SPRINT 9

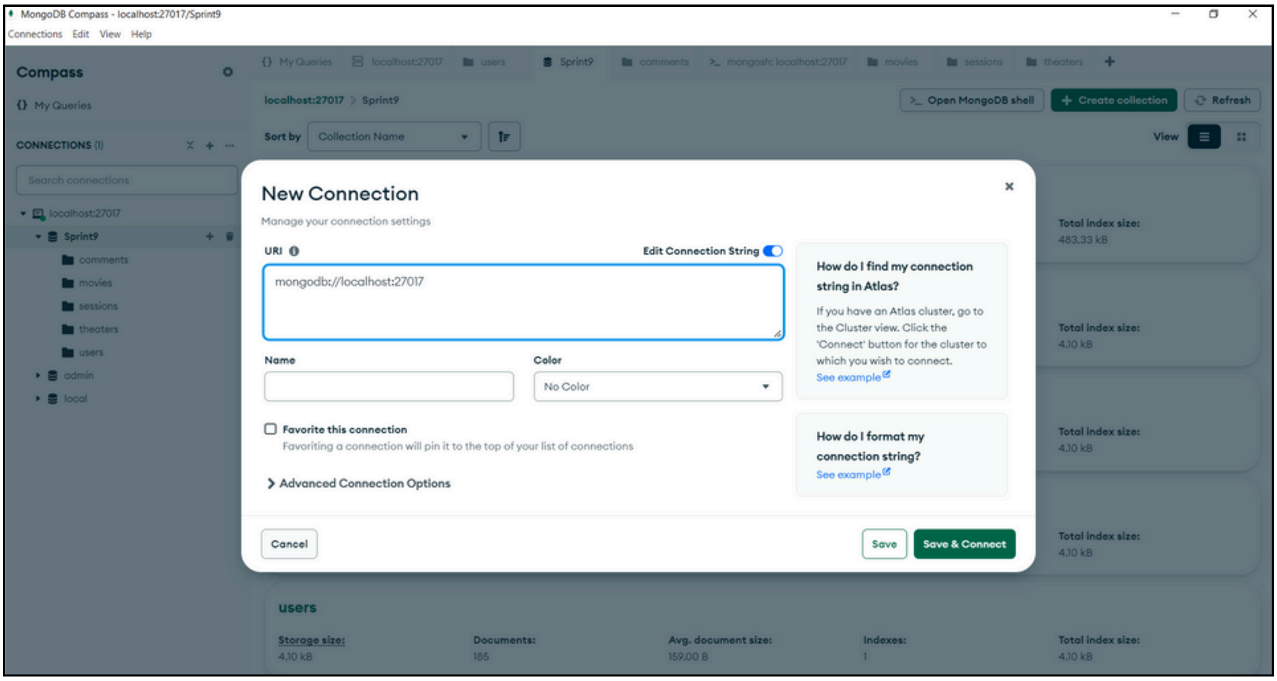
CONSULTES AMB MONGODB

PREPARED BY:

CECIL LUNA

LEVEL 1

Create a database with MongoDB using the attached files as collections.



New Connection

Manage your connection settings

URI

Edit Connection String

mongodb://localhost:27017

Name

Color: No Color

□ Favorite this connection
Favoriting a connection will pin it to the top of your list of connections

> Advanced Connection Options

How do I find my connection string in Atlas?
If you have an Atlas cluster, go to the Cluster view. Click the 'Connect' button for the cluster to which you wish to connect.
See example

How do I format my connection string?
See example

Total index size: 483.33 kB

Total index size: 4.10 kB

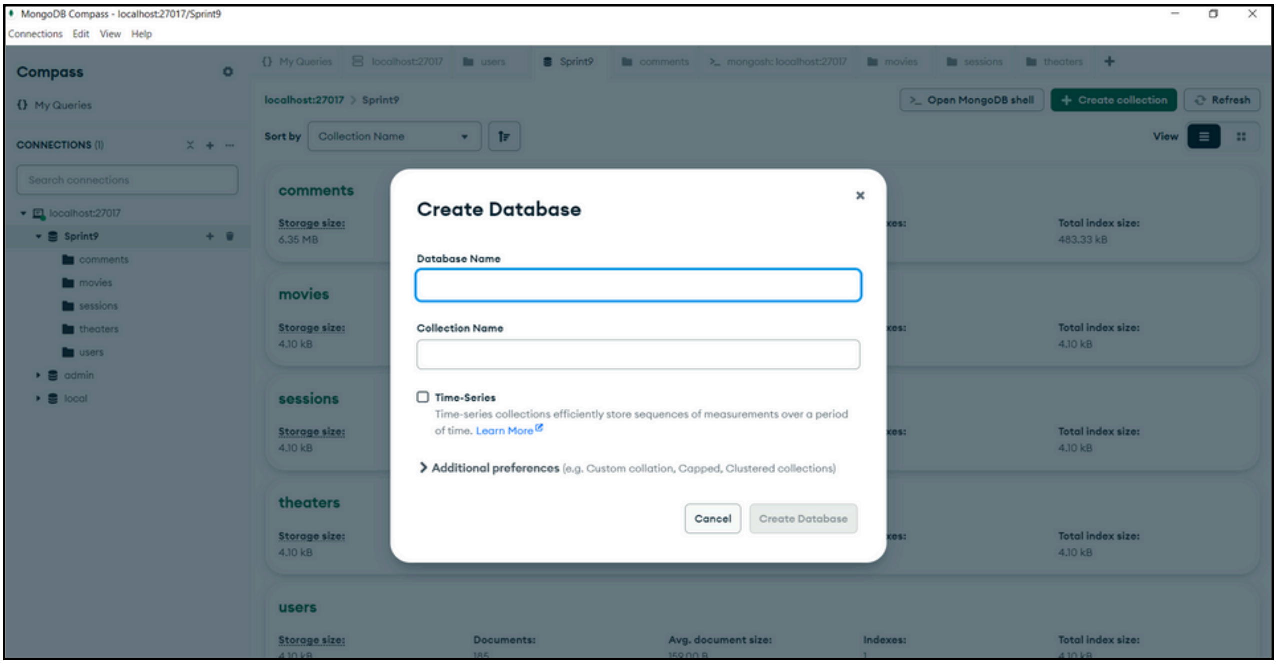
Total index size: 4.10 kB

Total index size: 4.10 kB

users

Storage size:	Documents:	Avg. document size:	Indexes:	Total index size:
4.10 kB	185	159.00 B	1	4.10 kB

Locate the "localhost" label in your MongoDB interface. Next to this label, click the plus (+) sign to create a new database.



Create Database

Database Name

Collection Name

□ Time-Series
Time-series collections efficiently store sequences of measurements over a period of time. Learn More

> Additional preferences (e.g. Custom collation, Capped, Clustered collections)

comments
Storage size: 6.35 MB
Total index size: 483.33 kB

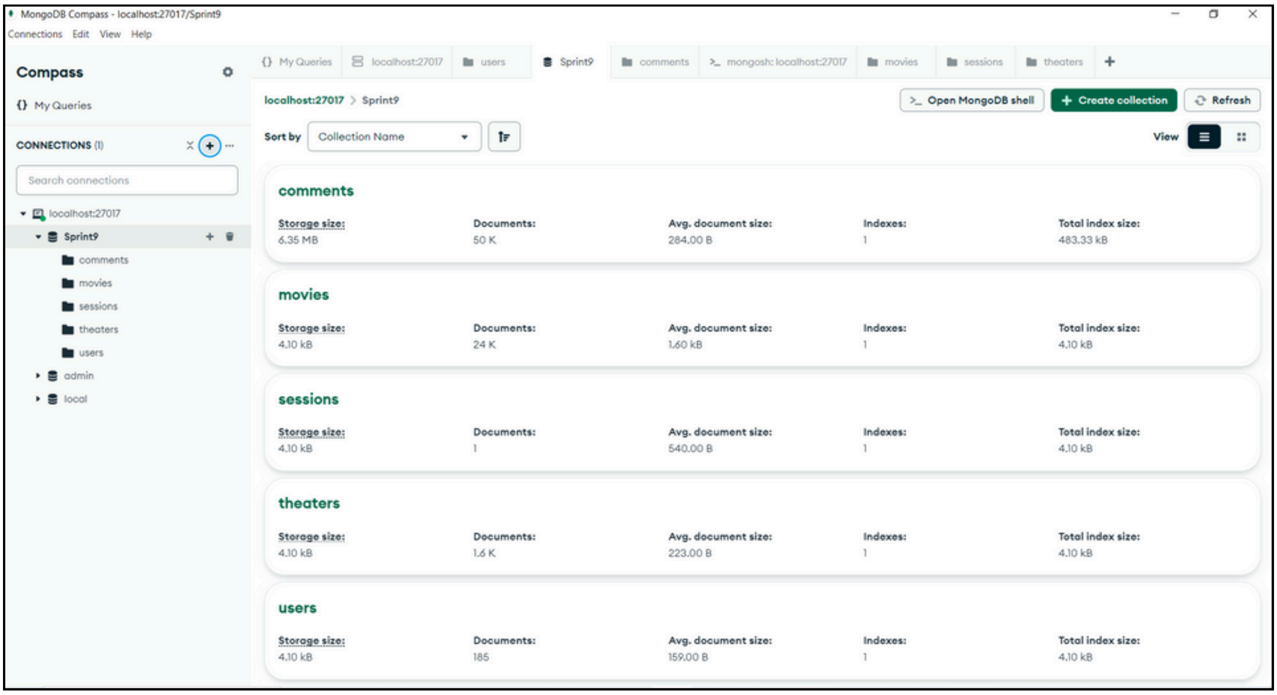
movies
Storage size: 4.10 kB
Total index size: 4.10 kB

sessions
Storage size: 4.10 kB
Total index size: 4.10 kB

theaters
Storage size: 4.10 kB
Total index size: 4.10 kB

users
Storage size: Documents: Avg. document size: Indexes: Total index size:

Enter a name for your database. For example, in this case, we'll use "Sprint 9".



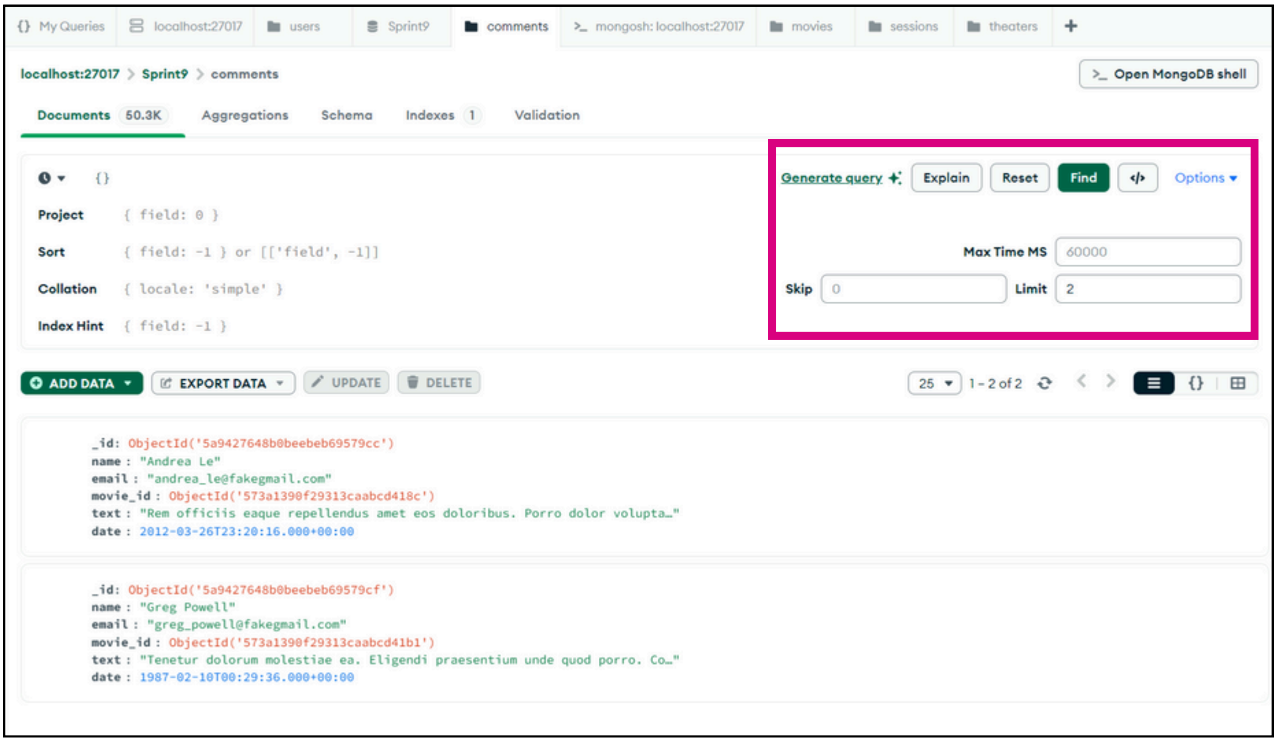
	Storage size:	Documents:	Avg. document size:	Indexes:	Total index size:
comments	6.35 MB	50 K	284.00 B	1	483.33 kB
movies	4.10 kB	24 K	1.60 kB	1	4.10 kB
sessions	4.10 kB	1	540.00 B	1	4.10 kB
theaters	4.10 kB	1.6 K	223.00 B	1	4.10 kB
users	4.10 kB	185	159.00 B	1	4.10 kB

After naming your database, click on the Create Collection button. Each collection should correspond to a set of related documents like movies, theaters.

LEVEL 1

EXERCISE 1

Displays the first 2 comments that appear in the database.



```
{}
Project      { field: 0 }
Sort         { field: -1 } or [['field', -1]]
Collation    { locale: 'simple' }
Index Hint   { field: -1 }
```

Max Time MS 60000

Skip 0

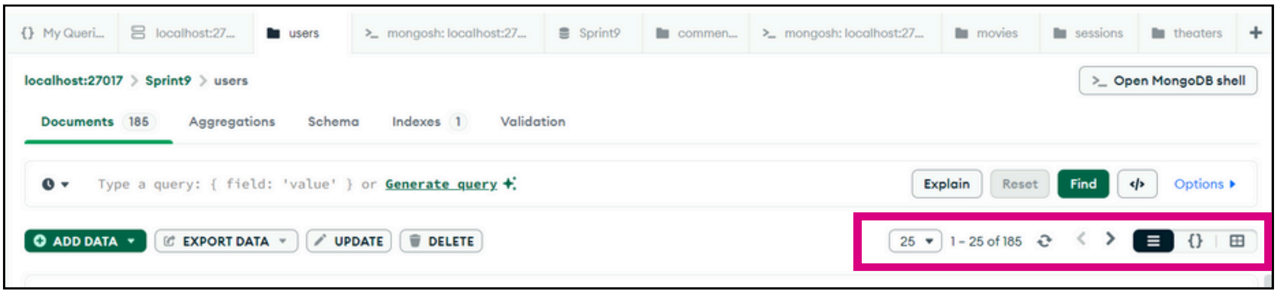
Limit 2

25 ▾ 1 - 2 of 2

```
_id: ObjectId('5a9427648b0beebeb69579cc')
name : "Andrea Le"
email : "andrea_le@fakegmail.com"
movie_id : ObjectId('573a1390f29313caabcd418c')
text : "Rem officiis eaque repellendus amet eos doloribus. Porro dolor volupta…"
date : 2012-03-26T23:20:16.000+00:00

_id: ObjectId('5a9427648b0beebeb69579cf')
name : "Greg Powell"
email : "greg_powell@fakegmail.com"
movie_id : ObjectId('573a1390f29313caabcd41b1')
text : "Tenetur dolorum molestiae ea. Eligendi praesentium unde quod porro. Co…"
date : 1987-02-10T00:29:36.000+00:00
```

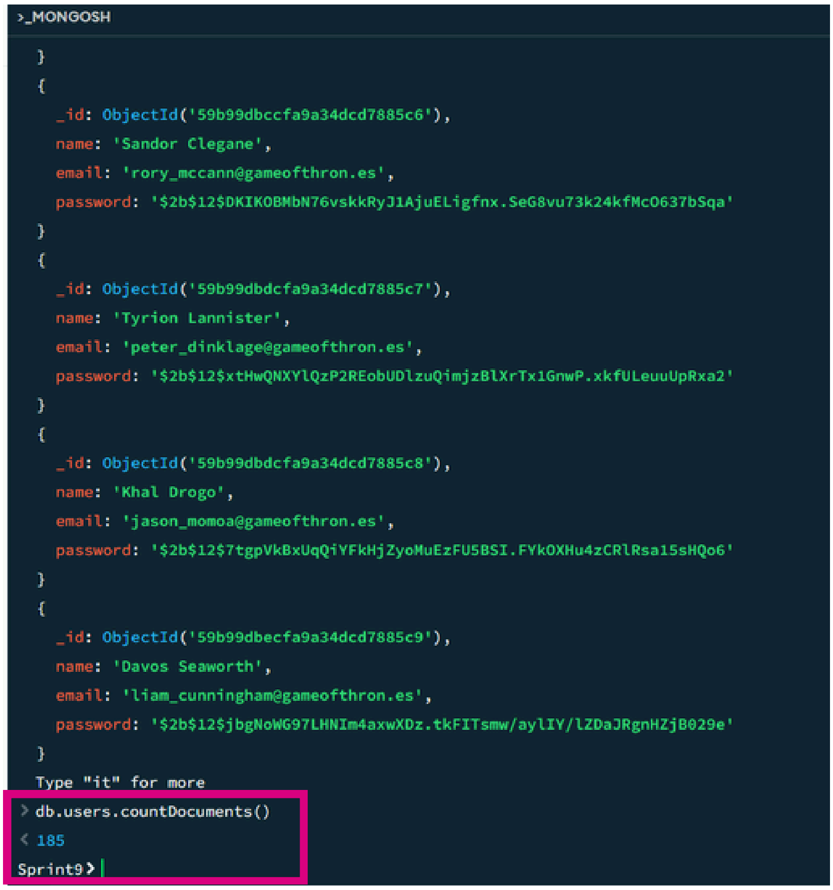
To limit the data that will appear from a specific table, click the table name or the collection name (in this case the comments collection) and in the query section, click the drop down button in options and in the limit box, type the desired number of table rows, JSON document or tree structure to display. In this activity, it's 2.

How many users do we have registered?



25 ▾ 1 - 25 of 185

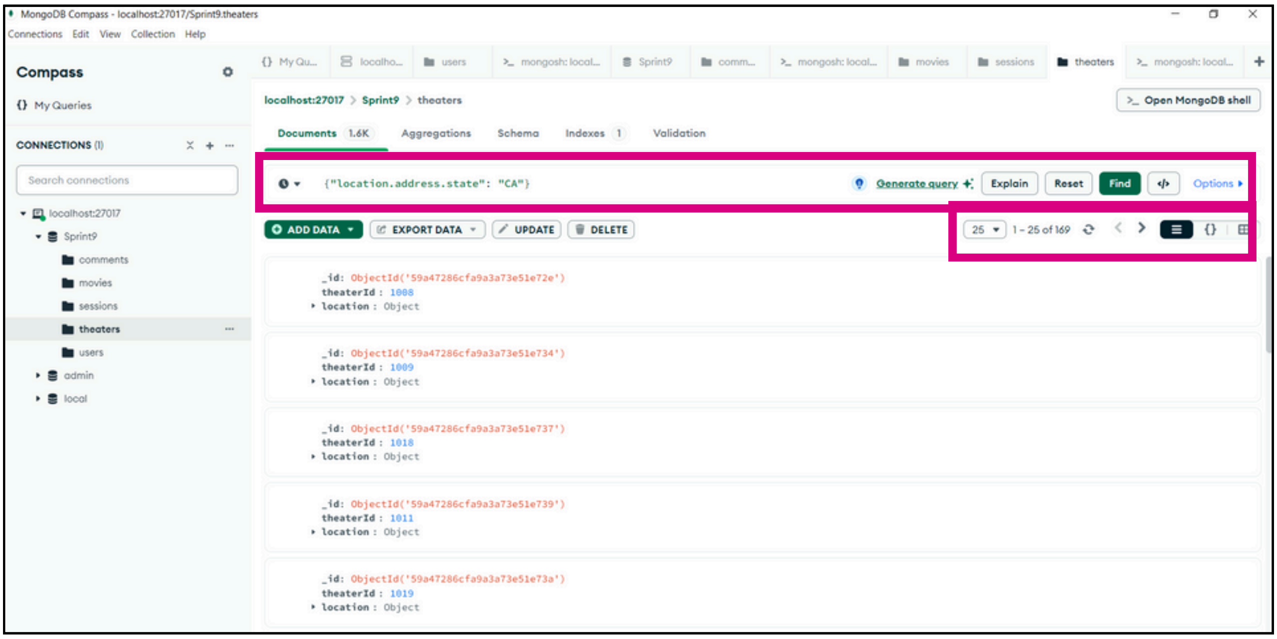
By clicking the name of the data collection, the number of registers will appear.



```
>_MONGOSH
  }
  {
    _id: ObjectId('59b99dbccfa9a34dcd7885c6'),
    name: 'Sandor Clegane',
    email: 'rory_mccann@gameofthron.es',
    password: '$2b$12$DKIKOBMbN76vskkRyJ1AjuELigfnx.SeG8vu73k24kfMcO637bSqa'
  }
  {
    _id: ObjectId('59b99dbdcfa9a34dcd7885c7'),
    name: 'Tyrion Lannister',
    email: 'peter_dinklage@gameofthron.es',
    password: '$2b$12$xtHwQNXYlQzP2REobUDlzuQimjzBlXrTx1GnwP.xkfULeuuUpRxa2'
  }
  {
    _id: ObjectId('59b99dbdcfa9a34dcd7885c8'),
    name: 'Khal Drogo',
    email: 'jason_momoa@gameofthron.es',
    password: '$2b$12$7tgpVkBxUqQiYFkHjZyoMuEzFU5BSI.FYkOXHu4zCRlRsa15sHQo6'
  }
  {
    _id: ObjectId('59b99dbecfa9a34dcd7885c9'),
    name: 'Davos Seaworth',
    email: 'liam_cunningham@gameofthron.es',
    password: '$2b$12$jbgNoWG97LHNIm4axwXDz.tkFITsmw/aylIY/lZDaJRgnHZjB029e'
  }
  Type "it" for more
> db.users.countDocuments()
< 185
Sprint9>
```

Another option is using a code and running it in MongoDB shell. Using countDocuments(), this will count the number of documents in the specified collection.

How many theaters are there in the state of California?


MongoDB Compass - localhost:27017/Sprint9.theaters
Connections Edit View Collection Help
Compass
My Queries
CONNECTIONS (1)
Search connections
localhost:27017
Sprint9
comments
movies
sessions
theaters
users
admin
local
My Qu... localho... users mongosh: local... Sprint9 comm... mongosh: local... movies sessions theaters mongosh: local...
Open MongoDB shell
Documents 1.6K Aggregations Schema Indexes 1 Validation
Generate query Explain Reset Find Options
ADD DATA EXPORT DATA UPDATE DELETE

localhost:27017 > Sprint9 > theaters

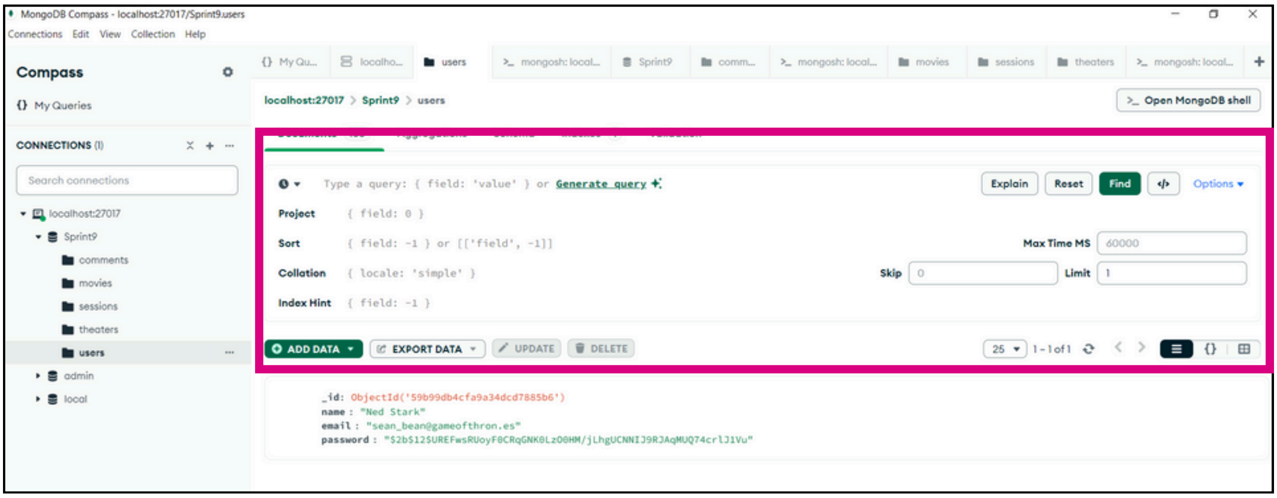
```
{"location.address.state": "CA"}
```

25 1 - 25 of 169

```
_id: ObjectId('59a47286cfa9a3a73e51e72e')
theaterId : 1008
location : Object

_id: ObjectId('59a47286cfa9a3a73e51e734')
theaterId : 1009
location : Object

_id: ObjectId('59a47286cfa9a3a73e51e737')
theaterId : 1018
location : Object

_id: ObjectId('59a47286cfa9a3a73e51e739')
theaterId : 1011
location : Object

_id: ObjectId('59a47286cfa9a3a73e51e73a')
theaterId : 1019
location : Object
```

Another option to query the collections is using FIND. With this code the software search the collection for documents where the state field within address, which is within location, is set to "CA". Then the documents are displayed, there are 169 registers.

Who was the first user to register?


MongoDB Compass - localhost:27017/Sprint9.users
Connections Edit View Collection Help
Compass
My Queries
CONNECTIONS (1)
Search connections
localhost:27017
Sprint9
comments
movies
sessions
theaters
users
admin
local
My Qu... localho... users mongosh: local... Sprint9 comm... mongosh: local... movies sessions theaters mongosh: local...
Open MongoDB shell
Type a query: { field: 'value' } or Generate query
Explain Reset Find Options
ADD DATA EXPORT DATA UPDATE DELETE

localhost:27017 > Sprint9 > users

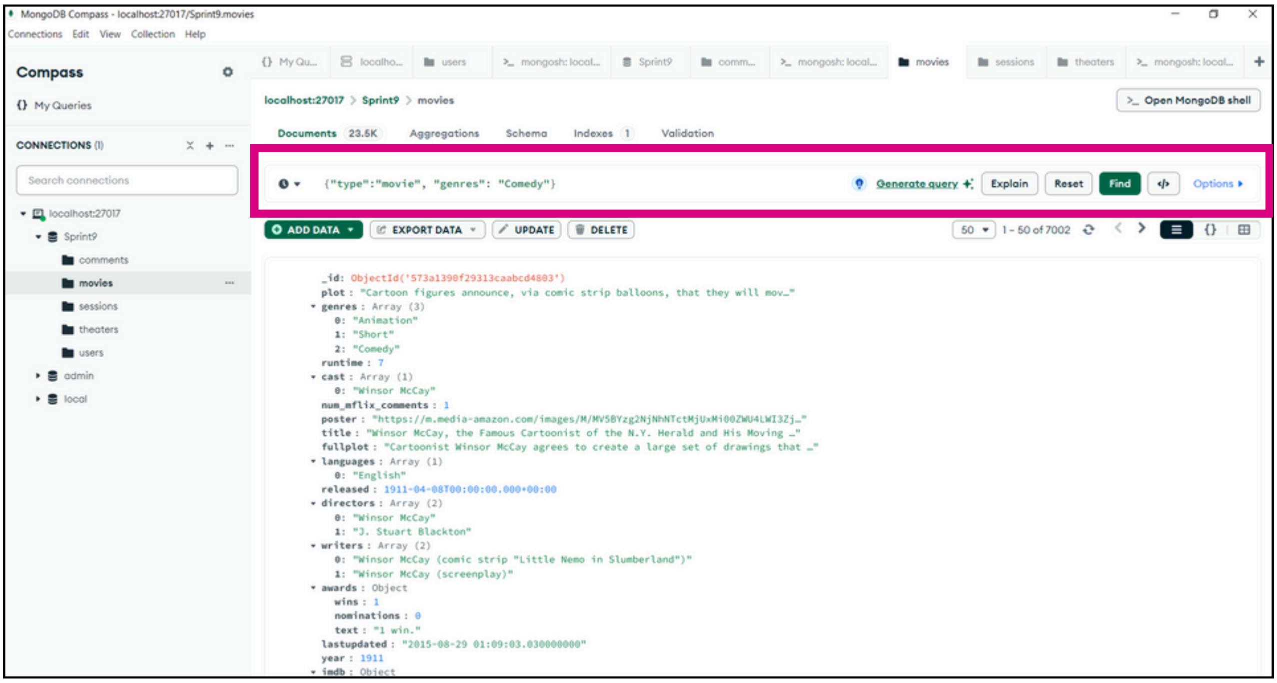
Project { field: 0 }
Sort { field: -1 } or [['field', -1]]
Max Time MS 60000
Collation { locale: 'simple' }
Skip 0
Limit 1
Index Hint { field: -1 }

25 1 - 1 of 1

```
_id: ObjectId('59b99db4cfa9a34dcd7885b6')
name : "Ned Stark"
email : "sean_bean@gameofthron.es"
password : "$2b$12$UREFwsRUoyF0CRqGNK0LzO0HM/jLhgUCNNIJ9RJAqMUQ74crlJ1Vu"
```

To identify the first register, just limit it to 1. In the user collection, Ned Stark is the first user to register.

How many comedy movies are in our database?



```
{"type":"movie", "genres": "Comedy"}
```

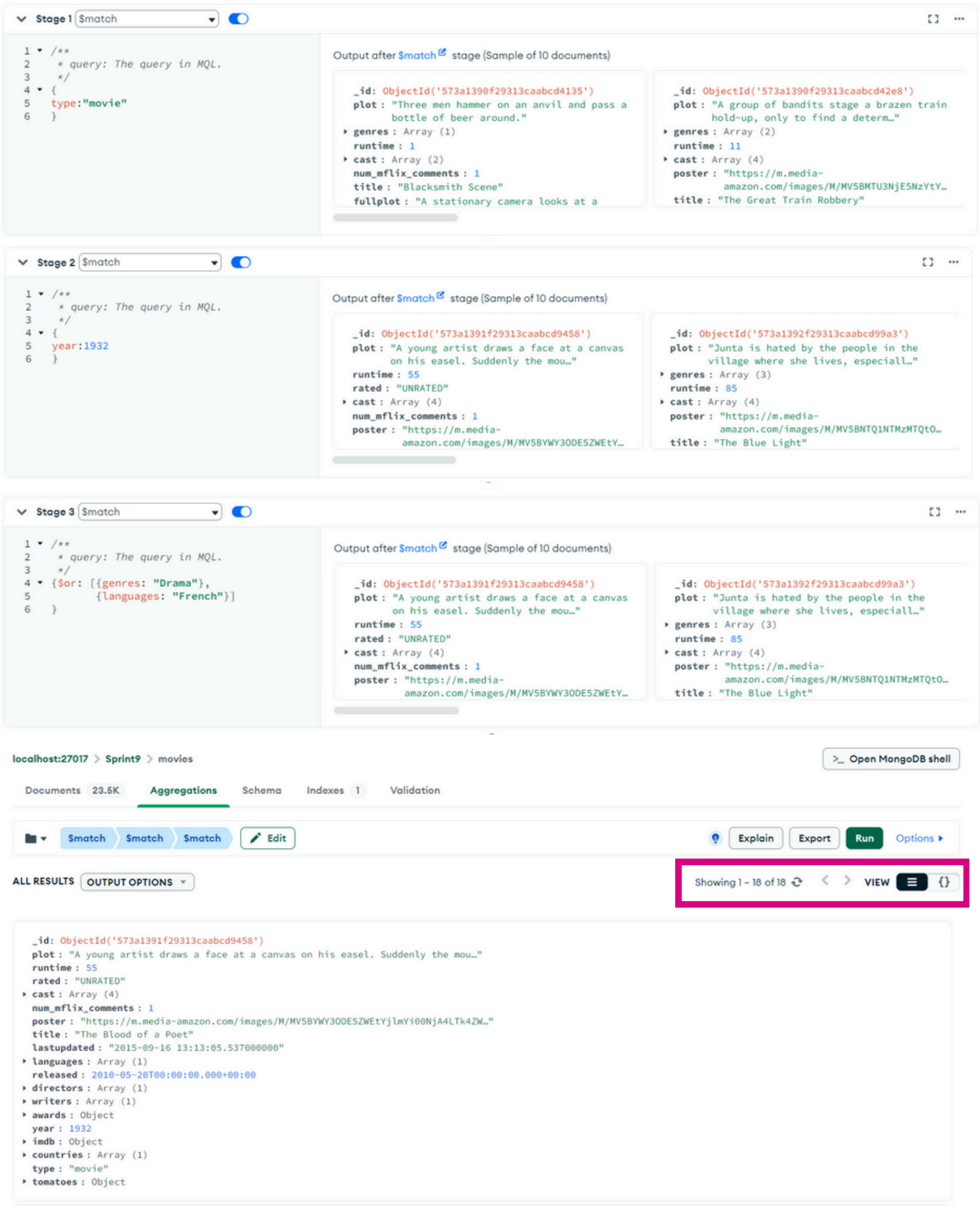
```
_id: ObjectId('573a1390f29313caabcd4803')
plot : "Cartoon figures announce, via comic strip balloons, that they will mov…"
genres : Array (3)
  0: "Animation"
  1: "Short"
  2: "Comedy"
runtime : 7
cast : Array (1)
  0: "Winsor McCay"
num_mflix_comments : 1
poster : "https://m.media-amazon.com/images/M/MV5BYzg2NjNhNTctMjUxMi00ZWU4LWI3Zj…"
title : "Winsor McCay, the Famous Cartoonist of the N.Y. Herald and His Moving …"
fullplot : "Cartoonist Winsor McCay agrees to create a large set of drawings that …"
languages : Array (1)
  0: "English"
released : 1911-04-08T00:00:00.000+00:00
directors : Array (2)
  0: "Winsor McCay"
  1: "J. Stuart Blackton"
writers : Array (2)
  0: "Winsor McCay (comic strip "Little Nemo in Slumberland")"
  1: "Winsor McCay (screenplay)"
awards : Object
  wins : 1
  nominations : 0
  text : "1 win."
lastupdated : "2015-08-29 01:09:03.030000000"
year : 1911
imdb : Object
```

Since type and genre are required in this exercise, 2 filters are included in the query, only movies for the type and comedy for genres will be fetched.

LEVEL 1

EXERCISE 2

Show all the documents of films produced in 1932, but that the genre is drama or are in French.



```
/**
 * query: The query in MQL.
 */
{
type:"movie"
}
```

Output after $match stage (Sample of 10 documents)

```
_id: ObjectId('573a1390f29313caabcd4135')
plot : "Three men hammer on an anvil and pass a
       bottle of beer around."
▸ genres : Array (1)
runtime : 1
▸ cast : Array (2)
num_mflix_comments : 1
title : "Blacksmith Scene"
fullplot : "A stationary camera looks at a
```

```
_id: ObjectId('573a1390f29313caabcd42e8')
plot : "A group of bandits stage a brazen train
       hold-up, only to find a determ…"
▸ genres : Array (2)
runtime : 11
▸ cast : Array (4)
poster : "https://m.media-
         amazon.com/images/M/MV5BMTU3NjE5NzYtY…
title : "The Great Train Robbery"
```

```
/**
 * query: The query in MQL.
 */
{
year:1932
}
```

Output after $match stage (Sample of 10 documents)

```
_id: ObjectId('573a1391f29313caabcd9458')
plot : "A young artist draws a face at a canvas
       on his easel. Suddenly the mou…"
runtime : 55
rated : "UNRATED"
▸ cast : Array (4)
num_mflix_comments : 1
poster : "https://m.media-
         amazon.com/images/M/MV5BYWY3ODE5ZWEtY…
```

```
_id: ObjectId('573a1392f29313caabcd99a3')
plot : "Junta is hated by the people in the
       village where she lives, especiall…"
▸ genres : Array (3)
runtime : 85
▸ cast : Array (4)
poster : "https://m.media-
         amazon.com/images/M/MV5BNTQ1NTMzMTQtO…
title : "The Blue Light"
```

```
/**
 * query: The query in MQL.
 */
{$or: [{genres: "Drama"},
         {languages: "French"}]
}
```

Output after $match stage (Sample of 10 documents)

```
_id: ObjectId('573a1391f29313caabcd9458')
plot : "A young artist draws a face at a canvas
       on his easel. Suddenly the mou…"
runtime : 55
rated : "UNRATED"
▸ cast : Array (4)
num_mflix_comments : 1
poster : "https://m.media-
         amazon.com/images/M/MV5BYWY3ODE5ZWEtY…
```

```
_id: ObjectId('573a1392f29313caabcd99a3')
plot : "Junta is hated by the people in the
       village where she lives, especiall…"
▸ genres : Array (3)
runtime : 85
▸ cast : Array (4)
poster : "https://m.media-
         amazon.com/images/M/MV5BNTQ1NTMzMTQtO…
title : "The Blue Light"
```

```
_id: ObjectId('573a1391f29313caabcd9458')
plot : "A young artist draws a face at a canvas on his easel. Suddenly the mou…"
runtime : 55
rated : "UNRATED"
▸ cast : Array (4)
num_mflix_comments : 1
poster : "https://m.media-amazon.com/images/M/MV5BYWY3ODE5ZWEtYjlmYi00NjA4LTk4ZW…"
title : "The Blood of a Poet"
lastupdated : "2015-09-16 13:13:05.537000000"
▸ languages : Array (1)
released : 2010-05-20T00:00:00.000+00:00
▸ directors : Array (1)
▸ writers : Array (1)
▸ awards : Object
year : 1932
▸ imdb : Object
▸ countries : Array (1)
type : "movie"
▸ tomatoes : Object
```

To fetch the information needed, aggregation stage was used. This was used to filter the necessary information needed and to process the data filters step by step.

STAGE 1
In this stage on the movies under the category type is fetched.

STAGE 2
The results from stage 1 is filtered by year.

STAGE 3
The results from stage 2 is filtered in a certain condition. The query finds documents that meet at least one, movie in 1932 that is either a drama or in French.

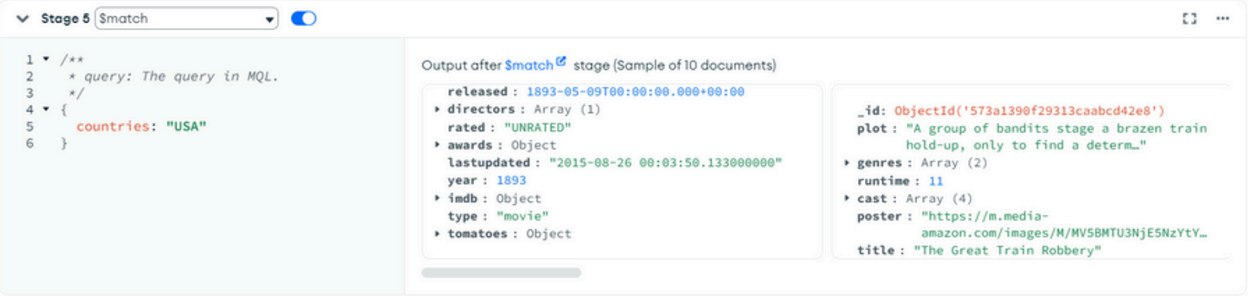
And by clicking RUN it displayed the results that meet the conditions of the filters.

There are 18 results.

LEVEL 1

EXERCISE 3

Show all US film docs that have between 5 and 9 awards that were produced between 2012 and 2014.

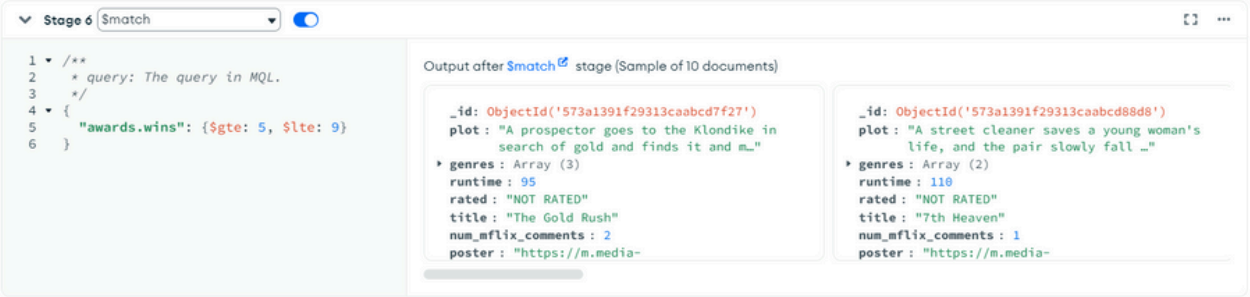


```
/**
 * query: The query in MQL.
 */
{
  countries: "USA"
}
```

Output after $match stage (Sample of 10 documents)

```
  released : 1893-05-09T00:00:00.000+00:00
▸ directors : Array (1)
  rated : "UNRATED"
▸ awards : Object
  lastupdated : "2015-08-26 00:03:50.133000000"
  year : 1893
▸ imdb : Object
  type : "movie"
▸ tomatoes : Object
```

```
  _id: ObjectId('573a1390f29313caabcd42e8')
  plot : "A group of bandits stage a brazen train
         hold-up, only to find a determ…"
▸ genres : Array (2)
  runtime : 11
▸ cast : Array (4)
  poster : "https://m.media-
           amazon.com/images/M/MV5BMTU3NjE5NzYtY…
  title : "The Great Train Robbery"
```

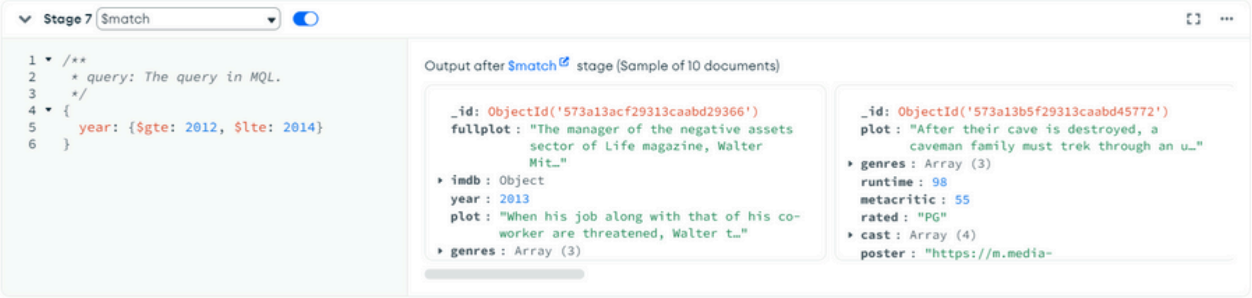


```
/**
 * query: The query in MQL.
 */
{
  "awards.wins": {$gte: 5, $lte: 9}
}
```

Output after $match stage (Sample of 10 documents)

```
  _id: ObjectId('573a1391f29313caabcd7f27')
  plot : "A prospector goes to the Klondike in
         search of gold and finds it and m…"
▸ genres : Array (3)
  runtime : 95
  rated : "NOT RATED"
  title : "The Gold Rush"
  num_mflix_comments : 2
  poster : "https://m.media-
```

```
  _id: ObjectId('573a1391f29313caabcd88d8')
  plot : "A street cleaner saves a young woman's
         life, and the pair slowly fall …"
▸ genres : Array (2)
  runtime : 110
  rated : "NOT RATED"
  title : "7th Heaven"
  num_mflix_comments : 1
  poster : "https://m.media-
```

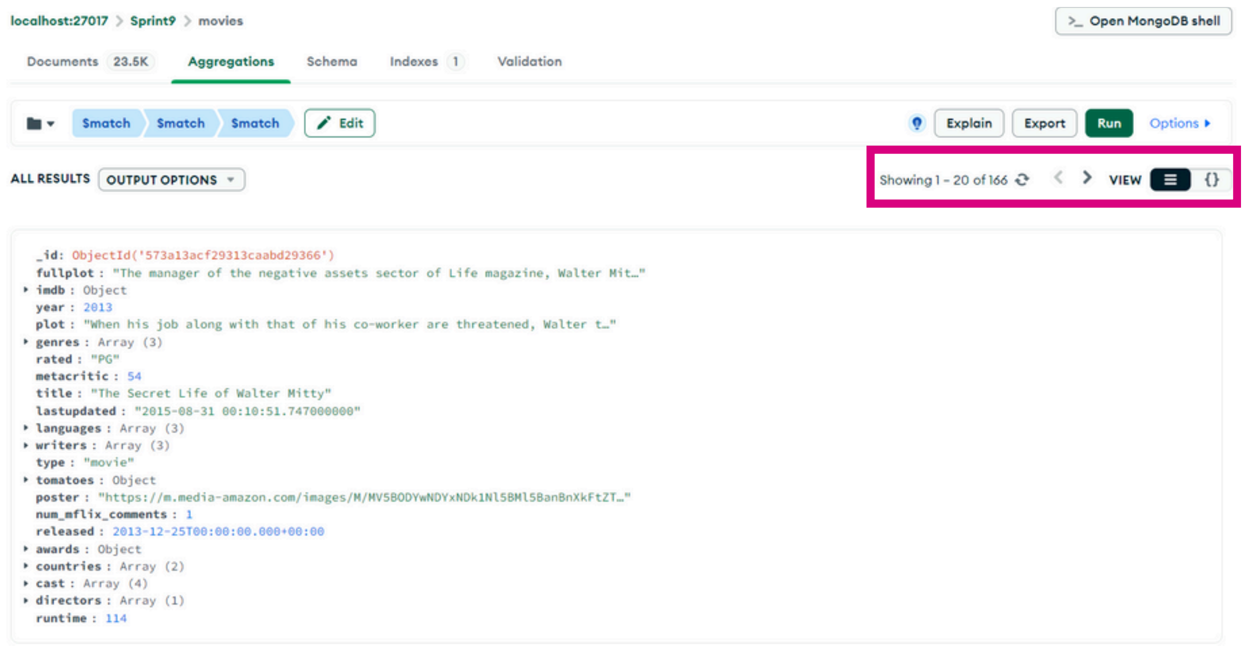


```
/**
 * query: The query in MQL.
 */
{
  year: {$gte: 2012, $lte: 2014}
}
```

Output after $match stage (Sample of 10 documents)

```
  _id: ObjectId('573a13acf29313caabd29366')
  fullplot : "The manager of the negative assets
             sector of Life magazine, Walter
             Mit…"
▸ imdb : Object
  year : 2013
  plot : "When his job along with that of his co-
         worker are threatened, Walter t…"
▸ genres : Array (3)
```

```
  _id: ObjectId('573a13b5f29313caabd45772')
  plot : "After their cave is destroyed, a
         caveman family must trek through an u…"
▸ genres : Array (3)
  runtime : 98
  metacritic : 55
  rated : "PG"
▸ cast : Array (4)
  poster : "https://m.media-
```



```
  _id: ObjectId('573a13acf29313caabd29366')
  fullplot : "The manager of the negative assets sector of Life magazine, Walter Mit…"
▸ imdb : Object
  year : 2013
  plot : "When his job along with that of his co-worker are threatened, Walter t…"
▸ genres : Array (3)
  rated : "PG"
  metacritic : 54
  title : "The Secret Life of Walter Mitty"
  lastupdated : "2015-08-31 00:10:51.747000000"
▸ languages : Array (3)
▸ writers : Array (3)
  type : "movie"
▸ tomatoes : Object
  poster : "https://m.media-amazon.com/images/M/MV5BODYwNDYxNDk1Nl5BMl5BanBnXkFtZT…"
  num_mflix_comments : 1
  released : 2013-12-25T00:00:00.000+00:00
▸ awards : Object
▸ countries : Array (2)
▸ cast : Array (4)
▸ directors : Array (1)
  runtime : 114
```

This is not the best way to show the process of this exercise but before the execution of the query, the previous filters were disabled to ensure the reliability of the results.

STAGE 1
Only movies that are in the USA are fetched.

STAGE 2
The results from STAGE 1 is filtered to only movies from the USA with awards and they won between 5 to 9 awards.

STAGE 3
The results from STAGE 2 is filtered to only movies from the USA with awards and they won between 5 to 9 awards in year between 2012 to 2014.

And by clicking RUN it displayed the results that meet the conditions of the filters.

There are 166 results.