

## Practical - 3 ADBMS

### CRUD operations in MongoDB:

Creating a new database and a new collection:

```
test> use newdb
switched to db newdb
newdb> db.createCollection("mycoll");
{ ok: 1 }
```

Inserting data/documents in the collection:

```
newdb> db.mycoll.insertMany([
... {name:"Max",age:30},
... {name:"Christine",age:22},
... {name:"Stephen",age:28}
... ]);
{
  acknowledged: true,
  insertedIds: {
    '0': ObjectId('65dc9be53fa62446c8b13b5e'),
    '1': ObjectId('65dc9be53fa62446c8b13b5f'),
    '2': ObjectId('65dc9be53fa62446c8b13b60')
  }
}
```

Reading the created collection:

```
newdb> db.mycoll.find()
[
  { _id: ObjectId('65dc9be53fa62446c8b13b5e'), name: 'Max', age: 30 },
  {
    _id: ObjectId('65dc9be53fa62446c8b13b5f'),
    name: 'Christine',
    age: 22
  },
  {
    _id: ObjectId('65dc9be53fa62446c8b13b60'),
    name: 'Stephen',
    age: 28
  }
]
```

Retrieving a single document using a key-value pair:

```
newdb> db.mycoll.findOne(
... {name:"Max"}
... );
{ _id: ObjectId('65dc9be53fa62446c8b13b5e'), name: 'Max', age: 30 }
```

Update a single document for a given condition:

```
newdb> db.mycoll.update(
... {name:"Max"},{$set:{email:"maximus@gmail.com"}}
... );
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 1,
  modifiedCount: 1,
  upsertedCount: 0
}
```

Updating multiple documents using a given condition:

```
newdb> db.mycoll.updateMany(
... {age:{$lt:30}},{$set:{status:"active"}}
... );
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 2,
  modifiedCount: 2,
  upsertedCount: 0
}
```

```
newdb> db.mycoll.find()
[
  {
    _id: ObjectId('65dc9be53fa62446c8b13b5e'),
    name: 'Max',
    age: 30,
    email: 'maximus@gmail.com'
  },
  {
    _id: ObjectId('65dc9be53fa62446c8b13b5f'),
    name: 'Christine',
    age: 22,
    status: 'active'
  },
  {
    _id: ObjectId('65dc9be53fa62446c8b13b60'),
    name: 'Stephen',
    age: 28,
    status: 'active'
  }
]
```

Deletion of a single document:

```
newdb> db.mycoll.deleteOne(
... {name:"Max"}
... );
{ acknowledged: true, deletedCount: 1 }
```

```
newdb> db.mycoll.find()
[
  {
    _id: ObjectId('65dc9be53fa62446c8b13b5f'),
    name: 'Christine',
    age: 22,
    status: 'active'
  },
  {
    _id: ObjectId('65dc9be53fa62446c8b13b60'),
    name: 'Stephen',
    age: 28,
    status: 'active'
  }
]
```

Deletion of multiple records in the collection using a condition:

```
newdb> db.mycoll.deleteMany(
... {age:{$lt:25}}
... );
{ acknowledged: true, deletedCount: 1 }
newdb> db.mycoll.find()
[
  {
    _id: ObjectId('65dc9be53fa62446c8b13b60'),
    name: 'Stephen',
    age: 28,
    status: 'active'
  }
]
```

To remove an entire collection:

```
newdb> db.mycoll.drop()
true
```