

## ***// DBMSL B2 – 31139 (Durvesh)***

### ***//Comparison Operators***

```
>
db.employees2.insertMany([{name:'a',city:'vellore',salary:10000},{name:'b',city:'mumbai',salary:100
00},{name:'c',city:'vellore',salary:100000},{name:'d',city:'mumbai',salary:30000},{name:'e',city:'delhi'
,salary:300000}])

{
  "acknowledged" : true,
  "insertedIds" : [
    ObjectId("5f8fe04165e78575f2b130d2"),
    ObjectId("5f8fe04165e78575f2b130d3"),
    ObjectId("5f8fe04165e78575f2b130d4"),
    ObjectId("5f8fe04165e78575f2b130d5"),
    ObjectId("5f8fe04165e78575f2b130d6")
  ]
}

> db.employees2.find()

{ "_id" : ObjectId("5f8fe04165e78575f2b130d2"), "name" : "a", "city" : "vellore", "salary" : 10000 }
{ "_id" : ObjectId("5f8fe04165e78575f2b130d3"), "name" : "b", "city" : "mumbai", "salary" : 10000 }
{ "_id" : ObjectId("5f8fe04165e78575f2b130d4"), "name" : "c", "city" : "vellore", "salary" : 100000 }
{ "_id" : ObjectId("5f8fe04165e78575f2b130d5"), "name" : "d", "city" : "mumbai", "salary" : 30000 }
{ "_id" : ObjectId("5f8fe04165e78575f2b130d6"), "name" : "e", "city" : "delhi", "salary" : 300000 }

>

> db.employees2.find({salary:{$eq:10000}})

{ "_id" : ObjectId("5f8fe04165e78575f2b130d2"), "name" : "a", "city" : "vellore", "salary" : 10000 }
{ "_id" : ObjectId("5f8fe04165e78575f2b130d3"), "name" : "b", "city" : "mumbai", "salary" : 10000 }

> db.employees2.find({city:{$eq:'vellore'}})
```

```

{ "_id" : ObjectId("5f8fe04165e78575f2b130d2"), "name" : "a", "city" : "vellore", "salary" : 10000 }
{ "_id" : ObjectId("5f8fe04165e78575f2b130d4"), "name" : "c", "city" : "vellore", "salary" : 100000 }
> db.employees2.find({salary:{$gte:100000}})
{ "_id" : ObjectId("5f8fe04165e78575f2b130d4"), "name" : "c", "city" : "vellore", "salary" : 100000 }
{ "_id" : ObjectId("5f8fe04165e78575f2b130d6"), "name" : "e", "city" : "delhi", "salary" : 300000 }
> db.employees2.find({city:{$in:['vellore','mumbai']}})
{ "_id" : ObjectId("5f8fe04165e78575f2b130d2"), "name" : "a", "city" : "vellore", "salary" : 10000 }
{ "_id" : ObjectId("5f8fe04165e78575f2b130d3"), "name" : "b", "city" : "mumbai", "salary" : 10000 }
{ "_id" : ObjectId("5f8fe04165e78575f2b130d4"), "name" : "c", "city" : "vellore", "salary" : 100000 }
{ "_id" : ObjectId("5f8fe04165e78575f2b130d5"), "name" : "d", "city" : "mumbai", "salary" : 30000 }
> db.employees2.find({salary:{$lt:50000}})
{ "_id" : ObjectId("5f8fe04165e78575f2b130d2"), "name" : "a", "city" : "vellore", "salary" : 10000 }
{ "_id" : ObjectId("5f8fe04165e78575f2b130d3"), "name" : "b", "city" : "mumbai", "salary" : 10000 }
{ "_id" : ObjectId("5f8fe04165e78575f2b130d5"), "name" : "d", "city" : "mumbai", "salary" : 30000 }
> db.employees2.find({city:{$ne:'delhi'}})
{ "_id" : ObjectId("5f8fe04165e78575f2b130d2"), "name" : "a", "city" : "vellore", "salary" : 10000 }
{ "_id" : ObjectId("5f8fe04165e78575f2b130d3"), "name" : "b", "city" : "mumbai", "salary" : 10000 }
{ "_id" : ObjectId("5f8fe04165e78575f2b130d4"), "name" : "c", "city" : "vellore", "salary" : 100000 }
{ "_id" : ObjectId("5f8fe04165e78575f2b130d5"), "name" : "d", "city" : "mumbai", "salary" : 30000 }
> db.employees2.find({city:{$nin:['delhi','mumbai']}})
{ "_id" : ObjectId("5f8fe04165e78575f2b130d2"), "name" : "a", "city" : "vellore", "salary" : 10000 }
{ "_id" : ObjectId("5f8fe04165e78575f2b130d4"), "name" : "c", "city" : "vellore", "salary" : 100000 }
>

```

## // Logical Operators

```
>
db.employees.insertMany([{name:'jitendra',country:'india',salary:20000},{name:'jinesh',country:'india',salary:5000},{name:'dinesh',country:'india',salary:30000}])

{
  "acknowledged" : true,
  "insertedIds" : [
    ObjectId("5f8fdb0865e78575f2b130cc"),
    ObjectId("5f8fdb0865e78575f2b130cd"),
    ObjectId("5f8fdb0865e78575f2b130ce")
  ]
}

>
db.employees.insertMany([{name:'dinanath',country:'USA',salary:2000000},{name:'jignesh',country:'UK',salary:509000},{name:'mark',country:'Kenya',salary:2000}])

{
  "acknowledged" : true,
  "insertedIds" : [
    ObjectId("5f8fdb8665e78575f2b130cf"),
    ObjectId("5f8fdb8665e78575f2b130d0"),
    ObjectId("5f8fdb8665e78575f2b130d1")
  ]
}

> db.employees.find()

{ "_id" : ObjectId("5f8fdb0865e78575f2b130cc"), "name" : "jitendra", "country" : "india", "salary" : 20000 }

{ "_id" : ObjectId("5f8fdb0865e78575f2b130cd"), "name" : "jinesh", "country" : "india", "salary" : 5000 }

{ "_id" : ObjectId("5f8fdb0865e78575f2b130ce"), "name" : "dinesh", "country" : "india", "salary" : 30000 }
```

```
{ "_id" : ObjectId("5f8fdb8665e78575f2b130cf"), "name" : "dinanath", "country" : "USA", "salary" : 2000000 }
```

```
{ "_id" : ObjectId("5f8fdb8665e78575f2b130d0"), "name" : "jignesh", "country" : "UK", "salary" : 509000 }
```

```
{ "_id" : ObjectId("5f8fdb8665e78575f2b130d1"), "name" : "mark", "country" : "Kenya", "salary" : 2000 }
```

```
> db.employees.find({$and:[{salary:{$gt:10000}},{country:'india'}]})
```

```
{ "_id" : ObjectId("5f8fdb0865e78575f2b130cc"), "name" : "jitendra", "country" : "india", "salary" : 20000 }
```

```
{ "_id" : ObjectId("5f8fdb0865e78575f2b130ce"), "name" : "dinesh", "country" : "india", "salary" : 30000 }
```

```
> db.employees.find({$or:[{salary:{$gt:20000}},{country:'india'}]})
```

```
{ "_id" : ObjectId("5f8fdb0865e78575f2b130cc"), "name" : "jitendra", "country" : "india", "salary" : 20000 }
```

```
{ "_id" : ObjectId("5f8fdb0865e78575f2b130cd"), "name" : "jinesh", "country" : "india", "salary" : 5000 }
```

```
{ "_id" : ObjectId("5f8fdb0865e78575f2b130ce"), "name" : "dinesh", "country" : "india", "salary" : 30000 }
```

```
{ "_id" : ObjectId("5f8fdb8665e78575f2b130cf"), "name" : "dinanath", "country" : "USA", "salary" : 2000000 }
```

```
{ "_id" : ObjectId("5f8fdb8665e78575f2b130d0"), "name" : "jignesh", "country" : "UK", "salary" : 509000 }
```

```
> db.employees.find({$and:[{salary:{$gt:50000}},{country:{$not: {$eq:'india'}}]})
```

```
{ "_id" : ObjectId("5f8fdb8665e78575f2b130cf"), "name" : "dinanath", "country" : "USA", "salary" : 2000000 }
```

```
{ "_id" : ObjectId("5f8fdb8665e78575f2b130d0"), "name" : "jignesh", "country" : "UK", "salary" : 509000 }
```

```
> db.employees.find({country:{$not: {$eq:'india'}}})
```

```
{ "_id" : ObjectId("5f8fdb8665e78575f2b130cf"), "name" : "dinanath", "country" : "USA", "salary" : 2000000 }
```

```
{ "_id" : ObjectId("5f8fdb8665e78575f2b130d0"), "name" : "jignesh", "country" : "UK", "salary" : 509000 }
```

```
{ "_id" : ObjectId("5f8fdb8665e78575f2b130d1"), "name" : "mark", "country" : "Kenya", "salary" : 2000 }
```

## **// Save Method**

```
> db.employees.find()

{ "_id" : ObjectId("5f8d12e1d31c0fe38ce15c8a"), "name" : "employee1", "salary" : 10000, "city" :
"vellore" }

{ "_id" : ObjectId("5f8d12e1d31c0fe38ce15c8b"), "name" : "employee2", "salary" : 10000, "city" :
"vellore" }

{ "_id" : ObjectId("5f8d12e1d31c0fe38ce15c8c"), "name" : "employee3", "salary" : 200000, "city" :
"mumbai" }

{ "_id" : ObjectId("5f8d12e1d31c0fe38ce15c8d"), "name" : "employee4", "salary" : 1000000, "city" :
"delhi" }

{ "_id" : ObjectId("5f8d12e1d31c0fe38ce15c8e"), "name" : "employee5", "salary" : 300000, "city" :
"mumbai" }

{ "_id" : ObjectId("5f8d12e1d31c0fe38ce15c8f"), "name" : "employee6", "salary" : 30000, "city" :
"delhi" }

> db.employees.save({_id:101,name:"Ratan Tata",salary:1000000,city:"delhi"})

WriteResult({ "nMatched" : 0, "nUpserted" : 1, "nModified" : 0, "_id" : 101 })

> db.employees.save({_id:101,name:"Ratan Tata",salary:1000000,city:"mumbai"})

WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })

> db.employees.find()

{ "_id" : ObjectId("5f8d12e1d31c0fe38ce15c8a"), "name" : "employee1", "salary" : 10000, "city" :
"vellore" }

{ "_id" : ObjectId("5f8d12e1d31c0fe38ce15c8b"), "name" : "employee2", "salary" : 10000, "city" :
"vellore" }

{ "_id" : ObjectId("5f8d12e1d31c0fe38ce15c8c"), "name" : "employee3", "salary" : 200000, "city" :
"mumbai" }

{ "_id" : ObjectId("5f8d12e1d31c0fe38ce15c8d"), "name" : "employee4", "salary" : 1000000, "city" :
"delhi" }

{ "_id" : ObjectId("5f8d12e1d31c0fe38ce15c8e"), "name" : "employee5", "salary" : 300000, "city" :
"mumbai" }

{ "_id" : ObjectId("5f8d12e1d31c0fe38ce15c8f"), "name" : "employee6", "salary" : 30000, "city" :
"delhi" }

{ "_id" : 101, "name" : "Ratan Tata", "salary" : 1000000, "city" : "mumbai" }

>
```

## **// Outputs**

```
C:\WINDOWS\system32\cmd.exe - mongo

or with --bind_ip_all to bind to all interfaces. If this behavior is desired, start the server with --bind_ip 127.0.0.1 to disable this warning
...
---
Enable MongoDB's free cloud-based monitoring service, which will then receive and display
metrics about your deployment (disk utilization, CPU, operation statistics, etc).

The monitoring data will be available on a MongoDB website with a unique URL accessible to you
and anyone you share the URL with. MongoDB may use this information to make product
improvements and to suggest MongoDB products and deployment options to you.

To enable free monitoring, run the following command: db.enableFreeMonitoring()
To permanently disable this reminder, run the following command: db.disableFreeMonitoring()
...
> db.employees.insertMany([({name: 'jittendra', country: 'india', salary: 20000}, {name: 'jinesh', country: 'india', salary: 5000}, {name: 'dinesh', country: 'india', salary: 30000})])
{
  "acknowledged": true,
  "insertedIds": [
    ObjectId("5f8fd0865e78575f2b130cc"),
    ObjectId("5f8fd0865e78575f2b130cd"),
    ObjectId("5f8fd0865e78575f2b130ce")
  ]
}
> db.employees.insertMany([({name: 'dinanath', country: 'USA', salary: 2000000}, {name: 'jignesh', country: 'UK', salary: 509000}, {name: 'mark', country: 'Kenya', salary: 2000})])
{
  "acknowledged": true,
  "insertedIds": [
    ObjectId("5f8fd0865e78575f2b130cf"),
    ObjectId("5f8fd0865e78575f2b130d0"),
    ObjectId("5f8fd0865e78575f2b130d1")
  ]
}
> db.employees.find()
{ "_id": ObjectId("5f8fd0865e78575f2b130cc"), "name": "jittendra", "country": "india", "salary": 20000 }
{ "_id": ObjectId("5f8fd0865e78575f2b130cd"), "name": "jinesh", "country": "india", "salary": 5000 }
{ "_id": ObjectId("5f8fd0865e78575f2b130ce"), "name": "dinesh", "country": "india", "salary": 30000 }
{ "_id": ObjectId("5f8fd0865e78575f2b130cf"), "name": "dinanath", "country": "USA", "salary": 2000000 }
{ "_id": ObjectId("5f8fd0865e78575f2b130d0"), "name": "jignesh", "country": "UK", "salary": 509000 }
{ "_id": ObjectId("5f8fd0865e78575f2b130d1"), "name": "mark", "country": "Kenya", "salary": 2000 }
> db.employees.find($and:[{$salary:{$gt:100000}}, {country:'india'}])
uncaught exception: SyntaxError: expected property name, got '{'
@shell):1:25
> db.employees.find($and:[{$salary:{$gt:100000}}, {country:'india'}])
{ "_id": ObjectId("5f8fd0865e78575f2b130cc"), "name": "jittendra", "country": "india", "salary": 20000 }
{ "_id": ObjectId("5f8fd0865e78575f2b130ce"), "name": "dinesh", "country": "india", "salary": 30000 }
> db.employees.find($or:[{$salary:{$gt:200000}}, {country:'india'}])
{ "_id": ObjectId("5f8fd0865e78575f2b130cc"), "name": "jittendra", "country": "india", "salary": 20000 }
{ "_id": ObjectId("5f8fd0865e78575f2b130cd"), "name": "jinesh", "country": "india", "salary": 5000 }
{ "_id": ObjectId("5f8fd0865e78575f2b130ce"), "name": "dinesh", "country": "india", "salary": 30000 }
{ "_id": ObjectId("5f8fd0865e78575f2b130cf"), "name": "dinesh", "country": "india", "salary": 30000 }
{ "_id": ObjectId("5f8fd0865e78575f2b130d1"), "name": "dinanath", "country": "USA", "salary": 2000000 }
{ "_id": ObjectId("5f8fd0865e78575f2b130d0"), "name": "jignesh", "country": "UK", "salary": 509000 }
```

```
C:\WINDOWS\system32\cmd.exe - mongo

> db.employees.find($and:[{$salary:{$gt:500000}}, {country:{$not:{$eq:'india'}}}])
{ "_id": ObjectId("5f8fd0865e78575f2b130cf"), "name": "dinanath", "country": "USA", "salary": 2000000 }
{ "_id": ObjectId("5f8fd0865e78575f2b130d1"), "name": "jignesh", "country": "UK", "salary": 509000 }
> db.employees.find(country:{$not:{$eq:'india'}})
{ "_id": ObjectId("5f8fd0865e78575f2b130cf"), "name": "dinanath", "country": "USA", "salary": 2000000 }
{ "_id": ObjectId("5f8fd0865e78575f2b130d0"), "name": "jignesh", "country": "UK", "salary": 509000 }
{ "_id": ObjectId("5f8fd0865e78575f2b130d1"), "name": "mark", "country": "Kenya", "salary": 2000 }
> db.employees2.insertMany([({name:'a', city:'vellore', salary:10000}, {name:'b', city:'mumbai', salary:10000}, {name:'c', city:'vellore', salary:100000}, {name:'d', city:'mumbai', salary:30000}, {name:'e', city:'delhi', salary:300000})])
uncaught exception: SyntaxError: unexpected token: ':'
@shell):1:220
> db.employees2.insertMany([({name:'a', city:'vellore', salary:10000}, {name:'b', city:'mumbai', salary:10000}, {name:'c', city:'vellore', salary:100000}, {name:'d', city:'mumbai', salary:30000}, {name:'e', city:'delhi', salary:300000})])
{
  "acknowledged": true,
  "insertedIds": [
    ObjectId("5f8fe04165e78575f2b130d2"),
    ObjectId("5f8fe04165e78575f2b130d3"),
    ObjectId("5f8fe04165e78575f2b130d4"),
    ObjectId("5f8fe04165e78575f2b130d5"),
    ObjectId("5f8fe04165e78575f2b130d6")
  ]
}
> db.employees2.find(salary:{$eq:100000})
uncaught exception: SyntaxError: missing '}' after argument list
@shell):1:25
> db.employees2.find(salary:{$eq:100000})
{ "_id": ObjectId("5f8fe04165e78575f2b130d2"), "name": "a", "city": "vellore", "salary": 10000 }
{ "_id": ObjectId("5f8fe04165e78575f2b130d3"), "name": "b", "city": "mumbai", "salary": 10000 }
> db.employees2.find(city:{$eq:'vellore'})
{ "_id": ObjectId("5f8fe04165e78575f2b130d2"), "name": "a", "city": "vellore", "salary": 10000 }
{ "_id": ObjectId("5f8fe04165e78575f2b130d4"), "name": "c", "city": "vellore", "salary": 100000 }
> db.employees2.find(salary:{$gte:100000})
{ "_id": ObjectId("5f8fe04165e78575f2b130d4"), "name": "c", "city": "vellore", "salary": 100000 }
{ "_id": ObjectId("5f8fe04165e78575f2b130d5"), "name": "e", "city": "delhi", "salary": 300000 }
> db.employees2.find(city:{$in:['vellore', 'mumbai']})
{ "_id": ObjectId("5f8fe04165e78575f2b130d2"), "name": "a", "city": "vellore", "salary": 10000 }
{ "_id": ObjectId("5f8fe04165e78575f2b130d3"), "name": "b", "city": "mumbai", "salary": 10000 }
{ "_id": ObjectId("5f8fe04165e78575f2b130d4"), "name": "c", "city": "vellore", "salary": 100000 }
{ "_id": ObjectId("5f8fe04165e78575f2b130d5"), "name": "d", "city": "mumbai", "salary": 30000 }
> db.employees2.find(salary:{$lt:500000})
{ "_id": ObjectId("5f8fe04165e78575f2b130d2"), "name": "a", "city": "vellore", "salary": 10000 }
{ "_id": ObjectId("5f8fe04165e78575f2b130d3"), "name": "b", "city": "mumbai", "salary": 10000 }
{ "_id": ObjectId("5f8fe04165e78575f2b130d5"), "name": "d", "city": "mumbai", "salary": 30000 }
> db.employees2.find(city:{$ne:'delhi'})
{ "_id": ObjectId("5f8fe04165e78575f2b130d2"), "name": "a", "city": "vellore", "salary": 10000 }
{ "_id": ObjectId("5f8fe04165e78575f2b130d3"), "name": "b", "city": "mumbai", "salary": 10000 }
{ "_id": ObjectId("5f8fe04165e78575f2b130d4"), "name": "c", "city": "vellore", "salary": 100000 }
{ "_id": ObjectId("5f8fe04165e78575f2b130d5"), "name": "d", "city": "mumbai", "salary": 30000 }
> db.employees2.find(city:{$nin:['delhi', 'mumbai']})
{ "_id": ObjectId("5f8fe04165e78575f2b130d2"), "name": "a", "city": "vellore", "salary": 10000 }
{ "_id": ObjectId("5f8fe04165e78575f2b130d4"), "name": "c", "city": "vellore", "salary": 100000 }
```

```
D:\Program Files\MongoDB\Server\4.4\bin>mongo
> use employees
> db.employees.find()
{ "_id" : ObjectId("5f8d12e1d31c0fe38ce15c8a"), "name" : "employee1", "salary" : 10000, "city" : "vellore" }
{ "_id" : ObjectId("5f8d12e1d31c0fe38ce15c8b"), "name" : "employee2", "salary" : 10000, "city" : "vellore" }
{ "_id" : ObjectId("5f8d12e1d31c0fe38ce15c8c"), "name" : "employee3", "salary" : 200000, "city" : "mumbai" }
{ "_id" : ObjectId("5f8d12e1d31c0fe38ce15c8d"), "name" : "employee4", "salary" : 1000000, "city" : "delhi" }
{ "_id" : ObjectId("5f8d12e1d31c0fe38ce15c8e"), "name" : "employee5", "salary" : 300000, "city" : "mumbai" }
{ "_id" : ObjectId("5f8d12e1d31c0fe38ce15c8f"), "name" : "employee6", "salary" : 30000, "city" : "delhi" }
> db.employees.save({_id:101, name:"Ratan Tata", salary:1000000, city:"delhi"})
writeResult({ "nMatched" : 0, "nUpserted" : 1, "nModified" : 0, "_id" : 101 })
> db.employees.save({_id:101, name:"Ratan Tata", salary:1000000, city:"mumbai"})
writeResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
> db.employees.find()
{ "_id" : ObjectId("5f8d12e1d31c0fe38ce15c8a"), "name" : "employee1", "salary" : 10000, "city" : "vellore" }
{ "_id" : ObjectId("5f8d12e1d31c0fe38ce15c8b"), "name" : "employee2", "salary" : 10000, "city" : "vellore" }
{ "_id" : ObjectId("5f8d12e1d31c0fe38ce15c8c"), "name" : "employee3", "salary" : 200000, "city" : "mumbai" }
{ "_id" : ObjectId("5f8d12e1d31c0fe38ce15c8d"), "name" : "employee4", "salary" : 1000000, "city" : "delhi" }
{ "_id" : ObjectId("5f8d12e1d31c0fe38ce15c8e"), "name" : "employee5", "salary" : 300000, "city" : "mumbai" }
{ "_id" : ObjectId("5f8d12e1d31c0fe38ce15c8f"), "name" : "employee6", "salary" : 30000, "city" : "delhi" }
{ "_id" : 101, "name" : "Ratan Tata", "salary" : 1000000, "city" : "mumbai" }
```