History', 'Philosophy' ],
  age: 21,
  subject: [ 'Math', 'Science' ],
                                                                           gratuated: true,
  gratuated: false
                                                                           hasMaths: false
]
                                                                            id: ObjectId("669f47ef61bbe242162b2c1b"),
                                                                           name: 'Sita',
db.runCommand({collMod:"students",validator:{$jsonSchem
                                                                           age: 25,
a: \{bsonType: "object", required: ["name", "age", "subject", "gratu" \} \\
                                                                           subject: [ 'Math', 'Science' ],
ated"],properties:{name:{bsonType:"string"},age:{bsonType:"i
                                                                           gratuated: true,
nt"},gratuated:{bsonType:"bool"}}}}))
                                                                           hasMaths: true
{ ok: 1 }
test>
db.students.updateOne({name:"Priya"},{$set:{subject:["Histor
                                                                            _id: ObjectId("669f494c61bbe242162b2c1c"),
v","Philosophy"]}})
                                                                           name: 'Reema',
                                                                           age: 21.
 acknowledged: true,
                                                                           subject: [ 'Math', 'Science' ],
 insertedId: null,
                                                                           gratuated: false,
```

```
hasMaths: true
                                                                                   age: 25,
 }
                                                                                   subject: ['Literature', 'Science'],
                                                                                   gratuated: true
test> db.students.updateOne({name:"Sita"},{gratuated:false})
MongoInvalidArgumentError: Update document requires
                                                                                   _id: ObjectId('66a9d741c63be471b5149f4e'),
atomic operators
                                                                                   name: 'Sohama',
                                                                                   age: 20.
db.students.updateOne({name:"Sita"},{$set:{gratuated:false}}
                                                                                   subject: [ 'Math', 'Science' ],
                                                                                   gratuated: false
 acknowledged: true,
 insertedId: null,
 matchedCount: 1,
                                                                                   _id: ObjectId('66a9d741c63be471b5149f4f'),
 modifiedCount: 1,
                                                                                   name: 'Roshan',
 upsertedCount: 0
                                                                                   age: 23,
                                                                                   subject: [ 'AI', 'Science' ],
test> db.students.find()
                                                                                   gratuated: false
[
   id: ObjectId("669f47ef61bbe242162b2c19"),
                                                                         test> db.collections.find()
  name: 'Priya',
                                                                         test> db.students.find()
  age: 24,
  subject: [ 'History', 'Philosophy' ],
  gratuated: true.
                                                                                   _id: ObjectId('66a9cc19cf1de96595149f49'),
  hasMaths: false
                                                                                   name: 'Priya',
                                                                                   age: 24,
   id: ObjectId("669f47ef61bbe242162b2c1b"),
                                                                                   subject: [ 'History', 'Literature' ],
  name: 'Sita',
                                                                                   gratuated: true
  age: 25,
  subject: [ 'Math', 'Science' ],
  gratuated: false,
                                                                                   id: ObjectId('66a9cc19cf1de96595149f4b'),
  hasMaths: true
                                                                                   name: 'Sita',
                                                                                   age: 25,
                                                                                   subject: [ 'Math', 'Science' ],
   id: ObjectId("669f494c61bbe242162b2c1c"),
                                                                                   gratuated: true
  name: 'Reema',
  age: 21,
  subject: [ 'Math', 'Science' ],
                                                                                   id: ObjectId('66a9d741c63be471b5149f4c'),
  gratuated: false,
                                                                                   name: 'Raj',
  hasMaths: true
                                                                                   age: 22,
                                                                                   subject: [ 'Math', 'Science' ],
 }
                                                                                   gratuated: false
test>
est> db.students.find()
                                                                                   _id: ObjectId('66a9d741c63be471b5149f4d'),
                                                                                   name: 'Ravi'.
           _id: ObjectId('66a9cc19cf1de96595149f49'),
                                                                                   age: 25,
          name: 'Priya',
                                                                                   subject: [ 'Literature', 'Science' ],
          age: 24,
                                                                                   gratuated: true
          subject: [ 'History', 'Literature' ],
          gratuated: true
                                                                                   _id: ObjectId('66a9d741c63be471b5149f4e'),
                                                                                   name: 'Sohama',
           _id: ObjectId('66a9cc19cf1de96595149f4b'),
                                                                                   age: 20,
                                                                                   subject: ['Math', 'Science'],
          name: 'Sita',
          age: 25.
                                                                                   gratuated: false
          subject: ['Math', 'Science'],
          gratuated: true
                                                                                   _id: ObjectId('66a9d741c63be471b5149f4f'),
                                                                                   name: 'Roshan',
           _id: ObjectId('66a9d741c63be471b5149f4c'),
                                                                                   age: 23,
          name: 'Raj',
                                                                                   subject: [ 'AI', 'Science' ],
          age: 22,
                                                                                   gratuated: false
          subject: [ 'Math', 'Science' ],
                                                                         }
          gratuated: false
                                                                        test> db.students.find({name:"Raj"})
           id: ObjectId('66a9d741c63be471b5149f4d'),
          name: 'Ravi',
                                                                                   _id: ObjectId('66a9d741c63be471b5149f4c'),
```

```
name: 'Raj',
                                                                                    subject: [ 'History', 'Literature' ],
          age: 22,
                                                                                    gratuated: true
          subject: [ 'Math', 'Science' ],
          gratuated: false
 }
                                                                                    id: ObjectId('66a9cc19cf1de96595149f4b'),
                                                                                    name: 'Sita',
test> db.students.find({name:"Anil"})
                                                                                    age: 25,
                                                                                    subject: ['Math', 'Science'],
test> db.students.find({$qt:{age:22})
                                                                                    gratuated: true
test> db.students.find({age:{$gt:22}})
[
                                                                                     id: ObjectId('66a9d741c63be471b5149f4c'),
 {
          _id: ObjectId('66a9cc19cf1de96595149f49'),
                                                                                    name: 'Raj',
          name: 'Priya',
                                                                                    age: 22,
          age: 24,
          subject: [ 'History', 'Literature' ],
                                                                                    subject: ['Math', 'Science'],
          gratuated: true
                                                                                    gratuated: false
          id: ObjectId('66a9cc19cf1de96595149f4b'),
                                                                                    id: ObjectId('66a9d741c63be471b5149f4d'),
          name: 'Sita',
                                                                                    name: 'Ravi',
          age: 25,
                                                                                    age: 25,
          subject: ['Math', 'Science'],
                                                                                    subject: ['Literature', 'Science'],
          gratuated: true
                                                                                    gratuated: true
                                                                          }
          _id: ObjectId('66a9d741c63be471b5149f4d'),
                                                                         test> db.students.find({age:{$lte:23}})
          name: 'Ravi',
          age: 25,
                                                                                    _id: ObjectId('66a9d741c63be471b5149f4c'),
          subject: [ 'Literature', 'Science' ],
                                                                                    name: 'Raj',
          gratuated: true
                                                                                    age: 22,
                                                                                   subject: [ 'Math', 'Science' ],
           id: ObjectId('66a9d741c63be471b5149f4f'),
                                                                                    gratuated: false
          name: 'Roshan',
          age: 23,
          subject: [ 'Al', 'Science' ],
                                                                                    _id: ObjectId('66a9d741c63be471b5149f4e'),
          gratuated: false
                                                                                    name: 'Sohama',
                                                                                   age: 20,
 }
                                                                                    subject: [ 'Math', 'Science' ],
test> db.students.find({$or:[{name:"Sita"},{age:{$gt:23}}]})
                                                                                    gratuated: false
           _id: ObjectId('66a9cc19cf1de96595149f49'),
                                                                                    _id: ObjectId('66a9d741c63be471b5149f4f'),
                                                                                   name: 'Roshan',
          name: 'Priya',
          age: 24,
                                                                                    age: 23,
          subject: [ 'History', 'Literature' ],
                                                                                    subject: [ 'Al', 'Science' ],
          gratuated: true
                                                                                    gratuated: false
                                                                          }
           _id: ObjectId('66a9cc19cf1de96595149f4b'),
                                                                         test> db.students.find({age:{$ne:23}})
          name: 'Sita',
          age: 25,
                                                                         [
          subject: [ 'Math', 'Science' ],
          gratuated: true
                                                                                     _id: ObjectId('66a9cc19cf1de96595149f49'),
                                                                                    name: 'Priya',
                                                                                    age: 24,
          id: ObjectId('66a9d741c63be471b5149f4d'),
                                                                                    subject: [ 'History', 'Literature' ],
          name: 'Ravi',
                                                                                    gratuated: true
          age: 25,
          subject: [ 'Literature', 'Science' ],
                                                                                    _id: ObjectId('66a9cc19cf1de96595149f4b'),
          gratuated: true
                                                                                    name: 'Sita',
                                                                                    age: 25,
test> db.students.find({$or:[{name:"Raj"},{age:{$gt:23}}]})
                                                                                    subject: [ 'Math', 'Science' ],
                                                                                    gratuated: true
[
          _id: ObjectId('66a9cc19cf1de96595149f49'),
          name: 'Priya',
                                                                                    id: ObjectId('66a9d741c63be471b5149f4c'),
          age: 24,
                                                                                    name: 'Raj',
```

```
age: 22,
                                                                                  age: 24,
          subject: [ 'Math', 'Science' ],
                                                                                  subject: [ 'History', 'Literature' ],
          gratuated: false
                                                                                  gratuated: true
                                                                                   _id: ObjectId('66a9cc19cf1de96595149f4b'),
          _id: ObjectId('66a9d741c63be471b5149f4d'),
          name: 'Ravi',
                                                                                  name: 'Sita',
                                                                                  age: 25.
          age: 25.
          subject: [ 'Literature', 'Science' ],
                                                                                  subject: [ 'Math', 'Science' ],
          gratuated: true
                                                                                  gratuated: true
          _id: ObjectId('66a9d741c63be471b5149f4e'),
                                                                                  _id: ObjectId('66a9d741c63be471b5149f4c'),
          name: 'Sohama',
                                                                                  name: 'Raj',
          age: 20,
                                                                                  age: 22,
                                                                                  subject: [ 'Math', 'Science' ],
          subject: ['Math', 'Science'],
          gratuated: false
                                                                                  gratuated: false
}
test> db.students.find({subject:{$in:"Science"}})
                                                                                   id: ObjectId('66a9d741c63be471b5149f4d'),
MongoServerError[BadValue]: $in needs an array
                                                                                  name: 'Ravi',
test> db.students.find({subject:{$in:["Science"]}})
                                                                                  age: 25,
                                                                                  subject: ['Literature', 'Science'],
[
 {
                                                                                  gratuated: true
          _id: ObjectId('66a9cc19cf1de96595149f4b'),
          name: 'Sita',
                                                                                   _id: ObjectId('66a9d741c63be471b5149f4e'),
          age: 25,
          subject: [ 'Math', 'Science' ],
                                                                                  name: 'Sohama',
          gratuated: true
                                                                                  age: 20,
                                                                                  subject: [ 'Math', 'Science' ],
                                                                                  gratuated: false
          id: ObjectId('66a9d741c63be471b5149f4c'),
          name: 'Raj',
          age: 22,
                                                                                   id: ObjectId('66a9d741c63be471b5149f4f'),
          subject: [ 'Math', 'Science' ],
                                                                                  name: 'Roshan',
          gratuated: false
                                                                                  age: 23,
                                                                                  subject: ['Al', 'Science'],
                                                                                  gratuated: false
          id: ObjectId('66a9d741c63be471b5149f4d'),
          name: 'Ravi',
                                                                        test> db.students.find({nickname:{$exists:true}})
          age: 25,
          subject: [ 'Literature', 'Science' ],
          gratuated: true
                                                                        test> db.students.find({names:{$regex:.a}})
                                                                        Uncaught:
                                                                        SyntaxError: Unexpected token (1:32)
          _id: ObjectId('66a9d741c63be471b5149f4e'),
          name: 'Sohama',
                                                                        > 1 | db.students.find({names:{$regex:.a}})
          age: 20,
          subject: [ 'Math', 'Science' ],
                                                                         2 |
          gratuated: false
                                                                        test> db.students.find({names:{$regex:".a"}})
          _id: ObjectId('66a9d741c63be471b5149f4f'),
                                                                        test> db.students.find({names:{$regex:"."}})
          name: 'Roshan',
          age: 23,
                                                                        test> db.students.find({names:{$regex:"*a"}})
                                                                        MongoServerError[Location51091]: Regular expression is
          subject: [ 'AI', 'Science' ],
          gratuated: false
                                                                        invalid: quantifier does not follow a repeatable item
                                                                        test> db.students.find({names:{$regex:"^a"}})
}
test> db.students.find(($ne:[{nickname:""}]})
                                                                        test> db.students.find({names:{$regex:"/*a/g"}})
MongoServerError[BadValue]: unknown top level operator:
$ne. If you have a field name that starts with a '$' symbol,
                                                                        test> db.students.find({names:{$regex:"/*n/g"}})
consider using $getField or $setField.
test> db.students.find({nickname:{$exist:false}})
                                                                        test>
MongoServerError[BadValue]: unknown operator: $exist
                                                                        db.students.find({age:{$gt:21}}).limit(2).skip(1).sort({name:1})
test> db.students.find({nickname:{$exists:false}})
                                                                                   _id: ObjectId('66a9d741c63be471b5149f4c'),
           id: ObjectId('66a9cc19cf1de96595149f49'),
                                                                                  name: 'Raj',
          name: 'Priya',
                                                                                  age: 22,
```

```
subject: ['Math', 'Science'],
gratuated: false
},
{
    __id: ObjectId('66a9d741c63be471b5149f4d'),
    name: 'Ravi',
    age: 25,
    subject: ['Literature', 'Science'],
    gratuated: true
}

lest>
db.students.find({age:{$gt:21}}).limit(2).skip(1).sort({name:-1})

[
    __id: ObjectId('66a9d741c63be471b5149f4f'),
    name: 'Roshan',
    age: 23,
    subject: ['Al', 'Science'],
    gratuated: false
},

{
    __id: ObjectId('66a9d741c63be471b5149f4d'),
    name: 'Ravi',
    age: 25,
    subject: ['Literature', 'Science'],
    gratuated: true
}

lest>
(To exit, press Ctrl+C again or Ctrl+D or type .exit)
test>
dit-23@dit23-OptiPlex-5070:~/Desktop$
```