MongoDB: Exercise

Creation of a database called Entertainment and collection Movie with following structure/data, (insertion of documents in the collection)

```
{title : Fight Club
writer: Chuck Palahniuk
vear: 1999,
genre,
rating,
actors:[
 Brad Pitt
 Edward Norton
franchise: The Hobbit}
> use entertainment
switched to db entertainment
> db.createCollection("movie")
{ "ok": 1 }
> db.movie.insertMany([{title: "Fight Club", writer:"Chuck Palahnuik", year: 1999, genre:
"Action", rating: 9.5, actors: ["Brad Pitt", "Edward Norton"], franchise: "Fight Club"}, {title: "Harry
Potter 1", writer: "JK Rowling", year: 2001, genre: "Fantasy", rating: 9, actors: ["Daniel Radcliffe",
"Emma Watson"], franchise: "Harry Potter"}, {title: "Game Night", writer: "Ted Danson", year:
2012, genre: "Comedy", rating: 8.5, actors: ["Rachel McAdams", "Ted Phillips"]}, {title: "The
Hobbit: Desolation of Smaug", writer: "Tolkien", year: 2015, genre: "Fanatsy", rating: 7.5, actors:
["Martin Freeman", "Graham Norton"], franchise: "The Hobbit"}, {title: "The Irishman",
writer: "Ken Cosgrove", year: 2019, genre: "Drama", rating: 9.5, actors: ["Robert DeNiro", "Joe
Pesci", "Al Pacino"]}])
{
       "acknowledged": true,
       "insertedIds": [
              ObjectId("5e80c84dd3a6468e17088c0c"),
              ObjectId("5e80c84dd3a6468e17088c0d"),
              ObjectId("5e80c84dd3a6468e17088c0e"),
              ObjectId("5e80c84dd3a6468e17088c0f"),
              ObjectId("5e80c84dd3a6468e17088c10")
       ]
> db.movie.insertMany([{title: "There's nothing about mary", writer:"Jan Michael Vincent", year:
2000, genre: "Action", rating: 9, actors: ["Jack Black", "Cameron Diaz"], franchise: "Cool
Whip"},{title: "Jan Quadrant Vincent 16", writer: "Kool Aid Man", year: 2022, genre: "Action",
rating: 10, actors: ["Jan Michael Vincent", "Jan Michael Vincent"], franchise: "Jan Quadrant
16"},{title: "Diamonds don't cry", writer: "Tom Shcur", year: 2000, genre: "Drama", rating: 10,
actors: ["Cindy Crawford", "Ted Danson"]}, {title: "Hey Jude", writer: "Britney Spears", year: 2007,
genre: "Romance", rating: 1.5, actors: ["Bran Pyt", "Not Clooney"], franchise: "Generic Heist
Franchise"},{title: "The Countrymen", writer: "Joe Pesci", year: 2020, genre: "Comedy", rating: 6.5,
actors: ["Robert DeNiro", "Rainn Wilson", "John Hamm"]}])
{
```

```
"acknowledged": true,
       "insertedIds":[
              ObjectId("5e80cb72d3a6468e17088c11"),
              ObjectId("5e80cb72d3a6468e17088c12").
              ObjectId("5e80cb72d3a6468e17088c13"),
              ObjectId("5e80cb72d3a6468e17088c14"),
              ObjectId("5e80cb72d3a6468e17088c15")
       1
}
> db.movie.insertMany([{title: "There's too much about mary", writer:"Jan Michael Vincent", year:
2000, genre: "Action", rating: 7, actors: ["Jack Black", "Cameron Diaz", "Amanda Seyfried"],
franchise: "Cool Whip"},{title: "Jan Quadrant Vincent 16 Part 2", writer:"Seth MacFarlane", year:
2016, genre: "Action", rating: 9.8, actors: ["Jan Michael Vincent", "Jan Michael Vincent"],
franchise: "Jan Quadrant 16"}, {title: "Bye Bye Birdie", writer: "Tommy Vercetti", year: 2020, genre:
"Drama", rating: 2, actors: ["Cindy Crawford", "Saint John Paul"]}, {title: "Harry Potter 2",
writer: "JK Rowling", year: 2003, genre: "Fantasy", rating: 6.5, actors: ["Daniel Radcliffe", "Emma
Watson", "Rupert Grint"], franchise: "Harry Potter"}, {title: "Transporter 4", writer: "Jerry Seinfeld",
year: 2015, genre: "Action", rating: 7.5, actors: ["Jason Statham", "Jessica Chastain", "Jennifer
Aniston"]}])
{
       "acknowledged": true,
       "insertedIds":[
              ObjectId("5e80d4a7d3a6468e17088c16"),
              ObjectId("5e80d4a7d3a6468e17088c17"),
              ObjectId("5e80d4a7d3a6468e17088c18"),
              ObjectId("5e80d4a7d3a6468e17088c19"),
              ObjectId("5e80d4a7d3a6468e17088c1a")
       1
}
```

Queries:

1. get all documents from Movie collection.

```
> db.movie.find().pretty()

{
        "_id" : ObjectId("5e80c84dd3a6468e17088c0c"),
        "title" : "Fight Club",
        "writer" : "Chuck Palahnuik",
        "year" : 1999,
        "genre" : "Action",
        "rating" : 9.5,
        "actors" : [
```

```
"Brad Pitt",
             "Edward Norton"
      ],
      "franchise": "Fight Club"
}
{
      " id": ObjectId("5e80c84dd3a6468e17088c0d"),
      "title": "Harry Potter 1",
      "writer": "JK Rowling",
      "year": 2001,
      "genre": "Fantasy",
      "rating": 9,
      "actors" : [
             "Daniel Radcliffe",
             "Emma Watson"
      ],
      "franchise": "Harry Potter"
}
{
      "_id": ObjectId("5e80c84dd3a6468e17088c0e"),
      "title": "Game Night",
      "writer": "Ted Danson",
      "year": 2012,
      "genre": "Comedy",
      "rating": 8.5,
      "actors" : [
```

```
"Rachel McAdams",
             "Ted Phillips"
      ]
}
      " id": ObjectId("5e80c84dd3a6468e17088c0f"),
      "title": "The Hobbit: Desolation of Smaug",
      "writer": "Tolkien",
      "year": 2015,
      "genre": "Fanatsy",
      "rating": 7.5,
      "actors" : [
             "Martin Freeman",
             "Graham Norton"
      ],
      "franchise": "The Hobbit"
}
{
      "_id": ObjectId("5e80c84dd3a6468e17088c10"),
      "title": "The Irishman",
      "writer": "Ken Cosgrove",
      "year": 2019,
      "genre": "Drama",
      "rating": 9.5,
      "actors" : [
             "Robert DeNiro",
```

```
"Joe Pesci",
             "Al Pacino"
      ]
}
      " id": ObjectId("5e80cb72d3a6468e17088c11"),
      "title": "There's nothing about mary",
      "writer": "Jan Michael Vincent",
      "year": 2000,
      "genre": "Action",
      "rating": 9,
      "actors" : [
             "Jack Black",
             "Cameron Diaz"
      ],
      "franchise": "Cool Whip"
}
{
      " id": ObjectId("5e80cb72d3a6468e17088c12"),
      "title": "Jan Quadrant Vincent 16",
      "writer": "Kool Aid Man",
      "year": 2022,
      "genre": "Action",
      "rating": 10,
      "actors" : [
             "Jan Michael Vincent",
```

```
"Jan Michael Vincent"
      ],
      "franchise": "Jan Quadrant 16"
}
{
      " id": ObjectId("5e80cb72d3a6468e17088c13"),
      "title": "Diamonds don't cry",
      "writer": "Tom Shcur",
      "year": 2000,
      "genre": "Drama",
      "rating": 10,
      "actors" : [
             "Cindy Crawford",
             "Ted Danson"
      ]
}
{
      "_id": ObjectId("5e80cb72d3a6468e17088c14"),
      "title": "Hey Jude",
      "writer": "Britney Spears",
      "year": 2007,
      "genre": "Romance",
      "rating": 1.5,
      "actors" : [
             "Bran Pyt",
             "Not Clooney"
```

```
],
      "franchise": "Generic Heist Franchise"
}
{
      "_id": ObjectId("5e80cb72d3a6468e17088c15"),
      "title": "The Countrymen",
      "writer": "Joe Pesci",
      "year": 2020,
      "genre": "Comedy",
      "rating": 6.5,
      "actors" : [
             "Robert DeNiro",
             "Rainn Wilson",
             "John Hamm"
      ]
}
      "_id": ObjectId("5e80d4a7d3a6468e17088c16"),
      "title": "There's too much about mary",
      "writer": "Jan Michael Vincent",
      "year": 2000,
      "genre": "Action",
      "rating": 7,
      "actors" : [
             "Jack Black",
             "Cameron Diaz",
```

```
"Amanda Seyfried"
      ],
      "franchise": "Cool Whip"
}
{
      " id": ObjectId("5e80d4a7d3a6468e17088c17"),
      "title": "Jan Quadrant Vincent 16 Part 2",
      "writer": "Seth MacFarlane",
      "year": 2016,
      "genre": "Action",
      "rating": 9.8,
      "actors" : [
             "Jan Michael Vincent",
             "Jan Michael Vincent"
      ],
      "franchise": "Jan Quadrant 16"
}
{
      " id": ObjectId("5e80d4a7d3a6468e17088c18"),
      "title": "Bye Bye Birdie",
      "writer": "Tommy Vercetti",
      "year": 2020,
      "genre": "Drama",
      "rating": 2,
      "actors" : [
             "Cindy Crawford",
```

```
"Saint John Paul"
      1
}
{
      "_id": ObjectId("5e80d4a7d3a6468e17088c19"),
      "title": "Harry Potter 2",
      "writer": "JK Rowling",
      "year": 2003,
      "genre": "Fantasy",
      "rating": 6.5,
      "actors" : [
              "Daniel Radcliffe",
              "Emma Watson",
              "Rupert Grint"
      ],
      "franchise": "Harry Potter"
}
{
      "_id": ObjectId("5e80d4a7d3a6468e17088c1a"),
      "title": "Transporter 4",
      "writer": "Jerry Seinfeld",
      "year": 2015,
      "genre": "Action",
      "rating": 7.5,
      "actors" : [
              "Jason Statham",
```

```
"Jessica Chastain",
              "Jennifer Aniston"
       ]
}
2. get all documents with writer set to "Quentin Tarantino"
> db.movie.find({writer: "Quentin Tarantino"}).pretty()
{
       "_id": ObjectId("5e80c84dd3a6468e17088c0d"),
       "title": "Harry Potter 1",
       "writer": "Quentin Tarantino",
       "year": 2001,
       "genre": "Fantasy",
       "rating": 9,
       "actors" : [
              "Daniel Radcliffe",
              "Emma Watson"
       ],
       "franchise": "Harry Potter"
}
{
       "_id": ObjectId("5e80d4a7d3a6468e17088c19"),
       "title": "Harry Potter 2",
       "writer": "Quentin Tarantino",
       "year": 2003,
       "genre": "Fantasy",
```

```
"rating": 6.5,
       "actors" : [
              "Daniel Radcliffe",
              "Emma Watson",
              "Rupert Grint"
       ],
       "franchise": "Harry Potter"
}
3. get all documents where actors include "Brad Pitt"
> db.movie.find({actors: "Brad Pitt"}).pretty()
{
       " id": ObjectId("5e80c84dd3a6468e17088c0c"),
       "title": "Fight Club",
       "writer": "Chuck Palahnuik",
       "year": 1999,
       "genre": "Action",
       "rating": 9.5,
       "actors" : [
              "Brad Pitt",
              "Edward Norton"
       ],
       "franchise": "Fight Club"
}
```

4. get all documents with franchise set to "The Hobbit"

```
> db.movie.find({franchise: "The Hobbit"}).pretty()
{
       " id": ObjectId("5e80c84dd3a6468e17088c0f"),
       "title": "The Hobbit: Desolation of Smaug",
       "writer": "Tolkien",
       "year": 2015,
       "genre": "Fanatsy",
       "rating": 7.5,
       "actors": [
              "Martin Freeman",
              "Graham Norton"
       ],
       "franchise": "The Hobbit"
}
```

5. get all movies released in the 90s

```
>>> db.movie.find({$and: [{year: {$lt: 2000}}}, {year: {$gt:1990}}}]}).pretty()
{

"__id": ObjectId("5e80c84dd3a6468e17088c0c"),

"title": "Fight Club",

"writer": "Chuck Palahnuik",

"year": 1999,

"genre": "Action",

"rating": 9.5,

"actors": [
```

```
"Brad Pitt",
              "Edward Norton"
      ],
       "franchise": "Fight Club"
}
{
      " id": ObjectId("5e81d3d6a891d0cb41142565"),
       "title": "Commando",
       "writer": "Seth MacFarlane",
      "year": 1999,
       "genre": "Comedy",
       "rating": 7.5,
       "actors":[
              "Sylvester Stallone",
              "Lindsay Lohan"
      ],
       "franchise": "Commando"
}
6. get all movies released before the year 2000 or after 2010
> db.movie.aggregate([{$match: {$or: [{year: {$lt: 2000}}}, {year: {$gt: 2010}}]}}]).pretty()
{
      " id": ObjectId("5e80c84dd3a6468e17088c0c"),
      "title": "Fight Club",
      "writer" : "Chuck Palahnuik",
       "year": 1999,
```

```
"genre": "Action",
      "rating": 9.5,
      "actors" : [
             "Brad Pitt",
             "Edward Norton"
      ],
      "franchise": "Fight Club"
}
{
      " id": ObjectId("5e80c84dd3a6468e17088c0e"),
      "title": "Game Night",
      "writer": "Ted Danson",
      "year": 2012,
      "genre": "Comedy",
      "rating": 8.5,
      "actors" : [
             "Rachel McAdams",
             "Ted Phillips"
      ]
}
      "_id": ObjectId("5e80c84dd3a6468e17088c0f"),
      "title": "The Hobbit: Desolation of Smaug",
      "writer": "Tolkien",
      "year": 2015,
      "genre": "Fanatsy",
```

```
"rating": 7.5,
      "actors" : [
             "Martin Freeman",
             "Graham Norton"
      ],
      "franchise": "The Hobbit"
}
{
      "_id": ObjectId("5e80c84dd3a6468e17088c10"),
      "title": "The Irishman",
      "writer": "Ken Cosgrove",
      "year": 2019,
      "genre": "Drama",
      "rating": 9.5,
      "actors" : [
             "Robert DeNiro",
             "Joe Pesci",
             "Al Pacino"
      ]
}
      "_id": ObjectId("5e80cb72d3a6468e17088c11"),
      "title": "There's nothing about mary",
      "writer": "Jan Michael Vincent",
      "year": 1967,
      "genre": "Action",
```

```
"rating" : 9,
      "actors" : [
             "Jack Black",
             "Cameron Diaz"
      ],
      "franchise": "Cool Whip"
}
{
      "_id": ObjectId("5e80cb72d3a6468e17088c12"),
      "title": "Jan Quadrant Vincent 16",
      "writer": "Kool Aid Man",
      "year": 2022,
      "genre": "Action",
      "rating": 10,
      "actors" : [
             "Jan Michael Vincent",
             "Jan Michael Vincent"
      ],
      "franchise": "Jan Quadrant 16"
}
{
      "_id": ObjectId("5e80cb72d3a6468e17088c15"),
      "title": "The Countrymen",
      "writer": "Joe Pesci",
      "year": 2020,
      "genre": "Comedy",
```

```
"rating": 6.5,
      "actors" : [
             "Robert DeNiro",
             "Rainn Wilson",
             "John Hamm"
      ]
}
{
      "_id": ObjectId("5e80d4a7d3a6468e17088c16"),
      "title": "There's too much about mary",
      "writer": "Jan Michael Vincent",
      "year": 1967,
      "genre": "Action",
      "rating": 7,
      "actors" : [
             "Jack Black",
             "Cameron Diaz",
             "Amanda Seyfried"
      ],
      "franchise": "Cool Whip"
}
{
      " id": ObjectId("5e80d4a7d3a6468e17088c17"),
      "title": "Jan Quadrant Vincent 16 Part 2",
      "writer": "Seth MacFarlane",
      "year": 2016,
```

```
"genre": "Action",
      "rating": 9.8,
      "actors" : [
              "Jan Michael Vincent",
              "Jan Michael Vincent"
      ],
      "franchise": "Jan Quadrant 16"
}
{
      " id": ObjectId("5e80d4a7d3a6468e17088c18"),
      "title": "Bye Bye Birdie",
      "writer": "Tommy Vercetti",
      "year": 2020,
      "genre": "Drama",
      "rating": 2,
      "actors" : [
              "Cindy Crawford",
              "Saint John Paul"
      ]
}
      "_id": ObjectId("5e80d4a7d3a6468e17088c1a"),
      "title": "Transporter 4",
      "writer": "Jerry Seinfeld",
      "year": 2015,
      "genre": "Action",
```

```
"rating": 7.5,
       "actors" : [
              "Jason Statham",
              "Jessica Chastain",
              "Jennifer Aniston"
       1
}
7. add a synopsis to "The Hobbit: An Unexpected Journey": "A reluctant hobbit, Bilbo
Baggins, sets out to the Lonely Mountain with a spirited group of dwarves to reclaim their
mountain home - and the gold within it - from the dragon Smaug."
> db.movie.update({title: "The Hobbit: Desolation of Smaug"}, {$set: {synopsis: "A reluctant
hobbit, Bilbo Baggins, sets out to the Lonely Mountain with a spirited group of dwarves to reclaim
their mountain home - and the gold within it - from the dragon Smaug."}})
WriteResult({ "nMatched": 1, "nUpserted": 0, "nModified": 1 })
> db.movie.find({title: "The Hobbit: Desolation of Smaug"}).pretty()
{
       " id": ObjectId("5e80c84dd3a6468e17088c0f"),
       "title": "The Hobbit: Desolation of Smaug",
       "writer": "Tolkien",
       "year": 2015,
       "genre": "Fanatsy",
       "rating": 7.5,
       "actors" : [
              "Martin Freeman",
              "Graham Norton"
       ],
       "franchise": "The Hobbit",
```

```
"synopsis": "A reluctant hobbit, Bilbo Baggins, sets out to the Lonely Mountain with a
spirited group of dwarves to reclaim their mountain home - and the gold within it - from the dragon
Smaug."
}
8. add an actor named "Samuel L. Jackson" to the movie "Pulp Fiction"
> db.movie.find({title: "Pulp Fiction"}).pretty()
{
       " id": ObjectId("5e80dc49a891d0cb41142562"),
       "title": "Pulp Fiction",
       "writer": "Quentin Tarantino",
       "year": 1990,
       "genre": "Action",
       "rating": 10,
       "actors" : [
              "John Travolta",
              "John Hamm"
       1
}
> db.movie.update({title: "Pulp Fiction"}, {$set: {"actors.0": "Samuel L Jackson"}})
WriteResult({ "nMatched": 1, "nUpserted": 0, "nModified": 1 })
> db.movie.find({title: "Pulp Fiction"}).pretty()
{
       " id": ObjectId("5e80dc49a891d0cb41142562"),
       "title": "Pulp Fiction",
       "writer": "Quentin Tarantino",
```

"year": 1990,

```
"genre": "Action",

"rating": 10,

"actors": [

"Samuel L Jackson",

"John Travolta",

"John Hamm"

]
```

}

9. find all movies that have a synopsis that contains the word "Bilbo"

```
> db.movie.find({synopsis: {$regex: "Bilbo"}}).pretty()
{
       " id": ObjectId("5e80c84dd3a6468e17088c0f"),
       "title": "The Hobbit: Desolation of Smaug",
       "writer": "Tolkien",
       "year": 2015,
       "genre": "Fanatsy",
       "rating": 7.5,
       "actors" : [
              "Martin Freeman",
              "Graham Norton"
       ],
       "franchise": "The Hobbit",
       "synopsis": "A reluctant hobbit, Bilbo Baggins, sets out to the Lonely Mountain with a
spirited group of dwarves to reclaim their mountain home - and the gold within it - from the dragon
Smaug."
```

10. find all movies that have a synopsis that contains the word "Bilbo" and not the word "Gandalf"

```
> db.movie.find({$and: [{synopsis: {$regex: "Bilbo"}}, {synopsis: {$not: {$regex: }
"gandalf"}}}]).pretty()
{
       " id": ObjectId("5e80c84dd3a6468e17088c0f"),
       "title": "The Hobbit: Desolation of Smaug",
       "writer": "Tolkien",
       "year": 2015,
       "genre": "Fanatsy",
       "rating": 7.5,
       "actors" : [
              "Martin Freeman",
              "Graham Norton"
       ],
       "franchise": "The Hobbit",
       "synopsis": "A reluctant hobbit, Bilbo Baggins, sets out to the Lonely Mountain with a
spirited group of dwarves to reclaim their mountain home - and the gold within it - from the dragon
Smaug."
}
11. delete the movie "Avatar"
> db.movie.find({title: "Avatar"}).pretty()
{
       " id": ObjectId("5e81d2cba891d0cb41142563"),
       "title": "Avatar",
       "writer": "James Cameron",
       "year": 2009,
       "genre": "Sci-Fi",
```

```
"rating": 10
}
> db.movie.remove({title: "Avatar"})
WriteResult({ "nRemoved" : 1 })
> db.movie.find({title: "Avatar"}).pretty()
12. find all movies that have a synopsis that contains the word "dwarves" or "hobbit"
> db.movie.find({$or:[{synopsis: {$regex: "Bilbo"}}, {synopsis: {$regex: "gandalf"}}]}).pretty()
{
       " id": ObjectId("5e80c84dd3a6468e17088c0f"),
       "title": "The Hobbit: Desolation of Smaug",
       "writer": "Tolkien",
       "year": 2015,
       "genre": "Fanatsy",
       "rating": 7.5,
       "actors" : [
              "Martin Freeman",
              "Graham Norton"
       ],
       "franchise": "The Hobbit",
       "synopsis": "A reluctant hobbit, Bilbo Baggins, sets out to the Lonely Mountain with a
spirited group of dwarves to reclaim their mountain home - and the gold within it - from the dragon
Smaug."
}
13. Find all movie with genre as an "action" and actor is Sylvester Stallone
> db.movie.find({$and: [{genre: "Action"}, {actors: "Sylvester Stallone"}]}).pretty()
{
```

```
" id": ObjectId("5e81d3a0a891d0cb41142564"),
      "title": "Rocky",
      "writer": "John Marsh",
      "year": 1987,
      "genre": "Action",
      "rating": 10,
      "actors":[
             "Sylvester Stallone",
             "Cindy Crawford"
      ],
      "franchise": "Rocky"
}
{
      "_id": ObjectId("5e81d421a891d0cb41142566"),
      "title": "Expendables",
      "writer": "Chuck Norris",
      "year": 2017,
      "genre": "Action",
      "rating": 9.5,
      "actors": [
             "Sylvester Stallone",
             "Arnold Shwarznegger",
             "Dolph Lundgreen"
      ],
      "franchise": "Expendables"
}
```

14. Find movies that are comedies and dramas at the same time or have a rating 5

```
> db.movie.find({$or: [{$and: [{genre: "Comedy"}, {genre: "Drama"}]}, {rating: 5}]}).pretty()
{
       " id": ObjectId("5e81d421a891d0cb41142566"),
       "title": "Expendables",
       "writer": "Chuck Norris",
       "year": 2017,
       "genre": "Action",
       "rating": 5,
       "actors" : [
              "Sylvester Stallone",
              "Arnold Shwarznegger",
              "Dolph Lundgreen"
      ],
       "franchise": "Expendables"
}
{
      "_id": ObjectId("5e81d50aa891d0cb41142567"),
       "title": "Sad Horse",
       "writer": "Davis Day",
       "year": 2007,
       "genre":[
              "Comedy",
              "Drama"
      ],
       "rating": 5,
```

```
"actors" : [
             "Jan Michael Vincent",
             "Michael Douglas",
             "Dolph Lundgreen"
      ]
}
{
      "_id": ObjectId("5e81d540a891d0cb41142568"),
      "title": "All about that jazz",
      "writer": "Danny Devito",
      "year": 2017,
      "genre":[
             "Comedy",
             "Drama"
      ],
      "rating": 7,
      "actors" : [
             "Michael Douglas",
             "Rachel McAdams"
      ]
}
```