

```

iti> use ems
switched to db ems
ems> db.createCollection("faculty");
{ ok: 1 }
ems>

```

```

ems> 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" }])
{
  acknowledged: true,
  insertedIds: {
    '0': ObjectId("63f6b3ca4b1f9b70acdb0317"),
    '1': ObjectId("63f6b3ca4b1f9b70acdb0318"),
    '2': ObjectId("63f6b3ca4b1f9b70acdb0319"),
    '3': ObjectId("63f6b3ca4b1f9b70acdb031a"),
    '4': ObjectId("63f6b3ca4b1f9b70acdb031b"),
    '5': ObjectId("63f6b3ca4b1f9b70acdb031c"),
    '6': ObjectId("63f6b3ca4b1f9b70acdb031d"),
    '7': ObjectId("63f6b3ca4b1f9b70acdb031e"),
    '8': ObjectId("63f6b3ca4b1f9b70acdb031f"),
    '9': ObjectId("63f6b3ca4b1f9b70acdb0320")
  }
}
ems>

```

```
ms> db.faculty.find()
```

```
{
  _id: ObjectId("63f6b3ca4b1f9b70acdb0317"),
  name: 'Krish',
  age: 35,
  gender: 'M',
  exp: 10,
  subjects: [ 'DS', 'C', 'OS' ],
  type: 'Full Time',
  qualification: 'M.Tech'
},
{
  _id: ObjectId("63f6b3ca4b1f9b70acdb0318"),
  name: 'Manoj',
  age: 38,
  gender: 'M',
  exp: 12,
  subjects: [ 'JAVA', 'DBMS' ],
  type: 'Full Time',
  qualification: 'Ph.D'
},
{
  _id: ObjectId("63f6b3ca4b1f9b70acdb0319"),
  name: 'Anush',
  age: 32,
  gender: 'F',
  exp: 8,
  subjects: [ 'C', 'CPP' ],
  type: 'Part Time',
  qualification: 'M.Tech'
},
{
  _id: ObjectId("63f6b3ca4b1f9b70acdb031a"),
  name: 'Suresh',
  age: 40,
  gender: 'M',
  exp: 9,
  subjects: [ 'JAVA', 'DBMS', 'NETWORKING' ],
  type: 'Full Time',
  qualification: 'Ph.D'
},
{
  _id: ObjectId("63f6b3ca4b1f9b70acdb031b"),
  name: 'Rajesh',
  age: 35,
  gender: 'M',
  exp: 7,
```

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

```
ms> db.faculty.find({qualification:"Ph.D"})
{
  _id: ObjectId("63f6b3ca4b1f9b70acdb0318"),
  name: 'Manoj',
  age: 38,
  gender: 'M',
  exp: 12,
  subjects: [ 'JAVA', 'DBMS' ],
  type: 'Full Time',
  qualification: 'Ph.D'
},
{
  _id: ObjectId("63f6b3ca4b1f9b70acdb031a"),
  name: 'Suresh',
  age: 40,
  gender: 'M',
  exp: 9,
  subjects: [ 'JAVA', 'DBMS', 'NETWORKING' ],
  type: 'Full Time',
  qualification: 'Ph.D'
},
{
  _id: ObjectId("63f6b3ca4b1f9b70acdb031c"),
  name: 'Mani',
  age: 38,
  gender: 'F',
  exp: 10,
  subjects: [ 'JAVA', 'DBMS', 'OS' ],
  type: 'Part Time',
  qualification: 'Ph.D'
},
{
  _id: ObjectId("63f6b3ca4b1f9b70acdb031e"),
  name: 'Nagesh',
  age: 39,
  gender: 'M',
  exp: 11,
  subjects: [ 'JAVA', 'DBMS', 'NETWORKING' ],
  type: 'Full Time',
  qualification: 'Ph.D'
},
{
  _id: ObjectId("63f6b3ca4b1f9b70acdb031f"),
  name: 'Nagesh',
  age: 35,
  gender: 'M',
  exp: 9,
  subjects: [ 'JAVA', '.Net', 'NETWORKING' ],
```

```
{
  _id: ObjectId("63f6b3ca4b1f9b70acdb031f"),
  name: 'Nagesh',
  age: 35,
  gender: 'M',
  exp: 9,
  subjects: [ 'JAVA', '.Net', 'NETWORKING' ],
  type: 'Full Time',
  qualification: 'Ph.D'
},
{
  _id: ObjectId("63f6b3ca4b1f9b70acdb0320"),
  name: 'Latha',
  age: 40,
  gender: 'F',
  exp: 13,
  subjects: [ 'MATHS' ],
  type: 'Full Time',
  qualification: 'Ph.D'
}
]
```

```
ems> db.faculty.find({exp:{$gt:8,$lt:12}});
[
  {
    _id: ObjectId("63f6b3ca4b1f9b70acdb0317"),
    name: 'Krish',
    age: 35,
    gender: 'M',
    exp: 10,
    subjects: [ 'DS', 'C', 'OS' ],
    type: 'Full Time',
    qualification: 'M.Tech'
  },
  {
    _id: ObjectId("63f6b3ca4b1f9b70acdb031a"),
    name: 'Suresh',
    age: 40,
    gender: 'M',
    exp: 9,
    subjects: [ 'JAVA', 'DBMS', 'NETWORKING' ],
    type: 'Full Time',
    qualification: 'Ph.D'
  },
  {
    _id: ObjectId("63f6b3ca4b1f9b70acdb031c"),
    name: 'Mani',
    age: 38,
    gender: 'F',
    exp: 10,
    subjects: [ 'JAVA', 'DBMS', 'OS' ],
    type: 'Part Time',
    qualification: 'Ph.D'
  },
  {
    _id: ObjectId("63f6b3ca4b1f9b70acdb031e"),
    name: 'Nagesh',
    age: 39,
    gender: 'M',
    exp: 11,
    subjects: [ 'JAVA', 'DBMS', 'NETWORKING' ],
    type: 'Full Time',
    qualification: 'Ph.D'
  },
]
```

```
{
  _id: ObjectId("63f6b3ca4b1f9b70acdb031f"),
  name: 'Nagesh',
  age: 35,
  gender: 'M',
  exp: 9,
  subjects: [ 'JAVA', '.Net', 'NETWORKING' ],
  type: 'Full Time',
  qualification: 'Ph.D'
}
```

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

```
[
  {
    _id: ObjectId("63f6b3ca4b1f9b70acdb031a"),
    name: 'Suresh',
    age: 40,
    gender: 'M',
    exp: 9,
    subjects: [ 'JAVA', 'DBMS', 'NETWORKING' ],
    type: 'Full Time',
    qualification: 'Ph.D'
  },
  {
    _id: ObjectId("63f6b3ca4b1f9b70acdb031d"),
    name: 'Sivani',
    age: 32,
    gender: 'F',
    exp: 8,
    subjects: [ 'C', 'CPP', 'MATHS' ],
    type: 'Part Time',
    qualification: 'M.Tech'
  },
  {
    _id: ObjectId("63f6b3ca4b1f9b70acdb031e"),
    name: 'Nagesh',
    age: 39,
    gender: 'M',
    exp: 11,
    subjects: [ 'JAVA', 'DBMS', 'NETWORKING' ],
    type: 'Full Time',
    qualification: 'Ph.D'
  },
  {
    _id: ObjectId("63f6b3ca4b1f9b70acdb031f"),
    name: 'Nagesh',
    age: 35,
    gender: 'M',
    exp: 9,
    subjects: [ 'JAVA', '.Net', 'NETWORKING' ],
    type: 'Full Time',
    qualification: 'Ph.D'
  },
  {
    _id: ObjectId("63f6b3ca4b1f9b70acdb0320"),
    name: 'Latha',
    age: 40,
    gender: 'F',
    exp: 13,
    subjects: [ 'MATHS' ],
  }
]
```



```
ems> db.faculty.find({ subjects: "MATHS", age: { $gt: 30 }, qualification: "Ph.D" });
[
  {
    _id: ObjectId("63f6b3ca4b1f9b70acdb0320"),
    name: 'Latha',
    age: 40,
    gender: 'F',
    exp: 13,
    subjects: [ 'MATHS' ],
    type: 'Full Time',
    qualification: 'Ph.D'
  }
]
```

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

```
[
  {
    _id: ObjectId("63f6b3ca4b1f9b70acdb0318"),
    name: 'Manoj',
    age: 38,
    gender: 'M',
    exp: 12,
    subjects: [ 'JAVA', 'DBMS' ],
    type: 'Full Time',
    qualification: 'Ph.D'
  },
  {
    _id: ObjectId("63f6b3ca4b1f9b70acdb0319"),
    name: 'Anush',
    age: 32,
    gender: 'F',
    exp: 8,
    subjects: [ 'C', 'CPP' ],
    type: 'Part Time',
    qualification: 'M.Tech'
  },
  {
    _id: ObjectId("63f6b3ca4b1f9b70acdb031a"),
    name: 'Suresh',
    age: 40,
    gender: 'M',
    exp: 9,
    subjects: [ 'JAVA', 'DBMS', 'NETWORKING' ],
    type: 'Full Time',
    qualification: 'Ph.D'
  },
  {
    _id: ObjectId("63f6b3ca4b1f9b70acdb031c"),
    name: 'Mani',
    age: 38,
    gender: 'F',
    exp: 10,
    subjects: [ 'JAVA', 'DBMS', 'OS' ],
    type: 'Part Time',
    qualification: 'Ph.D'
  },
]
```

```

{
  _id: ObjectId("63f6b3ca4b1f9b70acdb031d"),
  name: 'Sivani',
  age: 32,
  gender: 'F',
  exp: 8,
  subjects: [ 'C', 'CPP', 'MATHS' ],
  type: 'Part Time',
  qualification: 'M.Tech'
},
{
  _id: ObjectId("63f6b3ca4b1f9b70acdb031e"),
  name: 'Nagesh',
  age: 39,
  gender: 'M',
  exp: 11,
  subjects: [ 'JAVA', 'DBMS', 'NETWORKING' ],
  type: 'Full Time',
  qualification: 'Ph.D'
},
{
  _id: ObjectId("63f6b3ca4b1f9b70acdb031f"),
  name: 'Nagesh',
  age: 35,
  gender: 'M',
  exp: 9,
  subjects: [ 'JAVA', '.Net', 'NETWORKING' ],
  type: 'Full Time',
  qualification: 'Ph.D'
}

```

```

ems> db.faculty.insertOne({ name: "suresh Babu", age: 55, gender: "M", exp: 25, subjects: ["MATHS", "DE"
], type: "Full Time", qualification: "Ph.D" });
{
  acknowledged: true,
  insertedId: ObjectId("63f6b6ec4b1f9b70acdb0322")
}

```

```
ems> db.faculty.updateMany({}, { $inc: { age: 1, exp: 1 } })
{To exit, press Ctrl+C again or Ctrl+D or type .exit}
  acknowledged: true,
  insertedId: null,
  matchedCount: 12,
  modifiedCount: 12,
  upsertedCount: 0
}
```

```
ems> db.faculty.updateMany({ name: "Sivani" }, { $set: { qualification: "Ph.D", type: "FULL TIME" } })
{ acknowledged: true,
  acknowledged: true,
  insertedId: null,
  matchedCount: 1,
  modifiedCount: 0,
  upsertedCount: 0
}
```

```
ems> db.faculty.updateMany({ subjects: "MATHS", }, { $push: { "subjects": "PSK" } });
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 4,
  modifiedCount: 4,
  upsertedCount: 0
}
```

```
ems> _
{ acknowledged: true, deletedCount: 2 }
```

```
ems> db.faculty.find({}, { _id: 0, name: 1, qualification: 1 })
[To exit, press Ctrl+C again or Ctrl+D or type .exit)
  { 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: 'Ph.D' },
  { name: 'Nagesh', qualification: 'Ph.D' },
  { name: 'Nagesh', qualification: 'Ph.D' },
  { name: 'Latha', qualification: 'Ph.D' }
]
```

```
ems> db.faculty.find({}, {_id:0,name:1,qualification:1,exp:1}).sort({exp:1});
[
  { name: 'Rajesh', exp: 9, qualification: 'M.Tech' },
  { name: 'Anush', exp: 10, qualification: 'M.Tech' },
  { name: 'Sivani', exp: 10, qualification: 'Ph.D' },
  { name: 'Suresh', exp: 11, qualification: 'Ph.D' },
  { name: 'Nagesh', exp: 11, qualification: 'Ph.D' },
  { name: 'Krish', exp: 12, qualification: 'M.Tech' },
  { name: 'Mani', exp: 12, qualification: 'Ph.D' },
  { name: 'Nagesh', exp: 13, qualification: 'Ph.D' },
  { name: 'Manoj', exp: 14, qualification: 'Ph.D' },
  { name: 'Latha', exp: 15, qualification: 'Ph.D' }
]
```

C:\> mongosh mongodb://127.0.0.1:27017/?directConnection=true&se

```
ems> db.faculty.find().sort({age:-1}).limit(5);
```

```
[
  {
    _id: ObjectId("63f6b3ca4b1f9b70acdb0320"),
    name: 'Latha',
    age: 42,
    gender: 'F',
    exp: 15,
    subjects: [ 'MATHS', 'PSK' ],
    type: 'Full Time',
    qualification: 'Ph.D'
  },
  {
    _id: ObjectId("63f6b3ca4b1f9b70acdb031a"),
    name: 'Suresh',
    age: 42,
    gender: 'M',
    exp: 11,
    subjects: [ 'JAVA', 'DBMS', 'NETWORKING' ],
    type: 'Full Time',
    qualification: 'Ph.D'
  },
  {
    _id: ObjectId("63f6b3ca4b1f9b70acdb031e"),
    name: 'Nagesh',
    age: 41,
    gender: 'M',
    exp: 13,
    subjects: [ 'JAVA', 'DBMS', 'NETWORKING' ],
    type: 'Full Time',
    qualification: 'Ph.D'
  },
  {
    _id: ObjectId("63f6b3ca4b1f9b70acdb031c"),
    name: 'Mani',
    age: 40,
    gender: 'F',
    exp: 12,
    subjects: [ 'JAVA', 'DBMS', 'OS' ],
    type: 'Part Time',
    qualification: 'Ph.D'
  },
  {
    _id: ObjectId("63f6b3ca4b1f9b70acdb0318"),
    name: 'Manoj',
    age: 40,
    gender: 'M',
    exp: 14,
    subjects: [ 'JAVA', 'DBMS' ],

```