

Setup

```
PROBLEMS OUTPUT TERMINAL DEBUG CONSOLE [mongo + -] [ ] [v] [x]

"MI" { "_id": 10, "title": "Gladiator", "director": "Ridley Scott", "yearReleased": 2000, "leadActors": ["Russell Crowe", "Joaquin Phoenix", "Connie Nielsen", "Oliver Reed"], "lengthInMin": 155, "genre": ["Action", "Adventure", "Drama"], "MPAA": "R" }, "Crowe", "Joaquin Phoenixi...
...
Mongo { "_id": 1, "title": "Wonder Woman", "director": "Patty Jenkins", "yearReleased": 2017, "leadActors": ["Gal Gadot", "Chris Pine", "Robin Wright", "Jesse Plemons", "Tom Tykwer", "yearReleased": 2012, "leadActors": ["Tom Hanks", "Halle Berry", "Hugh Grant", "Jim Broadbent", "Jim Sturgess", "Hugo Weaving"], "lengthInMin": 172, "genre": ["Action", "Drama", "Mystery"], "MPAA": "R" }, { "_id": 4, "title": "Gone With the Wind", "director": "Victor Fleming", "yearReleased": 1939, "leadActors": ["Clark Gable", "Vivien Leigh", "Thomas Mitchell", "Olivia de Havilland", "Leslie Howard"], "lengthInMin": 230, "genre": ["Drama", "History", "Romance"], "MPAA": "G" }, { "_id": 5, "title": "Spartan", "director": "Mel Brooks", "yearReleased": 1980, "leadActors": ["Mel Brooks", "John Candy", "Rick Moran", "Jonathan Demme", "yearReleased": 1991, "leadActors": ["Julie Foster", "Anthony Quinn", "Anthony Quinn", "Tony Kaye", "yearReleased": 1990, "leadActors": ["Edward Norton", "Edward Furlong", { "_id": 8, "title": "Psycho", "director": "Alfred Hitchcock", "yearReleased": 1980, "leadActors": ["Anthony Perkins", "Vera Miles", "John Gavin", "d Horton", { "_id": 9, "title": "The Pianist", "director": "Roman Polanski", "yearReleased": 2002, "leadActors": ["Adrien Brody", "Fania Fox", "Michal Zebrowski", "Ed Stoppard"], "lengthInMin": 150, "genre": ["Biography", "Drama", "Music"], "MPAA": "R" }, { "_id": 10, "title": "Gladiator", "director": "Ridley Scott", "yearReleased": 2000, "leadActors": ["Russell Crowe", "Joaquin Phoenix", "Connie Nielsen", "Oliver Reed"], "lengthInMin": 155, "genre": ["Action", "Adventure", "Drama"], "MPAA": "R" }, "Crowe", "Joaquin Phoenixi...
}
{
  "acknowledged": true,
  "insertedIds": [
    1,
    2,
    3,
    4,
    5,
    6,
    7,
    8,
    9,
    10
  ]
}
MongoDB Enterprise atlas #0188e shard 0:PRIMARY> ]]
```

Part 1

Run the following queries:

- Find all movies that are longer than 2 hours

`db.movies.find({ lengthInMin : { $gt : 120 } })`

```
MongoDB Enterprise atlas #0188e-shard-0:PRIMARY> db.users.find({ _id : { $gt : 1 } })
{ "_id": 2, "lastName": "Wilson", "firstName": "Codyboy", "age": 18, "favoriteColor": "blue" }
MongoDB Enterprise atlas #0188e-shard-0:PRIMARY> db.movies.find({lengthInMin : { $gt : 120}})
uncaught exception: SyntaxError: missing ) after argument list
@(:shell):1:42
MongoDB Enterprise atlas #0188e shard 0:PRIMARY> db.movies.find({ lengthInMin : { $gt : 120 } })
{ "_id": 1, "title": "Wonder Woman", "director": "Patty Jenkins", "yearReleased": 2017, "leadActors": [ "Gal Gadot", "Chris Pine", "Robin Wright" ], "lengthInMin": 141, "genre": [ "Action", "Adventure", "Fantasy" ], "MPAA": "PG-13" }, { "_id": 2, "title": "Cloud Atlas", "director": "Tom Tykwer", "yearReleased": 2012, "leadActors": [ "Tom Hanks", "Halle Berry", "Hugh Grant", "Jim Broadbent", "Jim Sturgess", "Hugo Weaving" ], "lengthInMin": 172, "genre": [ "Action", "Drama", "Mystery" ], "MPAA": "R" }, { "_id": 4, "title": "Gone With the Wind", "director": "Victor Fleming", "yearReleased": 1939, "leadActors": [ "Clark Gable", "Vivien Leigh", "Thomas Mitchell", "Olivia de Havilland", "Leslie Howard" ], "lengthInMin": 230, "genre": [ "Drama", "History", "Romance" ], "MPAA": "G" }, { "_id": 9, "title": "The Pianist", "director": "Roman Polanski", "yearReleased": 2002, "leadActors": [ "Adrien Brody", "Fania Fox", "Michal Zebrowski", "Ed Stoppard" ], "lengthInMin": 150, "genre": [ "Biography", "Drama", "Music" ], "MPAA": "R" }, { "_id": 10, "title": "Gladiator", "director": "Ridley Scott", "yearReleased": 2000, "leadActors": [ "Russell Crowe", "Joaquin Phoenix", "Connie Nielsen", "Oliver Reed" ], "lengthInMin": 155, "genre": [ "Action", "Adventure", "Drama" ], "MPAA": "R" }
MongoDB Enterprise atlas #0188e-shard-0:PRIMARY> ]]
```

- Find all movies that do not have Tom Hanks as a lead actor

`db.movies.find({ leadActors : {$ne : "Tom Hanks" } })`

```

@shell>1:53
MongoDB Enterprise atlas-m0188e-shard-0:PRIMARY> db.movies.find({ leadActors : {$ne : "Tom Hanks" } })
{ "_id" : ObjectId("60eb274b42307d8ea4fe851e"), "title" : "The Shawshank Redemption", "director" : "Frank Darabont", "yearReleased" : 1994 }
{ "_id" : ObjectId("60eb274b42307d8ea4fe851e"), "title" : "The Dark Knight", "director" : "Christopher Nolan", "yearReleased" : 2008 }
{ "_id" : ObjectId("60eb274b42307d8ea4fe8520"), "title" : "It's a Wonderful Life", "director" : "Frank Capra", "yearReleased" : 1946 }
{ "_id" : 1, "title" : "Wonder Woman", "director" : "Patty Jenkins", "yearReleased" : 2017, "leadActors" : [ "Gal Gadot", "Chris Pine", "Robin Wright" ], "lengthInMin" : 141, "genre" : [ "Action", "Adventure", "Fantasy" ], "MPAA" : "PG-13" }
{ "_id" : 3, "title" : "Pan's Labyrinth", "director" : "Guillermo del Toro", "yearReleased" : 2006, "leadActors" : [ "Ivana Baquero", "Ariadna Gil", "Sergi Lopez" ], "lengthInMin" : 118, "genre" : [ "Drama", "Fantasy", "War", "Foreign" ], "MPAA" : "R" }
{ "_id" : 4, "title" : "Game with the Wind", "director" : "Victor Fleming", "yearReleased" : 1939, "leadActors" : [ "Clark Gable", "Vivien Leigh", "Thomas Mitchell", "Olivia de Havilland", "Leslie Howard" ], "lengthInMin" : 238, "genre" : [ "Drama", "History", "Romance" ], "MPAA" : "G" }
{ "_id" : 5, "title" : "Spaceballs", "director" : "Mel Brooks", "yearReleased" : 1987, "leadActors" : [ "Mel Brooks", "John Candy", "Rick Moranis", "Bill Pullman", "Daphne Zuniga" ], "lengthInMin" : 96, "genre" : [ "Adventure", "Comedy", "Sci-Fi" ], "MPAA" : "PG" }
{ "_id" : 6, "title" : "Silence of the Lambs", "director" : "Jonathan Demme", "yearReleased" : 1991, "leadActors" : [ "Jodie Foster", "Anthony Hopkins", "Anthony Heald" ], "lengthInMin" : 118, "genre" : [ "Crime", "Drama", "Thriller" ], "MPAA" : "R" }
{ "_id" : 7, "title" : "American History X", "director" : "Tony Kaye", "yearReleased" : 1998, "leadActors" : [ "Edward Norton", "Edward Furlong", "Beverly D'Angelo", "Ethan Suplee" ], "lengthInMin" : 119, "genre" : [ "Crime", "Drama" ], "MPAA" : "R" }
{ "_id" : 8, "title" : "Psycho", "director" : "Alfred Hitchcock", "yearReleased" : 1960, "leadActors" : [ "Anthony Perkins", "Vera Miles", "John Gavin", "Janet Leigh" ], "lengthInMin" : 109, "genre" : [ "Horror", "Mystery", "Thriller" ], "MPAA" : "R" }
{ "_id" : 9, "title" : "The Pianist", "director" : "Roman Polanski", "yearReleased" : 2002, "leadActors" : [ "Adrien Brody", "Emilia Fox", "Michal Zebrowski", "Ed Stoppard" ], "lengthInMin" : 159, "genre" : [ "Biography", "Drama", "Music" ], "MPAA" : "R" }
{ "_id" : 10, "title" : "Gladiator", "director" : "Ridley Scott", "yearReleased" : 2000, "leadActors" : [ "Russell Crowe", "Joaquin Phoenix", "Connie Nielsen", "Oliver Reed" ], "lengthInMin" : 155, "genre" : [ "Action", "Adventure", "Drama" ], "MPAA" : "R" }
MongoDB Enterprise atlas-m0188e-shard-0:PRIMARY>

```

- Find all movies that were directed by Mel Brooks

db.movies.find({ director: {\$eq: "Mel Brooks" } })

```

MongoDB Enterprise atlas-m0188e-shard-0:PRIMARY> db.movies.find({ director: {$eq: "Mel Brooks" } })
{ "_id" : 5, "title" : "Spaceballs", "director" : "Mel Brooks", "yearReleased" : 1987, "leadActors" : [ "Mel Brooks", "John Candy", "Rick Moranis", "Bill Pullman", "Daphne Zuniga" ], "lengthInMin" : 96, "genre" : [ "Adventure", "Comedy", "Sci-Fi" ], "MPAA" : "PG" }
MongoDB Enterprise atlas-m0188e-shard-0:PRIMARY>

```

- Find all movies that are not considered Drama

db.movies.find({ genre: {\$ne: "Drama" } })

```

lengthInMin : 96, "genre" : [ "Adventure", "Comedy", "Sci-Fi" ], "MPAA" : "PG" }
MongoDB Enterprise atlas-m0188e-shard-0:PRIMARY> db.movies.find({ genre: {$ne: "Drama" } })
{ "_id" : ObjectId("60eb274b42307d8ea4fe851e"), "title" : "The Shawshank Redemption", "director" : "Frank Darabont", "yearReleased" : 1994 }
{ "_id" : ObjectId("60eb274b42307d8ea4fe851e"), "title" : "The Dark Knight", "director" : "Christopher Nolan", "yearReleased" : 2008 }
{ "_id" : ObjectId("60eb274b42307d8ea4fe8520"), "title" : "It's a Wonderful Life", "director" : "Frank Capra", "yearReleased" : 1946 }
{ "_id" : 1, "title" : "Wonder Woman", "director" : "Patty Jenkins", "yearReleased" : 2017, "leadActors" : [ "Gal Gadot", "Chris Pine", "Robin Wright" ], "lengthInMin" : 141, "genre" : [ "Action", "Adventure", "Fantasy" ], "MPAA" : "PG-13" }
{ "_id" : 5, "title" : "Spaceballs", "director" : "Mel Brooks", "yearReleased" : 1987, "leadActors" : [ "Mel Brooks", "John Candy", "Rick Moranis", "Bill Pullman", "Daphne Zuniga" ], "lengthInMin" : 96, "genre" : [ "Adventure", "Comedy", "Sci-Fi" ], "MPAA" : "PG" }
{ "_id" : 8, "title" : "Psycho", "director" : "Alfred Hitchcock", "yearReleased" : 1960, "leadActors" : [ "Anthony Perkins", "Vera Miles", "John Gavin", "Janet Leigh" ], "lengthInMin" : 109, "genre" : [ "Horror", "Mystery", "Thriller" ], "MPAA" : "R" }
{ "_id" : 109, "genre" : [ "Horror", "Mystery", "Thriller" ], "MPAA" : "R" }
MongoDB Enterprise atlas-m0188e-shard-0:PRIMARY>

```

- Find all movies that are longer than 90 minutes but less than 2 hours

db.movies.find({ \$and: [{ lengthInMin: { \$gt: 90 } }, { lengthInMin: { \$lt: 120 } }]});

```

{ "_id" : 8, "title" : "Psycho", "director" : "Alfred Hitchcock", "yearReleased" : 1960, "leadActors" : [ "Anthony Perkins", "Vera Miles", "John Gavin", "Janet Leigh" ], "lengthInMin" : 109, "genre" : [ "Horror", "Mystery", "Thriller" ], "MPAA" : "R" }
MongoDB Enterprise atlas-m0188e-shard-0:PRIMARY> db.movies.find({
... $and: [{ lengthInMin: { $gt: 90 } }, { lengthInMin: { $lt: 120 } }]});
... });
{ "_id" : 3, "title" : "Pan's Labyrinth", "director" : "Guillermo del Toro", "yearReleased" : 2006, "leadActors" : [ "Ivana Baquero", "Ariadna Gil", "Sergi Lopez" ], "lengthInMin" : 118, "genre" : [ "Drama", "Fantasy", "War", "Foreign" ], "MPAA" : "R" }
{ "_id" : 5, "title" : "Spaceballs", "director" : "Mel Brooks", "yearReleased" : 1987, "leadActors" : [ "Mel Brooks", "John Candy", "Rick Moranis", "Bill Pullman", "Daphne Zuniga" ], "lengthInMin" : 96, "genre" : [ "Adventure", "Comedy", "Sci-Fi" ], "MPAA" : "PG" }
{ "_id" : 6, "title" : "Silence of the Lambs", "director" : "Jonathan Demme", "yearReleased" : 1991, "leadActors" : [ "Jodie Foster", "Anthony Hopkins", "Anthony Heald" ], "lengthInMin" : 118, "genre" : [ "Crime", "Drama", "Thriller" ], "MPAA" : "R" }
{ "_id" : 7, "title" : "American History X", "director" : "Tony Kaye", "yearReleased" : 1998, "leadActors" : [ "Edward Norton", "Edward Furlong", "Beverly D'Angelo", "Ethan Suplee" ], "lengthInMin" : 119, "genre" : [ "Crime", "Drama" ], "MPAA" : "R" }
{ "_id" : 8, "title" : "Psycho", "director" : "Alfred Hitchcock", "yearReleased" : 1960, "leadActors" : [ "Anthony Perkins", "Vera Miles", "John Gavin", "Janet Leigh" ], "lengthInMin" : 109, "genre" : [ "Horror", "Mystery", "Thriller" ], "MPAA" : "R" }
MongoDB Enterprise atlas-m0188e-shard-0:PRIMARY>

```

- Find all movies that are considered Action or Adventure and return only the title of the movie

db.movies.find({ \$or: [{ genre: "Action" }, { genre: "Adventure" }] }, {title:1})

```

MongoDB Enterprise atlas-m0188e-shard-0:PRIMARY> db.movies.find( { $or: [ { genre: "Action" }, { genre: "Adventure" } ] }, {title:1} )
{ "_id" : 1, "title" : "Wonder Woman" }
{ "_id" : 2, "title" : "Cloud Atlas" }
{ "_id" : 5, "title" : "Spaceballs" }
{ "_id" : 10, "title" : "Gladiator" }
MongoDB Enterprise atlas-m0188e-shard-0:PRIMARY>

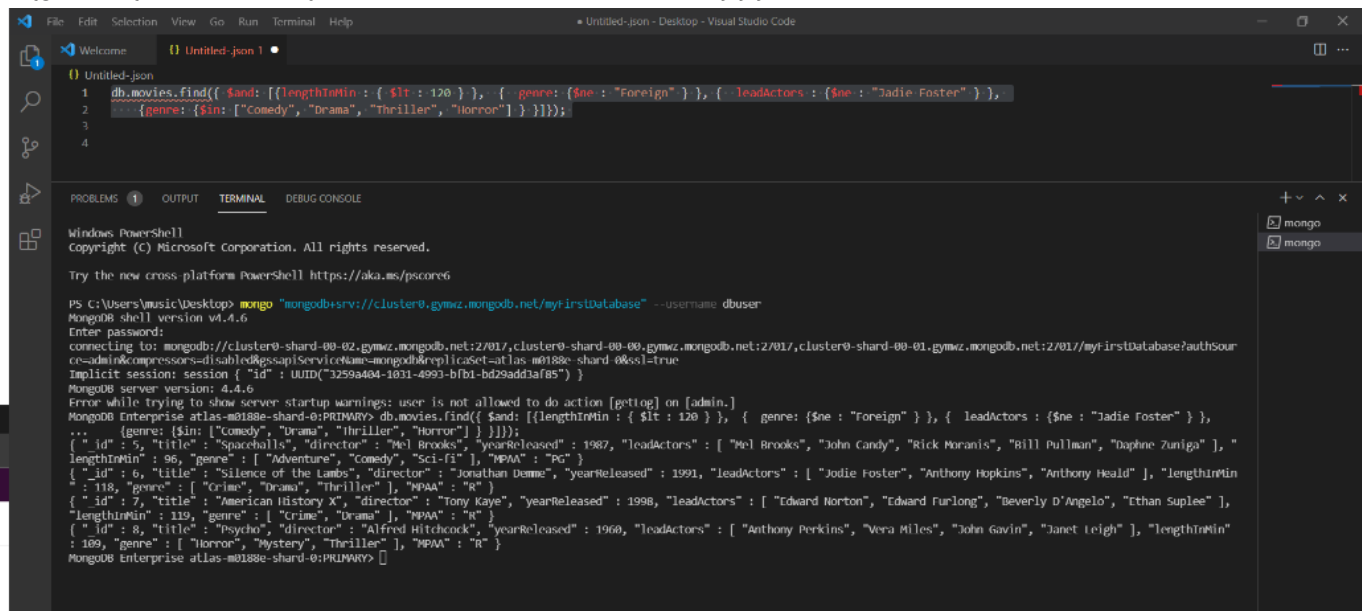
```

Part 2

Below is a real-life scenario. Please read this scenario and run the appropriate queries needed.

The company you work for is having a movie night for all employees, and they are trying to find the perfect movie for movie night. The problem is, so many people have different opinions, and they want to make everyone happy. Sally has very poor eyesight so cannot watch any foreign films but likes comedies and dramas. Robert hates Jodie Foster and refuses to watch any movies with her in it, but likes comedies and horror films. Stewart has somewhere to be after movie night, so he can't watch a movie longer than 2 hours; he prefers thrillers and comedies. After running your query(ies), what movie is going to be played at movie night?

```
db.movies.find({ $and: [{lengthInMin : { $lt : 120 } }, { genre: { $ne : "Foreign" } }, { leadActors : { $ne : "Jodie Foster" } }, {genre: { $in: ["Comedy", "Drama", "Thriller", "Horror"] } } ]});
```



The screenshot shows a Visual Studio Code editor with a file named 'Untitled-json'. The file contains a MongoDB query:

```
1 db.movies.find({ $and: [{lengthInMin : { $lt : 120 } }, { genre: { $ne : "Foreign" } }, { leadActors : { $ne : "Jodie Foster" } }, {genre: { $in: ["Comedy", "Drama", "Thriller", "Horror"] } } ]});
```

Below the editor, the 'TERMINAL' panel shows the execution of the query in a MongoDB shell. The prompt is `PS C:\Users\music\Desktop> mongo "mongodb+srv://cluster0.gymz.mongodb.net/myfirstDatabase" --username dbuser`. The output shows the MongoDB shell version 4.4.6 and the execution of the query:

```
MongoDB shell version 4.4.6
Enter password:
connecting to: mongodb://cluster0-shard-00-02.gymz.mongodb.net:27017,cluster0-shard-00-00.gymz.mongodb.net:27017,cluster0-shard-00-01.gymz.mongodb.net:27017/myfirstDatabase?authSource=admin&compressors=disabled&gssapiServiceName=mongodb&replicaset=atlas-m0188e-shard-0&ssl=true
Implicit session: session { "id" : UUID("3259a404-1031-4993-bfb1-bd29add3af85") }
MongoDB server version: 4.4.6
Error while trying to show server startup warnings: user is not allowed to do action [getlog] on [admin.]
MongoDB Enterprise atlas-m0188e-shard-0:PRIMARY> db.movies.find({ $and: [{lengthInMin : { $lt : 120 } }, { genre: { $ne : "Foreign" } }, { leadActors : { $ne : "Jodie Foster" } }, {genre: { $in: ["Comedy", "Drama", "Thriller", "Horror"] } } ]});
...
{ "id" : 5, "title" : "Spaceballs", "director" : "Mel Brooks", "yearReleased" : 1987, "leadActors" : [ "Mel Brooks", "John Candy", "Rick Moranis", "Bill Pullman", "Daphne Zuniga" ], "lengthInMin" : 96, "genre" : [ "Adventure", "Comedy", "Sci-Fi" ], "MPAA" : "PG" }
{ "id" : 6, "title" : "Silence of the Lambs", "director" : "Jonathan Demme", "yearReleased" : 1991, "leadActors" : [ "Jodie Foster", "Anthony Hopkins", "Anthony Heald" ], "lengthInMin" : 118, "genre" : [ "Crime", "Drama", "Thriller" ], "MPAA" : "R" }
{ "id" : 7, "title" : "American History X", "director" : "Tony Kaye", "yearReleased" : 1998, "leadActors" : [ "Edward Norton", "Edward Furlong", "Beverly D'Angelo", "Ethan Suplee" ], "lengthInMin" : 119, "genre" : [ "Crime", "Drama" ], "MPAA" : "R" }
{ "id" : 8, "title" : "Psycho", "director" : "Alfred Hitchcock", "yearReleased" : 1960, "leadActors" : [ "Anthony Perkins", "Vera Miles", "John Gavin", "Janet Leigh" ], "lengthInMin" : 109, "genre" : [ "Horror", "Mystery", "Thriller" ], "MPAA" : "R" }
MongoDB Enterprise atlas-m0188e-shard-0:PRIMARY>
```