



### Experiment 10

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**Branch:** CSE

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**Subject Name:** ADBMS

**UID:** 23BCS12327

**Section/Group:** KRG 3-A

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#### 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")
```



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,
```



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```
    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"

}

])
```

```
{
  "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" })

```

//
{
  "_id": "6984e7bf1e02b7582ad09c60",
  "title": "Interstellar",
  "director": "Christopher Nolan",
  "year": 2014,
  "rating": 8,.6,
  "genre": "Sci-Fi",
  "features": [ "Space", "Drama" ],
  "added_by": "Gourav",
},
{
  "_id": "6984e7bf1e02b7582ad09c61",
  "title": "Avatar",
  "director": "James Cameron",
  "year": 2009,
  "rating": 7,.8,
  "genre": "Adventure",
  "features": [ "3D", "Action" ],
  "added_by": "Gourav",
},
{
  "_id": "6984e7bf1e02b7582ad09c62",
  "title": "The Dark Knight",
  "director": "Christopher Nolan",
  "year": 2008,
  "rating": 9,
  "genre": "Action",
  "features": [ "Batman", "Crime" ],
  "added_by": "Gourav",
}
]
{
  "_id": "6984e7a58146093180d09c60",
  "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": "6984e7bf1e02b7582ad09c62",
  "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" },



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```
{ $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({}) \
```



```
{ "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