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:"Riya",phoneno:7934777432,marks:89,add
ress:"angamali",yearofcourse:2019})
```

OUTPUT

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

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

```
>db.student.insertMany([{_rollno:30,name:"Sujith",phoneno:9309240912,marks:78
,address:"ernakulam",yearofcourse:2019},{_rollno:31,name:"abhilash",phoneno:8
238649832,marks:75,address:"kodungallur",yearofcourse:2017},{_rollno:32,name:
"unnimaya",phoneno:9293984354,marks:95,address:"thrissur",yearofcourse:2020},
{_rollno:33,name:"senna",phoneno:9094375943,marks:88,address:"thiruvalla",yea
rofcourse:2017},{_rollno:34,name:"surya",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" : "Riya", "phoneno" :
        7934777432,
        "marks" : 89,
        "address" : "angamali",
```

```
        "yearofcourse" : 2019
}
{
        "_id" : ObjectId("615ad1fe1ac4c5a0937e8088"),
        "_rollno" : 30,
        "name" : "Sujith", "phoneno" :
        9309240912,
        "marks" : 78,
        "address" : "ernakulam",
        "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" : "senna", "phoneno" :
        9094375943,
        "marks" : 88,
        "address" : "thiruvalla","yearofcourse" : 2017
}
{
        "_id" : ObjectId("615ad1fe1ac4c5a0937e808c"),
        "_rollno" : 34,
        "name" : "surya", "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" : "Riya", "phoneno" : 7934777432, "marks" : 89,"address" : "angamali}
{ "_rollno" : 30, "name" : "Sujith", "phoneno" : 9495027076, "marks" : 78,"address" : "ernakulam"}
{"_rollno" : 31, "name" : "abhilash", "phoneno" : 8238649832, "marks" : 75,"address" : "kodungallur”}
{ "_rollno" : 32, "name" : "unnimaya", "phoneno" : 9293984354, "marks" : 95,"address" : "thrissur"}
{ "_rollno" : 33, "name" : "senna", "phoneno" : 9094375943, "marks" : 88,"address" : "thiruvalla", }
{ "_rollno" : 34, "name" : "surya", "phoneno" : 7025858321, "marks" : 90,"address" : "amballur"}
{rollno" : 32, "name" : "unnimaya", "phoneno" : 9293984354, "marks" : 95,"address" : "thrissur"}

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("615ad1fe1ac4c5a0937e808a"), "_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("615ad1fe1ac4c5a0937e8088"), "_rollno" : 30, "name" : "Sujith", "phoneno" : 9495027076, "marks" : 78, "address" : "ernakulam","yearofcourse" : 2019 }

7.Update the year of course in all the documents in the student collection to 2021. Alsoretrieve 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("615ace8a1ac4c5a0937e8087"), "_rollno" : 29, "name" :"Riya", "phoneno" : 7934777432, "marks" : 89, "address" : "angamali", "yearofcourse" : 2019 }
{ "_id" : ObjectId("615ad1fe1ac4c5a0937e8088"), "_rollno" : 30, "name" : "Sujith", "phoneno" : 9495027076, "marks" : 78, "address" : "ernakulam","yearofcourse" : 2019 }
{ "_id" : ObjectId("615ad1fe1ac4c5a0937e808b"), "_rollno" : 33, "name" : "senna", "phoneno" : 9094375943, "marks" : 88, "address" : "thiruvalla","yearofcourse" : 2017 }
{ "_id" : ObjectId("615ad1fe1ac4c5a0937e808c"), "_rollno" : 34, "name" :"surya", "phoneno" : 7025858321, "marks" : 90, "address" : "amballur", "yearofcourse" : 2018 }
{ "_id" : ObjectId("615ad1fe1ac4c5a0937e808a"), "_rollno" : 32, "name" : "unnimaya", "phoneno" : 9293984354, "marks" : 95, "address" : "thrissur","yearofcourse" : 2021 }