Name: Shraddha Rajkumar Kotwar

Class: TE(Comp)-B

Roll no: 18

Batch: T1

**Assignment On Mongodb Collection**

Create Institute database and create student Collection

1. RollNo

2. Name

3. Age

4.Branch

5. Address:{city,state}

6.Hobbies[array]

**1.Create database Institute**

> use Institute

switched to db Institute

**2.Create Collection Student**

> db.createCollection("Student")

{ "ok" : 1 }

>

**3.Insert 10 documents with above mentioned structure.**

db.Student.insert({Rollno:2,name:"Kavita",Age:20,Branch:"Comp",address:{city:"chandwad",state:"MH"},Hobbies:["read","travel"]})

WriteResult({ "nInserted" : 1 })

> db.Student.insert({Rollno:3,name:"Shraddha",Age:21,Branch:"AIDS",address:{city:"manmad",state:"MP"},Hobbies:["Music","travel"]})

WriteResult({ "nInserted" : 1 })

> db.Student.insert({Rollno:1,name:"Kirti",Age:21,Branch:"E&TC",address:{city:"Rajkot",state:"GJ"},Hobbies:["Music","movies"]})

WriteResult({ "nInserted" : 1 })

> db.Student.insert({Rollno:5,name:"Gayatri",Age:19,Branch:"E&TC",address:{city:"Patna",state:"UP"},Hobbies:["Music","Write"]})

WriteResult({ "nInserted" : 1 })

> db.Student.insert({Rollno:7,name:"Ashwini",Age:19,Branch:"E&TC",address:{city:"Ladakh",state:"JK"},Hobbies:["Music","Paint"]})

WriteResult({ "nInserted" : 1 })

> db.Student.insert({Rollno:8,name:"Nishi",Age:19,Branch:"Mech",address:{city:"Patiala",state:"Panjab"},Hobbies:["dance","Paint"]})

WriteResult({ "nInserted" : 1 })

> db.Student.insert({Rollno:9,name:"Punam",Age:19,Branch:"Aeronautics",address:{city:"Jodhpur",state:"RJ"},Hobbies:["singing","Paint"]})

WriteResult({ "nInserted" : 1 })

> db.Student.insert({Rollno:10,name:"Anu",Age:22,Branch:"Comp",address:{city:"Latur",state:"MH"},Hobbies:["singing","cooking"]})

WriteResult({ "nInserted" : 1 })

> db.Student.insert({Rollno:11,name:"Priya",Age:22,Branch:"Comp",address:{city:"Pune",state:"MH"},Hobbies:["read","cooking"]})

WriteResult({ "nInserted" : 1 })

> db.Student.insert({Rollno:6,name:"Gauri",Age:14,Branch:"Mech",address:{city:"Mumbai",state:"MH"},Hobbies:["read","Travel"]})

WriteResult({ "nInserted" : 1 })

**4. Display all Students Information**

> db.Student.find()

{ "\_id" : ObjectId("6523d2d585ea922274408a0a"), "Rollno" : 2, "name" : "Kavita", "Age" : 20, "Branch" : "Comp", "address" : { "city" : "chandwad", "state" : "MH" }, "Hobbies" : [ "read", "travel" ] }

{ "\_id" : ObjectId("6523d32c85ea922274408a0b"), "Rollno" : 3, "name" : "Shraddha", "Age" : 21, "Branch" : "AIDS", "address" : { "city" : "manmad", "state" : "MP" }, "Hobbies" : [ "Music", "travel" ] }

{ "\_id" : ObjectId("6523d39a85ea922274408a0c"), "Rollno" : 1, "name" : "Kirti", "Age" : 21, "Branch" : "E&TC", "address" : { "city" : "Rajkot", "state" : "GJ" }, "Hobbies" : [ "Music", "movies" ] }

{ "\_id" : ObjectId("6523d42e85ea922274408a0d"), "Rollno" : 5, "name" : "Gayatri", "Age" : 19, "Branch" : "E&TC", "address" : { "city" : "Patna", "state" : "UP" }, "Hobbies" : [ "Music", "Write" ] }

{ "\_id" : ObjectId("6523d47785ea922274408a0e"), "Rollno" : 7, "name" : "Ashwini", "Age" : 19, "Branch" : "E&TC", "address" : { "city" : "Ladakh", "state" : "JK" }, "Hobbies" : [ "Music", "Paint" ] }

{ "\_id" : ObjectId("6523d50985ea922274408a0f"), "Rollno" : 8, "name" : "Nishi", "Age" : 19, "Branch" : "Mech", "address" : { "city" : "Patiala", "state" : "Panjab" }, "Hobbies" : [ "dance", "Paint" ] }

{ "\_id" : ObjectId("6523d55085ea922274408a10"), "Rollno" : 9, "name" : "Punam", "Age" : 19, "Branch" : "Aeronautics", "address" : { "city" : "Jodhpur", "state" : "RJ" }, "Hobbies" : [ "singing", "Paint" ] }

{ "\_id" : ObjectId("6523d5a085ea922274408a11"), "Rollno" : 10, "name" : "Anu", "Age" : 22, "Branch" : "Comp", "address" : { "city" : "Latur", "state" : "MH" }, "Hobbies" : [ "singing", "cooking" ] }

{ "\_id" : ObjectId("6523d5d985ea922274408a12"), "Rollno" : 11, "name" : "Priya", "Age" : 22, "Branch" : "Comp", "address" : { "city" : "Pune", "state" : "MH" }, "Hobbies" : [ "read", "cooking" ] }

{ "\_id" : ObjectId("6523d63685ea922274408a13"), "Rollno" : 6, "name" : "Gauri", "Age" : 14, "Branch" : "Mech", "address" : { "city" : "Mumbai", "state" : "MH" }, "Hobbies" : [ "read", "Travel" ] }

**5. Display Student Information whose age is greater than 15**

> db.Student.find({Age:{$gt:15}})

{ "\_id" : ObjectId("6523d2d585ea922274408a0a"), "Rollno" : 2, "name" : "Kavita", "Age" : 20, "Branch" : "Comp", "address" : { "city" : "chandwad", "state" : "MH" }, "Hobbies" : [ "read", "travel" ] }

{ "\_id" : ObjectId("6523d32c85ea922274408a0b"), "Rollno" : 3, "name" : "Shraddha", "Age" : 21, "Branch" : "AIDS", "address" : { "city" : "manmad", "state" : "MP" }, "Hobbies" : [ "Music", "travel" ] }

{ "\_id" : ObjectId("6523d39a85ea922274408a0c"), "Rollno" : 1, "name" : "Kirti", "Age" : 21, "Branch" : "E&TC", "address" : { "city" : "Rajkot", "state" : "GJ" }, "Hobbies" : [ "Music", "movies" ] }

{ "\_id" : ObjectId("6523d42e85ea922274408a0d"), "Rollno" : 5, "name" : "Gayatri", "Age" : 19, "Branch" : "E&TC", "address" : { "city" : "Patna", "state" : "UP" }, "Hobbies" : [ "Music", "Write" ] }

{ "\_id" : ObjectId("6523d47785ea922274408a0e"), "Rollno" : 7, "name" : "Ashwini", "Age" : 19, "Branch" : "E&TC", "address" : { "city" : "Ladakh", "state" : "JK" }, "Hobbies" : [ "Music", "Paint" ] }

{ "\_id" : ObjectId("6523d50985ea922274408a0f"), "Rollno" : 8, "name" : "Nishi", "Age" : 19, "Branch" : "Mech", "address" : { "city" : "Patiala", "state" : "Panjab" }, "Hobbies" : [ "dance", "Paint" ] }

{ "\_id" : ObjectId("6523d55085ea922274408a10"), "Rollno" : 9, "name" : "Punam", "Age" : 19, "Branch" : "Aeronautics", "address" : { "city" : "Jodhpur", "state" : "RJ" }, "Hobbies" : [ "singing", "Paint" ] }

{ "\_id" : ObjectId("6523d5a085ea922274408a11"), "Rollno" : 10, "name" : "Anu", "Age" : 22, "Branch" : "Comp", "address" : { "city" : "Latur", "state" : "MH" }, "Hobbies" : [ "singing", "cooking" ] }

{ "\_id" : ObjectId("6523d5d985ea922274408a12"), "Rollno" : 11, "name" : "Priya", "Age" : 22, "Branch" : "Comp", "address" : { "city" : "Pune", "state" : "MH" }, "Hobbies" : [ "read", "cooking" ] }

**6. Display Student Information sorted on name field**

> db.Student.find().sort({name:1})

{ "\_id" : ObjectId("6523d5a085ea922274408a11"), "Rollno" : 10, "name" : "Anu", "Age" : 22, "Branch" : "Comp", "address" : { "city" : "Latur", "state" : "MH" }, "Hobbies" : [ "singing", "cooking" ] }

{ "\_id" : ObjectId("6523d47785ea922274408a0e"), "Rollno" : 7, "name" : "Ashwini", "Age" : 19, "Branch" : "E&TC", "address" : { "city" : "Ladakh", "state" : "JK" }, "Hobbies" : [ "Music", "Paint" ] }

{ "\_id" : ObjectId("6523d63685ea922274408a13"), "Rollno" : 6, "name" : "Gauri", "Age" : 14, "Branch" : "Mech", "address" : { "city" : "Mumbai", "state" : "MH" }, "Hobbies" : [ "read", "Travel" ] }

{ "\_id" : ObjectId("6523d42e85ea922274408a0d"), "Rollno" : 5, "name" : "Gayatri", "Age" : 19, "Branch" : "E&TC", "address" : { "city" : "Patna", "state" : "UP" }, "Hobbies" : [ "Music", "Write" ] }

{ "\_id" : ObjectId("6523d2d585ea922274408a0a"), "Rollno" : 2, "name" : "Kavita", "Age" : 20, "Branch" : "Comp", "address" : { "city" : "chandwad", "state" : "MH" }, "Hobbies" : [ "read", "travel" ] }

{ "\_id" : ObjectId("6523d39a85ea922274408a0c"), "Rollno" : 1, "name" : "Kirti", "Age" : 21, "Branch" : "E&TC", "address" : { "city" : "Rajkot", "state" : "GJ" }, "Hobbies" : [ "Music", "movies" ] }

{ "\_id" : ObjectId("6523d50985ea922274408a0f"), "Rollno" : 8, "name" : "Nishi", "Age" : 19, "Branch" : "Mech", "address" : { "city" : "Patiala", "state" : "Panjab" }, "Hobbies" : [ "dance", "Paint" ] }

{ "\_id" : ObjectId("6523d5d985ea922274408a12"), "Rollno" : 11, "name" : "Priya", "Age" : 22, "Branch" : "Comp", "address" : { "city" : "Pune", "state" : "MH" }, "Hobbies" : [ "read", "cooking" ] }

{ "\_id" : ObjectId("6523d55085ea922274408a10"), "Rollno" : 9, "name" : "Punam", "Age" : 19, "Branch" : "Aeronautics", "address" : { "city" : "Jodhpur", "state" : "RJ" }, "Hobbies" : [ "singing", "Paint" ] }

{ "\_id" : ObjectId("6523d32c85ea922274408a0b"), "Rollno" : 3, "name" : "Shraddha", "Age" : 21, "Branch" : "AIDS", "address" : { "city" : "manmad", "state" : "MP" }, "Hobbies" : [ "Music", "travel" ] }

**7. Update Student branch Computer of Rollno 3**

> db.Student.update({Rollno:3},{$set:{Branch:"Comp"}})

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

> db.Student.find({Rollno:3})

{ "\_id" : ObjectId("6523d32c85ea922274408a0b"), "Rollno" : 3, "name" : "Shraddha", "Age" : 21, "Branch" : "Comp", "address" : { "city" : "manmad", "state" : "MP" }, "Hobbies" : [ "Music", "travel" ] }

**8. Remove Document with Rollno 1**

> db.Student.remove({Rollno:1})

WriteResult({ "nRemoved" : 1 })

> db.Student.find()

{ "\_id" : ObjectId("6523d2d585ea922274408a0a"), "Rollno" : 2, "name" : "Kavita", "Age" : 20, "Branch" : "Comp", "address" : { "city" : "chandwad", "state" : "MH" }, "Hobbies" : [ "read", "travel" ] }

{ "\_id" : ObjectId("6523d32c85ea922274408a0b"), "Rollno" : 3, "name" : "Shraddha", "Age" : 21, "Branch" : "Comp", "address" : { "city" : "manmad", "state" : "MP" }, "Hobbies" : [ "Music", "travel" ] }

{ "\_id" : ObjectId("6523d42e85ea922274408a0d"), "Rollno" : 5, "name" : "Gayatri", "Age" : 19, "Branch" : "E&TC", "address" : { "city" : "Patna", "state" : "UP" }, "Hobbies" : [ "Music", "Write" ] }

{ "\_id" : ObjectId("6523d47785ea922274408a0e"), "Rollno" : 7, "name" : "Ashwini", "Age" : 19, "Branch" : "E&TC", "address" : { "city" : "Ladakh", "state" : "JK" }, "Hobbies" : [ "Music", "Paint" ] }

{ "\_id" : ObjectId("6523d50985ea922274408a0f"), "Rollno" : 8, "name" : "Nishi", "Age" : 19, "Branch" : "Mech", "address" : { "city" : "Patiala", "state" : "Panjab" }, "Hobbies" : [ "dance", "Paint" ] }

{ "\_id" : ObjectId("6523d55085ea922274408a10"), "Rollno" : 9, "name" : "Punam", "Age" : 19, "Branch" : "Aeronautics", "address" : { "city" : "Jodhpur", "state" : "RJ" }, "Hobbies" : [ "singing", "Paint" ] }

{ "\_id" : ObjectId("6523d5a085ea922274408a11"), "Rollno" : 10, "name" : "Anu", "Age" : 22, "Branch" : "Comp", "address" : { "city" : "Latur", "state" : "MH" }, "Hobbies" : [ "singing", "cooking" ] }

{ "\_id" : ObjectId("6523d5d985ea922274408a12"), "Rollno" : 11, "name" : "Priya", "Age" : 22, "Branch" : "Comp", "address" : { "city" : "Pune", "state" : "MH" }, "Hobbies" : [ "read", "cooking" ] }

{ "\_id" : ObjectId("6523d63685ea922274408a13"), "Rollno" : 6, "name" : "Gauri", "Age" : 14, "Branch" : "Mech", "address" : { "city" : "Mumbai", "state" : "MH" }, "Hobbies" : [ "read", "Travel" ] }

**9. Display Student Information whose name starts with A.**

>db.Student.find({“name”:/A/})

{ "\_id" : ObjectId("6523d47785ea922274408a0e"), "Rollno" : 7, "name" : "Ashwini", "Age" : 19, "Branch" : "E&TC", "address" : { "city" : "Ladakh", "state" : "JK" }, "Hobbies" : [ "Music", "Paint" ] }

{ "\_id" : ObjectId("6523d5a085ea922274408a11"), "Rollno" : 10, "name" : "Anu", "Age" : 22, "Branch" : "Comp", "address" : { "city" : "Latur", "state" : "MH" }, "Hobbies" : [ "singing", "cooking" ] }

**10. Display the total no of documents available in Collection**

> db.Student.find().count()

9

**11. Display only first 5 documents.**

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

{ "\_id" : ObjectId("6523d2d585ea922274408a0a"), "Rollno" : 2, "name" : "Kavita", "Age" : 20, "Branch" : "Comp", "address" : { "city" : "chandwad", "state" : "MH" }, "Hobbies" : [ "read", "travel" ] }

{ "\_id" : ObjectId("6523d32c85ea922274408a0b"), "Rollno" : 3, "name" : "Shraddha", "Age" : 21, "Branch" : "Comp", "address" : { "city" : "manmad", "state" : "MP" }, "Hobbies" : [ "Music", "travel" ] }

{ "\_id" : ObjectId("6523d42e85ea922274408a0d"), "Rollno" : 5, "name" : "Gayatri", "Age" : 19, "Branch" : "E&TC", "address" : { "city" : "Patna", "state" : "UP" }, "Hobbies" : [ "Music", "Write" ] }

{ "\_id" : ObjectId("6523d47785ea922274408a0e"), "Rollno" : 7, "name" : "Ashwini", "Age" : 19, "Branch" : "E&TC", "address" : { "city" : "Ladakh", "state" : "JK" }, "Hobbies" : [ "Music", "Paint" ] }

{ "\_id" : ObjectId("6523d50985ea922274408a0f"), "Rollno" : 8, "name" : "Nishi", "Age" : 19, "Branch" : "Mech", "address" : { "city" : "Patiala", "state" : "Panjab" }, "Hobbies" : [ "dance", "Paint" ] }

**12. Display all documents instead of first 3**.

> db.Student.find().skip(3)

{ "\_id" : ObjectId("6523d47785ea922274408a0e"), "Rollno" : 7, "name" : "Ashwini", "Age" : 19, "Branch" : "E&TC", "address" : { "city" : "Ladakh", "state" : "JK" }, "Hobbies" : [ "Music", "Paint" ] }

{ "\_id" : ObjectId("6523d50985ea922274408a0f"), "Rollno" : 8, "name" : "Nishi", "Age" : 19, "Branch" : "Mech", "address" : { "city" : "Patiala", "state" : "Panjab" }, "Hobbies" : [ "dance", "Paint" ] }

{ "\_id" : ObjectId("6523d55085ea922274408a10"), "Rollno" : 9, "name" : "Punam", "Age" : 19, "Branch" : "Aeronautics", "address" : { "city" : "Jodhpur", "state" : "RJ" }, "Hobbies" : [ "singing", "Paint" ] }

{ "\_id" : ObjectId("6523d5a085ea922274408a11"), "Rollno" : 10, "name" : "Anu", "Age" : 22, "Branch" : "Comp", "address" : { "city" : "Latur", "state" : "MH" }, "Hobbies" : [ "singing", "cooking" ] }

{ "\_id" : ObjectId("6523d5d985ea922274408a12"), "Rollno" : 11, "name" : "Priya", "Age" : 22, "Branch" : "Comp", "address" : { "city" : "Pune", "state" : "MH" }, "Hobbies" : [ "read", "cooking" ] }

{ "\_id" : ObjectId("6523d63685ea922274408a13"), "Rollno" : 6, "name" : "Gauri", "Age" : 14, "Branch" : "Mech", "address" : { "city" : "Mumbai", "state" : "MH" }, "Hobbies" : [ "read", "Travel" ] }

**13. Display name of student who live in Pune city**

> db.Student.find({"address.city":"Pune"})

{ "\_id" : ObjectId("6523d5d985ea922274408a12"), "Rollno" : 11, "name" : "Priya", "Age" : 22, "Branch" : "Comp", "address" : { "city" : "Pune", "state" : "MH" }, "Hobbies" : [ "read", "cooking" ] }

> db.Student.find({"name":/A/})

{ "\_id" : ObjectId("6523d47785ea922274408a0e"), "Rollno" : 7, "name" : "Ashwini", "Age" : 19, "Branch" : "E&TC", "address" : { "city" : "Ladakh", "state" : "JK" }, "Hobbies" : [ "Music", "Paint" ] }

{ "\_id" : ObjectId("6523d5a085ea922274408a11"), "Rollno" : 10, "name" : "Anu", "Age" : 22, "Branch" : "Comp", "address" : { "city" : "Latur", "state" : "MH" }, "Hobbies" : [ "singing", "cooking" ] }

**14. Display the list of different cities from where students are coming.**

> db.Student.distinct("address.city")

[

"chandwad",

"manmad",

"Patna",

"Ladakh",

"Patiala",

"Jodhpur",

"Latur",

"Pune",

"Mumbai"

]

**15. Display the list of different cities with no of students from belonging to that city.**

> db.Student.aggregate([{$group:{\_id:"$address.city",count:{$sum:1}}}])

{ "\_id" : "Mumbai", "count" : 1 }

{ "\_id" : "Latur", "count" : 1 }

{ "\_id" : "Jodhpur", "count" : 1 }

{ "\_id" : "Pune", "count" : 1 }

{ "\_id" : "Patiala", "count" : 1 }

{ "\_id" : "Ladakh", "count" : 1 }

{ "\_id" : "Patna", "count" : 1 }

{ "\_id" : "manmad", "count" : 1 }

{ "\_id" : "chandwad", "count" : 1 }

**16. Display only name of all students.**

> db.Student.find({},{name:1,\_id:0})

{ "name" : "Kavita" }

{ "name" : "Shraddha" }

{ "name" : "Gayatri" }

{ "name" : "Ashwini" }

{ "name" : "Nishi" }

{ "name" : "Punam" }

{ "name" : "Anu" }

{ "name" : "Priya" }

{ "name" : "Gauri" }

**17. Display the Hobbies of each student.**

> db.Student.find({},{name:1,Hobbies:1,\_id:0})

{ "name" : "Kavita", "Hobbies" : [ "read", "travel" ] }

{ "name" : "Shraddha", "Hobbies" : [ "Music", "travel" ] }

{ "name" : "Gayatri", "Hobbies" : [ "Music", "Write" ] }

{ "name" : "Ashwini", "Hobbies" : [ "Music", "Paint" ] }

{ "name" : "Nishi", "Hobbies" : [ "dance", "Paint" ] }

{ "name" : "Punam", "Hobbies" : [ "singing", "Paint" ] }

{ "name" : "Anu", "Hobbies" : [ "singing", "cooking" ] }

{ "name" : "Priya", "Hobbies" : [ "read", "cooking" ] }

{ "name" : "Gauri", "Hobbies" : [ "read", "Travel" ] }

**18. Drop Collection**

> db.Student.drop()

true

> db.Student.find()