**PRACTICAL 1**

**Aim :** Practical of Data collection, Data curation and management for Large-scale Data system (such as MongoDB)

**Set Path**

**C:\>set path=C:\Program Files\MongoDB\Server\4.0\bin C:\>mongo**

**Create Mongo DAtaBase -**

**> use beginnersbook** *switched to db beginnersbook* **> db**  beginnersbook **> show dbs** admin 0.000GB config 0.000GB local 0.000GB

**Insert in db -**

**> db.user.insert({name:"Chaitanya",age:"30"})** WriteResult({ "nInserted" : 1 })

**> show dbs**  admin 0.000GB beginnersbook 0.000GB config 0.000GB local 0.000GB

**Drop DB -**

**> db.dropDatabase()** { "dropped" : "beginnersbook", "ok" : 1 } **> show dbs** admin 0.000GB config 0.000GB local 0.000GB

**Creating collection -**

**> use beginnersbookdb** switched to db beginnersbookdb **> db.beginnersbook.insert({name:"Chaitanya",age:"30",website:"www.google.com"})**

WriteResult({ "nInserted" : 1 })

**Show Collections -**

**> show collections** beginnersbook user

**View Collections -**

**> db.beginnersbook.find()** { "\_id" : ObjectId("5c382e6fe1e7a0b854d84441"), "name" : "Chaitanya", "age" : "30", "website" : "www.google.com" }

**Creating Collection manually -**

**> db.createCollection("teachers",{capped:true,size:9232768})** { "ok" : 1 }

**Drop Collection -**

**> db.teachers.drop()**

true

**Inserting Multiple Fields in collection -**

**> db.beginnersbook.insert( ... {**

**... name:"Omkar", ... age:20,**

**... email:"or123@gmail.com", ... course:[{name:"MonoDB",Duration:7},{name:"Java",Duration:30}] ... }**

**... )** WriteResult({ "nInserted" : 1 })

**> db.beginnersbook.find()** { "\_id" : ObjectId("5c382e6fe1e7a0b854d84441"), "name" : "Chaitanya", "age" : "30", "website" : "www.google.com" }

{ "\_id" : ObjectId("5c3831b0e1e7a0b854d84442"), "name" : "Omkar", "age" : 20, "email" : "or123@gmail.com", "course" : [ { "name" : "MonoDB", "Duration" : 7 }, { "name" : "Java", "Duration" : 30 } ] }

**Inserting Multiple Doc in collection -**

**> var beginners= [ {"StudentID":1001, "StudentName":"Steve","age":30},{"StudentID":1002, "StudentName":"nege","age":40},{"StudentID":3333, "StudentName":"rick","age":50}]**

**> db.students.insert(beginners);** BulkWriteResult({ "writeErrors" : [ ], "writeConcernErrors" : [ ], "nInserted" : 3, "nUpserted" : 0, "nMatched" : 0, "nModified" : 0, "nRemoved" : 0, "upserted" : [ ]

})

**> db.students.find()** { "\_id" : ObjectId("5c383475683d8084043ccb08"), "StudentID" : 1001, "StudentName" : "Steve", "age" : 30 }

{ "\_id" : ObjectId("5c383475683d8084043ccb09"), "StudentID" : 1002, "StudentName" : "nege", "age" : 40 }

{ "\_id" : ObjectId("5c383475683d8084043ccb0a"), "StudentID" : 3333, "StudentName" : "rick", "age" : 50 }

**Viewing in JavaScript format -**

**> db.students.find().forEach(printjson)** { "\_id" : ObjectId("5c383475683d8084043ccb08"), "StudentID" : 1001, "StudentName" : "Steve", "age" : 30

}

{ "\_id" : ObjectId("5c383475683d8084043ccb09"), "StudentID" : 1002, "StudentName" : "nege", "age" : 40

}

{ "\_id" : ObjectId("5c383475683d8084043ccb0a"), "StudentID" : 3333, "StudentName" : "rick", "age" : 50

}

**> db.students.find({StudentName:"Steve"}).pretty()** { "\_id" : ObjectId("5c383475683d8084043ccb08"), "StudentID" : 1001, "StudentName" : "Steve", "age" : 30

}

**Greater and Less Than -**

**> db.students.find({"age":{$gt:32}}).pretty()** { "\_id" : ObjectId("5c383475683d8084043ccb09"), "StudentID" : 1002, "StudentName" : "nege", "age" : 40

}

{ "\_id" : ObjectId("5c383475683d8084043ccb0a"), "StudentID" : 3333, "StudentName" : "rick", "age" : 50

}

**> db.students.find({"age":{$lt:32}}).pretty()** { "\_id" : ObjectId("5c383475683d8084043ccb08"), "StudentID" : 1001, "StudentName" : "Steve", "age" : 30

}

**> db.students.find({"age":{$lte:40}}).pretty()** { "\_id" : ObjectId("5c383475683d8084043ccb08"), "StudentID" : 1001, "StudentName" : "Steve", "age" : 30

}

{ "\_id" : ObjectId("5c383475683d8084043ccb09"), "StudentID" : 1002, "StudentName" : "nege", "age" : 40

}

**> db.students.find({"age":{$gte:40}}).pretty()** { "\_id" : ObjectId("5c383475683d8084043ccb09"), "StudentID" : 1002, "StudentName" : "nege", "age" : 40

}

{ "\_id" : ObjectId("5c383475683d8084043ccb0a"), "StudentID" : 3333, "StudentName" : "rick", "age" : 50

}

**> db.students.find({"age":{$ne:40}}).pretty()** { "\_id" : ObjectId("5c383475683d8084043ccb08"), "StudentID" : 1001, "StudentName" : "Steve", "age" : 30

}

{ "\_id" : ObjectId("5c383475683d8084043ccb0a"), "StudentID" : 3333, "StudentName" : "rick", "age" : 50

}

**Update Doc -**

**>db.students.update({"StudentName":"Steve"},{$set:{"StudentName":"Jhon"}})** WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })

**> db.students.find()** { "\_id" : ObjectId("5c383475683d8084043ccb08"), "StudentID" : 1001, "StudentName" : "Jhon", "age" : 30 }

{ "\_id" : ObjectId("5c383475683d8084043ccb09"), "StudentID" : 1002, "StudentName" : "nege", "age" : 40 }

{ "\_id" : ObjectId("5c383475683d8084043ccb0a"), "StudentID" : 3333, "StudentName" : "rick", "age" : 50 }

**Saving Doc -**

**> db.students.save({ "\_id" : ObjectId("5c383475683d8084043ccb08"),"StudentID" : 1001, "StudentName" : "Rocky", "age" : 30 })**

WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 }) **> db.students.find()** { "\_id" : ObjectId("5c383475683d8084043ccb08"), "StudentID" : 1001, "StudentName" : "Rocky", "age" : 30 }

{ "\_id" : ObjectId("5c383475683d8084043ccb09"), "StudentID" : 1002, "StudentName" : "nege", "age" : 40 }

{ "\_id" : ObjectId("5c383475683d8084043ccb0a"), "StudentID" : 3333, "StudentName" : "rick", "age" : 50 }

**Delete Doc -**

**> db.students.remove({"age":50})** WriteResult({ "nRemoved" : 1 }) **> db.students.find()** { "\_id" : ObjectId("5c383475683d8084043ccb08"), "StudentID" : 1001, "StudentName" : "Rocky", "age" : 30 }

{ "\_id" : ObjectId("5c383475683d8084043ccb09"), "StudentID" : 1002, "StudentName" : "nege", "age" : 40 }

**Particular Columns -**

**> db.students.find({},{"\_id":0,"StudentID":1})** { "StudentID" : 1001 } { "StudentID" : 1002 }

**Limit And Skip -**

**> db.students.find({"StudentID":{$gt:1000}}).limit(1).skip(1).pretty()** { "\_id" : ObjectId("5c383475683d8084043ccb09"), "StudentID" : 1002, "StudentName" : "nege", "age" : 40

}

**Sorting -**

**> db.students.find({},{"\_id":0,"StudentID":1}).sort({})**  { "StudentID" : 1001 } { "StudentID" : 1002 }

**> db.students.find().sort({})** { "\_id" : ObjectId("5c383475683d8084043ccb08"), "StudentID" : 1001, "StudentName" : "Rocky", "age" : 30 }

{ "\_id" : ObjectId("5c383475683d8084043ccb09"), "StudentID" : 1002, "StudentName" : "nege", "age" : 40 }

**Creating Index-**

**> db.students.createIndex({"StudentName":1})** { "createdCollectionAutomatically" : false, "numIndexesBefore" : 1, "numIndexesAfter" : 2, "ok" : 1

}

**Get INDEX -**

**> db.students.getIndexes()** [ { "v" : 2, "key" : { "\_id" : 1 }, "name" : "\_id\_", "ns" : "test.students" }, { "v" : 2, "key" : { "StudentName" : 1 }, "name" : "StudentName\_1", "ns" : "test.students" }

]

**Drop index-**

**> db.students.dropIndex({"StudentName":1})** { "nIndexesWas" : 2, "ok" : 1 }

**Drop All Index -**

**> db.students.dropIndexes()** { "nIndexesWas" : 1, "msg" : "non-\_id indexes dropped for collection", "ok" : 1

}