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

    NoSQL code:

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

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

    NoSQL CODE:

    ```
    > db.Student.insertOne({_id:111,name:"Hima",phone:8263726171,marks:92,Address:"aaa",yearofcourse:2021})
    { "acknowledged" : true, "insertedId" : 111 }
    > db.Student.insertMany( [{_id:112,name:"Udit",phone:889991345,marks:100,Address:"bbbb",Yearofcourse:2012},{_id:113,name:"Mallika",phone:8855345678,marks:65,Address:"
    ccc",Yearofcourse:1998},{_id:114,name:"Hari",phone:99999,marks:78,Address:"ddd",Yearofcourse:1988},{_id:115,name:"Uthara",phone:990009111,marks:20,Address:"eee",Yearofcourse:2008}] )
    { "acknowledged" : true, "insertedIds" : [ 112, 113, 114, 115 ] }
    > db.Student.insertOne({_id:116,name:"Sujith",phone:8244726171,marks:92,Address:"Thrissur",yearofcourse:2022})
    { "acknowledged" : true, "insertedId" : 116 }
    > db.Student.insertOne({_id:117,name:"Abhilash",phone:8245726171,marks:66,Address:"Thrissur",yearofcourse:2020})
    { "acknowledged" : true, "insertedId" : 117 }
    ```

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

    NoSQL CODE:

```
>db.student.find({name:{$eq:"Hima"}},{_id:111,roll_no:1,name:1,address:1,p
hone:1,mark:1})
```

```
{ "name" : "Hima", "mark" : 92, "address" : "aaa" }
```

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

   NoSQL CODE:

```
> db.Student.find({$and:[{marks:{$gt:90}},{Address:"Thrissur"}]})
```

```
{ "_id" : 116, "name" : "Sujith", "phone" : 8244726171, "marks" : 92, "Address" : "Thrissur", "yearofcourse" : 2022 }
```

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

   NoSQL CODE:

```
> db.Student.updateOne({_id:116},{$set:{phone:9876655322}})
```

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

7. 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({yearofcourse:2020},{$set:{yearofcourse:2021}})

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

   > db.Student.find().pretty()

   {

   "_id" : 111,

   "name" : "Hima",

   "phone" : 8263726171,

   "marks" : 92,

   "Address" : "aaa",

   "yearofcourse" : 2021

   }

   {

   "_id" : 112,

   "name" : "Udit",

"phone" : 889991345,

"marks" : 100,

"Address" : "bbbb",

"Yearofcourse" : 2012

}

{

"_id" : 113,

"name" : "Mallika",

"phone" : 8855345678,

"marks" : 65,

"Address" : "ccc",

"Yearofcourse" : 1998

}

{

"_id" : 114,

"name" : "Hari",

"phone" : 99999,

"marks" : 78,

"Address" : "ddd",

"Yearofcourse" : 1988

}

{

"_id" : 115,

"name" : "Uthara",

"phone" : 990009111,

"marks" : 20,

"Address" : "eee",

"Yearofcourse" : 2008

}

{

"_id" : 116,

"name" : "Sujith",

"phone" : 9876655322,

"marks" : 92,

"Address" : "Thrissur",

"yearofcourse" : 2022

}

{

"_id" : 117,

"name" : "Abhilash",

"phone" : 8245726171,

"marks" : 66,

"Address" : "Thrissur",

"yearofcourse" : 2021

}

8. 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 }

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

NoSQL CODE:

>db.Student.find().count()

6

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

NoSQL CODE:

```
> db.Student.find().sort({name:1})
{ "_id" : 114, "name" : "Hari", "phone" : 99999, "marks" : 78, "Address" : "ddd", "Yearofcourse" :
1988 }
{ "_id" : 111, "name" : "Hima", "phone" : 8263726171, "marks" : 92, "Address" : "aaa",
"yearofcourse" : 2021 }
{ "_id" : 113, "name" : "Mallika", "phone" : 8855345678, "marks" : 65, "Address" : "ccc",
"Yearofcourse" : 1998 }
{ "_id" : 116, "name" : "Sujith", "phone" : 9876655322, "marks" : 92, "Address" : "Thrissur",
```

"yearofcourse" : 2022 }
{ "_id" : 112, "name" : "Udit", "phone" : 889991345, "marks" : 100, "Address" : "bbbb",
"Yearofcourse" : 2012 }
{ "_id" : 115, "name" : "Uthara", "phone" : 990009111, "marks" : 20, "Address" : "eee",
"Yearofcourse" : 2008 }
>