**DBMS Lab**

**Assignment No. 10: Mongo DB CRUD Operations (Student Collection)**

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1. Crete a collection having name “student” with following documents:

> use Student

switched to db Student

> db.Student.insert({'RollNO': 1,'Name':"Amit",'Address':"Loni"})

WriteResult({ "nInserted" : 1 })

> db.Student.insert({'RollNO': 2,'Name':"Shashir",'Address':{'At':"Loni",'Tal':"Rahata",'Dist':"Ahemadnagar"}})

WriteResult({ "nInserted" : 1 })

> db.Student.insert({'RollNO': 11,'Name':"Sachin",'percent marks':60.25,'Address':"pune"})

WriteResult({ "nInserted" : 1 })

> db.Student.insert({'Name':"Rahul",'Address':"Kolhar"})

WriteResult({ "nInserted" : 1 })

> show dbs

Employee 0.000GB

Student 0.000GB

admin 0.000GB

config 0.000GB

local 0.000GB

1. Insert new documents into a collection named “student”.

> db.Student.insert({'RollNO': 6,'Name':"Sanjay",'Address':"DDUN"})

WriteResult({ "nInserted" : 1 })

> db.Student.insert({'RollNO': 9,'Name':"Anish",'Address':"RPG"})

WriteResult({ "nInserted" : 1 })

1. Retrieve all students’ details.

> db.Student.find().forEach(printjson)

{

"\_id" : ObjectId("5f72c467716b9be520b2c00c"),

"RollNO" : 1,

"Name" : "Amit",

"Address" : "Loni"

}

{

"\_id" : ObjectId("5f72c4ca716b9be520b2c00d"),

"RollNO" : 2,

"Name" : "Shashir",

"Address" : {

"At" : "Loni",

"Tal" : "Rahata",

"Dist" : "Ahemadnagar"

}

}

{

"\_id" : ObjectId("5f72c55d716b9be520b2c00e"),

"RollNO" : 11,

"Name" : "Sachin",

"percent marks" : 60.25,

"Address" : "pune"

}

{

"\_id" : ObjectId("5f72c590716b9be520b2c00f"),

"Name" : "Rahul",

"Address" : "Kolhar"

}

{

"\_id" : ObjectId("5f72c5fb716b9be520b2c010"),

"RollNO" : 6,

"Name" : "Sanjay",

"Address" : "DDUN"

}

{

"\_id" : ObjectId("5f72c60d716b9be520b2c011"),

"RollNO" : 9,

"Name" : "Anish",

"Address" : "RPG"

}

1. Display only name field from student collection.

> db.Student.find({},{Name:1})

{ "\_id" : ObjectId("5f72c467716b9be520b2c00c"), "Name" : "Amit" }

{ "\_id" : ObjectId("5f72c4ca716b9be520b2c00d"), "Name" : "Shashir" }

{ "\_id" : ObjectId("5f72c55d716b9be520b2c00e"), "Name" : "Sachin" }

{ "\_id" : ObjectId("5f72c590716b9be520b2c00f"), "Name" : "Rahul" }

{ "\_id" : ObjectId("5f72c5fb716b9be520b2c010"), "Name" : "Sanjay" }

{ "\_id" : ObjectId("5f72c60d716b9be520b2c011"), "Name" : "Anish" }

1. Display first 5 student details. ( Use limit () )

> db.Student.find().limit(5).pretty()

{

"\_id" : ObjectId("5f72c467716b9be520b2c00c"),

"RollNO" : 1,

"Name" : "Amit",

"Address" : "Loni"

}

{

"\_id" : ObjectId("5f72c4ca716b9be520b2c00d"),

"RollNO" : 2,

"Name" : "Shashir",

"Address" : {

"At" : "Loni",

"Tal" : "Rahata",

"Dist" : "Ahemadnagar"

}

}

{

"\_id" : ObjectId("5f72c55d716b9be520b2c00e"),

"RollNO" : 11,

"Name" : "Sachin",

"percent marks" : 60.25,

"Address" : "pune"

}

{

"\_id" : ObjectId("5f72c590716b9be520b2c00f"),

"Name" : "Rahul",

"Address" : "Kolhar"

}

{

"\_id" : ObjectId("5f72c5fb716b9be520b2c010"),

"RollNO" : 6,

"Name" : "Sanjay",

"Address" : "DDUN"

}

1. Fetch the remaining documents after first 5 documents.(Use skip () )

> db.Student.find().skip(5).pretty()

{

"\_id" : ObjectId("5f72c60d716b9be520b2c011"),

"RollNO" : 9,

"Name" : "Anish",

"Address" : "RPG"

}

1. Find the details of student whose roll\_no is between 5 and 10.

> db.Student.find({'RollNO':{$gte:5,$lte:10}}).pretty()

{

"\_id" : ObjectId("5f72c5fb716b9be520b2c010"),

"RollNO" : 6,

"Name" : "Sanjay",

"Address" : "DDUN"

}

{

"\_id" : ObjectId("5f72c60d716b9be520b2c011"),

"RollNO" : 9,

"Name" : "Anish",

"Address" : "RPG"

}

1. Display the student details whose address is “Loni” or “Pune”.

> db.Student.find({$or:[{Address:"pune"},{Address:"Loni"}]}).forEach(printjson)

{

"\_id" : ObjectId("5f72c467716b9be520b2c00c"),

"RollNO" : 1,

"Name" : "Amit",

"Address" : "Loni"

}

{

"\_id" : ObjectId("5f72c55d716b9be520b2c00e"),

"RollNO" : 11,

"Name" : "Sachin",

"percent marks" : 60.25,

"Address" : "pune"

}

1. Sort the documents of student collection in ascending order of roll\_no.

> db.Student.find({}).sort({'RollNO':1}).pretty()

{

"\_id" : ObjectId("5f72c590716b9be520b2c00f"),

"Name" : "Rahul",

"Address" : "Kolhar"

}

{

"\_id" : ObjectId("5f72c467716b9be520b2c00c"),

"RollNO" : 1,

"Name" : "Amit",

"Address" : "Loni"

}

{

"\_id" : ObjectId("5f72c4ca716b9be520b2c00d"),

"RollNO" : 2,

"Name" : "Shashir",

"Address" : {

"At" : "Loni",

"Tal" : "Rahata",

"Dist" : "Ahemadnagar"

}

}

{

"\_id" : ObjectId("5f72c5fb716b9be520b2c010"),

"RollNO" : 6,

"Name" : "Sanjay",

"Address" : "DDUN"

}

{

"\_id" : ObjectId("5f72c60d716b9be520b2c011"),

"RollNO" : 9,

"Name" : "Anish",

"Address" : "RPG"

}

{

"\_id" : ObjectId("5f72c55d716b9be520b2c00e"),

"RollNO" : 11,

"Name" : "Sachin",

"percent marks" : 60.25,

"Address" : "pune"

}

1. Add these details to a document where \_id=10 (Use save() )

Name =”Ram” Roll \_no = 60

Address =”Pune”

> db.Student.save({'\_id':10,'RollNO':60,'Name':"Ram",'Address':"pune"})

WriteResult({ "nMatched" : 0, "nUpserted" : 1, "nModified" : 0, "\_id" : 10 })

> db.Student.find().pretty()

{

"\_id" : ObjectId("5f72c467716b9be520b2c00c"),

"RollNO" : 1,

"Name" : "Amit",

"Address" : "Loni"

}

{

"\_id" : ObjectId("5f72c4ca716b9be520b2c00d"),

"RollNO" : 2,

"Name" : "Shashir",

"Address" : {

"At" : "Loni",

"Tal" : "Rahata",

"Dist" : "Ahemadnagar"

}

}

{

"\_id" : ObjectId("5f72c55d716b9be520b2c00e"),

"RollNO" : 11,

"Name" : "Sachin",

"percent marks" : 60.25,

"Address" : "pune"

}

{

"\_id" : ObjectId("5f72c590716b9be520b2c00f"),

"Name" : "Rahul",

"Address" : "Kolhar"

}

{

"\_id" : ObjectId("5f72c5fb716b9be520b2c010"),

"RollNO" : 6,

"Name" : "Sanjay",

"Address" : "DDUN"

}

{

"\_id" : ObjectId("5f72c60d716b9be520b2c011"),

"RollNO" : 9,

"Name" : "Anish",

"Address" : "RPG"

}

{ "\_id" : 10, "RollNO" : 60, "Name" : "Ram", "Address" : "pune" }

1. Update the address of roll\_no 60. Change the address as

At: “Sangamner” Tal:”Sangamner” Dist: “Ahemadnagar”

> db.Student.update({RollNO:1}, {$set: {"Address": {"At": "Sangamner", "Tal":"Sangamner", "Dist":"karnataka"}}})

WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })

> db.Student.find().pretty()

{

"\_id" : ObjectId("5f72c467716b9be520b2c00c"),

"RollNO" : 1,

"Name" : "Amit",

"Address" : {

"At" : "Sangamner",

"Tal" : "Sangamner",

"Dist" : "karnataka"

}

}

{

"\_id" : ObjectId("5f72c4ca716b9be520b2c00d"),

"RollNO" : 2,

"Name" : "Shashir",

"Address" : {

"At" : "Loni",

"Tal" : "Rahata",

"Dist" : "Ahemadnagar"

}

}

{

"\_id" : ObjectId("5f72c55d716b9be520b2c00e"),

"RollNO" : 11,

"Name" : "Sachin",

"percent marks" : 60.25,

"Address" : "pune"

}

{

"\_id" : ObjectId("5f72c590716b9be520b2c00f"),

"Name" : "Rahul",

"Address" : "Kolhar"

}

{

"\_id" : ObjectId("5f72c5fb716b9be520b2c010"),

"RollNO" : 6,

"Name" : "Sanjay",

"Address" : "DDUN"

}

{

"\_id" : ObjectId("5f72c60d716b9be520b2c011"),

"RollNO" : 9,

"Name" : "Anish",

"Address" : "RPG"

}

{ "\_id" : 10, "RollNO" : 60, "Name" : "Ram", "Address" : "pune" }

1. Create Index on roll\_no field

> db.Student.ensureIndex({RollNO:1})

{

"createdCollectionAutomatically" : false,

"numIndexesBefore" : 1,

"numIndexesAfter" : 2,

"ok" : 1

}

> db.Student.getIndexes()

[

{

"v" : 2,

"key" : {

"\_id" : 1

},

"name" : "\_id\_"

},

{

"v" : 2,

"key" : {

"RollNO" : 1

},

"name" : "RollNO\_1"

}

]

1. Remove all those documents whose address is “Kolhar”.

> db.Student.remove({'Address':"Kolhar"})

WriteResult({ "nRemoved" : 1 })

> db.Student.find().pretty()

{

"\_id" : ObjectId("5f72c467716b9be520b2c00c"),

"RollNO" : 1,

"Name" : "Amit",

"Address" : {

"At" : "Sangamner",

"Tal" : "Sangamner",

"Dist" : "karnataka"

}

}

{

"\_id" : ObjectId("5f72c4ca716b9be520b2c00d"),

"RollNO" : 2,

"Name" : "Shashir",

"Address" : {

"At" : "Loni",

"Tal" : "Rahata",

"Dist" : "Ahemadnagar"

}

}

{

"\_id" : ObjectId("5f72c55d716b9be520b2c00e"),

"RollNO" : 11,

"Name" : "Sachin",

"percent marks" : 60.25,

"Address" : "pune"

}

{

"\_id" : ObjectId("5f72c5fb716b9be520b2c010"),

"RollNO" : 6,

"Name" : "Sanjay",

"Address" : "DDUN"

}

{

"\_id" : ObjectId("5f72c60d716b9be520b2c011"),

"RollNO" : 9,

"Name" : "Anish",

"Address" : "RPG"

}

{ "

1. Remove all those documents having roll\_no less than 8 and greater than 3.

> db.Student.remove({RollNO: {$gt:3, $lt: 8}})

WriteResult({ "nRemoved" : 1 })

> db.Student.find().forEach(printjson)

{

"\_id" : ObjectId("5f72c467716b9be520b2c00c"),

"RollNO" : 1,

"Name" : "Amit",

"Address" : {

"At" : "Sangamner",

"Tal" : "Sangamner",

"Dist" : "karnataka"

}

}

{

"\_id" : ObjectId("5f72c4ca716b9be520b2c00d"),

"RollNO" : 2,

"Name" : "Shashir",

"Address" : {

"At" : "Loni",

"Tal" : "Rahata",

"Dist" : "Ahemadnagar"

}

}

{

"\_id" : ObjectId("5f72c55d716b9be520b2c00e"),

"RollNO" : 11,

"Name" : "Sachin",

"percent marks" : 60.25,

"Address" : "pune"

}

{

"\_id" : ObjectId("5f72c60d716b9be520b2c011"),

"RollNO" : 9,

"Name" : "Anish",

"Address" : "RPG"

}

{ "\_id" : 10, "RollNO" : 60, "Name" : "Ram", "Address" : "pune" }

1. Remove collection “student”

> db.Student.drop()

true

> show dbs

Employee 0.000GB

admin 0.000GB

config 0.000GB

local 0.000GB