

MongoDB Lab1

1- Install mongodb server and mongosh client

ok

2- Add mongo DB folder to your system variables path

Go to -> Edit System environment variables -> Environment variables-> inside system variables choose path and add "C:\Program Files\MongoDB\Server\4.0\bin" apply and exit.

3- Open server (on windows shell using command "mongod");

4- Open another shell for client using command "mongosh" or noSqlBoost Tool

5- Create database with name ITI □ by typing use ITI

6- start create new collection named instructors and start with following inserts

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

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

a- Insert many using array contained with lab folder instructors.txt file.

```
iti> load("instructorsArray.js")
true
iti> db.instructors.insertMany("instructorsArray")
iti> db.instructors.insertMany(instructorsArray)
{
  acknowledged: true,
  insertedIds: { '0': 6, '1': 7, '2': 8, '3': 9, '4': 10, '5': 2, '6': 3, '7': 4 }
}
```

```
iti> load("instructorsArray.js")
true
iti> db.instructors.insertMany("instructorsArray")
MongoInvalidArgumentError: Argument "docs" must be an array of documents
iti> db.instructors.insertMany(instructorsArray)
{
  acknowledged: true,
  insertedIds: { '0': 6, '1': 7, '2': 8, '3': 9, '4': 10, '5': 2, '6': 3, '7': 4 }
}
iti> □
```

b- Insert your own data

```
iti> db.instructors.insertOne({ _id:99, firstName:"Ebrahim",lastName:"Mostafa",
age:23, salary: 33000, address:{city: "cairo",street:20,building:13 },courses:
["js","mvc","signal","express"] })
{ acknowledged: true, insertedId: 99 }
iti>
```

```
iti> db.instructors.insertOne({ _id:99, firstName:"Ebrahim",lastName:"Mostafa", age:23, salary: 33000,
address:{city: "cairo",street:20,building:13 },courses:["js","mvc","signal","express"] })
{ acknowledged: true, insertedId: 99 }
iti> □
```

c- Insert instructor without firstName and LastName (mongo will raise an error or not ?)

added successfully without any errors

```
iti> db.instructors.insertOne({ _id:90, age:23, salary: 33000, address:{city:
"cairo",street:20,building:13 },courses:["js","mvc","signal","express"] })
{ acknowledged: true, insertedId: 90 }
iti>
```

```
iti> db.instructors.insertOne({ _id:90, age:23, salary: 33000, address:{city: "cairo",street:20,
building:13 },courses:["js","mvc","signal","express"] })
{ acknowledged: true, insertedId: 90 }
iti>
```

7- Try the following queries: (all queries should be run using find or findOne)

a- db.instructors.find({});

this shows all documents

```
{
  _id: 3,
  firstName: 'mazen',
  lastName: 'ali',
  age: 30,
  salary: 7010,
  address: { city: 'cairo', street: 10, building: 5 },
  courses: [ 'asp.net', 'mvc', 'EF' ]
},
{
  _id: 4,
  firstName: 'ebtesam',
  lastName: 'ahmed',
  age: 28,
  salary: 6200,
  address: { city: 'mansoura', street: 14, building: 7 },
  courses: [ 'js', 'html5', 'signalR', 'expressjs', 'bootstrap', 'es6' ]
},
{
  _id: 99,
  firstName: 'Ebrahim',
  lastName: 'Mostafa',
  age: 23,
  salary: 33000,
  address: { city: 'cairo', street: 20, building: 13 },
  courses: [ 'js', 'mvc', 'signal', 'express' ]
},
{
  _id: 90,
  age: 23,
  salary: 33000,
  address: { city: 'cairo', street: 20, building: 13 },
  courses: [ 'js', 'mvc', 'signal', 'express' ]
}
]
iti>
```

b- db.instructors.find(); //return the cursor object
the same as the above

c- db.instructors.findOne();
shows only the first document

```
iti> db.instructors.findOne()
{
  _id: 6,
  firstName: 'noha',
  lastName: 'hesham',
  age: 21,
  salary: 3500,
  address: { city: 'cairo', street: 10, building: 8 },
  courses: [ 'js', 'mvc', 'signalR', 'expressjs' ]
}
iti>
```

d- `db.instructors.find().constructor.name`
return the name of the constructor function which created the object

```
iti> db.instructors.find().constructor.name
Cursor
iti> 
```

e- `db.instructors.find({}).forEach((document)=>{
 print(document); })`

shows all documents

f-Now from step e try to display only firstName and lastName for each instructor?!

```
iti> db.instructors.find({}).forEach((document) => { print(document.firstName);print(document.lastName);})
noha
```

```
noha
hesham
mona
ahmed
mazen
mohammed
ebtesam
hesham
badr
ahmed
mona
mohammed
mazen
ali
ebtesam
ahmed
Ebrahim
Mostafa
```

```
iti> 
```