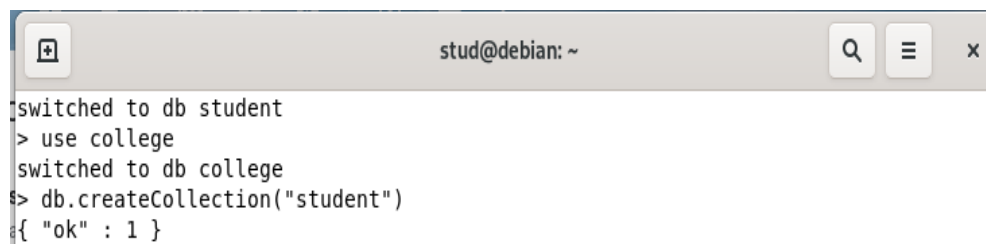# LAB CYCLE - 3

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

 use college

switched to db college

> db.createCollection("student")

{ "ok" : 1 }

```
switched to db student
> use college
switched to db college
> db.createCollection("student")
{ "ok" : 1 }
```

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

>
db.student.insertOne({_id:50,name:"harsh",phno:78653429,mark:85,address:"rosevilla",city:"ekm",ycourse:2020})

{ "acknowledged" : true, "insertedId" : 50 }

>
db.student.insertOne({_id:51,name:"dona",phno:73653429,mark:95,address:"dragonvilla",city:"kochi",ycourse:2019})

{ "acknowledged" : true, "insertedId" : 51 }

>
db.student.insertMany([{_id:52,name:"gayu",phno:73643429,mark:86,address:"heavenvilla",city:"tvm",ycourse:2020},{_id:53,name:"abelu",phno:78452698,mark:90,address:"silentvilla",city:"bangalore",ycourse:2020},{_id:54,name:"ebin",phno:87653421,mark:95,address:"peacevilla",city:"thrissur",ycourse:2019}])

```
{ "acknowledged" : true, "insertedIds" : [ 52, 53, 54 ] }

> db.student.find()

{ "_id" : 50, "name" : "harsh", "phno" : 78653429, "mark" : 85, "address" : "rosevilla", "city"
: "ekm", "ycourse" : 2020 }

{ "_id" : 51, "name" : "dona", "phno" : 73653429, "mark" : 95, "address" : "dragonvilla",
"city" : "kochi", "ycourse" : 2019 }

{ "_id" : 52, "name" : "gayu", "phno" : 73643429, "mark" : 86, "address" : "heavenvilla",
"city" : "tvm", "ycourse" : 2020 }

{ "_id" : 53, "name" : "abelu", "phno" : 78452698, "mark" : 90, "address" : "silentvilla",
"city" : "bangalore", "ycourse" : 2020 }

{ "_id" : 54, "name" : "ebin", "phno" : 87653421, "mark" : 95, "address" : "peacevilla", "city"
: "thrissur", "ycourse" : 2019 }

> db.student.find().pretty()

{
        "_id" : 50,

        "name" : "harsh",

        "phno" : 78653429,

        "mark" : 85,

        "address" : "rosevilla",

        "city" : "ekm",

        "ycourse" : 2020
}
{
        "_id" : 51,

        "name" : "dona",

        "phno" : 73653429,

        "mark" : 95,

        "address" : "dragonvilla",

        "city" : "kochi",

        "ycourse" : 2019
}
{
```

```
        "_id" : 52,
        "name" : "gayu",
        "phno" : 73643429,
        "mark" : 86,
        "address" : "heavenvilla",
        "city" : "tvm",
        "ycourse" : 2020
}
{
        "_id" : 53,
        "name" : "abelu",
        "phno" : 78452698,
        "mark" : 90,
        "address" : "silentvilla",
        "city" : "bangalore",
        "ycourse" : 2020
}
{
        "_id" : 54,
        "name" : "ebin",
        "phno" : 87653421,
        "mark" : 95,
        "address" : "peacevilla",
        "city" : "thrissur",
        "ycourse" : 2019
}
```

```
> db.student.find()
{ "_id" : 50, "name" : "harsh", "phno" : 78653429, "mark" : 85, "address" : "ros
evilla", "city" : "ekm", "ycourse" : 2020 }
{ "_id" : 51, "name" : "dona", "phno" : 73653429, "mark" : 95, "address" : "drag
onvilla", "city" : "kochi", "ycourse" : 2019 }
{ "_id" : 52, "name" : "gayu", "phno" : 73643429, "mark" : 86, "address" : "heav
envilla", "city" : "tvm", "ycourse" : 2020 }
{ "_id" : 53, "name" : "abelu", "phno" : 78452698, "mark" : 90, "address" : "sil
entvilla", "city" : "bangalore", "ycourse" : 2020 }
{ "_id" : 54, "name" : "ebin", "phno" : 87653421, "mark" : 95, "address" : "peac
evilla", "city" : "thrissur", "ycourse" : 2019 }
> db.student.find().pretty()
{
        "_id" : 50,
        "name" : "harsh",
        "phno" : 78653429,
        "mark" : 85,
        "address" : "rosevilla",
        "city" : "ekm",
        "ycourse" : 2020
}
```

```
}
{
        "_id" : 51,
        "name" : "dona",
        "phno" : 73653429,
        "mark" : 95,
        "address" : "dragonvilla",
        "city" : "kochi",
        "ycourse" : 2019
}
{
        "_id" : 52,
        "name" : "gayu",
        "phno" : 73643429,
        "mark" : 86,
        "address" : "heavenvilla",
        "city" : "tvm",
        "ycourse" : 2020
}
```

```
}
{
        "_id" : 53,
        "name" : "abelu",
        "phno" : 78452698,
        "mark" : 90,
        "address" : "silentvilla",
        "city" : "bangalore",
        "ycourse" : 2020
}
{
        "_id" : 54,
        "name" : "ebin",
        "phno" : 87653421,
        "mark" : 95,
        "address" : "peacevilla",
        "city" : "thrissur",
        "ycourse" : 2019
}
```

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

db.student.find({_id:{$gt:49}},{address:0,ycourse:0})

{ "_id" : 50, "name" : "harsh", "phno" : 78653429, "mark" : 85, "city" : "ekm" }

{ "_id" : 51, "name" : "dona", "phno" : 73653429, "mark" : 95, "city" : "kochi" }

{ "_id" : 52, "name" : "gayu", "phno" : 73643429, "mark" : 86, "city" : "tvm" }

{ "_id" : 53, "name" : "abelu", "phno" : 78452698, "mark" : 90, "city" : "bangalore" }

{ "_id" : 54, "name" : "ebin", "phno" : 87653421, "mark" : 95, "city" : "thrissur" }

{ "_id" : 55, "name" : "sujith", "phno" : 74653879, "mark" : 96, "city" : "tvm" } >

```
> db.student.find({_id:{$gt:49},{address:0,ycourse:0}})
2021-09-30T10:54:58.640+0530 E  QUERY    [js] uncaught exception: SyntaxError: e
xpected property name, got '{' :
@(shell):1:30
> db.student.find({_id:{$gt:49}},{address:0,ycourse:0})
{ "_id" : 50, "name" : "harsh", "phno" : 78653429, "mark" : 85, "city" : "ekm" }
{ "_id" : 51, "name" : "dona", "phno" : 73653429, "mark" : 95, "city" : "kochi"
}
{ "_id" : 52, "name" : "gayu", "phno" : 73643429, "mark" : 86, "city" : "tvm" }
{ "_id" : 53, "name" : "abelu", "phno" : 78452698, "mark" : 90, "city" : "bangal
ore" }
{ "_id" : 54, "name" : "ebin", "phno" : 87653421, "mark" : 95, "city" : "thrissu
r" }
{ "_id" : 55, "name" : "sujith", "phno" : 74653879, "mark" : 96, "city" : "tvm"
}
>
```

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

db.student.find({$and:[{city:"thrissur"},{mark:{$gt:90}}]})

{ "_id" : 54, "name" : "ebin", "phno" : 87653421, "mark" : 95, "address" : "peacevilla", "city" : "thrissur", "ycourse" : 2019 }

```
> db.student.find({$and:[{city:"thrissur"},{mark:{$gt:90}}]})
{ "_id" : 4, "name" : "sam", "phno" : 8765432190, "mark" : 98, "address" : "cholakkal", "year" : 2020, "dept" : "mba", "city" : "thrissur" }
> db.student.find({_id:{$in:[1,2,3,4,5]}},{dept:0,year:0})
```

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

db.student.insertOne({_id:55,name:"sujith",phno:98765432,mark:96,address:"redvilla",city:"tvm",ycourse:2020})

{ "acknowledged" : true, "insertedId" : 55 }

db.student.insertOne({_id:56,name:"abhilash",phno:98765832,mark:87,address:"whitevilla", city:"thrissur",ycourse:2020})

{ "acknowledged" : true, "insertedId" : 56 }

db.student.updateOne({_id:55},{$set:{phno:74653879}})

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

```
> db.student.updateOne({_id:55},{$set:{phno:74653879}})
{ "acknowledged" : true, "matchedCount" : 1, "modifiedCount" : 1 }
> db.student.find()
{ "_id" : 50, "name" : "harsh", "phno" : 78653429, "mark" : 85, "address" : "ros
evilla", "city" : "ekm", "ycourse" : 2020 }
{ "_id" : 51, "name" : "dona", "phno" : 73653429, "mark" : 95, "address" : "drag
onvilla", "city" : "kochi", "ycourse" : 2019 }
{ "_id" : 52, "name" : "gayu", "phno" : 73643429, "mark" : 86, "address" : "heav
envilla", "city" : "tvm", "ycourse" : 2020 }
{ "_id" : 53, "name" : "abelu", "phno" : 78452698, "mark" : 90, "address" : "sil
entvilla", "city" : "bangalore", "ycourse" : 2020 }
{ "_id" : 54, "name" : "ebin", "phno" : 87653421, "mark" : 95, "address" : "peac
evilla", "city" : "thrissur", "ycourse" : 2019 }
{ "_id" : 55, "name" : "sujith", "phno" : 74653879, "mark" : 96, "address" : "re
dvilla", "city" : "tvm", "ycourse" : 2020 }
{ "_id" : 56, "name" : "abhilash", "phno" : 98765832, "mark" : 87, "address" : "
whitevilla", "city" : "thrissur", "ycourse" : 2020 }
>
```

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

db.student.updateOne({_id:50},{$set:{ycourse:2021}})

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

> db.student.updateOne({_id:51},{$set:{ycourse:2021}})

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

> db.student.updateOne({_id:52},{$set:{ycourse:2021}})

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

> db.student.updateOne({_id:53},{$set:{ycourse:2021}})

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

> db.student.updateOne({_id:54},{$set:{ycourse:2021}})

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

> db.student.updateOne({_id:55},{$set:{ycourse:2021}})

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

> db.student.updateOne({_id:56},{$set:{ycourse:2021}})

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

> db.student.find()

{ "_id" : 50, "name" : "harsh", "phno" : 78653429, "mark" : 85, "address" : "rosevilla", "city" : "ekm", "ycourse" : 2021 }

{ "_id" : 51, "name" : "dona", "phno" : 73653429, "mark" : 95, "address" : "dragonvilla", "city" : "kochi", "ycourse" : 2021 }

{ "_id" : 52, "name" : "gayu", "phno" : 73643429, "mark" : 86, "address" : "heavenvilla", "city" : "tvm", "ycourse" : 2021 }

{ "_id" : 53, "name" : "abelu", "phno" : 78452698, "mark" : 90, "address" : "silentvilla", "city" : "bangalore", "ycourse" : 2021 }

{ "_id" : 54, "name" : "ebin", "phno" : 87653421, "mark" : 95, "address" : "peacevilla", "city" : "thrissur", "ycourse" : 2021 }

{ "_id" : 55, "name" : "sujith", "phno" : 74653879, "mark" : 96, "address" : "redvilla", "city" : "tvm", "ycourse" : 2021 }

{ "_id" : 56, "name" : "abhilash", "phno" : 98765832, "mark" : 87, "address" : "whitevilla", "city" : "thrissur", "ycourse" : 2021 }

>

```
> db.student.find()
{ "_id" : 50, "name" : "harsh", "phno" : 78653429, "mark" : 85, "address" : "ros
evilla", "city" : "ekm", "ycourse" : 2021 }
{ "_id" : 51, "name" : "dona", "phno" : 73653429, "mark" : 95, "address" : "drag
onvilla", "city" : "kochi", "ycourse" : 2021 }
{ "_id" : 52, "name" : "gayu", "phno" : 73643429, "mark" : 86, "address" : "heav
envilla", "city" : "tvm", "ycourse" : 2021 }
{ "_id" : 53, "name" : "abelu", "phno" : 78452698, "mark" : 90, "address" : "sil
entvilla", "city" : "bangalore", "ycourse" : 2021 }
{ "_id" : 54, "name" : "ebin", "phno" : 87653421, "mark" : 95, "address" : "peac
evilla", "city" : "thrissur", "ycourse" : 2021 }
{ "_id" : 55, "name" : "sujith", "phno" : 74653879, "mark" : 96, "address" : "re
dvilla", "city" : "tvm", "ycourse" : 2021 }
{ "_id" : 56, "name" : "abhilash", "phno" : 98765832, "mark" : 87, "address" : "
whitevilla", "city" : "thrissur", "ycourse" : 2021 }
>
```

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

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

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

> db.student.find()

{ "_id" : 50, "name" : "harsh", "phno" : 78653429, "mark" : 85, "address" : "rosevilla", "city" : "ekm", "ycourse" : 2021 }

{ "_id" : 51, "name" : "dona", "phno" : 73653429, "mark" : 95, "address" : "dragonvilla", "city" : "kochi", "ycourse" : 2021 }

{ "_id" : 52, "name" : "gayu", "phno" : 73643429, "mark" : 86, "address" : "heavenvilla", "city" : "tvm", "ycourse" : 2021 }

{ "_id" : 53, "name" : "abelu", "phno" : 78452698, "mark" : 90, "address" : "silentvilla", "city" : "bangalore", "ycourse" : 2021 }

{ "_id" : 54, "name" : "ebin", "phno" : 87653421, "mark" : 95, "address" : "peacevilla", "city" : "thrissur", "ycourse" : 2021 }

{ "_id" : 55, "name" : "sujith", "phno" : 74653879, "mark" : 96, "address" : "redvilla", "city" : "tvm", "ycourse" : 2021 }

```
> db.student.deleteOne({name:"abhilash"})
{ "acknowledged" : true, "deletedCount" : 1 }
```

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

db.student.find().count()

6

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

3

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

3

```
> db.student.find({dept:"mca"}).count()
3
h> db.student.find({dept:"mba"}).count()
3
> db.student.find({dept:"mca",dept:"mba"}).count()
3
>
```

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

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

{ "_id" : 53, "name" : "abelu", "phno" : 78452698, "mark" : 90, "address" : "silentvilla", "city" : "bangalore", "ycourse" : 2021 }

{ "_id" : 51, "name" : "dona", "phno" : 73653429, "mark" : 95, "address" : "dragonvilla", "city" : "kochi", "ycourse" : 2021 }

{ "_id" : 54, "name" : "ebin", "phno" : 87653421, "mark" : 95, "address" : "peacevilla", "city" : "thrissur", "ycourse" : 2021 }

{ "_id" : 52, "name" : "gayu", "phno" : 73643429, "mark" : 86, "address" : "heavenvilla", "city" : "tvm", "ycourse" : 2021 }

{ "_id" : 50, "name" : "harsh", "phno" : 78653429, "mark" : 85, "address" : "rosevilla", "city" : "ekm", "ycourse" : 2021 }

{ "_id" : 55, "name" : "sujith", "phno" : 74653879, "mark" : 96, "address" : "redvilla", "city" : "tvm", "ycourse" : 2021 }

```
> db.student.find().sort({name:1})
{ "_id" : 53, "name" : "abelu", "phno" : 78452698, "mark" : 90, "address" : "sil
ventvilla", "city" : "bangalore", "ycourse" : 2021 }
{ "_id" : 51, "name" : "dona", "phno" : 73653429, "mark" : 95, "address" : "drag
onvilla", "city" : "kochi", "ycourse" : 2021 }
{ "_id" : 54, "name" : "ebin", "phno" : 87653421, "mark" : 95, "address" : "peac
evilla", "city" : "thrissur", "ycourse" : 2021 }
{ "_id" : 52, "name" : "gayu", "phno" : 73643429, "mark" : 86, "address" : "heav
envilla", "city" : "tvm", "ycourse" : 2021 }
{ "_id" : 50, "name" : "harsh", "phno" : 78653429, "mark" : 85, "address" : "ros
evilla", "city" : "ekm", "ycourse" : 2021 }
{ "_id" : 55, "name" : "sujith", "phno" : 74653879, "mark" : 96, "address" : "re
dvilla", "city" : "tvm", "ycourse" : 2021 }
>
```

11. Rename city as town and add the detail of address consists of apartment no, street name and PIN.

MongoDB Enterprise > db.student.updateOne({_id:50},{$set:{town:"404 Max sunflower apartment pin-680066"}})
{ "acknowledged" : true, "matchedCount" : 1, "modifiedCount" : 1 }
MongoDB Enterprise > db.student.updateOne({_id:51},{$set:{town:"303 Nandeeswara nilaya apartment pin-680023"}})
{ "acknowledged" : true, "matchedCount" : 1, "modifiedCount" : 1 }
MongoDB Enterprise > db.student.updateOne({_id:52},{$set:{town:"401 B prestiage apartment pin-687755"}})
{ "acknowledged" : true, "matchedCount" : 1, "modifiedCount" : 1 }
MongoDB Enterprise > db.student.updateOne({_id:53},{$set:{town:"111 sky line apartment pin-687711"}})
{ "acknowledged" : true, "matchedCount" : 1, "modifiedCount" : 1 }
MongoDB Enterprise > db.student.updateOne({_id:54},{$set:{town:"101 confident apartment pin-687700"}})
{ "acknowledged" : true, "matchedCount" : 1, "modifiedCount" : 1 }

```
MongoDB Enterprise > db.student.find().pretty()
{
        "_id" : 50,
        "name" : "harsh",
        "phno" : 78653429,
        "mark" : 85,
        "address" : "rosevilla",
        "ycourse" : 2020,
        "town" : "404 Max sunflower apartment pin-680066"
}
{
        "_id" : 51,
        "name" : "dona",
        "phno" : 73653429,
        "mark" : 95,
        "address" : "dragonvilla",
        "ycourse" : 2019,
        "town" : "303 Nandeeswara nilaya apartment pin-680023"
}
{
        "_id" : 52,
        "name" : "gayu",
        "phno" : 73643429,
        "mark" : 86,
        "address" : "heavenvilla",
        "ycourse" : 2020,
        "town" : "401 B prestiage apartment pin-687755"
}
{
        "_id" : 53,
        "name" : "abelu",
        "phno" : 78452698,
        "mark" : 90,
        "address" : "silentvilla ",
        "ycourse" : 2020,
        "town" : "111 sky line apartment pin-687711"
}
{
        "_id" : 54,
        "name" : "ebin",
        "phno" : 87653421,
        "mark" : 95,
        "address" : "pea cevilla",
        "ycourse" : 2019,
        "town" : "101 confident apartment pin-687700"
}
```

12. Display the contact address of 'Abhilash'

db.student.find({name:{$eq:"abhilash"} }).pretty()

```
MongoDB Enterprise > db.student.find({name:{$eq:"abhilash"} }).pretty()
{
        "_id" : 56,
        "name" : "abhilash",
        "phno" : 98765832,
        "mark" : 87,
        "address" : "whitevilla",
        "city" : "thrissur",
        "ycourse" : 2020
}
MongoDB Enterprise >
```