

MongoDB_Lab1

Answer Part1

1. help

```
test> help

Shell Help:

use                Set current database
show               'show databases'/'show dbs': Print a list of all available databases.
                  'show collections'/'show tables': Print a list of all collections for current database.
                  'show profile': Prints system.profile information.
                  'show users': Print a list of all users for current database.
                  'show roles': Print a list of all roles for current database.
                  'show log <type>': log for current connection, if type is not set uses 'global'

test>

exit               Quit the MongoDB shell with exit()/exit().
quit              Quit the MongoDB shell with quit()/quit().
Mongo             Create a new connection and return the Mongo object. Usage: new Mongo([URI], options [optional])
connect           Create a new connection and return the Database object. Usage: connect([URI], username [optional], password [optional])
it                result of the last line evaluated; use to further iterate
version           Shell version
load              Loads and runs a JavaScript file into the current shell environment
enableTelemetry   Enables collection of anonymous usage data to improve the mongosh CLI
disableTelemetry Disables collection of anonymous usage data to improve the mongosh CLI
passwordPrompt    Prompts the user for a password
sleep             Sleep for the specified number of milliseconds
print             Prints the contents of an object to the output
printjson         Alias for print()
convertShardKeyToHashed Returns the hashed value for the input using the same hashing function as a hashed index.
cls               Clears the screen like console.clear()
isInteractive      Returns whether the shell will enter or has entered interactive mode

For more information on usage: https://docs.mongodb.com/manual/reference/method
test> db.help()

Database Class:

getMongo           Returns the current database connection
getName            Returns the name of the DB
getCollectionNames Returns an array containing the names of all collections in the current database.
getCollectionInfos Returns an array of documents with collection information, i.e. collection name and options, for the current database.
runCommand         Runs an arbitrary command on the database.
adminCommand       Runs an arbitrary command against the admin database.
aggregate          Runs a specified admin/diagnostic pipeline which does not require an underlying collection.
getSiblingDB       Returns another database without modifying the db variable in the shell environment.
getCollection       Returns a collection or a view object that is functionally equivalent to using the db.<collectionName>.
dropDatabase        Removes the current database, deleting the associated data files.
createUser          Creates a new user for the database on which the method is run. db.createUser() returns a duplicate user error if the user already exists on the database.
updateUser          Updates the user's profile on the database on which you run the method. An update to a field completely replaces the previous field's values. This includes updates to the user's roles array.
changeUserPassword Updates a user's password. Run the method in the database where the user is defined, i.e. the database you created the user.
logout             Ends the current authentication session. This function has no effect if the current session is not authenticated.
```

2. db

show dbs;

```
test> db
test
test> show dbs;
admin    40.00 KiB
config   96.00 KiB
local    40.00 KiB
test>
```

3. use iti

db.students.insert({"studId":1 , "studName":"Donia" , "age":22})

```

test> use iti
switched to db iti
iti> show dbs;
admin    40.00 KiB
config  108.00 KiB
local    40.00 KiB
iti> db.students.insert({"studId":1, "studName":"Donia", "age":22})
DeprecationWarning: Collection.insert() is deprecated. Use insertOne, insertMany, or bulkWrite.
{
  acknowledged: true,
  insertedIds: { '0': ObjectId("63f4cbe82b90acf6dbd19e50") }
}
iti> show dbs;
admin    40.00 KiB
config  108.00 KiB
iti       8.00 KiB
local    40.00 KiB
iti>

```

4. show dbs

(I noticed that the database that I created has been added to the database groups)

```

iti> show dbs;
admin    40.00 KiB
config  108.00 KiB
iti       8.00 KiB
local    40.00 KiB
iti>

```

5. db.students.insertMany([{"studId":"2", "studName":"Rewan", "age":"22", "tel":"0121564"}, {"studId":"3", "studName":"NerMeen", "age":"23", "dep":"CS"}, {"studId":"4", "studName":"Merna", "age":"24", "GPA":"3.45"}, {"studId":"5", "studName":"Essra", "age":"20", "subj":["math","geoph","os"]}, {"studId":"6", "studName":"mariam", "age":"25", "score":["325", "456"]}, {"studId":"7", "studName":"Nada", "age":"23", "sports":["football","tennis"]}, {"studId":"8", "studName":"Raneen", "age":"19", "birth_Date":"1-7-1999"}, {"studId":"9", "studName":"viola", "age":"23", "tel":"010546"}, {"studId":"10", "studName":"viola", "age":"23", "email":"samar@gmail.com"}])

```

iti> db.students.insertMany([{"studId":"2", "studName":"Rewan", "age":"22", "tel":"0121564"}, {"studId":"3", "studName":"NerMeen", "age":"23", "dep":"CS"}, {"studId":"4", "studName":"Merna", "age":"24", "GPA":"3.45"}, {"studId":"5", "studName":"Essra", "age":"20", "subj":["math","geoph","os"]}, {"studId":"6", "studName":"mariam", "age":"25", "score":["325", "456"]}, {"studId":"7", "studName":"Nada", "age":"23", "sports":["football","tennis"]}, {"studId":"8", "studName":"Raneen", "age":"19", "birth_Date":"1-7-1999"}, {"studId":"9", "studName":"viola", "age":"23", "tel":"010546"}, {"studId":"10", "studName":"viola", "age":"23", "email":"samar@gmail.com"}])
{
  acknowledged: true,
  insertedIds: {
    '0': ObjectId("63f4fd2b90acf6dbd19e51"),
    '1': ObjectId("63f4fd2b90acf6dbd19e52"),
    '2': ObjectId("63f4fd2b90acf6dbd19e53"),
    '3': ObjectId("63f4fd2b90acf6dbd19e54"),
    '4': ObjectId("63f4fd2b90acf6dbd19e55"),
    '5': ObjectId("63f4fd2b90acf6dbd19e56"),
    '6': ObjectId("63f4fd2b90acf6dbd19e57"),
    '7': ObjectId("63f4fd2b90acf6dbd19e58"),
    '8': ObjectId("63f4fd2b90acf6dbd19e59")
  }
}
iti>

```

6. db.students.find({studName:"Donia"})

```
iti> db.students.find({studName:"Donia"})
[
  {
    _id: ObjectId("63f4cbe82b90acf6dbd19e50"),
    studId: 1,
    studName: 'Donia',
    age: 22
  }
]
iti>
```

7. db.students.find({age:"23"})

```
iti> db.students.find({age:"23"})
[
  {
    _id: ObjectId("63f4dfdd2b90acf6dbd19e52"),
    studId: '3',
    studName: 'NerMeen',
    age: '23',
    dep: 'CS'
  },
  {
    _id: ObjectId("63f4dfdd2b90acf6dbd19e56"),
    studId: '7',
    studName: 'Nada',
    age: '23',
    sports: [ 'football', 'tennis' ]
  },
  {
    _id: ObjectId("63f4dfdd2b90acf6dbd19e58"),
    studId: '9',
    studName: 'viola',
    age: '23',
    tel: '010546'
  },
  {
    _id: ObjectId("63f4dfdd2b90acf6dbd19e59"),
    studId: '10',
    studName: 'viola',
    age: '23',
    email: 'samar@gmail.com'
  }
]
iti>
```

8. `db.students.find({age:{$gt: "22"}})`

```
iti> db.students.find({age:{$gt: "22"}})
[
  {
    _id: ObjectId("63f4dfdd2b90acf6dbd19e52"),
    studId: '3',
    studName: 'NerMeen',
    age: '23',
    dep: 'CS'
  },
  {
    _id: ObjectId("63f4dfdd2b90acf6dbd19e53"),
    studId: '4',
    studName: 'Merna',
    age: '24',
    GPA: '3.45'
  },
  {
    _id: ObjectId("63f4dfdd2b90acf6dbd19e55"),
    studId: '6',
    studName: 'mariam',
    age: '25',
    score: [ '325', '456' ]
  },
  {
    _id: ObjectId("63f4dfdd2b90acf6dbd19e56"),
    studId: '7',
    studName: 'Nada',
    age: '23',
    sports: [ 'football', 'tennis' ]
  },
  {
    _id: ObjectId("63f4dfdd2b90acf6dbd19e58"),
    studId: '9',
    studName: 'viola',
    age: '23',
    tel: '010546'
  },
  {
    _id: ObjectId("63f4dfdd2b90acf6dbd19e59"),
    studId: '10',
    studName: 'viola',
    age: '23',
    email: 'samar@gmail.com'
  }
]
iti>
```

9. `db.students.deleteOne({studId: "10"})`

```
iti> db.students.deleteOne({studId: "10"})
{ acknowledged: true, deletedCount: 1 }
iti>
```

10. db.students.find().pretty()

```
iti> db.students.find().pretty()
[
  {
    _id: ObjectId("63f4cbe82b90acf6dbbd19e50"),
    studId: 1,
    studName: 'Donia',
    age: 22
  },
  {
    _id: ObjectId("63f4dfdd2b90acf6dbbd19e51"),
    studId: '2',
    studName: 'Rewan',
    age: '22',
    tel: '0121564'
  },
  {
    _id: ObjectId("63f4dfdd2b90acf6dbbd19e52"),
    studId: '3',
    studName: 'NerMeen',
    age: '23',
    dep: 'CS'
  },
  {
    _id: ObjectId("63f4dfdd2b90acf6dbbd19e53"),
    studId: '4',
    studName: 'Merna',
    age: '24',
    GPA: '3.45'
  },
  {
    _id: ObjectId("63f4dfdd2b90acf6dbbd19e54"),
    studId: '5',
    studName: 'Essra',
    age: '20',
    subj: [ 'math', 'geoph', 'os' ]
  },
  {
    _id: ObjectId("63f4dfdd2b90acf6dbbd19e55"),
    studId: '6',
    studName: 'mariam',
    age: '25',
    score: [ '325', '456' ]
  },
]
```

11. db.students.find().count();

```
iti> db.students.find().count();
9
iti>
```

Answer Part2

1. use ems

```
iti> use ems
switched to db ems
```

- ## 2. db.faculty.insertMany([{ "name":"Krish", "age":35,"gender":"M","exp":10,subjects:["DS","C","OS"],"type":"Full Time","qualification":"M.Tech" }, { "name":"Manoj", "age":38,"gender":"M","exp":12,subjects:["JAVA","DBMS"],"type":"Full Time", "qualification":"Ph.D"}, { "name":"Anush", "age":32,"gender":"F", "exp":8,subjects:["C","CPP"],"type":"Part Time","qualification":"M.Tech" }, { "name":"Suresh", "age":40,"gender":"M","exp":9,subjects:["JAVA","DBMS","NETWORKING"],"type":"Full Time", "qualification":"Ph.D"}, { "name":"Rajesh", "age":35,"gender":"M","exp":7,subjects:["DS","C","OS"],"type":"Full Time", "qualification":"M.Tech" }, { "name":"Mani", "age":38,"gender":"F", "exp":10,subjects:["JAVA","DBMS","OS"],"type":"Part Time", "qualification":"Ph.D"}, { "name":"Sivani", "age":32,"gender":"F", "exp":8,subjects:["C","CPP","MATHS"],"type":"Part Time", "qualification":"M.Tech" }, { "name":"Nagesh", "age":39,"gender":"M","exp":11,subjects:["JAVA","DBMS","NETWORKING"],"type":"Full Time", "qualification":"Ph.D"}, { "name":"Nagesh", "age":35,"gender":"M","exp":9,subjects:["JAVA",".Net","NETWORKING"],"type":"Full Time", "qualification":"Ph.D"}, { "name":"Latha", "age":40,"gender":"F", "exp":13,subjects:["MATHS"],"type":"Full Time", "qualification":"Ph.D"}])

```
ms> db.faculty.insertMany([ { "name":"Manoj", "age":38, "gender":"M", "exp":12, subjects:["JAVA","DBMS"], "type":"Full Time", "qualification":"Ph.D"}, { "name":"Anush", "age":32, "gender":"F", "exp":8, subjects:["C","CPP"], "type":"Part Time", "qualification":"M.Tech"}, { "name":"Suresh", "age":40, "gender":"M", "exp":9, subjects:["JAVA","DBMS","NETWORKING"], "type":"Full Time", "qualification":"Ph.D"}, { "name":"Rajesh", "age":35, "gender":"M", "exp":7, subjects:["DS","C","OS"], "type":"Full Time", "qualification":"M.Tech"}, { "name":"Mani", "age":38, "gender":"F", "exp":10, subjects:["JAVA","DBMS","OS"], "type":"Part Time", "qualification":"Ph.D"}, { "name":"Sivani", "age":32, "gender":"F", "exp":8, subjects:["C","CPP","MATHS"], "type":"Part Time", "qualification":"M.Tech"}, { "name":"Nagesh", "age":39, "gender":"M", "exp":11, subjects:["JAVA","DBMS","NETWORKING"], "type":"Full Time", "qualification":"Ph.D"}, { "name":"Nagesh", "age":35, "gender":"M", "exp":9, subjects:["JAVA",".Net","NETWORKING"], "type":"Full Time", "qualification":"Ph.D"}, { "name":"Latha", "age":40, "gender":"F", "exp":13, subjects:["MATHS"], "type":"Full Time", "qualification":"Ph.D"} ])
{
  acknowledged: true,
  insertedIds: {
    0: ObjectId("63f4ef122b90acf6dbd19e5c"),
    1: ObjectId("63f4ef122b90acf6dbd19e5d"),
    2: ObjectId("63f4ef122b90acf6dbd19e5e"),
    3: ObjectId("63f4ef122b90acf6dbd19e5f"),
    4: ObjectId("63f4ef122b90acf6dbd19e60"),
    5: ObjectId("63f4ef122b90acf6dbd19e61"),
    6: ObjectId("63f4ef122b90acf6dbd19e62"),
    7: ObjectId("63f4ef122b90acf6dbd19e63"),
    8: ObjectId("63f4ef122b90acf6dbd19e64")
  }
}
```

1. db.faculty.find().pretty()

```
ems> db.faculty.find().pretty()
[
  {
    _id: ObjectId("63f4ec642b90acf6dbd19e5a"),
    name: 'Krish',
    age: 35,
    gender: 'M',
    exp: 10,
    subjects: [ 'DS', 'C', 'OS' ],
    type: 'Full Time',
    qualification: 'M.Tech'
  },
  {
    _id: ObjectId("63f4ef122b90acf6dbd19e5c"),
    name: 'Manoj',
    age: 38,
    gender: 'M',
    exp: 12,
    subjects: [ 'JAVA', 'DBMS' ],
    type: 'Full Time',
    qualification: 'Ph.D'
  },
  {
    _id: ObjectId("63f4ef122b90acf6dbd19e5d"),
    name: 'Anush',
    age: 32,
    gender: 'F',
    exp: 8,
    subjects: [ 'C', 'CPP' ],
    type: 'Part Time',
    qualification: 'M.Tech'
  },
  {
    _id: ObjectId("63f4ef122b90acf6dbd19e5e"),
    name: 'Suresh',
    age: 40,
    gender: 'M',
    exp: 9,
    subjects: [ 'JAVA', 'DBMS', 'NETWORKING' ],
    type: 'Full Time',
    qualification: 'Ph.D'
  },
  {
```

2. db.faculty.find().count()

```
ems> db.faculty.find().count()
10
ems>
```

3. db.faculty.find({qualification:"Ph.D"})

```
ems> db.faculty.find({qualification:"Ph.D"})
[
  {
    _id: ObjectId("63f4ef122b90acf6dbd19e5c"),
    name: 'Manoj',
    age: 38,
    gender: 'M',
    exp: 12,
    subjects: [ 'JAVA', 'DBMS' ],
    type: 'Full Time',
    qualification: 'Ph.D'
  },
  {
    _id: ObjectId("63f4ef122b90acf6dbd19e5e"),
    name: 'Suresh',
    age: 40,
    gender: 'M',
    exp: 9,
    subjects: [ 'JAVA', 'DBMS', 'NETWORKING' ],
    type: 'Full Time',
    qualification: 'Ph.D'
  },
  {
    _id: ObjectId("63f4ef122b90acf6dbd19e60"),
    name: 'Mani',
    age: 38,
    gender: 'F',
    exp: 10,
    subjects: [ 'JAVA', 'DBMS', 'OS' ],
    type: 'Part Time',
    qualification: 'Ph.D'
  },
  {
    _id: ObjectId("63f4ef122b90acf6dbd19e62"),
    name: 'Nagesh',
    age: 39,
    gender: 'M',
    exp: 11,
    subjects: [ 'JAVA', 'DBMS', 'NETWORKING' ],
    type: 'Full Time',
    qualification: 'Ph.D'
  },
  {
    _id: ObjectId("63f4ef122b90acf6dbd19e63"),
    name: 'Nagesh',
    age: 35,
    gender: 'M',
    exp: 9,
    subjects: [ 'JAVA', '.Net', 'NETWORKING' ],
    type: 'Full Time',
    qualification: 'Ph.D'
  },
  {
    _id: ObjectId("63f4ef122b90acf6dbd19e64"),
    name: 'Latha',
    age: 40,
    gender: 'F',
    exp: 13,
    subjects: [ 'MATHS' ],
    type: 'Full Time',
    qualification: 'Ph.D'
  }
]
```

ems>

4. db.faculty.find({ exp: { \$gt: 8, \$lt: 12 } })

```
ems> db.faculty.find({ exp: { $gt: 8, $lt: 12 } })
[
  {
    _id: ObjectId("63f4ec642b90acf6dbd19e5a"),
    name: 'Krish',
    age: 35,
    gender: 'M',
    exp: 10,
    subjects: [ 'DS', 'C', 'OS' ],
    type: 'Full Time',
    qualification: 'M.Tech'
  },
  {
    _id: ObjectId("63f4ef122b90acf6dbd19e5e"),
    name: 'Suresh',
    age: 40,
    gender: 'M',
    exp: 9,
    subjects: [ 'JAVA', 'DBMS', 'NETWORKING' ],
    type: 'Full Time',
    qualification: 'Ph.D'
  },
  {
    _id: ObjectId("63f4ef122b90acf6dbd19e60"),
    name: 'Mani',
    age: 38,
    gender: 'F',
    exp: 10,
    subjects: [ 'JAVA', 'DBMS', 'OS' ],
    type: 'Part Time',
    qualification: 'Ph.D'
  },
  {
    _id: ObjectId("63f4ef122b90acf6dbd19e62"),
    name: 'Nagesh',
    age: 39,
    gender: 'M',
    exp: 11,
    subjects: [ 'JAVA', 'DBMS', 'NETWORKING' ],
    type: 'Full Time',
    qualification: 'Ph.D'
  },
  {
    _id: ObjectId("63f4ef122b90acf6dbd19e63"),
    name: 'Nagesh',
    age: 35,
    gender: 'M',
    exp: 9,
    subjects: [ 'JAVA', '.Net', 'NETWORKING' ],
```

5. `db.faculty.find({ "subjects": { $in: ["MATHS", "NETWORKING"] } })`

```
ems> db.faculty.find({ "subjects": { $in: ["MATHS", "NETWORKING"] } })
[
  {
    _id: ObjectId("63f4ef122b90acf6dbd19e5e"),
    name: 'Suresh',
    age: 40,
    gender: 'M',
    exp: 9,
    subjects: [ 'JAVA', 'DBMS', 'NETWORKING' ],
    type: 'Full Time',
    qualification: 'Ph.D'
  },
  {
    _id: ObjectId("63f4ef122b90acf6dbd19e61"),
    name: 'Sivani',
    age: 32,
    gender: 'F',
    exp: 8,
    subjects: [ 'C', 'CPP', 'MATHS' ],
    type: 'Part Time',
    qualification: 'M.Tech'
  },
  {
    _id: ObjectId("63f4ef122b90acf6dbd19e62"),
    name: 'Nagesh',
    age: 39,
    gender: 'M',
    exp: 11,
    subjects: [ 'JAVA', 'DBMS', 'NETWORKING' ],
    type: 'Full Time',
    qualification: 'Ph.D'
  },
  {
    _id: ObjectId("63f4ef122b90acf6dbd19e63"),
    name: 'Nagesh',
    age: 35,
    gender: 'M',
    exp: 9,
    subjects: [ 'JAVA', '.Net', 'NETWORKING' ],
    type: 'Full Time',
    qualification: 'Ph.D'
  },
  {
    _id: ObjectId("63f4ef122b90acf6dbd19e64"),
    name: 'Latha',
    age: 40,
    gender: 'F',
    exp: 13,
    subjects: [ 'MATHS' ],
    type: 'Full Time',
    qualification: 'Ph.D'
  }
]
ems>
```

6. `db.faculty.find({$and:[{subjects:'MATHS'},{age:{$gt:29}},{qualification:'Ph.D'}]}).pretty()`

```
ems> db.faculty.find({$and:[{subjects:'MATHS'},{age:{$gt:29}},{qualification:'Ph.D'}]}).pretty()
[
  {
    _id: ObjectId("63f4ef122b90acf6dbd19e64"),
    name: 'Latha',
    age: 40,
    gender: 'F',
    exp: 13,
    subjects: [ 'MATHS' ],
    type: 'Full Time',
    qualification: 'Ph.D'
  }
]
```

7. `db.faculty.find({$or:[{type:"Part Time"},{subjects:"JAVA"}]}).pretty()`

```
ems> db.faculty.find({$or:[{type:"Part Time"},{subjects:"JAVA"}]}).pretty()
[
  {
    _id: ObjectId("63f4ef122b90acf6dbd19e5c"),
    name: 'Manoj',
    age: 38,
    gender: 'M',
    exp: 12,
    subjects: [ 'JAVA', 'DBMS' ],
    type: 'Full Time',
    qualification: 'Ph.D'
  },
  {
    _id: ObjectId("63f4ef122b90acf6dbd19e5d"),
    name: 'Anush',
    age: 32,
    gender: 'F',
    exp: 8,
    subjects: [ 'C', 'CPP' ],
    type: 'Part Time',
    qualification: 'M.Tech'
  },
  {
    _id: ObjectId("63f4ef122b90acf6dbd19e5e"),
    name: 'Suresh',
    age: 40,
    gender: 'M',
    exp: 9,
    subjects: [ 'JAVA', 'DBMS', 'NETWORKING' ],
    type: 'Full Time',
    qualification: 'Ph.D'
  },
  {
    _id: ObjectId("63f4ef122b90acf6dbd19e60"),
    name: 'Mani',
    age: 38,
    gender: 'F',
    exp: 10,
    subjects: [ 'JAVA', 'DBMS', 'OS' ],
    type: 'Part Time',
    qualification: 'Ph.D'
  },
]
```

```

{
  _id: ObjectId("63f4ef122b90acf6dbd19e61"),
  name: 'Sivani',
  age: 32,
  gender: 'F',
  exp: 8,
  subjects: [ 'C', 'CPP', 'MATHS' ],
  type: 'Part Time',
  qualification: 'M.Tech'
},
{
  _id: ObjectId("63f4ef122b90acf6dbd19e62"),
  name: 'Nagesh',
  age: 39,
  gender: 'M',
  exp: 11,
  subjects: [ 'JAVA', 'DBMS', 'NETWORKING' ],
  type: 'Full Time',
  qualification: 'Ph.D'
},
{
  _id: ObjectId("63f4ef122b90acf6dbd19e63"),
  name: 'Nagesh',
  age: 35,
  gender: 'M',
  exp: 9,
  subjects: [ 'JAVA', '.Net', 'NETWORKING' ],
  type: 'Full Time',
  qualification: 'Ph.D'
}
]
ems>

```

8. `db.faculty.insert({name : "Suresh Babu", age:55, gender:"M", exp:25, subjects:["MATHS","DE"],type:"Full Time", qualification:"Ph.D"})`

```

ems> db.faculty.insert( {name : "Suresh Babu", age:55, gender:"M", exp:25, subjects:["MATHS","DE"],type:"Full Time", qualification:"Ph.D"})
{
  acknowledged: true,
  insertedIds: { '0': ObjectId("63f515512b90acf6dbd19e66") }
}
ems>

```

9. `db.faculty.updateMany({},{$inc:{age:1,exp:1}})`

```

ems> db.faculty.updateMany({},{$inc:{age:1,exp:1}})
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 11,
  modifiedCount: 11,
  upsertedCount: 0
}
ems>

```

10. db.faculty.updateOne({name:"Sivani"}, { \$set: {qualifications:'Ph.D',type:'Full Time'}})

```
ems> db.faculty.updateOne({name:"Sivani"}, { $set: {qualifications:'Ph.D',type:'Full Time'}})
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 1,
  modifiedCount: 1,
  upsertedCount: 0
}
ems>
```

11. db.faculty.updateMany({subjects:"MATHS"},{\$push:{subjects:"PSK"}})

```
ems> db.faculty.updateMany({subjects:"MATHS"},{$push:{subjects:"PSK"}})
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 3,
  modifiedCount: 3,
  upsertedCount: 0
}
ems>
```

12. db.faculty.deleteMany({age:{\$gt: 55}})

```
ems> db.faculty.deleteMany({age:{$gt: 55}})
{ acknowledged: true, deletedCount: 1 }
ems>
```

13. db.faculty.find({}, { name: 1, qualification: 1, _id: 0 })

```
ems> db.faculty.find({}, { name: 1, qualification: 1, _id: 0 })
[
  { name: 'Krish', qualification: 'M.Tech' },
  { name: 'Manoj', qualification: 'Ph.D' },
  { name: 'Anush', qualification: 'M.Tech' },
  { name: 'Suresh', qualification: 'Ph.D' },
  { name: 'Rajesh', qualification: 'M.Tech' },
  { name: 'Mani', qualification: 'Ph.D' },
  { name: 'Sivani', qualification: 'M.Tech' },
  { name: 'Nagesh', qualification: 'Ph.D' },
  { name: 'Nagesh', qualification: 'Ph.D' },
  { name: 'Latha', qualification: 'Ph.D' }
]
ems>
```

14. db.faculty.find({}, { name: 1, qualification: 1, _id: 0, exp: 1}).sort({ exp: -1})

```
ems> db.faculty.find({}, { name: 1, qualification: 1, _id: 0, exp: 1}).sort({ exp: -1})
[
  { name: 'Latha', exp: 18, qualification: 'Ph.D' },
  { name: 'Manoj', exp: 17, qualification: 'Ph.D' },
  { name: 'Nagesh', exp: 16, qualification: 'Ph.D' },
  { name: 'Krish', exp: 15, qualification: 'M.Tech' },
  { name: 'Mani', exp: 15, qualification: 'Ph.D' },
  { name: 'Suresh', exp: 14, qualification: 'Ph.D' },
  { name: 'Nagesh', exp: 14, qualification: 'Ph.D' },
  { name: 'Anush', exp: 13, qualification: 'M.Tech' },
  { name: 'Sivani', exp: 13, qualification: 'M.Tech' },
  { name: 'Rajesh', exp: 12, qualification: 'M.Tech' }
]
```

15. db.faculty.find({}).sort({ age:-1}).limit(5)

```
ems> db.faculty.find({}).sort({age:-1}).limit(5)
[
  {
    _id: ObjectId("63f4ef122b90acf6dbd19e64"),
    name: 'Latha',
    age: 44,
    gender: 'F',
    exp: 18,
    subjects: [ 'MATHS', 'PSK' ],
    type: 'Full Time',
    qualification: 'Ph.D'
  },
  {
    _id: ObjectId("63f4ef122b90acf6dbd19e5e"),
    name: 'Suresh',
    age: 44,
    gender: 'M',
    exp: 14,
    subjects: [ 'JAVA', 'DBMS', 'NETWORKING' ],
    type: 'Full Time',
    qualification: 'Ph.D'
  },
  {
    _id: ObjectId("63f4ef122b90acf6dbd19e62"),
    name: 'Nagesh',
    age: 43,
    gender: 'M',
    exp: 16,
    subjects: [ 'JAVA', 'DBMS', 'NETWORKING' ],
    type: 'Full Time',
    qualification: 'Ph.D'
  },
  {
    _id: ObjectId("63f4ef122b90acf6dbd19e60"),
    name: 'Mani',
    age: 42,
    gender: 'F',
    exp: 15,
    subjects: [ 'JAVA', 'DBMS', 'OS' ],
    type: 'Part Time',
    qualification: 'Ph.D'
  },
  {
    _id: ObjectId("63f4ef122b90acf6dbd19e5c"),
    name: 'Manoj',
    age: 42,
    gender: 'M',
    exp: 17,
    subjects: [ 'JAVA', 'DBMS' ],
    type: 'Full Time',
  }
]
```