**ADVANCED DATABASE MANAGEMENT SYSTEM LAB**

**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,address:"angamali",yearofcourse:2019})

**OUTPUT:**

{

"acknowledged" : true,

"insertedId" :ObjectId("615ace8a1ac4c5a0937e8087")

}

1. Insert the details of the multiple students (atleast5) in the form of documents in the student collection.

>db.student.insertMany([{\_rollno:30,name:"Sujith",phoneno:9309240912,marks:78,address:"ernakulam",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:"senna",phoneno:9094375943,marks:88,address:"thiruvalla",yearofcourse: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

}

1. 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"}

1. 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 }

1. 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 }

1. 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}})

1. Delete the details of the student whose name is ‘Abhilash’ from the student collection .

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

**OUTPUT:**

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

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

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

**OUTPUT:**

5

1. 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 }