ASSIGNMENT 4

Himanshu goyal

Question 1: Create the database.

```
> use Students
switched to db Students
> db.createCollection("StudentInformations")
{ "ok" : 1 }
> show collections
StudentInformations
>
```

Query 1: Insert many records in collection at once.

```
> db.StudentInformations.insertMany(
... [
... { sId: 1, fName:"Himanshu", lName: "Goyal", age: 30, gender: "M", branch: "IT"},
... { sId: 2, fName:"Sonal", lName: "Agarwal", age: 30, gender: "F", branch: "CS"},
... { sId: 3, fName:"Ankur", lName: "Goyal", age: 29, gender: "M", branch: "Civil"},
... { sId: 4, fName:"Harsh", lName: "Verma", age: 31, gender: "M", branch: "IT"},
... { sId: 5, fName:"Gyanesh", lName: "Rai", age: 28, gender: "M", branch: "MECH"},
... { sId: 6, fName:"Jyoti", lName: "Jain", age: 28, gender: "F", branch: "Civil"},
... { sId: 7, fName:"Rituraj", lName: "Singh", age: 32, gender: "M", branch: "CS"},
... { sId: 8, fName:"Himanshu", lName: "Shekhar", age: 27, gender: "M", branch: "IT"},
... ]
... )
{
        "acknowledged" : true,
        "insertedIds" : [
                ObjectId("5b3ac1528d51162197a376ea"),
                ObjectId("5b3ac1528d51162197a376eb"),
                ObjectId("5b3ac1528d51162197a376ec"),
                ObjectId("5b3ac1528d51162197a376ed"),
                ObjectId("5b3ac1528d51162197a376ee"),
                ObjectId("5b3ac1528d51162197a376ef"),
                ObjectId("5b3ac1528d51162197a376f0"),
                ObjectId("5b3ac1528d51162197a376f1")
        ]
}
>
```

Query 2: Display all the records in the collection.

```
> db.StudentInformations.find()
{ "_id" : ObjectId("5b3ac1528d51162197a376ea"), "sId" : 1, "fName" : "Himanshu", "lName" : "Goyal
", "age" : 30, "gender" : "M", "branch" : "IT" }
{ "_id" : ObjectId("5b3ac1528d51162197a376eb"), "sId" : 2, "fName" : "Sonal", "lName" : "Agarwal"
, "age" : 30, "gender" : "F", "branch" : "CS" }
{ "_id" : ObjectId("5b3ac1528d51162197a376ec"), "sId" : 3, "fName" : "Ankur", "lName" : "Goyal",
"age" : 29, "gender" : "M", "branch" : "Civil" }
{ "_id" : ObjectId("5b3ac1528d51162197a376ed"), "sId" : 4, "fName" : "Harsh", "lName" : "Verma",
"age" : 31, "gender" : "M", "branch" : "IT" }
{ "_id" : ObjectId("5b3ac1528d51162197a376ee"), "sId" : 5, "fName" : "Gyanesh", "lName" : "Rai",
"age" : 28, "gender" : "M", "branch" : "MECH" }
{ "_id" : ObjectId("5b3ac1528d51162197a376ef"), "sId" : 6, "fName" : "Jyoti", "lName" : "Jain", "
age" : 28, "gender" : "F", "branch" : "Civil" }
{ "_id" : ObjectId("5b3ac1528d51162197a376f0"), "sId" : 7, "fName" : "Rituraj", "lName" : "Singh"
, "age" : 32, "gender" : "M", "branch" : "CS" }
{ "_id" : ObjectId("5b3ac1528d51162197a376f1"), "sId" : 8, "fName" : "Himanshu", "lName" : "Shekh
ar", "age" : 27, "gender" : "M", "branch" : "IT" }
>
```

Query 3: Find the students belonging to IT department .

```
> db.StudentInformations.find({branch:"IT"})
{ "_id" : ObjectId("5b3ac1528d51162197a376ea"), "sId" : 1, "fName" : "Himanshu", "lName" : "Goyal
", "age" : 30, "gender" : "M", "branch" : "IT" }
{ "_id" : ObjectId("5b3ac1528d51162197a376ed"), "sId" : 4, "fName" : "Harsh", "lName" : "Verma",
"age" : 31, "gender" : "M", "branch" : "IT" }
{ "_id" : ObjectId("5b3ac1528d51162197a376f1"), "sId" : 8, "fName" : "Himanshu", "lName" : "Shekh
ar", "age" : 27, "gender" : "M", "branch" : "IT" }
>
```

Query 4: Find the student in IT and Civil.

```
> db.StudentInformations.find({branch:{ $in:["IT","Civil"]}})
{ "_id" : ObjectId("5b3ac1528d51162197a376ea"), "sId" : 1, "fName" : "Himanshu", "lName" : "Goyal
", "age" : 30, "gender" : "M", "branch" : "IT" }
{ "_id" : ObjectId("5b3ac1528d51162197a376ec"), "sId" : 3, "fName" : "Ankur", "lName" : "Goyal",
"age" : 29, "gender" : "M", "branch" : "Civil" }
{ "_id" : ObjectId("5b3ac1528d51162197a376ed"), "sId" : 4, "fName" : "Harsh", "lName" : "Verma",
"age" : 31, "gender" : "M", "branch" : "IT" }
{ "_id" : ObjectId("5b3ac1528d51162197a376ef"), "sId" : 6, "fName" : "Jyoti", "lName" : "Jain", "
age" : 28, "gender" : "F", "branch" : "Civil" }
{ "_id" : ObjectId("5b3ac1528d51162197a376f1"), "sId" : 8, "fName" : "Himanshu", "lName" : "Shekh
ar", "age" : 27, "gender" : "M", "branch" : "IT" }
>
```

Query 5: Find the student in Civit department having age greater than 28.

```
> db.StudentInformations.find({branch:"Civil", age:{$gt:28}})
{ "_id" : ObjectId("5b3ac1528d51162197a376ec"), "sId" : 3, "fName" : "Ankur", "lName" : "Goyal",
"age" : 29, "gender" : "M", "branch" : "Civil" }
>
```

Query 6: Or operator, Find the students who are female or students who belong to IT department.

```
> db.StudentInformations.find({$or: [{gender:"F"}, {branch:"IT"}]})
{ "_id" : ObjectId("5b3ac1528d51162197a376ea"), "sId" : 1, "fName" : "Himanshu", "lName" : "Goyal
", "age" : 30, "gender" : "M", "branch" : "IT" }
{ "_id" : ObjectId("5b3ac1528d51162197a376eb"), "sId" : 2, "fName" : "Sonal", "lName" : "Agarwal"
, "age" : 30, "gender" : "F", "branch" : "CS" }
{ "_id" : ObjectId("5b3ac1528d51162197a376ed"), "sId" : 4, "fName" : "Harsh", "lName" : "Verma",
"age" : 31, "gender" : "M", "branch" : "IT" }
{ "_id" : ObjectId("5b3ac1528d51162197a376ef"), "sId" : 6, "fName" : "Jyoti", "lName" : "Jain", "
age" : 28, "gender" : "F", "branch" : "Civil" }
{ "_id" : ObjectId("5b3ac1528d51162197a376f1"), "sId" : 8, "fName" : "Himanshu", "lName" : "Shekh
ar", "age" : 27, "gender" : "M", "branch" : "IT" }
>
```

Query 7: Find the total number of record in collection.

```
> db.StudentInformations.find().count()
8
>
```

Query 8: Display the records in ascending by age.

```
> db.StudentInformations.find().sort({age:1})
{ "_id" : ObjectId("5b3ac1528d51162197a376f1"), "sId" : 8, "fName" : "Himanshu", "lName" : "Shekh
ar", "age" : 27, "gender" : "M", "branch" : "IT" }
{ "_id" : ObjectId("5b3ac1528d51162197a376ee"), "sId" : 5, "fName" : "Gyanesh", "lName" : "Rai",
"age" : 28, "gender" : "M", "branch" : "MECH" }
{ "_id" : ObjectId("5b3ac1528d51162197a376ef"), "sId" : 6, "fName" : "Jyoti", "lName" : "Jain", "
age" : 28, "gender" : "F", "branch" : "Civil" }
{ "_id" : ObjectId("5b3ac1528d51162197a376ec"), "sId" : 3, "fName" : "Ankur", "lName" : "Goyal",
"age" : 29, "gender" : "M", "branch" : "Civil" }
{ "_id" : ObjectId("5b3ac1528d51162197a376ea"), "sId" : 1, "fName" : "Himanshu", "lName" : "Goyal
", "age" : 30, "gender" : "M", "branch" : "IT" }
{ "_id" : ObjectId("5b3ac1528d51162197a376eb"), "sId" : 2, "fName" : "Sonal", "lName" : "Agarwal"
, "age" : 30, "gender" : "F", "branch" : "CS" }
{ "_id" : ObjectId("5b3ac1528d51162197a376ed"), "sId" : 4, "fName" : "Harsh", "lName" : "Verma",
"age" : 31, "gender" : "M", "branch" : "IT" }
{ "_id" : ObjectId("5b3ac1528d51162197a376f0"), "sId" : 7, "fName" : "Rituraj", "lName" : "Singh"
, "age" : 32, "gender" : "M", "branch" : "CS" }
>
```

Query 9: Find the next two documents after skipping first 3.

```
> db.StudentInformations.find().limit(2).skip(3).pretty()
{
        "_id" : ObjectId("5b3ac1528d51162197a376ed"),
        "sId" : 4,
        "fName" : "Harsh",
        "lName" : "Verma",
        "age" : 31,
        "gender" : "M",
        "branch" : "IT"
}
{
        "_id" : ObjectId("5b3ac1528d51162197a376ee"),
        "sId" : 5,
        "fName" : "Gyanesh",
        "lName" : "Rai",
        "age" : 28,
        "gender" : "M",
        "branch" : "MECH"
}
>
```

Query 10: Update Harsh branch to “MECH”.

```
> db.StudentInformations.updateOne({fName: "Harsh"}, {$set: {branch:"MECH"}})
{ "acknowledged" : true, "matchedCount" : 1, "modifiedCount" : 1 }
> db.StudentInformations.find({fName:"Harsh"})
{ "_id" : ObjectId("5b3ac1528d51162197a376ed"), "sId" : 4, "fName" : "Harsh", "lName" : "Verma",
"age" : 31, "gender" : "M", "branch" : "MECH" }
>
```