MongoDB\_Lab1

1-open mongo shell and view the help

2 – identify your current working database and show list of available databases

db

show dbs

3 – create a new database called iti and create a collection named “students”. Insert whatever data you want about yourself (include name and age in your details).

**use iti**

**)**

4– show list of available databases.

db.students.insert(

{

name:”aya”,

age:”23”,

grades:[“A”,”A”,”B”],

track:”opensource”

}

What did you notice ?

-Show dbs

-iti database didn’t appear when it was empty but appeared after insert data ;

5 – Insert un-structured or semi-structured data for 10 of your friends (include name and age in your details. The documents should have different types of data i.e. arrays, strings, documents, integers).

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| --- |
|  |
|  |
|  |
| ""  db.students.insertMany([  { name: "monica", age: 23, grades: ["A", "B","A"], track:"opensource"},  { name: "karim", age: 23, grades: ["A", "B","A"], track:"opensource"},  { name: "merihan", age: 22, grades: ["A", "B","A"], track:"systemadmin"},  { name: "ghaidaa", age: 23, grades: ["A", "B","A"], track:"ai"},  { name: "hager", age: 21, grades: ["A", "B","A"], track:"pd"}  ]) |
|  |

6 – Search for your object by name.

db.students.find({name:"merihan"})

7– Search for your friend(s) by age.

db.students.find({age:21})

8 – Search for all of your friends whose age is older than yours.

db.students.find(age:{$lt:23}).pretty()

**9** – delete any of your friends by id.

db.students.delete({\_id:”6239c03298169d7b726f2c56”})

10 – view all documents in students collection in a prettified format.

db.students.find().pretty()

11 – count all documents in students collection. (self learning)

db.students.find().count()

**---------------------------------------------------------**

**part 2**

1- Create database with name ems

use ems

2-Insert the following data into "faculty" collection

db.faculty.insertMany([

{ "name":"Krish", "age":35,"gender":"M","exp":10,subjects:["DS","C","OS"],"type":"Full Time","qualification":"M.Tech" },

{ "name":"Manoj", "age":38,"gender":"M","exp":12,subjects:["JAVA","DBMS"],"type":"Full Time", "qualification":"Ph.D"},

{ "name":"Anush", "age":32,"gender":"F","exp":8,subjects:["C","CPP"],"type":"Part Time","qualification":"M.Tech" },

{ "name":"Suresh", "age":40,"gender":"M","exp":9,subjects:["JAVA","DBMS","NETWORKING"],"type":"Full Time", "qualification":"Ph.D"},

{ "name":"Rajesh", "age":35,"gender":"M","exp":7,subjects:["DS","C","OS"],"type":"Full Time","qualification":"M.Tech" },

{ "name":"Mani", "age":38,"gender":"F","exp":10,subjects:["JAVA","DBMS","OS"],"type":"Part Time", "qualification":"Ph.D"},

{ "name":"Sivani", "age":32,"gender":"F","exp":8,subjects:["C","CPP","MATHS"],"type":"Part Time","qualification":"M.Tech" },

{ "name":"Nagesh", "age":39,"gender":"M","exp":11,subjects:["JAVA","DBMS","NETWORKING"],"type":"Full Time", "qualification":"Ph.D"},

{ "name":"Nagesh", "age":35,"gender":"M","exp":9,subjects:["JAVA",".Net","NETWORKING"],"type":"Full Time", "qualification":"Ph.D"},

{ "name":"Latha", "age":40,"gender":"F","exp":13,subjects:["MATHS"],"type":"Full Time", "qualification":"Ph.D"}

])

1. Get the details of all the faculty.

db.faculty.find().pretty()

2. Get the count of all faculty members.

db.faculty.find().count()

3. Get all the faculty members whose qualification is “Ph.D”.

db.faculty.find({qualification:”Ph.D”}).pretty()

4. Get all the faculty members whose experience is between 8 to 12 years.

db.faculty.find({exp:{$gt:8,$lt:12}}).pretty()

5. Get all the faculty members who teach “MATHS” or “NETWORKING”.

db.faculty.find({$or:[{subjects:"MATHS"},{subjects:"NETWORKING"}]}).pretty()

6. Get all the faculty members who teach “MATHS” and whose age is more than 30 years and qualification must be “Ph.D”.

db.faculty.find({subjects:"MATHS"},{age:{$lt:30}},{qualification:"Ph.D"})

7. Get all the faculty members who are working part-time or who teach “JAVA”.

db.faculty.find({$or:[{subjects:"JAVA"},{type:"Part Time"}]}).pretty()

8. Add the following new faculty members:

{ "name":"Suresh Babu", "age":55,"gender":"M","exp":25,subjects: ["MATHS","DE"],"type":"Full Time", "qualification":"Ph.D"}

db.faculty.insertOne(

{

"name":"SureshBabu",

"age":55,

"gender":"M",

"exp":25,subjects: ["MATHS","DE"],

"type":"Full Time",

"qualification":"Ph.D"

}

)

9. Update the data of all faculty members by incrementing their age and exp by one year.

db.faculty.updateMany({},{$inc:{age:1,exp:1}})

10. Update the faculty “Sivani” with the following data: update qualification to “Ph.D” and type to “Full Time”.

db.faculty.update(

{name:"Sivani"},

{$set:{qualification:"Ph.D",type:"Full Time"}}

)

11. Update all faculty members who are teaching “MATHS” such that they should now also teach “PSK”.

db.faculty.updateMany(

{subjects:"MATHS"},

{$set:{subjects:"PSK"}}

)

12. Delete all faculty members whose age is more than 55 years.

db.faculty.deleteMany({ age :{$gt:55}})

13. Get only the name and qualification of all faculty members.

db.faculty.find({},{name:1,qualification:1}).pretty()

14. Get the name, qualification and exp of all faculty members and display the same in ascending order of exp.

db.faculty.find({},{name:1,qualification:1,exp:1}).sort({exp}).pretty()

15. Sort the faculty details by their age (descending order) and get the details of the first five faculty members only.

db.faculty.find().sort({age:-1}).limit(5).pretty()