**- Import the attached json file into your database.**

mongoimport -d imdb -c imdb\_movies --type json --file movies.json –jsonArray

**- Show movies of 2010**

db.imdb\_movies.find({year: {$eq: 2010}}).pretty()

**- How many movies were made in 2009.**

db.imdb\_movies.find({year: {$eq: 2009}}).count()

**- Make a request to retrieve documents from films made in 2008 by excluding the fields: \_id, cast, genres.**

db.imdb\_movies.find({year: {$eq: 2008}}, {\_id: 0, cast: 0, genres: 0}).pretty()

**- Show all movies beginning with the letter A.**

db.imdb\_movies.find({title: {$regex: /^A/, $options: 'm'}}).pretty()

**- View films where “Timothy Gibbs” played in 2011**

db.imdb\_movies.find({year: {$eq: 2011}, cast: {$eq: "Timothy Gibbs"}}).pretty()

**- Show 'Thriller' movies in 2011;**

db.imdb\_movies.find({genres: {$eq: "Thriller"}, year: {$eq: 2011}}).pretty()

**- Display 'Thriller' films made in 2016 in reverse alphabetical order of their 'title'.**

db.imdb\_movies.find({genres: {$eq: "Thriller"}, year: {$eq: 2016}}).sort({title: -1}).pretty()

**- Insert two movies of your choice into the database using a BulkWrite**

db.imdb\_movies.bulkWrite(

    [

        {  insertOne :

            {

                "document" :  {

                    "title" : "The Purge",

                    "year" : "2020",

                    "cast" : [

                                "Jessica Garza" ,

                                "Hannah Anderson",

                                "Cindy Robinson"

                            ],

                    "genres" : [

                                "Horror",

                                "Thriller"

                            ]

                }

            }

        },

        {  insertOne :

            {

                "document" :  {

                    "title" : "Who Am I",

                    "year" : "2020",

                    "cast" : [

                                "Tom Schiling" ,

                                "Elyas M’Barek",

                            ],

                    "genres" : [

                                "Crime",

                                "Drama"

                            ]

                }

            }

        },

    ]

);

**- Delete all films made before 2000.**

db.imdb\_movies.remove({year: {$lt: 2000}}).pretty()

**- Add a rating field which will be of type array of objects for all documents.**

db.imdb\_movies.updateMany({}, {$set: {ratings: []}})

**- Make yourself and a collaborator, the ratings (the rating is out of 5) of two films of your choice, as follows: ratings: [{by: "me", rating: 4}, {by: "collaborator", rating: 5 }]**

db.imdb\_movies.bulkWrite(

    [

        {  updateOne :

            {

                filter :  { "title" : "The Purge"},

                update :  { $set : {

                    "ratings": [

                        {by: "me", rating: 4}, {by: "collaborator", rating: 3}

                    ]

                } }

            }

        },

        {  updateOne :

            {

                filter :  { "title" : "Who Am I"},

                update :  { $set : {

                    "ratings": [

                        {by: "me", rating: 5}, {by: "collaborator", rating: 5}

                    ]

                } }

            }

        },

    ]

);

**- Creating a field that will be the average of all ratings is called the: ar.**

db.imdb\_movies.aggregate([

    {

        $addFields: {

            ar: { avg: "$ratings.rating" }

        }

    },

    {

        $out : "movies"

    }

]);

**- Rename the previously created field, namely: ar, to become averageRating.**

db.imdb\_movies.updateMany({}, {$rename: {"ar": "averageRating"}})

**- Create a views field which will be an array that will contain values ​​as follows: ‘views‘: [123444, 66855,78966]**

db.movies.updateMany({}, {$set : { "views": []}})

db.imdb\_movies.bulkWrite(

    [

        {  updateOne :

            {

                filter :  { "title" : "The Purge"},

                update :  { $set : {

                    "views": [123444, 66855,78966],

                } }

            }

        },

        {  updateOne :

            {

                filter :  { "title" : "Who Am I"},

                update :  { $set : {

                    "views": [102030, 405060,708090]

                } }

            }

        },

    ]

);

**- Creating a field that will be the average of all ratings is called the: ar.**

db.imdb\_movies.aggregate([

    {

        $addFields: {

            ar: { avg: "$ratings.rating" },

        }

    },

    {

        $out : "imdb\_movies"

    }

]);

**- Rename the previously created field, namely: ar, to become averageRating.**

db.imdb\_movies.updateMany( {}, { $rename: { "ar": " averageRating" } } )

**- Create a totalViews field which will be the sum of the view array.**

db.imdb\_movies.aggregate([

    {

        $addFields: {

            totalViews: { $sum: "$views" }

        }

    },

    {

        $out : "imdb\_movies"

    }

]);

**- Create a budget field for all documents and initialize its value to -1.**

db.movies.updateMany({}, {$set: {"budget": -1}})

**- Edit the budget values ​​for the movies you added.**

db.imdb\_movies.bulkWrite(

    [

        {  updateOne :

            {

                filter :  { "title" : "The Purge"},

                update :  { $set : {

                    "budget" : 100,

                } }

            }

        },

        {  updateOne :

            {

                filter :  { "title" : "Who Am I"},

                update :  { $set : {

                    "budget" : 200,

                } }

            }

        },

    ]

);

**- Update the movies you added earlier.**

db.imdb\_movies.bulkWrite(

    [

        {  updateOne :

            {

                filter :  { "title" : "The Purge"},

                update :  { $set : {

                    "year" : "2014",

                    "cast" : [

                                "Ilyass Benhadda",

                            ]

                } }

            }

        },

        {  updateOne :

            {

                filter :  { "title" : "Who Am I"},

                update :  { $set : {

                    "year" : "2014",

                    "cast" : [

                                "Marzok Abdollah",

                            ]

                } }

            }

        },

    ]

);

**- Back up your database.(be sure that you already has mongodump tool in bin folder)**

Open cmd as administrator, then enter in bin folder by typing :

cd C:\Program Files\MongoDB\Server\4.4\bin

Then to backup a imdb database type :

Mongodump –db imdb

It’s will automatically create a folder called dump in bin folder, has backup of imdb database