

FEDERAL INSTITUTE OF SCIENCE AND TECHNOLOGY (FISAT)
DEPARTMENT OF COMPUTER APPLICATIONS

ADVANCED DBMS LAB

CYCLE -3

1. Install the MongoDB Compass GUI and configure it.
2. Create a collection student consists of details like rollno, name, phoneno, marks, address, year of course etc

```
> db.createCollection("student")
> db.student.insertOne({_rollno:29, name:"Remin", phoneno:7934777432, marks:89, address:"pala", yearofcourse:2019})
```

OUTPUT:

```
{
  "acknowledged" : true,
  "insertedId" : ObjectId("615ace8a1ac4c5a0937e8087")
}
```

3. Insert the details of the multiple students (atleast 5) in the form of documents in the student collection.

```
> db.student.insertMany([ {_rollno:30, name:"Sujith", phoneno:9309240912, marks:78, address:"kochi", yearofcourse:2019}, {_rollno:31, name:"abhilash", phoneno:8238649832, marks:75, address:"kodungallur", yearofcourse:2017}, {_rollno:32, name:"unnimaya", phoneno:9293984354, marks:95, address:"thrissur", yearofcourse:2020}, {_rollno:33, name:"anna", phoneno:9094375943, marks:88, address:"thiruvalla", yearofcourse:2017}, {_rollno:34, name:"nijil", phoneno:7025858321, marks:90, address:"amballur", yearofcourse:2018} ])
```

OUTPUT:

```
{
  "acknowledged" : true,
  "insertedIds" : [
    ObjectId("615ad1fe1ac4c5a0937e8088"),
    ObjectId("615ad1fe1ac4c5a0937e8089"),
    ObjectId("615ad1fe1ac4c5a0937e808a"),
    ObjectId("615ad1fe1ac4c5a0937e808b"),
    ObjectId("615ad1fe1ac4c5a0937e808c")
  ]
}
```

```
> db.student.find().pretty()
{
  "_id" : ObjectId("615ace8a1ac4c5a0937e8087"),
  "_rollno" : 29,
  "name" : "Remin",
  "phoneno" : 7934777432,
  "marks" : 89,
  "address" : "pala",
```

```

    "yearofcourse" : 2019
  }
  {
    "_id" : ObjectId("615ad1fe1ac4c5a0937e8088"),
    "_rollno" : 30,
    "name" : "Sujith",
    "phoneno" : 9309240912,
    "marks" : 78,
    "address" : "kochi",
    "yearofcourse" : 2019
  }
  {
    "_id" : ObjectId("615ad1fe1ac4c5a0937e8089"),
    "_rollno" : 31,
    "name" : "abhilash",
    "phoneno" : 8238649832,
    "marks" : 75,
    "address" : "kodungallur",
    "yearofcourse" : 2017
  }
  {
    "_id" : ObjectId("615ad1fe1ac4c5a0937e808a"),
    "_rollno" : 32,
    "name" : "unnimaya",
    "phoneno" : 9293984354,
    "marks" : 95,
    "address" : "thrissur",
    "yearofcourse" : 2020
  }
  {
    "_id" : ObjectId("615ad1fe1ac4c5a0937e808b"),
    "_rollno" : 33,
    "name" : "anna",
    "phoneno" : 9094375943,
    "marks" : 88,
    "address" : "thiruvalla",
    "yearofcourse" : 2017
  }
  {
    "_id" : ObjectId("615ad1fe1ac4c5a0937e808c"),
    "_rollno" : 34,
    "name" : "nijil",
    "phoneno" : 7025858321,
    "marks" : 90,
    "address" : "amballur",
    "yearofcourse" : 2018
  }
}

```

4. Retrieve the fields rollno, name, phoneno, marks, city for all the documents in the collection student.

```

>
db.student.find({}, {_id:0, _rollno:1, name:1, phoneno:1, marks:1, address:1})
.

```

OUTPUT :

```
{ "_rollno" : 29, "name" : "Remin", "phoneno" : 7934777432, "marks" : 89,
"address" : "pala"}
{ "_rollno" : 30, "name" : "Sujith", "phoneno" : 9495027076, "marks" : 78,
"address" : "kochi"}
{ "_rollno" : 31, "name" : "abhilash", "phoneno" : 8238649832, "marks" : 75,
"address" : "kodungallur"}
{ "_rollno" : 32, "name" : "unnimaya", "phoneno" : 9293984354, "marks" : 95,
"address" : "thrissur"}
{ "_rollno" : 33, "name" : "anna", "phoneno" : 9094375943, "marks" : 88,
"address" : "thiruvalla", }
{ "_rollno" : 34, "name" : "nijil", "phoneno" : 7025858321, "marks" : 90,
"address" : "amballur"}
```

5. Display the details of students who achieved a score more than 90 and are from 'Thrissur'.

```
>db.student.find({$and: [{address:"thrissur"},{marks:{$gt:90}}]})
```

OUTPUT :

```
{ "_id" : ObjectId("615ad1felac4c5a0937e808a"), "_rollno" : 32, "name" :
"unnimaya", "phoneno" : 9293984354, "marks" : 95, "address" : "thrissur",
"yearofcourse" : 2020 }
```

6. Update the phone number of Sujith in the student collection. Retrieve the updated information.

```
> db.student.updateOne({_rollno:30},{ $set:{phoneno:9495027076}})
```

OUTPUT :

```
{ "acknowledged" : true, "matchedCount" : 1, "modifiedCount" : 1 }
```

```
> db.student.find({_rollno:{$eq:30}})
```

```
{ "_id" : ObjectId("615ad1felac4c5a0937e8088"), "_rollno" : 30, "name" :
"Sujith", "phoneno" : 9495027076, "marks" : 78, "address" : "kochi",
"yearofcourse" : 2019 }
```

7. Update the year of course in all the documents in the student collection to 2021. Also retrieve the updated information.

```
> db.student.updateOne({yearofcourse:2020},{ $set:{yearofcourse:2021}})
```

8. Delete the details of the student whose name is 'Abhilash' from the student collection .

```
>db.student.deleteOne({name:"abhilash"})
```

OUTPUT:

```
{ "acknowledged" : true, "deletedCount" : 1 }
```

9. Retrieve the number of students per department from the student collection.

```
>db.student.find().count({dept:"mca"})
```

OUTPUT:

5

10. Arrange the name of the students in ascending order along with all the columns.

```
>db.student.find().sort({name:1})
```

OUTPUT:

```
{ "_id" : ObjectId("615ad1felac4c5a0937e808b"), "_rollno" : 33, "name" :  
"anna", "phoneno" : 9094375943, "marks" : 88, "address" : "thiruvalla",  
"yearofcourse" : 2017 }  
{ "_id" : ObjectId("615ad1felac4c5a0937e808c"), "_rollno" : 34, "name" :  
"nijil", "phoneno" : 7025858321, "marks" : 90, "address" : "amballur",  
"yearofcourse" : 2018 }  
{ "_id" : ObjectId("615ace8alac4c5a0937e8087"), "_rollno" : 29, "name" :  
"remin", "phoneno" : 7934777432, "marks" : 89, "address" : "pala",  
"yearofcourse" : 2019 }  
{ "_id" : ObjectId("615ad1felac4c5a0937e8088"), "_rollno" : 30, "name" :  
"Sujith", "phoneno" : 9495027076, "marks" : 78, "address" : "kochi",  
"yearofcourse" : 2019 }  
{ "_id" : ObjectId("615ad1felac4c5a0937e808a"), "_rollno" : 32, "name" :  
"unnimaya", "phoneno" : 9293984354, "marks" : 95, "address" : "thrissur",  
"yearofcourse" : 2021 }
```