**AIM:** Demonstrate the indexing and ordering operations in

1. MongoDB
2. CouchDB
3. Apache Cassandra

**RUN: MongoDB shell, Apache Cassandra**

1.MongoDB

**Command to create a Database**

---->use StudentData

**Command to create a Collection**

---->db.createCollection("Student")

**Command to view Collection**

---->show collections

**Command to insert a single document in Collection**

---->db.Student.insertOne({"name":"Raj","Roll\_no":1,"Class":"MSc\_CS","Address":"Mumbai"})

**Command to insert multiple documents in Collection**

---->db.Student.insertMany([{"name":"Rajat","Roll\_no":2,"Class":"MSc\_CS","Address":"Kalyan"},{"name":"Manish","Roll\_no":3,"Class":"MSc\_CS","Address":"Thane"},{"name":"Rahul","Roll\_no":4,"Class":"MSc\_IT","Address":"Kalyan"},{"name":"Mohit","Roll\_no":5,"Class":"MSc\_IT","Address":"Thane"},{"name":"Karan","Roll\_no":6,"Class":"MSc\_IT","Address":"Pune"}])

**Command to view all documents**

---->db.Student.find()

**Command to Create Index**

---->db.Student.createIndex({"Roll\_no":1});

**Command to view all indexes in collection**

---->db.Student.getIndexes();

**Command to Drop Index**

---->db.Student.dropIndex({"Roll\_no":1});

---->db.Student.getIndex();

**Before Sorting/Ordering**

>db.Student.find()

**Command to order data in ascending order**

---->db.Student.find({},{"name":1,"Roll\_no":1,\_id:0}).sort({"Roll\_no":1});

**Command to order data in descending order**

---->db.Student.find({},{"name":1,"Roll\_no":1,\_id:0}).sort({"Roll\_no":-1});

2. **Apache Cassandra**

**Command to create keyspace**

cqlsh>CREATE KEYSPACE studentDB WITH replication = {'class':'SimpleStrategy', 'replication\_factor' : 1};

**Command to use keyspace**

cqlsh>use studentDB;

**Command to create table**

---->CREATE TABLE student(

s\_id int PRIMARY KEY,

s\_name text,

s\_city text,

s\_class text

);

**Command to insert data**

---->INSERT INTO student (s\_id,s\_name,s\_city,s\_class)VALUES(1,'Raj', 'Mumbai', 'MSc\_CS');

---->INSERT INTO student (s\_id,s\_name,s\_city,s\_class)VALUES(2,'Mohit', 'Thane', 'MSc\_IT');

---->INSERT INTO student (s\_id,s\_name,s\_city,s\_class)VALUES(3,'Mohan', 'Kalyan', 'MSc\_CS');

---->INSERT INTO student (s\_id,s\_name,s\_city,s\_class)VALUES(4,'Sandeep', 'Pune', 'MSc\_CS');

---->INSERT INTO student (s\_id,s\_name,s\_city,s\_class)VALUES(5,'Suraj', 'Mumbai', 'MSc\_IT');

**Command to read data**

---->SELECT \* FROM student;

**Command to create index**

---->Create index ClassIndex on student(s\_class);

**Command to view filtered data**

---->SELECT \* FROM student WHERE s\_class = 'MSc\_CS';

**Command to delete index**

---->DROP INDEX IF EXISTS studentDB.ClassIndex;