

## MONGO DB – QUESTIONS

### QS: 1

- Create a database (Eg : MyCev)

```
> use MyCev
switched to db MyCev
```

- Create a collection (Eg: db\_mca)

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

- Create a collection (Eg: db\_cs)

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

- Insert 10 data to the collection

```
>db.db_mca.insert([{"Roll_no":1,"Name":"Aswin"}, {"Roll_no":2,"Name":"Dilshad"}, {"Roll_no":3,"Name":"Arun"}, {"Roll_no":4,"Name":"Nihad"}, {"Roll_no":5,"Name":"Midhun"}, {"Roll_no":6,"Name":"Akshay"}, {"Roll_no":7,"Name":"Dinil"}, {"Roll_no":8,"Name":"Vishak"}, {"Roll_no":9,"Name":"Vyshak"}, {"Roll_no":10,"Name":"Vishnu"}])
```

```
> db.db_mca.find()
{ "_id" : ObjectId("614ab2c15b72cb1cad705127"), "Roll_no" : 1, "Name" : "Aswin" }
{ "_id" : ObjectId("614ab2c15b72cb1cad705128"), "Roll_no" : 2, "Name" : "Dilshad" }
{ "_id" : ObjectId("614ab2c15b72cb1cad705129"), "Roll_no" : 3, "Name" : "Arun" }
{ "_id" : ObjectId("614ab2c15b72cb1cad70512a"), "Roll_no" : 4, "Name" : "Nihad" }
{ "_id" : ObjectId("614ab2c15b72cb1cad70512b"), "Roll_no" : 5, "Name" : "Midhun" }
{ "_id" : ObjectId("614ab30e5b72cb1cad70512c"), "Roll_no" : 6, "Name" : "Akshay" }
{ "_id" : ObjectId("614ab30e5b72cb1cad70512d"), "Roll_no" : 7, "Name" : "Dinil" }
{ "_id" : ObjectId("614ab30e5b72cb1cad70512e"), "Roll_no" : 8, "Name" : "Vishak" }
{ "_id" : ObjectId("614ab30e5b72cb1cad70512f"), "Roll_no" : 9, "Name" : "Vyshak" }
{ "_id" : ObjectId("614ab30e5b72cb1cad705130"), "Roll_no" : 10,
```

```
"Name" : "Vishnu" }
```

➤ List the first 5 data from the collection (limit)

```
> db.db_mca.find({}).limit(5)
{ "_id" : ObjectId("614ab2c15b72cb1cad705127"), "Roll_no" : 1,
  "Name" : "Aswin" }
{ "_id" : ObjectId("614ab2c15b72cb1cad705128"), "Roll_no" : 2,
  "Name" : "Dilshad" }
{ "_id" : ObjectId("614ab2c15b72cb1cad705129"), "Roll_no" : 3,
  "Name" : "Arun" }
{ "_id" : ObjectId("614ab2c15b72cb1cad70512a"), "Roll_no" : 4,
  "Name" : "Nihad" }
{ "_id" : ObjectId("614ab2c15b72cb1cad70512b"), "Roll_no" : 5,
  "Name" : "Midhun" }
```

➤ List the entire data except first 2 data (skip)

```
> db.db_mca.find({}).skip(2)
{ "_id" : ObjectId("614ab2c15b72cb1cad705129"), "Roll_no" : 3,
  "Name" : "Arun" }
{ "_id" : ObjectId("614ab2c15b72cb1cad70512a"), "Roll_no" : 4,
  "Name" : "Nihad" }
{ "_id" : ObjectId("614ab2c15b72cb1cad70512b"), "Roll_no" : 5,
  "Name" : "Midhun" }
{ "_id" : ObjectId("614ab30e5b72cb1cad70512c"), "Roll_no" : 6,
  "Name" : "Akshay" }
{ "_id" : ObjectId("614ab30e5b72cb1cad70512d"), "Roll_no" : 7,
  "Name" : "Dinil" }
{ "_id" : ObjectId("614ab30e5b72cb1cad70512e"), "Roll_no" : 8,
  "Name" : "Vishak" }
{ "_id" : ObjectId("614ab30e5b72cb1cad70512f"), "Roll_no" : 9,
  "Name" : "Vyshak" }
{ "_id" : ObjectId("614ab30e5b72cb1cad705130"), "Roll_no" : 10,
  "Name" : "Vishnu" }
```

➤ Sort the data by choosing any field in the collection

```
> db.db_mca.find().sort({"Name":1})
{ "_id" : ObjectId("614ab30e5b72cb1cad70512c"), "Roll_no" : 6,
  "Name" : "Akshay" }
{ "_id" : ObjectId("614ab2c15b72cb1cad705129"), "Roll_no" : 3,
  "Name" : "Arun" }
{ "_id" : ObjectId("614ab2c15b72cb1cad705127"), "Roll_no" : 1,
  "Name" : "Aswin" }
{ "_id" : ObjectId("614ab2c15b72cb1cad705128"), "Roll_no" : 2,
  "Name" : "Dilshad" }
{ "_id" : ObjectId("614ab30e5b72cb1cad70512d"), "Roll_no" : 7,
  "Name" : "Dinil" }
{ "_id" : ObjectId("614ab2c15b72cb1cad70512b"), "Roll_no" : 5,
  "Name" : "Midhun" }
{ "_id" : ObjectId("614ab2c15b72cb1cad70512a"), "Roll_no" : 4,
  "Name" : "Nihad" }
{ "_id" : ObjectId("614ab30e5b72cb1cad70512e"), "Roll_no" : 8,
  "Name" : "Vishak" }
```

```
{ "_id" : ObjectId("614ab30e5b72cb1cad705130"), "Roll_no" : 10,
  "Name" : "Vishnu" }
{ "_id" : ObjectId("614ab30e5b72cb1cad70512f"), "Roll_no" : 9,
  "Name" : "Vyshak" }
```

### ➤ Delete data from the collection

```
> db.db_mca.remove({"Name":"Nihad"})
WriteResult({ "nRemoved" : 1 })
```

```
> db.db_mca.find()
{ "_id" : ObjectId("614ab2c15b72cb1cad705127"), "Roll_no" : 1,
  "Name" : "Aswin" }
{ "_id" : ObjectId("614ab2c15b72cb1cad705128"), "Roll_no" : 2,
  "Name" : "Dilshad" }
{ "_id" : ObjectId("614ab2c15b72cb1cad705129"), "Roll_no" : 3,
  "Name" : "Arun" }
{ "_id" : ObjectId("614ab2c15b72cb1cad70512b"), "Roll_no" : 5,
  "Name" : "Midhun" }
{ "_id" : ObjectId("614ab30e5b72cb1cad70512c"), "Roll_no" : 6,
  "Name" : "Akshay" }
{ "_id" : ObjectId("614ab30e5b72cb1cad70512d"), "Roll_no" : 7,
  "Name" : "Dinil" }
{ "_id" : ObjectId("614ab30e5b72cb1cad70512e"), "Roll_no" : 8,
  "Name" : "Vishak" }
{ "_id" : ObjectId("614ab30e5b72cb1cad70512f"), "Roll_no" : 9,
  "Name" : "Vyshak" }
{ "_id" : ObjectId("614ab30e5b72cb1cad705130"), "Roll_no" : 10,
  "Name" : "Vishnu" }
```

### ➤ Drop the collection (db\_cs)

```
> db.db_cs.drop()
true
```

### ➤ Drop Database

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

## QS: 2

- Create a database Myclass

```
> use MyClass
switched to db MyClass
```

- Create a collection named “db\_students”

-> Should contain this fields : { student\_name, student\_rollno, mark[subject, mark] }

Nb: Mark should be stored as array

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

- Insert details of 10 students in a class

```
>db.db_students.insert([{"student_name":"Aswin","student_rollno":
"1","Mark":[{"Subject":"Maths","Mark":"50"}]})
```

```
BulkWriteResult({
  "writeErrors" : [ ],
  "writeConcernErrors" : [ ],
  "nInserted" : 1,
  "nUpserted" : 0,
  "nMatched" : 0,
  "nModified" : 0,
  "nRemoved" : 0,
  "upserted" : [ ]
})
```

```
>db.db_students.insert([{"student_name":"Arun","student_rollno":"
2","Mark":[{"Subject":"Maths","Mark":"70"}]})
```

```
BulkWriteResult({
  "writeErrors" : [ ],
  "writeConcernErrors" : [ ],
  "nInserted" : 1,
  "nUpserted" : 0,
  "nMatched" : 0,
  "nModified" : 0,
  "nRemoved" : 0,
  "upserted" : [ ]
})
```

```
>db.db_students.insert([{"student_name":"Dilshad","student_rollno
":"3","Mark":[{"Subject":"Maths","Mark":"90"}]})
```

```
BulkWriteResult({
  "writeErrors" : [ ],
  "writeConcernErrors" : [ ],
  "nInserted" : 1,
  "nUpserted" : 0,
  "nMatched" : 0,
  "nModified" : 0,
  "nRemoved" : 0,
  "upserted" : [ ]
})
```

```

        "upserted" : [ ]
    })
    >db.db_students.insert([{"student_name":"Lidhin","student_rollno":
        : "4","Mark":[{"Subject":"Maths","Mark":"40"}]}])
    BulkWriteResult({
        "writeErrors" : [ ],
        "writeConcernErrors" : [ ],
        "nInserted" : 1,
        "nUpserted" : 0,
        "nMatched" : 0,
        "nModified" : 0,
        "nRemoved" : 0,
        "upserted" : [ ]
    })
    >db.db_students.insert([{"student_name":"Jibin","student_rollno":
        : "5","Mark":[{"Subject":"Maths","Mark":"100"}]}])
    BulkWriteResult({
        "writeErrors" : [ ],
        "writeConcernErrors" : [ ],
        "nInserted" : 1,
        "nUpserted" : 0,
        "nMatched" : 0,
        "nModified" : 0,
        "nRemoved" : 0,
        "upserted" : [ ]
    })
    >db.db_students.insert([{"student_name":"Samuel","student_rollno":
        : "6","Mark":[{"Subject":"Maths","Mark":"60"}]}])
    BulkWriteResult({
        "writeErrors" : [ ],
        "writeConcernErrors" : [ ],
        "nInserted" : 1,
        "nUpserted" : 0,
        "nMatched" : 0,
        "nModified" : 0,
        "nRemoved" : 0,
        "upserted" : [ ]
    })
    >db.db_students.insert([{"student_name":"Aswanth","student_rollno":
        : "7","Mark":[{"Subject":"Maths","Mark":"70"}]}])
    BulkWriteResult({
        "writeErrors" : [ ],
        "writeConcernErrors" : [ ],
        "nInserted" : 1,
        "nUpserted" : 0,
        "nMatched" : 0,
        "nModified" : 0,
        "nRemoved" : 0,
        "upserted" : [ ]
    })
    >db.db_students.insert([{"student_name":"Abhiram","student_rollno":
        : "8","Mark":[{"Subject":"Maths","Mark":"65"}]}])
    BulkWriteResult({
        "writeErrors" : [ ],
        "writeConcernErrors" : [ ],

```

```

        "nInserted" : 1,
        "nUpserted" : 0,
        "nMatched" : 0,
        "nModified" : 0,
        "nRemoved" : 0,
        "upserted" : [ ]
    })
    >db.db_students.insert([{"student_name":"Vishak","student_rollno"
        : "9","Mark":[{"Subject":"Maths","Mark":"75"}]}])
BulkWriteResult({
    "writeErrors" : [ ],
    "writeConcernErrors" : [ ],
    "nInserted" : 1,
    "nUpserted" : 0,
    "nMatched" : 0,
    "nModified" : 0,
    "nRemoved" : 0,
    "upserted" : [ ]
})
    >db.db_students.insert([{"student_name":"Vyshak","student_rollno"
        : "9","Mark":[{"Subject":"Maths","Mark":"80"}]}])
BulkWriteResult({
    "writeErrors" : [ ],
    "writeConcernErrors" : [ ],
    "nInserted" : 1,
    "nUpserted" : 0,
    "nMatched" : 0,
    "nModified" : 0,
    "nRemoved" : 0,
    "upserted" : [ ]
})

```

### ➤ List the entire students in the class

```

> db.db_students.find()
{ "_id" : ObjectId("614ab9e4e40fc938df1dfb69"), "student_name" :
  "Aswin", "student_rollno" : "1", "Mark" : [ { "Subject" :
    "Maths", "Mark" : "50" } ] }
{ "_id" : ObjectId("614aba9de40fc938df1dfb6a"), "student_name" :
  "Arun", "student_rollno" : "2", "Mark" : [ { "Subject" :
    "Maths", "Mark" : "70" } ] }
{ "_id" : ObjectId("614abaaae40fc938df1dfb6b"), "student_name" :
  "Dilshad", "student_rollno" : "3", "Mark" : [ { "Subject" :
    "Maths", "Mark" : "90" } ] }
{ "_id" : ObjectId("614abab8e40fc938df1dfb6c"), "student_name" :
  "Lidhin", "student_rollno" : "4", "Mark" : [ { "Subject" :
    "Maths", "Mark" : "40" } ] }
{ "_id" : ObjectId("614abacbe40fc938df1dfb6d"), "student_name" :
  "Jibin", "student_rollno" : "5", "Mark" : [ { "Subject" :
    "Maths", "Mark" : "100" } ] }
{ "_id" : ObjectId("614abaf4e40fc938df1dfb6e"), "student_name" :
  "Samuel", "student_rollno" : "6", "Mark" : [ { "Subject" :
    "Maths", "Mark" : "60" } ] }
{ "_id" : ObjectId("614abb02e40fc938df1dfb6f"), "student_name" :
  "Aswanth", "student_rollno" : "7", "Mark" : [ { "Subject" :

```

```

    "Maths", "Mark" : "70" } ] }
{ "_id" : ObjectId("614abb15e40fc938df1dfb70"), "student_name" :
  "Abhiram", "student_rollno" : "8", "Mark" : [ { "Subject" :
    "Maths", "Mark" : "65" } ] }
{ "_id" : ObjectId("614abb23e40fc938df1dfb71"), "student_name" :
  "Vishak", "student_rollno" : "9", "Mark" : [ { "Subject" :
    "Maths", "Mark" : "75" } ] }
{ "_id" : ObjectId("614abb32e40fc938df1dfb72"), "student_name" :
  "Vyshak", "student_rollno" : "9", "Mark" : [ { "Subject" :
    "Maths", "Mark" : "80" } ] }

```

### ➤ Update mark of any students in the collection “db\_students”

```

>db.db_students.update({"student_name":"Arun"},{$set:{"Mark":[{"S
  ubject":"Maths","Mark":"80"}]}})
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
> db.db_students.find()
{ "_id" : ObjectId("614ab9e4e40fc938df1dfb69"), "student_name" :
  "Aswin", "student_rollno" : "1", "Mark" : [ { "Subject" :
    "Maths", "Mark" : "50" } ] }
{ "_id" : ObjectId("614aba9de40fc938df1dfb6a"), "student_name" :
  "Arun", "student_rollno" : "2", "Mark" : [ { "Subject" :
    "Maths", "Mark" : "80" } ] }
{ "_id" : ObjectId("614abaaae40fc938df1dfb6b"), "student_name" :
  "Dilshad", "student_rollno" : "3", "Mark" : [ { "Subject" :
    "Maths", "Mark" : "90" } ] }
{ "_id" : ObjectId("614abab8e40fc938df1dfb6c"), "student_name" :
  "Lidhin", "student_rollno" : "4", "Mark" : [ { "Subject" :
    "Maths", "Mark" : "40" } ] }
{ "_id" : ObjectId("614abacbe40fc938df1dfb6d"), "student_name" :
  "Jibin", "student_rollno" : "5", "Mark" : [ { "Subject" :
    "Maths", "Mark" : "100" } ] }
{ "_id" : ObjectId("614abaf4e40fc938df1dfb6e"), "student_name" :
  "Samuel", "student_rollno" : "6", "Mark" : [ { "Subject" :
    "Maths", "Mark" : "60" } ] }
{ "_id" : ObjectId("614abb02e40fc938df1dfb6f"), "student_name" :
  "Aswanth", "student_rollno" : "7", "Mark" : [ { "Subject" :
    "Maths", "Mark" : "70" } ] }
{ "_id" : ObjectId("614abb15e40fc938df1dfb70"), "student_name" :
  "Abhiram", "student_rollno" : "8", "Mark" : [ { "Subject" :
    "Maths", "Mark" : "65" } ] }
{ "_id" : ObjectId("614abb23e40fc938df1dfb71"), "student_name" :
  "Vishak", "student_rollno" : "9", "Mark" : [ { "Subject" :
    "Maths", "Mark" : "75" } ] }
{ "_id" : ObjectId("614abb32e40fc938df1dfb72"), "student_name" :
  "Vyshak", "student_rollno" : "9", "Mark" : [ { "Subject" :
    "Maths", "Mark" : "80" } ] }

```

➤ Delete the data of first student in the collection

```
> db.db_students.remove({"student_name":"Vyshak"})
WriteResult({ "nRemoved" : 1 })
> db.db_students.find()
{ "_id" : ObjectId("614ab9e4e40fc938df1dfb69"), "student_name" :
  "Aswin", "student_rollno" : "1", "Mark" : [ { "Subject" :
    "Maths", "Mark" : "50" } ] }
{ "_id" : ObjectId("614aba9de40fc938df1dfb6a"), "student_name" :
  "Arun", "student_rollno" : "2", "Mark" : [ { "Subject" :
    "Maths", "Mark" : "80" } ] }
{ "_id" : ObjectId("614abaaae40fc938df1dfb6b"), "student_name" :
  "Dilshad", "student_rollno" : "3", "Mark" : [ { "Subject" :
    "Maths", "Mark" : "90" } ] }
{ "_id" : ObjectId("614abab8e40fc938df1dfb6c"), "student_name" :
  "Lidhin", "student_rollno" : "4", "Mark" : [ { "Subject" :
    "Maths", "Mark" : "40" } ] }
{ "_id" : ObjectId("614abacbe40fc938df1dfb6d"), "student_name" :
  "Jibin", "student_rollno" : "5", "Mark" : [ { "Subject" :
    "Maths", "Mark" : "100" } ] }
{ "_id" : ObjectId("614abaf4e40fc938df1dfb6e"), "student_name" :
  "Samuel", "student_rollno" : "6", "Mark" : [ { "Subject" :
    "Maths", "Mark" : "60" } ] }
{ "_id" : ObjectId("614abb02e40fc938df1dfb6f"), "student_name" :
  "Aswanth", "student_rollno" : "7", "Mark" : [ { "Subject" :
    "Maths", "Mark" : "70" } ] }
{ "_id" : ObjectId("614abb15e40fc938df1dfb70"), "student_name" :
  "Abhiram", "student_rollno" : "8", "Mark" : [ { "Subject" :
    "Maths", "Mark" : "65" } ] }
{ "_id" : ObjectId("614abb23e40fc938df1dfb71"), "student_name" :
  "Vishak", "student_rollno" : "9", "Mark" : [ { "Subject" :
    "Maths", "Mark" : "75" } ] }
>
```



### QS : 3

❖ {emp\_name : "Sharath", designation: "sales", salary: 15000}  
{emp\_name : "Shyam", designation: "manager", salary: 50000}  
{emp\_name : "Abraham", designation: "superwiser", salary: 35000}  
{emp\_name : "Muhammed", designation: "sales", salary: 15000}  
{emp\_name : "Rohith", designation: "sales", salary: 20000}  
{emp\_name : "Nirmal", designation: "driver", salary: 20000}  
{emp\_name : "Samuel", designation: "superwiser", salary: 35000}  
{emp\_name : "Johns", designation: "sales", salary: 15000}

➤ Create a database Employee

```
>use Employee  
switched to db Employee
```

➤ Create a collection "db\_employee"

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

➤ Insert the above employee details to the collection called "db\_employee"

```
> db.db_Employee.insert({"emp_name" : "Sharath",  
"designation": "sales", "salary": 15000})  
WriteResult({ "nInserted" : 1 })  
> db.db_Employee.insert({"emp_name": "Shyam",  
"designation": "manager", "salary": 50000})  
WriteResult({ "nInserted" : 1 })  
> db.db_Employee.insert({"emp_name" : "Abraham",  
"designation": "superwiser", "salary": 35000})  
WriteResult({ "nInserted" : 1 })  
> db.db_Employee.insert({"emp_name" : "Muhammed",  
"designation": "sales", "salary": 15000})  
WriteResult({ "nInserted" : 1 })  
> db.db_Employee.insert({"emp_name" : "Rohith",  
"designation": "sales", "salary": 20000})  
WriteResult({ "nInserted" : 1 })  
> db.db_Employee.insert({"emp_name" : "Nirmal",  
"designation": "driver", "salary": 20000})  
WriteResult({ "nInserted" : 1 })  
> db.db_Employee.insert({"emp_name" : "Nirmal",  
"designation": "driver", "salary": 20000})  
WriteResult({ "nInserted" : 1 })  
> db.db_Employee.insert({"emp_name" : "Johns",  
"designation": "sales", "salary": 15000})  
WriteResult({ "nInserted" : 1 })
```

- List the details of employee having 'salary > 15000' AND designation = "superwiser"

```
>db.db_Employee.find({$and:[{"salary":{$gt:15000}},{"designa-
tion":"superwiser"}]})
```

```
{ "_id" : ObjectId("614ac520aec2f308a97bea2e"),
  "emp_name" : "Abraham", "designation" :
  "superwiser", "salary" : 35000 }
```

- List the details of employee who working in 'sales' Department

```
> db.db_Employee.find({"designation":"sales"})
```

```
{ "_id" : ObjectId("614ac486aec2f308a97bea2c"),
  "emp_name" : "Sharath", "designation" : "sales",
  "salary" : 15000 }
{ "_id" : ObjectId("614ac590aec2f308a97bea2f"),
  "emp_name" : "Muhammed", "designation" : "sales",
  "salary" : 15000 }
{ "_id" : ObjectId("614ac5c8aec2f308a97bea30"),
  "emp_name" : "Rohith", "designation" : "sales",
  "salary" : 20000 }
{ "_id" : ObjectId("614ac64faec2f308a97bea33"),
  "emp_name" : "Johns", "designation" : "sales",
  "salary" : 15000 }
```

- Update the emp\_name : "Sharath" into Jamsheer

```
> db.db_Employee.update({"emp_name" :
  "Sharath"},{$set:{"emp_name":"Jamsheer"}})
WriteResult({ "nMatched" : 1, "nUpserted" : 0,
  "nModified" : 1 })
```

- Find the total sum of salary of employees under the sales department

```
>db.db_Employee.aggregate([{$match:{"designation":"s
ales"}},{$group : {_id : "$designation", salary_sum
: {$sum : "$salary"}}}])
```

```
{ "_id" : "sales", "salary_sum" : 65000 }
```