



DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Discover. Learn. Empower.

Experiment 10

Student Name: Deepasnhu Mandhyan

Branch: CSE

Semester: 5th

Subject Name: ADBMS

UID: 23BCS12327

Section/Group: KRG 3-A

Date of Performance: 30/10/2025

Subject Code: 23CSP-333

1. Aim:

- Create and manage databases and collections.
- Perform CRUD operations — Create, Read, Update, and Delete documents.
- Use aggregation for grouping and summarizing data.
- Understand how to modify, query, and manage collections efficiently in MongoDB.
- Gain practical experience with real-world data handling through command-line operations.

2. DBMS script and output:

```
// 1. Show all databases
```

```
show dbs
```

```
// 2. Create or switch to your database
```

```
use db_gourav
```

```
switched to db db_gourav
```

```
db_gourav>
```

```
// 3. Check current database
```

```
Db
```

```
db_443a7nnpk
```

```
// 4. Create a collection (optional)
```

```
db.createCollection("movies")
```



DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Discover. Learn. Empower.

ok

1

// 5. Insert Operations

```
db.movies.insertOne({  
    title: "Inception", director:  
    "Christopher Nolan", year: 2010,  
    rating: 8.8, genre: "Sci-Fi", features:  
    ["Mind-bending", "Action"],  
    added_by: "Gourav"  
})
```

acknowledged

insertedId

true

6904e7a58146093180d0...

db.movies.insertMany([

```
{    title: "Interstellar",  
    director: "Christopher Nolan",  
    year: 2014,    rating: 8.6,
```



DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Discover. Learn. Empower.

genre: "Sci-Fi", features:

["Space", "Drama"],

added_by: "Gourav"

}, { title: "Avatar",

director: "James Cameron",

year: 2009, rating: 7.8,

genre: "Adventure",

features: ["3D", "Action"],

added_by: "Gourav"

}, { title: "The Dark

Knight", director:

"Christopher Nolan", year:

2008, rating: 9.0, genre:

"Action", features:

["Batman", "Crime"],

added_by: "Gourav"

}

)



DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Discover. Learn. Empower.

```
{  
    "acknowledged": true,  
    insertedIds: {  
        "0": "6904e7bf1e02b7502ad09e60"  
        "1": "6904e7bf1e02b7502ad09e61"  
        "2": "6904e7bf1e02b7502ad09e62"  
    }  
}
```

// 6. Show all collections

```
show collections
```

```
demo  
movies
```

// 7. Read Operations db.movies.find().pretty()

```
db.movies.findOne() db.movies.find({}, { title: 1,  
year: 1, _id: 0 }) db.movies.find({ genre:  
"Action" }) db.movies.find({ "details.language":  
"English" })
```



DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

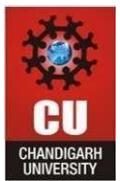
Discover. Learn. Empower.

```
/*
  [
    {
      "_id": "6904c7bf1e02b7582ad09e60",
      "title": "Interstellar",
      "director": "Christopher Nolan",
      "year": 2014,
      "rating": 8.6,
      "genre": "Sci-Fi",
      "features": [ "Space", "Drama" ],
      "added_by": "Gourav",
    },
    {
      "_id": "6904c7bf1e02b7582ad09e61",
      "title": "Avatar",
      "director": "James Cameron",
      "year": 2009,
      "rating": 7.8,
      "genre": "Adventure",
      "features": [ "3D", "Action" ],
      "added_by": "Gourav",
    },
    {
      "_id": "6904c7bf1e02b7582ad09e62",
      "title": "The Dark Knight",
      "director": "Christopher Nolan",
      "year": 2008,
      "rating": 9,
      "genre": "Action",
      "features": [ "Batman", "Crime" ],
      "added_by": "Gourav",
    }
  ]
  [
    {
      "_id": "6904c7a58146093180d09e60",
      "title": "Inception",
      "director": "Christopher Nolan",
      "year": 2010,
      "rating": 8.8,
      "genre": "Sci-Fi",
      "features": [ "Mind-bending", "Action" ],
      "added_by": "Gourav",
    }
  ]
  [
    {
      "title": "Inception", "year": 2010, },
    { "title": "Interstellar", "year": 2014, },
    { "title": "Avatar", "year": 2009, },
    { "title": "The Dark Knight", "year": 2008, }
  ]
  [
    {
      "_id": "6904c7bf1e02b7582ad09e62",
      "title": "The Dark Knight",
      "director": "Christopher Nolan",
      "year": 2008,
      "rating": 9,
      "genre": "Action",
      "features": [ "Batman", "Crime" ],
      "added_by": "Gourav",
    }
  ]
]
```

// 8. Update Operations

```
db.movies.updateOne(
```

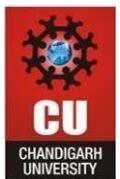
```
  { title: "Avatar" },
```



DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Discover. Learn. Empower.

```
{ $set: { rating: 8.1, genre: "Sci-Fi Adventure" } } )  
  
db.movies.updateOne(  
  
  { title: "Inception" },  
  
  { $push: { features: "Thriller" } }  
  
)  
  
db.movies.updateOne(  
  
  { title: "Inception" },  
  
  { $pull: { features: "Action" } }  
  
)  
  
db.movies.updateMany(  
  
  { director: "Christopher Nolan" },  
  
  { $set: { language: "English" } } )  
  
)  
  
db.movies.updateMany( {}, { $unset: { added_by: "" } } )  
  
db.movies.updateMany( {}, { $set: { color: "Full HD" } } )  
  
db.movies.updateOne(  
  
  { title: "Tenet" },  
  
  { $set: { director: "Christopher Nolan", year: 2020, rating: 7.5 } },  
  
  { upsert: true }  
  
)  
  
// 9. Delete Operations db.movies.deleteOne({ title:  
  "Avatar" }) db.movies.deleteMany({ director:  
  "Christopher Nolan" }) db.movies.deleteMany( {} ) \
```



DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Discover. Learn. Empower.

```
{ "acknowledged": true, "deletedCount": 0, }
{ "acknowledged": true, "deletedCount": 1, }
{ "acknowledged": true, "deletedCount": 0, }
```

// 10. Grouping (Aggregation)

```
db.movies.aggregate([
  { $group: { _id: "$director", total_movies: { $sum: 1 } } }
])
```

```
db.movies.aggregate([
  { $group: { _id: "$genre", total_movies: { $sum: 1 } } }
])
```

// 11. Drop collection

```
db.movies.drop()
```

true

// 12. Drop database

```
db.dropDatabase()
```

ok	dropped
1	db_443a7nnpk