

Database Management System Laboratory

UE19CS304

Week 1 - MongoDB (NoSQL)

Name : Abhishek Aditya BS
SRN : PES1UG19CS019
Section : A

CRUD Operations in MongoDB

1. Creation of collection in a database

Command : `db.createCollection("Server")`

```
> db.createCollection("Server");
{ "ok" : 1 }
> show collections
Server
> db.Server.insertOne({Name:"Server1",Processor:"Intel Xeon 3rd Gen", user:"vishal", password:"vishal", admin:"root"});
{
  "acknowledged" : true,
  "insertedId" : ObjectId("612861150e6d9575ed6a6c3e")
}
> db.
... Server
```

2. Insert one record into the collection

Command :
`db.Server.insertOne({Name:"Server1", Processor:"Intel Xeon 3rd Gen",
user: "vishal", password: "vishal", admin: "root"});`

```
> db.Server.insertOne({Name:"Server1",Processor:"Intel Xeon 3rd Gen", user:"vishal", password:"vishal", admin:"root"});
{
  "acknowledged" : true,
  "insertedId" : ObjectId("612861150e6d9575ed6a6c3e")
}
> db.
```

3. Insert many records into the collection

Command :
`db.Server.insertMany([
 {Name:"Server2", Processor:"Intel i5 13th gen", user:"abhishek",
password: "uhoooo", admin:"root"},
 {Name:"Server3", Processor:"AMD EPYC", user:"supreeth", password:
"radish", admin:"root"},
 {Name:"Server4", Processor:"HP loopathon 3GHZ", user: "milo,
password: "horlicks", admin:"root"}]);`

```
> db.Server.insertMany([
... {Name:"Server2", Processor:"Intel i5 13th gen", user:"abhishek", password:"uhoooo", admin:"root"},
... {Name:"Server3",Processor:"AMD EPYC", user:"supreeth",password:"radish",admin:"root"},
... {Name:"Server4",Processor:"HP loopathon 3GHZ",user:"milo",password:"horlicks",admin:"root"}]);
{
  "acknowledged" : true,
  "insertedIds" : [
    ObjectId("6128633d0e6d9575ed6a6c3f"),
    ObjectId("6128633d0e6d9575ed6a6c40"),
    ObjectId("6128633d0e6d9575ed6a6c41")
  ]
}
>
```

4. Find One record in the collection based on a condition

Command : `db.Server.findOne({user:"supreeth"});`

```
> db.Server.findOne({user:"supreeth"});
{
  "_id" : ObjectId("6128633d0e6d9575ed6a6c40"),
  "Name" : "Server3",
  "Processor" : "AMD EPYC",
  "user" : "supreeth",
  "password" : "radish",
  "admin" : "root"
}
```

5. Find all records in the collection

Command : `db.Server.find();`

```
> db.Server.find();
{ "_id" : ObjectId("612861150e6d9575ed6a6c3e"), "Name" : "Server1", "Processor" : "Intel Xeon 3rd Gen", "user" : "vishal", "password" : "vishal", "admin" : "root" }
{ "_id" : ObjectId("6128633d0e6d9575ed6a6c3f"), "Name" : "Server2", "Processor" : "Intel i5 13th gen", "user" : "abhishek", "password" : "uhoooo", "admin" : "root" }
{ "_id" : ObjectId("6128633d0e6d9575ed6a6c40"), "Name" : "Server3", "Processor" : "AMD EPYC", "user" : "supreeth", "password" : "radish", "admin" : "root" }
{ "_id" : ObjectId("6128633d0e6d9575ed6a6c41"), "Name" : "Server4", "Processor" : "HP loopathon 3GHZ", "user" : "milo", "password" : "horlicks", "admin" : "root" }
>
```

6. Update a specific record in the collection

Command : `db.Server.updateOne({user:"vishal"},{$set:{password:"1234567890"}});`

```
> db.Server.updateOne({user:"vishal"},{$set:{password:"1234567890"}});
{ "acknowledged" : true, "matchedCount" : 1, "modifiedCount" : 1 }
```

7. Update many records in a collection

Command : `db.Server.updateMany({admin:"root"},{$set{admin_password:"admin_passwd"}});`

```
> db.Server.updateMany({admin:"root"},{$set:{admin_password:"admin_passwd"}})
{ "acknowledged" : true, "matchedCount" : 7, "modifiedCount" : 7 }
```

8. Replace a specific record in a collection

Command : `db.Server.replaceOne({user:"123"},{name:"Server-Corrupted", Processor:null, user: null, password: null, admin:"root"});`

```
> db.Server.replaceOne({user:"123"},{name:"Server-Corrupted",Processor:null,user:null,password:null,admin:"root"})
{ "acknowledged" : true, "matchedCount" : 1, "modifiedCount" : 1 }
```

9. Delete a record from a collection

Command : `db.Server.deleteOne({user:"milo"});`

```
> db.Server.deleteOne({user:"milo"})
{ "acknowledged" : true, "deletedCount" : 1 }
> db.Server.find()
{ "_id" : ObjectId("612861150e6d9575ed6a6c3e"), "Name" : "Server1", "Processor" : "Intel Xeon 3rd Gen", "user" : "vishal", "password" : "1234567890", "admin" : "root", "admin_password" : "admin_passwd" }
{ "_id" : ObjectId("6128633d0e6d9575ed6a6c3f"), "Name" : "Server2", "Processor" : "Intel i5 13th gen", "user" : "abhishek", "password" : "uhoooo", "admin" : "root", "admin_password" : "admin_passwd" }
{ "_id" : ObjectId("6128633d0e6d9575ed6a6c40"), "Name" : "Server3", "Processor" : "AMD EPYC", "user" : "supreeth", "password" : "radi sh", "admin" : "root", "admin_password" : "admin_passwd" }
{ "_id" : ObjectId("612864890e6d9575ed6a6c42"), "Name" : "Server5", "Processor" : "Intel i5 13th gen", "user" : "cat", "password" : "1234", "admin" : "root", "admin_password" : "admin_passwd" }
{ "_id" : ObjectId("612864890e6d9575ed6a6c43"), "Name" : "Server6", "Processor" : "Intel i1 1st gen", "user" : "supreeth", "password" : "ginger", "admin" : "root", "admin_password" : "admin_passwd" }
{ "_id" : ObjectId("612864890e6d9575ed6a6c44"), "Name" : "Server-Corrupted", "Processor" : null, "user" : null, "password" : null, "admin" : "root" }
>
```

10. Delete many records from a collection

Command : `db.Server.deleteMany({admin:"root"});`

```
> db.Server.deleteMany({admin:"root"})
{ "acknowledged" : true, "deletedCount" : 6 }
> db.Server.find()
>
```