Lab cycle -3

1. Create a collection student consists of details like rollno, name, phoneno, marks, address, year of course etc

   NoSQL code:

```
> show dbs
  admin       0.000GB
  config      0.000GB
  local       0.000GB
  mymongodb   0.000GB
> use StudentB6
  switched to db StudentB6
> db.createCollection("student")
   \{ "ok" : 1 }
```

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

   NoSQL CODE:

```
>
db.student.insertMany([{roll_id:101,name:"Appu",phoneno:9496867367,mark:45
,address:"moozhikkal",year:2012},{roll_id:102,name:"Ammu",phoneno:94968673
67,mark:45,address:"mol",year:2012},{roll_id:103,name:"Anu",phoneno:949686
7367,mark:48,address:"mh",year:2020},{roll_id:104,name:"midhu",phoneno:949
6867367,mark:51,address:"mr",year:2020}])
{
      "acknowledged" : true,
      "insertedIds" : [
            ObjectId("61543b48b516465b01d989eb"),
            ObjectId("61543b48b516465b01d989ec"),
            ObjectId("61543b48b516465b01d989ed"),
            ObjectId("61543b48b516465b01d989ee")
      ]
}
```

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

   NoSQL CODE:

```
>
db.student.find({name:{$eq:"Ammu"}},{_id:0,roll_no:1,name:1,address:1,phon
e:1,mark:1})
```

```
{ "name" : "Ammu", "mark" : 45, "address" : "mol" }
```

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

   NoSQL CODE:

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

OUTPUT:

```
{ "_id" : ObjectId("61543b48b516465b01d989ee"), "roll_id" : 104, "name" :
"midhu", "phoneno" : 9496867367, "mark" : 95, "address" : " Thrissur ",
"year" : 2020 }
```

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

   NoSQL CODE:

```
> db.student.updateOne({name:"Sujith"},{$set:{phoneno:96325874}})
```

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

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

   NoSQL CODE:

```
> db.student.updateMany({year:2020},{$set:{year:2021}})
```

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

```
> db.student.find()
```

```
{ "_id" : ObjectId("61543b48b516465b01d989eb"), "roll_id" : 101, "name" :
"Abhilash", "phoneno" : 9496867367, "mark" : 45, "address" : "moozhikkal",
"year" : 2012 }
```

```
{ "_id" : ObjectId("61543b48b516465b01d989ec"), "roll_id" : 102, "name" :
"Ammu", "phoneno" : 9496867367, "mark" : 45, "address" : "mol", "year" :
2012 }
{ "_id" : ObjectId("61543b48b516465b01d989ed"), "roll_id" : 103, "name" :
"Anu", "phoneno" : 9496867367, "mark" : 48, "address" : "mh", "year" :
2021 }
{ "_id" : ObjectId("61543b48b516465b01d989ee"), "roll_id" : 104, "name" :
"Sujith", "phoneno" : 96325874, "mark" : 95, "address" : "Thrisur", "year"
: 2021 }
```

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

   NoSQL CODE:

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

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

> db.student.find()


{ "_id" : ObjectId("61543b48b516465b01d989eb"), "roll_id" : 101, "name" :
"Appu", "phoneno" : 9496867367, "mark" : 45, "address" : "moozhikkal",
"year" : 2012 }
{ "_id" : ObjectId("61543b48b516465b01d989ec"), "roll_id" : 102, "name" :
"Ammu", "phoneno" : 9496867367, "mark" : 45, "address" : "mol", "year" :
2012 }
{ "_id" : ObjectId("61543b48b516465b01d989ed"), "roll_id" : 103, "name" :
"Anu", "phoneno" : 9496867367, "mark" : 48, "address" : "mh", "year" :
2021 }
```

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

   NoSQL CODE:
```
> db.student.find().count()
  3
```

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

   NoSQL CODE:

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

{ "_id" : ObjectId("61543b48b516465b01d989ed"), "roll_id" : 103, "name" :
"Anu", "phoneno" : 9496867367, "mark" : 48, "address" : "mh", "year" :
2021 }
{ "_id" : ObjectId("61543b48b516465b01d989ec"), "roll_id" : 102, "name" :
"Ammu", "phoneno" : 9496867367, "mark" : 45, "address" : "mol", "year" :
2012 }
```

{ "_id" : ObjectId("61543b48b516465b01d989eb"), "roll_id" : 101, "name" : "Appu", "phoneno" : 9496867367, "mark" : 45, "address" : "moozhikkal", "year" : 2012 }