

## **Descripció**

Treballarem amb una base de dades que conté col·leccions relacionades amb una aplicació d'entreteniment cinematogràfic:

- users: Emmagatzema informació d'usuaris/es, incloent-hi noms, emails i contrasenyes xifrades.
- theatres: Conté dades de cinemes, com ID, ubicació (direcció i coordenades geogràfiques).
- sessions: Guarda sessions d'usuari, incloent-hi ID d'usuari i tokens JWT per a l'autenticació.
- movies: Inclou detalls de pel·lícules, com a trama, gèneres, durada, elenc, comentaris, any de llançament, directors, classificació i premis.
- comments: Emmagatzema comentaris d'usuaris/es sobre pel·lícules, amb informació de l'autor/a del comentari, ID de la pel·lícula, text del comentari i la data.

Duràs a terme algunes consultes que et demana el client/a, el qual està mesurant si seràs capaç o no de fer-te càrrec de la part analítica del projecte vinculat amb la seva base de dades.

## **Nivell 1**

Crea una base de dades amb MongoDB utilitzant com a col·leccions els arxius adjunts.

## Exercici 1

- Mostra els 2 primers comentaris que hi ha en la base de dades.

```
{  
  project: {  
    text: 1  
  },  
  limit: 2  
}
```

The screenshot shows the MongoDB Compass interface. On the left, the connection tree shows 'localhost:27017' connected to the 'Entretenimentcinematografic' database, which contains a 'Cinema' collection. The main area displays the results of a query on the 'Cinema' collection. The query is defined in the 'Find' tab of the query builder:

```
{  
  project: { text: 1 },  
  sort: { field: -1 } or [ { 'field': -1 } ],  
  limit: 2  
}
```

The results table shows two documents from the 'Cinema' collection:

_id	text
ObjectId('5a9427648b0bee...')	"Rem officiis eaque repe...
ObjectId('5a9427648b0bee...')	"Tenetur dolorum molesti...

- Quants usuaris tenim registrats? 318

MongoDB Compass - localhost:27017/Entretenimentcinematografic.Cinema

Connections Edit View Collection Help

**Compass**

My Queries

CONNECTIONS ()

localhost27017 Entretenimentcinematografic Cinema

localhost:27017 > Entretenimentcinematografic > Cinema

Documents 75.8K Aggregations Schema Indexes I Validation

Tell us what aggregation to build (e.g. count movies made each year) or paste one in another language (SQL, Java, etc.)

Untitled - modified SAVE + CREATE NEW EXPORT TO LANGUAGE

PREVIEW STAGES TEXT WIZARD

75593 documents in the collection

Preview of documents

Stage 1 \$group

```
1 {  
2   _id: "$name"  
3 }
```

Output preview after \$group stage (Sample of 10 documents)

\_id: "Andrea\_Lee"  
\_id: "Greg\_Powell"  
\_id: "Talia\_Rosary"  
\_id: "Oona\_Chaplin"  
\_id: "Cameron\_Duran"

Stage 2 \$count

```
1 "distinctNameCount"
```

Output preview after \$count stage (Sample of 1 document)

distinctNameCount : 318

MongoDB Compass - localhost:27017/Entretenimentcinematografic.Cinema

Connections Edit View Collection Help

**Compass**

My Queries

CONNECTIONS ()

localhost27017 Entretenimentcinematografic Cinema

localhost:27017 > Entretenimentcinematografic > Cinema

Documents 75.8K Aggregations Schema Indexes I Validation

\$group \$count Edit

ALL RESULTS

Showing 1-1 count results

distinctNameCount : 318

- Quants cinemes hi ha en l'estat de Califòrnia? 169

MongoDB Compass - localhost:27017/Entretainmentcinematografic.Cinema

Connections Edit View Collection Help

Compass

My Queries

Connections ()

localhost:27017 Cinema Entretainmentcinematografic

localhost:27017 > Entretainmentcinematografic > Cinema

Documents 75.4K Aggregations Schema Indexes I Validation

Tell us what to find (e.g. movies from 2000) or paste a query in another language (SQL, Java, etc.)

Project { "field": 0 }

Sort { "field": -1 } or [ ["field", -1] ]

Collection { locale: 'simple' }

Index Hint { "field": -1 }

Explain Reset Find Options ▾

Max Time MS 60000

Skip 0 Limit 0

ADD DATA EXPORT DATA UPDATE DELETE

100 1-100 of 169

	<b>Cinema</b>	<b>_id</b>	<b>objectId</b>	<b>theaterId</b>	<b>Int32</b>	<b>location</b>	<b>Object</b>
1	ObjectId('59a47286cfa9a3..')	1088			1088	( ) 2 fields	
2	ObjectId('59a47286cfa9a3..')	1089			1089	( ) 2 fields	
3	ObjectId('59a47286cfa9a3..')	1018			1018	( ) 2 fields	
4	ObjectId('59a47286cfa9a3..')	1011			1011	( ) 2 fields	
5	ObjectId('59a47286cfa9a3..')	1019			1019	( ) 2 fields	
6	ObjectId('59a47286cfa9a3..')	101			101	( ) 2 fields	
7	ObjectId('59a47286cfa9a3..')	1021			1021	( ) 2 fields	
8	ObjectId('59a47286cfa9a3..')	1020			1020	( ) 2 fields	
9	ObjectId('59a47286cfa9a3..')	100			100	( ) 2 fields	
10	ObjectId('59a47286cfa9a3..')	103			103	( ) 2 fields	
11	ObjectId('59a47286cfa9a3..')	1045			1045	( ) 2 fields	
12	ObjectId('59a47286cfa9a3..')	104			104	( ) 2 fields	
13	ObjectId('59a47286cfa9a3..')	1046			1046	( ) 2 fields	
14	ObjectId('59a47286cfa9a3..')	1061			1061	( ) 2 fields	
15	ObjectId('59a47286cfa9a3..')	1076			1076	( ) 2 fields	
16	ObjectId('59a47286cfa9a3..')	105			105	( ) 2 fields	
17	ObjectId('59a47286cfa9a3..')	107			107	( ) 2 fields	
18	ObjectId('59a47286cfa9a3..')	106			106	( ) 2 fields	
19	ObjectId('59a47286cfa9a3..')	108			108	( ) 2 fields	
20	ObjectId('59a47286cfa9a3..')	109			109	( ) 2 fields	
21	ObjectId('59a47286cfa9a3..')	1113			1113	( ) 2 fields	
22	ObjectId('59a47286cfa9a3..')	1119			1119	( ) 2 fields	

- Quin va ser el primer usuari/ària en registrar-se? Andrea Le

The screenshot shows the MongoDB Compass interface. The left sidebar displays connections: localhost:27017 (selected), Entretainmentcinematografic, and local. The main area shows a query results table for the 'Cinema' collection. The query is:

```
SELECT name from Cinema LIMIT;
```

The results table shows one document:

Cinema	name
1	"Andrea Le"

- Quantes pel·lícules de comèdia hi ha en la nostra base de dades? 7024

MongoDB Compass - localhost:27017/Entretenimentcinematografic.Cinema

Connections Edit View Collection Help

**Compass**

My Queries

CONNECTIONS ()

Search connections

localhost:27017 Entretenimentcinematografic Cinema localhost:27017

localhost:27017 > Entretenimentcinematografic > Cinema

Documents 76.4K Aggregations Schema Indexes 1 Validation

SELECT \* from Cinema WHERE genres="Comedy"

Project { "genres": "Comedy" }

Sort { field: -1 } or [ [ 'field', -1 ] ]

Collation { locale: 'simple' }

Index Hint { field: -1 }

EXPORT DATA

Max Time MS: 60000

Skip: 0 Limit: 0

100 1-100 of 7024

```

Cinema
plot String
1 "Cartoon figures announc...
2 "The cartoonist, Winsor ...
3 "Charlie is an immigrant...
4 "Gwen's family is rich, ...
5 "A rich young Easterner ...
6 "A penniless young man t...
7 "A tipsy doctor encounte...
8 "A newly wedded couple a...
9 "The simple-minded son o...
10 "The Tramp cares for an ...
11 "William deMille produced...
12 "A young man, unaccustom...
13 "A series of mishaps man...
14 "A man returns to his Ap...
15 "When a store clerk orga...
16 "The misadventures of Bu...
17 "Two spoiled rich people...
18 "A film projectionist lo...
19 "Nerdy college student w...
20 "With little luck at kee...
21 "A prospector goes to th...
22 "Mrs Erlynn, the mother...

```

## Exercici 2

Mostra'm tots els documents de les pel·lícules produïdes en 1932, però que el gènere sigui drama o estiguin en francès.

The screenshot shows the MongoDB Compass interface connected to the 'Entertainmentcinematografic.Cinema' database. The search bar contains the query: { "year": { "\$or": [ { "genres": "Drama" }, { "languages": "French" } ] }, "year": 1932 }. The results page displays three movie documents:

```
_id: ObjectId('573a1392f29313caab0d9aff')
plot: "Wrongly convicted James Allen serves in the intolerable conditions of ...
genres: Array (3)
runtime: 92
rated: "NOT RATED"
cast: Array (4)
writers: Array (2)
awards: Object
lastupdated: "2015-08-24 00:02:32.743000000"
year: 1932
imdb: Object
countries: Array (1)
type: "movie"
tomatoes: Object

_id: ObjectId('573a1392f29313caab0d9be4')
plot: "A living mummy stalks the beautiful woman he believes is the reincarna...
genres: Array (1)
runtime: 73
rated: "UNRATED"
lastupdated: "2015-09-15 03:22:11.277000000"
year: 1932
imdb: Object
countries: Array (1)
type: "movie"
tomatoes: Object

_id: ObjectId('573a1392f29313caab0d9bed')
plot: "Having returned from fighting in World War I, James Allen doesn't want...
genres: Array (1)
runtime: 92
rated: "NOT RATED"
cast: Array (4)
writers: Array (2)
awards: Object
lastupdated: "2015-09-15 03:22:11.277000000"
year: 1932
imdb: Object
countries: Array (1)
type: "movie"
tomatoes: Object
```

## Exercici 3

Mostra'm tots els documents de pel·lícules estatunidenques que tinguin entre 5 i 9 premis que van ser produïdes entre 2012 i 2014.

The screenshot shows the MongoDB Compass interface. The left sidebar displays a connection named "Entretenimientocinematografic" with a single collection "Cinema". The main pane shows a search bar with the query: { "countries": "USA", "awards.wins": { "\$gte": 5, "\$lte": 9 }, "year": { "\$gte": 2012, "\$lte": 2014 } }. Below the search bar, there are buttons for "ADD DATA", "EXPORT DATA", "UPDATE", and "DELETE". The results pane shows a list of 100 documents, with the first one partially visible:

```
_id: ObjectId('573a1b5f29313caabdd45772')
plot: "After their cave is destroyed, a caveman family must trek through an u..."
genres: Array(3)
  0: "PG"
  1: "Adventure"
  2: "Comedy"
  ...
rated: "PG"
metacritic: 54
title: "The Secret Life of Walter Mitty"
lastupdated: "2015-08-31 00:10:51.747000000"
languages: Array(3)
  0: "English"
  1: "Spanish"
  2: "French"
writers: Array(3)
  0: "Chrisied"
  1: "Jordana Oberman"
  2: "John Goodman"
  ...
type: "movie"
tomatoes: Object
  ...
poster: "https://m.media-amazon.com/images/M/W5B00YwNDyxDK1N15BM1SBanBnXkFtZT_"
numAfrixComments: 1
released: 2013-12-25T00:00:00+00:00
awards: Object
  ...
countries: Array(2)
  0: "United States"
  1: "Canada"
cast: Array(4)
  0: "Adam Sandler"
  1: "Kristen Bell"
  2: "Reese Witherspoon"
  3: "Nick Nolte"
  ...
directors: Array(1)
  0: "Jeffrey K.坤坤"
  ...
runtime: 114
```

At the bottom of the results pane, a message says "Compass 1.4.8.1 installed successfully". The taskbar at the bottom of the screen includes icons for Buscar, MongoDB Compass, Operadores relacio..., Zoom Workplace, Zoom Reunió..., Sprint 5 MongoDB..., E5, IBEX 35 -1.37%, and 04/11/2025.

# Nivell 2

## Exercici 1

Compte quants comentaris escriu un usuari/ària que utilitza "GAMEOFTHRON.ES" com a domini de correu electrònic: 22924

The screenshot shows the MongoDB Compass interface. The connection is set to 'localhost:27017/Entretainmentcinematografic.Cinema'. The 'Cinema' collection is selected. A search bar at the top contains the query: 'text like "%GAMEOFTHRON.ES%"'. The results pane displays 22924 documents, each containing a 'text' field with a random Latin sentence. The status bar at the bottom indicates '100 1-100 of 22924'.

This screenshot is identical to the one above, showing the same MongoDB Compass interface and results for the query 'text like "%GAMEOFTHRON.ES%"'. The results pane shows 22924 documents, and the status bar indicates '100 1-100 of 22924'.

## Exercici 2

Quants cinemes hi ha en cada codi postal situats dins de l'estat Washington D. C. (DC)?

```
db.Cinema.aggregate([
  { $match: { "location.address.state": "DC" } },
  { $group: {
    _id: "$location.address.zipcode",
    countstar: { $sum: 1 }
  }}
])
```

The screenshot shows the MongoDB Compass interface. On the left, the 'Connections' sidebar lists 'localhost:27017' and 'Entretenimentcinematogràfic'. The main area displays the 'Cinema' collection under the 'Aggregations' tab. A search bar at the top has '\$match' and '\$group' selected. The results table shows three documents with the '\_id' field set to '20002', '20010', and '20016', and the 'countstar' field set to 1. The bottom status bar shows the taskbar with various icons and the date/time '05/11/2025 10:31'.

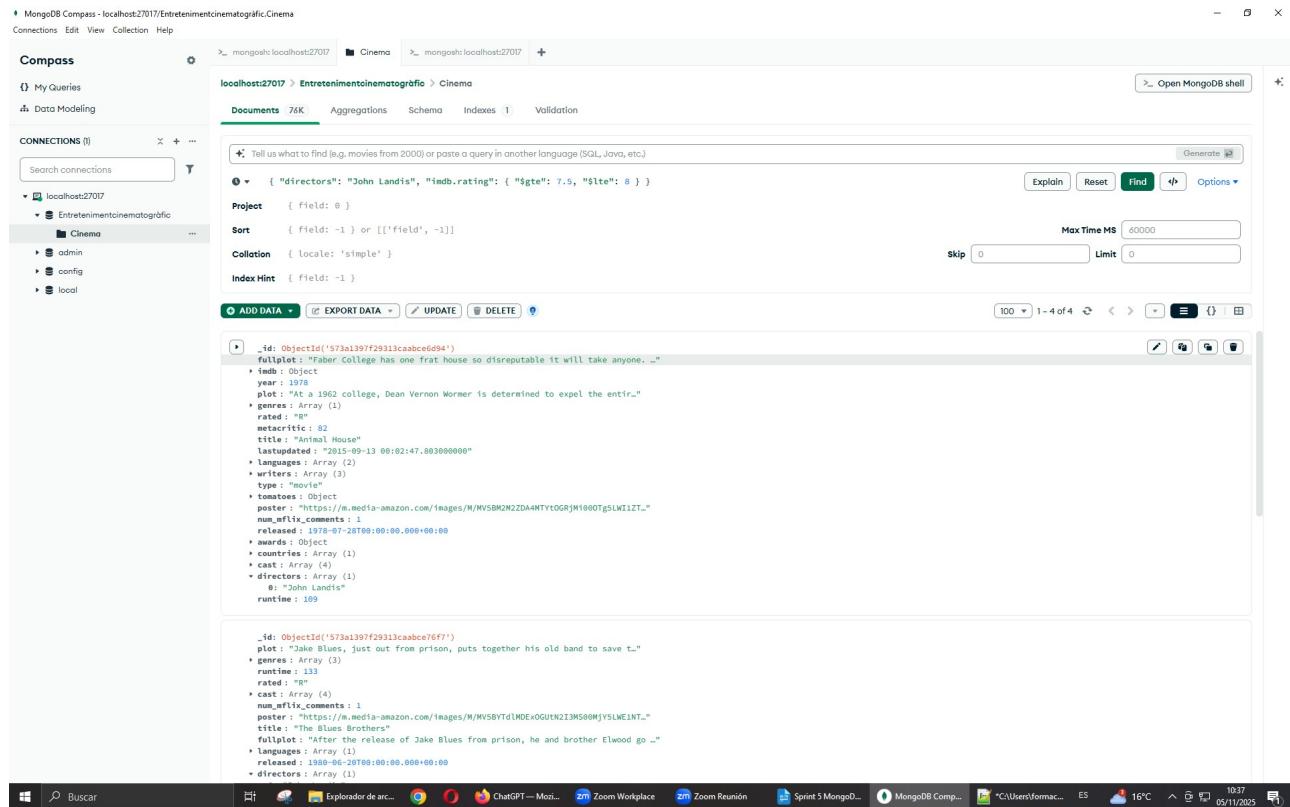
_id	countstar
20002	1
20010	1
20016	1

# Nivell 3

## Exercici 1

Troba totes les pel·lícules dirigides per John Landis amb una puntuació IMDb (Internet Movie Database) d'entre 7,5 i 8.

```
db.Cinema.find({  
    directors: 'John Landis',  
    'imdb.rating': { $gte: 7.5, $lte: 8 }  
})
```



The screenshot shows the MongoDB Compass interface. The left sidebar displays connections and collections, with 'Cinema' selected under 'Entretenimentcinematogràfic'. The main area shows the results of a query. The query is:

```
{ "directors": "John Landis", "imdb.rating": { "$gte": 7.5, "$lte": 8 } }
```

The results list two documents:

```
_id: ObjectId('573a1307f29313caabce76f7')  
fullplot: "Faber College has one frat house so disreputable it will take anyone. ..."  
imdb: Object  
year: 1978  
plot: "At a 1962 college, Dean Vernon Wormer is determined to expel the entire..."  
gener: Array (1)  
rated: "R"  
metacritic: 82  
title: "Animal House"  
lastupdated: "2015-09-13 00:02:47.883000000"  
languages: Array (2)  
writers: Array (3)  
type: "movie"  
tomatoes: Object  
poster: "https://m.media-amazon.com/images/M/MVSBM2M2DA4NTYDGRJM1800TgSLW1ZT..."  
num_mflix_comments: 1  
released: "1978-07-28T00:00:00+00:00"  
awards: Object  
countries: Array (1)  
cast: Array (4)  
directors: Array (1)  
    0: "John Landis"  
runtime: 109  
  


```
_id: ObjectId('573a1397f29313caabce76f7')  
plot: "Jake Blues, just out from prison, puts together his old band to save t..."  
genres: Array (3)  
runtime: 133  
rated: "R"  
cast: Array (4)  
num_mflix_comments: 1  
poster: "https://m.media-amazon.com/images/M/MVSBYtD1MDExQGU1N21MS00MjY5LWE1NT..."  
title: "The Blues Brothers"  
fullplot: "After the release of Jake Blues from prison, he and brother Elwood go ..."  
languages: Array (1)  
released: "1980-06-20T00:00:00+00:00"  
directors: Array (1)
```


```

## Exercici 2

Mostra en un mapa la ubicació de tots els teatres de la base de dades.

Mitjançant MongoDB Atlas podem dibuixar el mapa:

