Practical-5

Task

1. Using the "use" command to connect to a new database.

```
> use config
switched to db config
> show dbs
admin   0.000GB
config  0.000GB
local   0.000GB
> use local
switched to db local
> show collections
startup_log
>
```

2. Create one collection

```
> db.createCollection("new")
{ "ok" : 1 }
```

3. Apply the commands to show your database and collection both.

```
> show dbs
admin   0.000GB
config  0.000GB
local   0.000GB
> use admin
switched to db admin
> show collections
new
system.version
>
```

```
> db.getCollectionInfos(
... )
[
        {
                "name" : "new",
                "type" : "collection",
                "options" : {

                },
                "info" : {
                        "readOnly" : false,
                        "uuid" : UUID("7dc2ee2b-4eb4-4197-8603-ff5a8ed72edd")
                },
                "idIndex" : {
                        "v" : 2,
                        "key" : {
                                "_id" : 1
                        },
                        "name" : "_id_"
                }
        },
```

4. Insert minimum 4 documents into your database.

```
> db.new.insertOne(
... {
... name: "abcdef",
... age: 20,
... branch: "CE"
... }
... )
{
        "acknowledged" : true,
        "insertedId" : ObjectId("5f426424a5d69068fb236527")
}
>
```

5. Use find() to list them out.

```
> db.new.find()
{ "_id" : ObjectId("5f426424a5d69068fb236527"), "name" : " abcdef ", "age" : 20, "branch" : "CE" }
{ "_id" : ObjectId("5f4265e5a5d69068fb236528"), "name" : "docu2" }
{ "_id" : ObjectId("5f4265e5a5d69068fb236529"), "name" : "docu3" }
{ "_id" : ObjectId("5f4265e5a5d69068fb23652a"), "name" : "docu4" }
>
```

Task

Create a database name "petshop" and into it create collection name "pets" containing the documents having the name of the pets and species of them given below:
Pets name : Mikey, DaveyBungooligan, SuzyB , Mikey, Terrence, Philomena
Jones Species : Gerbil,Piranha,Cat,Hotdog,Sausagedog,Cat.

```
> use petshop
switched to db petshop
> show dbs
admin    0.000GB
config   0.000GB
local    0.000GB
> db
petshop
>
```

```
> db.pets.find()
> db.pets.insertMany( [ { pet:"Mikey", species:"Gerbil" } ] )
{
        "acknowledged" : true,
        "insertedIds" : [
                ObjectId("5f427ecea5d69068fb23652f")
        ]
}
> db.pets.find()
{ "_id" : ObjectId("5f427ecea5d69068fb23652f"), "pet" : "Mikey", "species" : "Gerbil" }
> show dbs
admin    0.000GB
config   0.000GB
local    0.000GB
petshop  0.000GB
>
```

```
> db.pets.insertMany( [ { pet:"Davey Bungooligan", species:"Piranha" } ,{pet:"SuzyB",species:"Cat"} ,{pet:"Mikey",species:"Hot
dog"}, {pet:"Terrence",species:"Sausagedog"}, {pet:"Philomena Jones",species:"Cat"} ] )
{
        "acknowledged" : true,
        "insertedIds" : [
                ObjectId("5f427faaa5d69068fb236530"),
                ObjectId("5f427faaa5d69068fb236531"),
                ObjectId("5f427faaa5d69068fb236532"),
                ObjectId("5f427faaa5d69068fb236533"),
                ObjectId("5f427faaa5d69068fb236534")
        ]
}
> db.pets.find()
{ "_id" : ObjectId("5f427ecea5d69068fb23652f"), "pet" : "Mikey", "species" : "Gerbil" }
{ "_id" : ObjectId("5f427faaa5d69068fb236530"), "pet" : "Davey Bungooligan", "species" : "Piranha" }
{ "_id" : ObjectId("5f427faaa5d69068fb236531"), "pet" : "SuzyB", "species" : "Cat" }
{ "_id" : ObjectId("5f427faaa5d69068fb236532"), "pet" : "Mikey", "species" : "Hotdog" }
{ "_id" : ObjectId("5f427faaa5d69068fb236533"), "pet" : "Terrence", "species" : "Sausagedog" }
{ "_id" : ObjectId("5f427faaa5d69068fb236534"), "pet" : "Philomena Jones", "species" : "Cat" }
>
```

Perform Queries to get following Results:
- Add another piranha called Pete, and a naked mole rat called Henry.

```
>
> db.pets.insertMany(
... [
... {pet:"Pete", species:"Piranha"},
... {pet:"Henry", species:"Naked mole-rat"}
... ]
... )
{
        "acknowledged" : true,
        "insertedIds" : [
                ObjectId("5f4280b5a5d69068fb236535"),
                ObjectId("5f4280b5a5d69068fb236536")
        ]
}
```

-
- Use find to list all the pets. Find the ID of Mikey the Gerbil.

```
> db.pets.find()
{ "_id" : ObjectId("5f427ecea5d69068fb23652f"), "pet" : "Mikey", "species" : "Gerbil" }
{ "_id" : ObjectId("5f427faaa5d69068fb236530"), "pet" : "Davey Bungooligan", "species" : "Piranha" }
{ "_id" : ObjectId("5f427faaa5d69068fb236531"), "pet" : "SuzyB", "species" : "Cat" }
{ "_id" : ObjectId("5f427faaa5d69068fb236532"), "pet" : "Mikey", "species" : "Hotdog" }
{ "_id" : ObjectId("5f427faaa5d69068fb236533"), "pet" : "Terrence", "species" : "Sausagedog" }
{ "_id" : ObjectId("5f427faaa5d69068fb236534"), "pet" : "Philomena Jones", "species" : "Cat" }
{ "_id" : ObjectId("5f4280b5a5d69068fb236535"), "pet" : "Pete", "species" : "Piranha" }
{ "_id" : ObjectId("5f4280b5a5d69068fb236536"), "pet" : "Henry", "species" : "Naked mole-rat" }
>
```

```
> db.pets.find({pet:"Mikey", species:"Gerbil"},{_id:1})
{ "_id" : ObjectId("5f427ecea5d69068fb23652f") }
>
```

- Use find to find Mikey by id

```
> db.pets.find({_id: ObjectId("5f427ecea5d69068fb23652f")})
{ "_id" : ObjectId("5f427ecea5d69068fb23652f"), "pet" : "Mikey", "species" : "Gerbil" }
>
```

- Use find to find all the Gerbils.

```
> db.pets.find({species:"Gerbil"})
{ "_id" : ObjectId("5f427ecea5d69068fb23652f"), "pet" : "Mikey", "species" : "Gerbil" }
>
```

-
- Find all the creatures named Mikey.

```
> db.pets.find({pet:"Mikey"})
{ "_id" : ObjectId("5f427ecea5d69068fb23652f"), "pet" : "Mikey", "species" : "Gerbil" }
{ "_id" : ObjectId("5f427faaa5d69068fb236532"), "pet" : "Mikey", "species" : "Hotdog" }
>
```

-
- Find all the creatures named Mikey who are Gerbils.

```
> db.pets.find({pet:"Mikey", species:"Gerbil"})
{ "_id" : ObjectId("5f427ecea5d69068fb23652f"), "pet" : "Mikey", "species" : "Gerbil" }
>
```

-
- Find all the creatures with the string "dog" in their species.

```
> db.pets.find({ species: {$regex: /dog/}})
{ "_id" : ObjectId("5f427faaa5d69068fb236532"), "pet" : "Mikey", "species" : "Hotdog" }
{ "_id" : ObjectId("5f427faaa5d69068fb236533"), "pet" : "Terrence", "species" : "Sausagedog" }
>
```

TASK:
Create a "Hospital" Database and collection name "Patient" with the format of document
given below of it.
{
         "firstname":
         "ronaldo",
         "lastname":
         "crist",
         "age":30,
         "history" :[
                      {"disease":"cold", treatment":..123...
                      {......}
                 ]

```
    }
> use Hospital
switched to db Hospital
> show dbs
admin      0.000GB
config     0.000GB
local      0.000GB
petshop    0.000GB
>
```

```
> db.Patient.insertMany([ { "firstname":"ronaldo", "lastname":"crist", "age":30, "history":[ {"disease":"cold", "treatme
nt":123 }]}]
... )
{
        "acknowledged" : true,
        "insertedIds" : [
                ObjectId("5f43dc5b68412cb2f436eb07")
        ]
}
> db.Patient.find()
{ "_id" : ObjectId("5f43dc5b68412cb2f436eb07"), "firstname" : "ronaldo", "lastname" : "crist", "age" : 30, "history" : [
{ "disease" : "cold", "treatment" : 123 } ] }
>
```

Perform the following:

1. Insert 3 Patient record with at least 1 history entry per patient

```
> db.Patient.insertMany([ { "firstname":"patient2", "lastname":"Trump", "age":35, "history":[ {"disease":"co
ld", "treatment":123 }, {"disease":"fever", "treatment":321 }] },
... { "firstname":"patient3", "lastname":"Hemsworth", "age":24, "history":[ {"disease":"malaria", "treatment
":258 }, {"disease":"cold", "treatment":123 }] },
... { "firstname":"patient4", "lastname":"Downey", "age":32, "history":[ {"disease":"swine flu", "treatment"
:369 }] }] )
{
        "acknowledged" : true,
        "insertedIds" : [
                ObjectId("5f43dd8268412cb2f436eb08"),
                ObjectId("5f43dd8268412cb2f436eb09"),
                ObjectId("5f43dd8268412cb2f436eb0a")
        ]
}
```

```
> db.Patient.find()
{ "_id" : ObjectId("5f43dc5b68412cb2f436eb07"), "firstname" : "ronaldo", "lastname" : "crist", "age" : 30, "
history" : [ { "disease" : "cold", "treatment" : 123 } ] }
{ "_id" : ObjectId("5f43dd8268412cb2f436eb08"), "firstname" : "patient2", "lastname" : "Trump", "age" : 35,
"history" : [ { "disease" : "cold", "treatment" : 123 }, { "disease" : "fever", "treatment" : 321 } ] }
{ "_id" : ObjectId("5f43dd8268412cb2f436eb09"), "firstname" : "patient3", "lastname" : "Hemsworth", "age" :
24, "history" : [ { "disease" : "malaria", "treatment" : 258 }, { "disease" : "cold", "treatment" : 123 } ]
}
{ "_id" : ObjectId("5f43dd8268412cb2f436eb0a"), "firstname" : "patient4", "lastname" : "Downey", "age" : 32,
 "history" : [ { "disease" : "swine flu", "treatment" : 369 } ] }
```

2. Update 1 data of 1 Patient with new age, name and History Entry.

```
... { $set :{
... "age":48,
... "history":[{"disease":"cold"}],
... "firstname":"newPatient4"}
... }
... )
{ "acknowledged" : true, "matchedCount" : 1, "modifiedCount" : 1 }
> db.Patient.find()
{ "_id" : ObjectId("5f43dc5b68412cb2f436eb07"), "firstname" : "ronaldo", "lastname" : "crist", "age" : 30, "histo
ry" : [ { "disease" : "cold", "treatment" : 123 } ] }
{ "_id" : ObjectId("5f43dd8268412cb2f436eb08"), "firstname" : "patient2", "lastname" : "Trump", "age" : 35, "hist
ory" : [ { "disease" : "cold", "treatment" : 123 }, { "disease" : "fever", "treatment" : 321 } ] }
{ "_id" : ObjectId("5f43dd8268412cb2f436eb09"), "firstname" : "patient3", "lastname" : "Hemsworth", "age" : 24, "
history" : [ { "disease" : "malaria", "treatment" : 258 }, { "disease" : "cold", "treatment" : 123 } ] }
{ "_id" : ObjectId("5f43dd8268412cb2f436eb0a"), "firstname" : "newPatient4", "lastname" : "Downey", "age" : 48, "
history" : [ { "disease" : "cold" } ] }
>
```

3. Find all patients who are older than 30 (Or Value of your choice you made in your data.)

```
> db.Patient.find({age: {$gt:30}})
{ "_id" : ObjectId("5f43dd8268412cb2f436eb08"), "firstname" : "patient2", "lastname" : "Trump", "age" : 35, "hist
ory" : [ { "disease" : "cold", "treatment" : 123 }, { "disease" : "fever", "treatment" : 321 } ] }
{ "_id" : ObjectId("5f43dd8268412cb2f436eb0a"), "firstname" : "newPatient4", "lastname" : "Downey", "age" : 48, "
history" : [ { "disease" : "cold" } ] }
>
```

4. Delete all patients who have a cold as a disease. (Or According your Data)

```
> db.Patient.find({},{_id:0,history:1})
{ "history" : [ { "disease" : "cold", "treatment" : 123 } ] }
{ "history" : [ { "disease" : "cold", "treatment" : 123 }, { "disease" : "fever", "treatment" : 321 } ] }
{ "history" : [ { "disease" : "malaria", "treatment" : 258 }, { "disease" : "cold", "treatment" : 123 } ] }
{ "history" : [ { "disease" : "cold" } ] }
>
>
```

```
> db.Patient.deleteMany({ "history.disease" : {$in : ["cold"]} } )
{ "acknowledged" : true, "deletedCount" : 4 }
> db.Patient.find()
>
```