

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. The left sidebar displays the database structure: 'localhost:27017' > 'Entretenimentcinematogràfic' > 'Cinema'. The main panel shows the 'Documents' tab for the 'Cinema' collection. A query is entered in the 'Tell us what to find' field: `{ text: 1 }`. The 'Project' field is set to `{ text: 1 }`, 'Sort' is `{ field: -1 } or [['_field', -1]]`, 'Collation' is `{ locale: 'simple' }`, and 'Index Hint' is `{ field: -1 }`. The 'Skip' field is 0 and the 'Limit' field is 2. The results are displayed in a table with 2 documents:

	_id	ObjectID	text	String
1	ObjectId('5a9427648b8bbee...')		"Res officitis eaque repe...	
2	ObjectId('5a9427648b8bbee...')		"Tenetur dolorum molesti...	

- Quants usuaris tenim registrats? 318

MongoDB Compass - localhost:27017/Entretenimentcinematogràfic.Cinema

Connections Edit View Collection Help

localhost:27017 > Entretenimentcinematogràfic > Cinema

Documents 75.6K Aggregations Schema Indexes 1 Validation

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

Group \$count Explain Export Run Options

Untitled - modified SAVE + CREATE NEW EXPORT TO LANGUAGE PREVIEW STAGES TEXT WIZARD

75693 Documents in the collection

Preview of documents

<pre>{ "_id": ObjectId("5a9427648b0beeb69579cc"), "name": "Andrea Le", "email": "andrea_le@fakegmaill.com", "movie_id": ObjectId("573a1398f29313caabc041..."), "text": "Rem officitls eaque repellendus amet eos doloribus. Porro dolor volupta..." "date": 2012-03-26T23:20:16.000+00:00 }</pre>	<pre>{ "_id": ObjectId("5a9427648b0beeb69579cf"), "name": "Greg Powell", "email": "greg.powell@fakegmaill.com", "movie_id": ObjectId("573a1398f29313caabc041..."), "text": "Tenetur dolorum molestiae ea. Eligendi praesentium unde quod porro. Co..." "date": 1987-02-10T00:29:36.000+00:00 }</pre>	<pre>{ "_id": ObjectId("5a9427648b0beeb69579d0"), "name": "Talisa Maegy", "email": "talisa_chaplin@gameoffthron.es", "movie_id": ObjectId("573a1398f29313caabc041..."), "text": "Rem itaque ad sit rem voluptattibus. Ad fugiat maxime illum optio lura..." "date": 1998-08-22T11:45:03.000+00:00 }</pre>	<pre>{ "_id": ObjectId("5a9427648b0beeb69579d9"), "name": "Cameron Duran", "email": "cameron_duran@fakegmaill.com", "movie_id": ObjectId("573a1398f29313caabc041..."), "text": "Quasi dicta culpa asperiores qi perferendis neque. Est amet pa..." "date": 1983-04-27T20:39:15.000+00:00 }</pre>
---	--	---	--

Stage 1 \$group

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

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

<pre>{ "_id": "Ms. Cathy Miller" }</pre>	<pre>{ "_id": "Maester Aemon" }</pre>	<pre>{ "_id": "Samwell Tarly" }</pre>
--	---	---

Stage 2 \$count

1 {
2 "distinctNameCount"
3 }

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

```
{
  "distinctNameCount": 318
}
```

MongoDB Compass - localhost:27017/Entretenimentcinematogràfic.Cinema

Connections Edit View Collection Help

localhost:27017 > Entretenimentcinematogràfic > Cinema

Documents 75.6K Aggregations Schema Indexes 1 Validation

Group \$count Edit Explain Export Run Options

ALL RESULTS Showing 1 - 1 count results

<pre>{ "distinctNameCount": 318 }</pre>

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

MongoDB Compass - localhost:27017/Entrenimentcinematogràfic.Cinema

Connections Edit View Collection Help

Compass

() My Queries

CONNECTIONS ()

Search connections

localhost:27017

Entrenimentcinematogràfic

Cinema

admin

config

local

localhost:27017 > Entrenimentcinematogràfic > Cinema

Documents 75.6K Aggregations Schema Indexes 1 Validation

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

Generate

Find

Options

Project { field: 0 }

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

Collation { locale: 'simple' }

Index Hint { field: -1 }

Max Time MS 60000

Skip 0 Limit 0

ADD DATA EXPORT DATA UPDATE DELETE

100 1 - 100 of 169

	* Cinema	_id ObjectId	theaterId Int32	location Object
1		ObjectId('59a47286cfa9a3...')	1988	{ } 2 fields
2		ObjectId('59a47286cfa9a3...')	1989	{ } 2 fields
3		ObjectId('59a47286cfa9a3...')	1918	{ } 2 fields
4		ObjectId('59a47286cfa9a3...')	1911	{ } 2 fields
5		ObjectId('59a47286cfa9a3...')	1919	{ } 2 fields
6		ObjectId('59a47286cfa9a3...')	191	{ } 2 fields
7		ObjectId('59a47286cfa9a3...')	1921	{ } 2 fields
8		ObjectId('59a47286cfa9a3...')	1920	{ } 2 fields
9		ObjectId('59a47286cfa9a3...')	192	{ } 2 fields
10		ObjectId('59a47286cfa9a3...')	193	{ } 2 fields
11		ObjectId('59a47286cfa9a3...')	1945	{ } 2 fields
12		ObjectId('59a47286cfa9a3...')	194	{ } 2 fields
13		ObjectId('59a47286cfa9a3...')	1946	{ } 2 fields
14		ObjectId('59a47286cfa9a3...')	1961	{ } 2 fields
15		ObjectId('59a47286cfa9a3...')	1976	{ } 2 fields
16		ObjectId('59a47286cfa9a3...')	195	{ } 2 fields
17		ObjectId('59a47286cfa9a3...')	197	{ } 2 fields
18		ObjectId('59a47286cfa9a3...')	196	{ } 2 fields
19		ObjectId('59a47286cfa9a3...')	198	{ } 2 fields
20		ObjectId('59a47286cfa9a3...')	199	{ } 2 fields
21		ObjectId('59a47286cfa9a3...')	1113	{ } 2 fields
22		ObjectId('59a47286cfa9a3...')	1119	{ } 2 fields

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

MongoDB Compass - localhost:27017/Entretenimentcinematogràfic.Cinema

Connections Edit View Collection Help

Compass

{ } My Queries

CONNECTIONS (0)

Search connections

localhost27017

- Entretenimentcinematogràfic
 - Cinema

localhost:27017 > Entretenimentcinematogràfic > Cinema

Documents 75.6K Aggregations Schema Indexes 1 Validation

SELECT name from Cinema LIMIT 1;

Generate

Explain Reset Find Options

Project {"name": 1, "_id": 0}

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

Collation { locale: 'simple' }

Index Hint { field: -1 }

Max Time MS 60000

Skip 0 Limit 1

EXPORT DATA

100 1..1 of 1

Cinema	
	name String
1	"Andrea Le"

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

MongoDB Compass - localhost:27017/Entretenimentcinematogràfic.Cinema

Connections Edit View Collection Help

Compass

My Queries

Search connections

localhost:27017

Entretenimentcinematogràfic

Cinema

admin

config

local

localhost:27017 > Entretenimentcinematogràfic > Cinema

Documents 75.4K Aggregations Schema Indexes 1 Validation

SELECT * from Cinema WHERE genres="Comedy"

Generate

Explain Reset Find Options

Project { field: 0 }

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

Collation { locale: 'simple' }

Index Hint { field: -1 }

Max Time MS 60000

Skip 0 Limit 0

EXPORT DATA

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 Erlynne, 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. The left sidebar displays the database structure: 'Entretenimentcinematografic' > 'Cinema'. The main panel shows a query filter: `{ "year": 1932, "genres": ["Drama"], "languages": ["French"] }`. The results pane displays three movie documents.

Document 1:

- genres: Array (2)
- runtime: 112
- rated: "PASSED"
- cast: Array (4)
- poster: "https://m.media-amazon.com/images/M/W580C5QWY8MQ2JgZm589YTA1Tk12m-"
- title: "Grand Hotel"
- fullplot: "Berlin's plushest, most expensive hotel is the setting where in the wo..."
- languages: Array (2)
- released: 1932-09-11T00:00:00.000+00:00
- directors: Array (1)
- writers: Array (2)
- awards: Object
- lastupdated: "2015-08-24 00:02:32.743800000"
- year: 1932
- imdb: Object
- countries: Array (1)
- type: "movie"
- tomatoes: Object

Document 2:

- _id: ObjectId('573a1392f29313caabdc9aff')
- plot: "Wrongly convicted James Allen serves in the intolerable conditions of ..."
- genres: Array (3)
- runtime: 92
- rated: "NOT RATED"
- cast: Array (4)
- poster: "https://m.media-amazon.com/images/M/W580MD1HDA4YVQVZdMNC800GxrLWE0K2-"
- title: "I Am a Fugitive from a Chain Gang"
- fullplot: "Having returned from fighting in World War I, James Allen doesn't want..."
- languages: Array (1)
- released: 1932-11-19T00:00:00.000+00:00
- directors: Array (1)
- writers: Array (3)
- awards: Object
- lastupdated: "2015-09-15 03:22:11.277000000"
- year: 1932
- imdb: Object
- countries: Array (1)
- type: "movie"
- tomatoes: Object

Document 3:

- _id: ObjectId('573a1392f29313caabdc9bed')
- plot: "A living mummy stalks the beautiful woman he believes is the reincarna..."
- genres: Array (1)
- runtime: 73
- rated: "UNRATED"

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. On the left, the 'Connections' panel shows a connection to 'localhost:27017' with a database named 'Entretinentcinematogràfic'. The 'Cinema' collection is selected. The main panel displays a query filter: `{ "countries": "USA", "awards.wins": { "$gte": 5, "$lte": 9 }, "year": { "$gte": 2012, "$lte": 2014 } }`. Below the query, two document snippets are visible. The first document is for 'The Secret Life of Walter Mitty' (2013), and the second is for 'The Croods' (2013). Both documents are of type 'movie' and have 5 awards. A notification at the bottom left states 'Compass 1.48.1 installed successfully'. The Windows taskbar at the bottom shows the date as 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

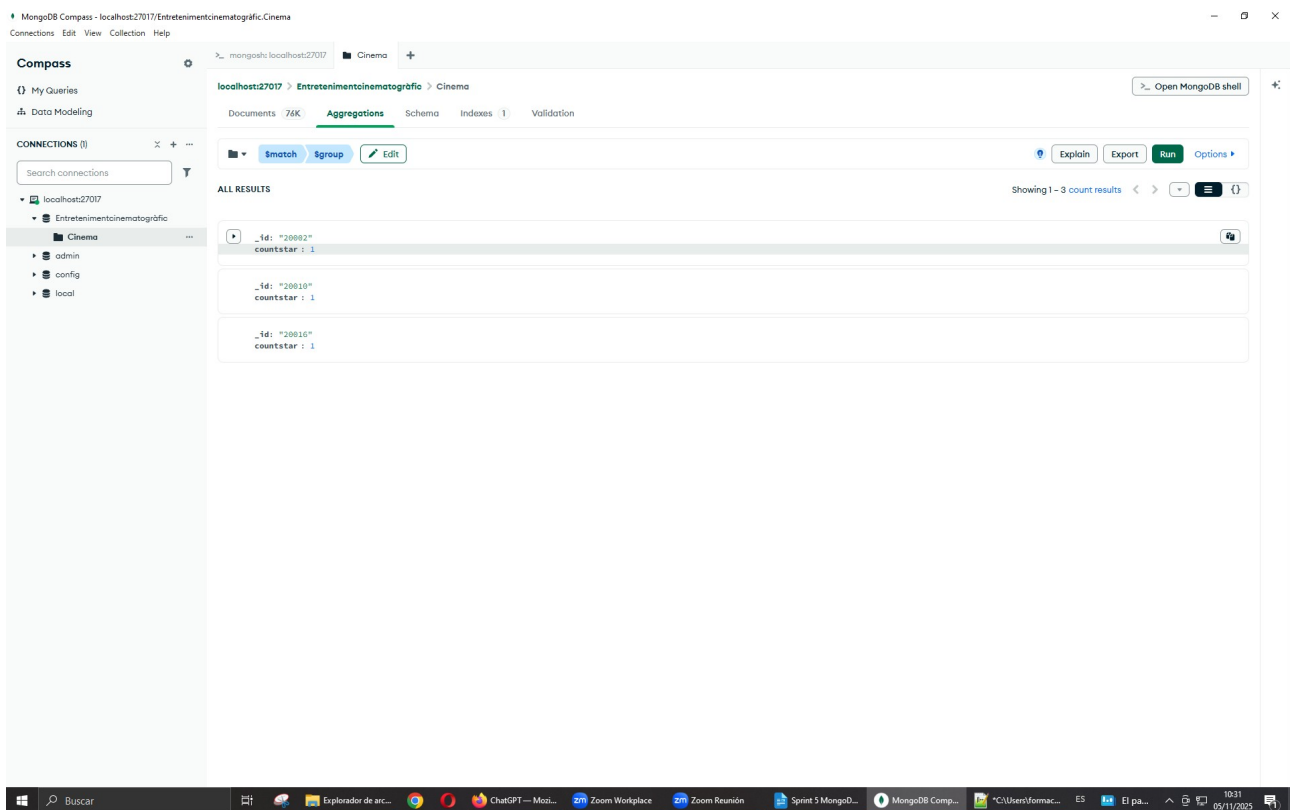
The screenshot shows the MongoDB Compass interface. On the left, the 'Connections' panel shows a connection to 'localhost:27017' with a database named 'Entretenimentcinematogràfic' and a collection named 'Cinema'. The main panel displays a query: `SELECT text from cinema where email like "%GAMEOFTHRON.ES%"`. The query is executed, and the results are shown in a table with 10 rows. Each row contains a 'text' field with a Latin sentence. The status bar at the bottom indicates 'Compass 1.46.1 installed successfully'.

The screenshot shows the MongoDB Compass interface with the 'Aggregations' tab selected. The aggregation pipeline is shown as `$match` followed by `$count`. The results are displayed in a table with one row: `total : 22924`. The status bar at the bottom indicates 'Compass 1.46.1 installed successfully'.

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 }
  }}
])
```



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. On the left, the 'CONNECTIONS' panel lists the local database 'Entretenimentcinematografic' and the 'Cinema' collection. The main panel displays the 'Documents' tab for the 'Cinema' collection. A query is entered in the search bar: `{ "directors": "John Landis", "imdb.rating": { "$gte": 7.5, "$lte": 8 } }`. The query is also shown in JSON format. The results panel shows two documents. The first document is for the movie 'Animal House' (1978), directed by John Landis, with an IMDb rating of 8.2. The second document is for the movie 'The Blues Brothers' (1980), directed by John Landis, with an IMDb rating of 8.0. The interface includes a 'Generate' button, a 'Find' button, and a 'Max Time MS' field set to 60000. The results are displayed in a table with columns for '_id', 'plot', 'year', 'genres', 'rated', 'metacritic', 'title', 'lastupdated', 'languages', 'writers', 'tomatoes', 'poster', 'num_flix_comments', 'released', 'awards', 'countries', 'cast', 'directors', and 'runtime'.

Exercici 2

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

Mitjançant MongoDB Atlas podem dibuixar el mapa:

