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DA-03 DBMS (MongoDB)

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1) Creating a Database in MongoDB named Shashank_Kumar_21BCE1887

```
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test> use Shashank_Kumar_21BCE1887
switched to db Shashank_Kumar_21BCE1887
Shashank_Kumar_21BCE1887> show dbs
admin   40.00 KiB
config  60.00 KiB
local   72.00 KiB
Shashank_Kumar_21BCE1887> db
Shashank_Kumar_21BCE1887
Shashank_Kumar_21BCE1887>
```

2) Creating Two Collections named Movie and Game inside Shashank_Kumar_21BCE1887 Database.

```
Shashank_Kumar_21BCE1887> db.createCollection('Movie')
{ ok: 1 }
Shashank_Kumar_21BCE1887> show collections
Movie
Shashank_Kumar_21BCE1887> db.createCollection('Game')
{ ok: 1 }
Shashank_Kumar_21BCE1887> show collections
Game
Movie
Shashank_Kumar_21BCE1887>
```

3) Inserting Documents inside the Collection
For Movie – 3 Documents (with insertOne and insertMany)
For Game – 1 Document (with insertOne)

```
Shashank_Kumar_21BCE1887> db.Movie.insertOne({'Name':'Top Gun Maverick', 'Genre'
:'Action', 'Release':2022, 'Actor': 'Tom Cruise'})
{
  acknowledged: true,
  insertedId: ObjectId("642bdb39aeda911835ec8a81")
}
```

```
Shashank_Kumar_21BCE1887> db.Movie.insertMany([{'Name':'The Dark Knight', 'Genre
':'Adventure', 'Release':2008, 'Actor': 'Christian Bale', 'Box Office':'1 B $'},
{'Name': 'Kung Fu Panda', 'Genre':'Animation', 'Release':2008, 'Rating':7.6}])
{
  acknowledged: true,
  insertedIds: {
    '0': ObjectId("642bdcc3aeda911835ec8a82"),
    '1': ObjectId("642bdcc3aeda911835ec8a83")
  }
}
Shashank_Kumar_21BCE1887>
```

```
Shashank_Kumar_21BCE1887> db.Movie.find()
[
  {
    _id: ObjectId("642bdb39aeda911835ec8a81"),
    Name: 'Top Gun Maverick',
    Genre: 'Action',
    Release: 2022,
    Actor: 'Tom Cruise'
  },
  {
    _id: ObjectId("642bdcc3aeda911835ec8a82"),
    Name: 'The Dark Knight',
    Genre: 'Adventure',
    Release: 2008,
    Actor: 'Christian Bale',
    'Box Office': '1 B $'
  },
  {
    _id: ObjectId("642bdcc3aeda911835ec8a83"),
    Name: 'Kung Fu Panda',
    Genre: 'Animation',
    Release: 2008,
    Rating: 7.6
  }
]
Shashank_Kumar_21BCE1887>
```

```
Shashank_21BCE1887> db.createCollection('Game')
{ ok: 1 }
Shashank_21BCE1887> db.Game.insertOne({'Name':'Angry Birds', 'Company':
'Rovio', 'Release':2009})
{
  acknowledged: true,
  insertedId: ObjectId("642c12d29d9d272ceaf0adad")
}
Shashank_21BCE1887> db.Game.find()
[
  {
    _id: ObjectId("642c12d29d9d272ceaf0adad"),
    Name: 'Angry Birds',
    Company: 'Rovio',
    Release: 2009
  }
]
```

4) Deleting a Document from collection Movie
   remove is used to delete Document where Name: Top Gun Maverick

```
Shashank_Kumar_21BCE1887> db.Movie.remove({'Name':'Top Gun Maverick'})
{ acknowledged: true, deletedCount: 1 }
Shashank_Kumar_21BCE1887> db.Movie.find()
[
  {
    _id: ObjectId("642bdcc3aeda911835ec8a82"),
    Name: 'The Dark Knight',
    Genre: 'Adventure',
    Release: 2008,
    Actor: 'Christian Bale',
    'Box Office': '1 B $'
  },
  {
    _id: ObjectId("642bdcc3aeda911835ec8a83"),
    Name: 'Kung Fu Panda',
    Genre: 'Animation',
    Release: 2008,
    Rating: 7.6
  }
]
Shashank_Kumar_21BCE1887>
```

5) Updating a Document in the Collection Movie
   UpdateOne is used to update Document where Name is Kung Fu Panda to Kung Fu Panda 2

```
Shashank_Kumar_21BCE1887> db.Movie.updateOne({Name: 'Kung Fu Panda'},
... {$set: {'Name': 'Kung Fu Panda 3',
...      'Genre': 'Adventure',
...      'Release': 2016,
...      'Rating': 7.1
... }}, {upsert: true})
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 1,
  modifiedCount: 1,
  upsertedCount: 0
}
Shashank_Kumar_21BCE1887> db.Movie.find()
[
  {
    _id: ObjectId("642bdcc3aeda911835ec8a82"),
    Name: 'The Dark Knight',
    Genre: 'Adventure',
    Release: 2008,
    Actor: 'Christian Bale',
    'Box Office': '1 B $'
  },
  {
    _id: ObjectId("642bdcc3aeda911835ec8a83"),
    Name: 'Kung Fu Panda 3',
    Genre: 'Adventure',
    Release: 2016,
    Rating: 7.1
  }
]
Shashank_Kumar_21BCE1887>
```

6) Searching for a specific Document in collection Movie
   find is used to search for Document where Actor: Christian Bale

```
Shashank_Kumar_21BCE1887> db.Movie.find({Actor:'Christian Bale'})
[
  {
    _id: ObjectId("642bdcc3aeda911835ec8a82"),
    Name: 'The Dark Knight',
    Genre: 'Adventure',
    Release: 2008,
    Actor: 'Christian Bale',
    'Box Office': '1 B $'
  }
]
Shashank_Kumar_21BCE1887>
```

7) Deletion a Collection

```
Shashank_21BCE1887> db.Game.drop()
true
```

8) Using distinct

```
Shashank_21BCE1887> db.Movie.distinct('Release')
[ 2008, 2012, 2022 ]
Shashank_21BCE1887> db.Movie.distinct('Name')
[ 'Batman' ]
Shashank_21BCE1887> db.Movie.distinct('Rating')
[ 7.8, 8.4, 9 ]
Shashank_21BCE1887> db.Movie.distinct('Actor')
[ 'Christian Bale', 'Robert Pattinson' ]
Shashank_21BCE1887>
```

9) For Sorting

Sorting in Ascending Order

```
Shashank_21BCE1887> db.Movie.find().sort({'Rating':1})
[
  {
    _id: ObjectId("642c59f3892a044e3a53e3cc"),
    Name: 'Batman',
    Release: 2022,
    Actor: 'Robert Pattinson',
    Rating: 7.8
  },
  {
    _id: ObjectId("642c59f3892a044e3a53e3cd"),
    Name: 'Batman',
    Release: 2012,
    Actor: 'Christian Bale',
    Rating: 8.4
  },
  {
    _id: ObjectId("642c59f3892a044e3a53e3cb"),
    Name: 'Batman',
    Release: 2008,
    Actor: 'Christian Bale',
    Rating: 9
  }
]
```

Sorting in Descending Order

```
Shashank_21BCE1887> db.Movie.find().sort({'Rating':-1})
[
  {
    _id: ObjectId("642c59f3892a044e3a53e3cb"),
    Name: 'Batman',
    Release: 2008,
    Actor: 'Christian Bale',
    Rating: 9
  },
  {
    _id: ObjectId("642c59f3892a044e3a53e3cd"),
    Name: 'Batman',
    Release: 2012,
    Actor: 'Christian Bale',
    Rating: 8.4
  },
  {
    _id: ObjectId("642c59f3892a044e3a53e3cc"),
    Name: 'Batman',
    Release: 2022,
    Actor: 'Robert Pattinson',
    Rating: 7.8
  }
]
```