

SPRINT 5

NIVELL 1

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

Carreguem les dades:

The screenshot shows the Compass MongoDB interface. On the left, the connection tree shows 'localhost:27017' with 'admin', 'cine', 'cinema', and 'comments' databases selected. The 'comments' database is currently active. In the center, the 'Documents' tab is selected, showing 50.3K documents. The interface includes a search bar, a query builder, and a results panel displaying four sample documents. Each document includes fields like _id, name, email, movie_id, text, and date. At the bottom, a dark overlay displays a success message: 'Import completed. 50304 documents imported.'

```
_id: ObjectId('5a9427648b0beebeb69579cc')
name: "Andrea Le"
email: "andrea_le@fakegmail.com"
movie_id: ObjectId('573a1390f29313caabcd418c')
text: "Rem officis 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

_id: ObjectId('5a9427648b0beebeb69579d0')
name: "Talisa Maegyr"
email: "oona_chaplin@gameofthron.es"
movie_id: ObjectId('573a1390f29313caabcd41b1')
text: "Rem itaque ad sit rem voluptatibus. Ad fugiat maxime illum optio iure ..."
date: 1998-08-22T11:45:03.000+00:00

_id: ObjectId('5a9427648b0beebeb69579d3')
name: "Cameron Duran"
email: "cameron_duran@fakegmail.com"
movie_id: ObjectId('573a1390f29313caabcd4217')
text: "Quasi dicta culpa asperiores quaerat perferendis neque. Est animi pari..."
```

Import completed.
50304 documents imported.

CONNECTIONS (1)

- localhost:27017
 - admin
 - cine
 - cinema
 - comments
 - users
 - ...
- config
- local

Documents 185

Type a query: { field: 'value' } **Find** Options ▾

25 1 - 25 of 185

```
_id: ObjectId('59b99db4cfa9a34dcd7885b6')
name : "Ned Stark"
email : "sean_bear@gameofthron.es"
password : "$2b$12$UREFwsRUoy0CRqGNK0Lz08HM/jLhgUCNNIj9RJAqMUQ74crlJ1Vu"

_id: ObjectId('59b99db4cfa9a34dcd7885b7')
name : "Robert Baratheon"
email : "mark_addy@gameofthron.es"
password : "$2b$12$yGqxLG9LZpXA2xVDhuPnSOZd.VURVkz7wgOLY3pn0s7u2S1Z032y"

_id: ObjectId('59b99db5cfa9a34dcd7885b8')
name : "Jaime Lannister"
email : "nikolaj_coster-waldau@gameofthron.es"
password : "$2b$12$6vz7wiw0.EI5rilvqizUc./9480gb1uPtXcahdxiadgyC3PS8XCUK"

_id: ObjectId('59b99db5cfa9a34dcd7885b9')
name : "Catelyn Stark"
email : "michelle_fairley@gameofthron.es"
password : "$2b$12$fiaTH5Sh1zKNFX2i/FTErEWGjxoJxvmV7XL.qlfqCr8CwOxK.mZWS"

_id: ObjectId('59b99db6cfa9a34dcd7885ba')
name : "Cersei Lannister"
email : "lenag_headey@gameofthron.es"
password : "$2b$12$FExjgr7CLhNCa.oUsB9seub8mqchzkJCFZ8heMc8CeIKOZfeTKP8m"
```

Import completed.
185 documents imported.

CONNECTIONS (1)

- localhost:27017
 - admin
 - cine
 - cinema
 - comments
 - movies
 - users
 - ...
- config
- local

Documents 23.5K

Type a query: { field: 'value' } **Find** Options ▾

25 1 - 25 of 23539

```
_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 large anvil with a blacksmith behind it..."
countries : Array (1)
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 determined
genres : Array (2)
runtime : 11
Array (4)
: "https://m.media-amazon.com/images/M/MV5BMTU3NjE5NzYtYTYYNS00MDVmLWIwYj...
title : "The Great Train Robbery"
plot : "Among the earliest existing films in American cinema - notable as the first feature-length film ever made in America."
```

Import completed.
23539 documents imported.

My Queries

CONNECTIONS (1)

- localhost:27017
 - admin
 - cine
 - cinema
 - comments
 - movies
 - sessions
 - users
- config
- local

localhost:27017 > cinema > sessions

Documents 1 Aggregations Schema Indexes 1 Validation

Type a query: { field: 'value' } Explain Reset Find Options

25 1-1 of 1

```
_id: ObjectId('5a97f9c91c807bb9c6eb5fb4')
user_id: "t3qulfeem@kwiv5.6urn"
jwt: "eyJ0eXAiOiJKV1QiLCJhbGciOiJIUzI1NiJ9.eyJpYXQiOjE1MTk5MDkzMjEsIm5iZiI6M..."
```

Import completed.
1 document imported.

CONNECTIONS (1)

- localhost:27017
 - admin
 - cine
 - cinema
 - comments
 - movies
 - sessions
 - theaters
 - users
- config
- local

localhost:27017 > cinema > theaters

Documents 1.6K Aggregations Schema Indexes 1 Validation

Type a query: { field: 'value' } Explain Reset Find Options

25 1 - 25 of 1564

```
_id: ObjectId('59a47286cfa9a3a73e51e72c')
theaterId: 1000
location: Object

_id: ObjectId('59a47286cfa9a3a73e51e72d')
theaterId: 1003
location: Object

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

_id: ObjectId('59a47286cfa9a3a73e51e72f')
theaterId: 1004
location: Object

_id: ObjectId('59a47286cfa9a3a73e51e730')
theaterId: 1002
location: Object
```

Import completed.
1564 documents imported.

EXERCICI 1

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

Hi han dos formes de fer-ho. La primera, una mica més ràpida sense necessitat d'escriure consulta, utilitzant el “filter input” buit y limitant els resultats a 2, tal que:

The screenshot shows the Compass MongoDB interface. On the left, the connection tree is visible, showing a connection to 'localhost:27017' which contains databases 'admin', 'cine', 'cinema', and 'comments'. The 'comments' database is selected. In the center, the 'documents' tab is active, showing 50.3K documents. A search bar at the top has an empty query '{}'. Below it, there are project, sort, and collation settings. The 'Sort' section includes a 'Max Time MS' input field set to 60000. The 'Collation' section includes a 'Skip' input field set to 0 and a 'Limit' input field set to 2. At the bottom, the results are displayed in two cards. The first card shows a document with fields: _id, name, email, movie_id, text, and date. The second card shows another document with similar fields.

```

_id: ObjectId('5a9427648b0beebe69579cc')
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('5a9427648b0beebe69579cf')
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

```

La segona opció, i la seleccionada per al desenvolupament de l'activitat, amb consultes a través del MongoDB Shell:

```

>_MONGOSH
> use cinema
< switched to db cinema
> db.comments.find({}).limit(2)
< [
  {
    _id: ObjectId('5a9427648b0beebe69579cc'),
    name: 'Andrea Le',
    email: 'andrea_le@fakegmail.com',
    movie_id: ObjectId('573a1390f29313caabcd418c'),
    text: 'Rem officiis eaque repellendus amet eos doloribus. Porro dolor voluptatum voluptates neque culpa molestias. Voluptate unde',
    date: 2012-03-26T23:20:16.000Z
  },
  {
    _id: ObjectId('5a9427648b0beebe69579cf'),
    name: 'Greg Powell',
    email: 'greg_powell@fakegmail.com',
    movie_id: ObjectId('573a1390f29313caabcd41b1'),
    text: 'Tenetur dolorum molestiae ea. Eligendi praesentium unde quod porro. Commodo nisi sit placeat rerum vero cupiditate neque. I',
    date: 1987-02-10T00:29:36.000Z
  }
]

```

- Quants usuaris tenim registrats?

```
> db.users.countDocuments({})
< 185
cinema> |
```

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

```
> db.theaters.countDocuments({ "location.address.state": "CA" })
< 169
cinema> |
```

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

```
> db.users.find({}).sort({ _id: 1 }).limit(1)
< {
  _id: ObjectId('59b99db4cfa9a34cd7885b6'),
  name: 'Ned Stark',
  email: 'sean_bean@gameofthron.es',
  password: '$2b$12$UREFwsRUoyF0CRqGNK0Lz00HM/jLhgUCNNIj9RJAqMUQ74crlJ1Vu'
}
cinema> |
```

sort _id: 1 → ordena de forma ascendent, el contrari es fer sort _id: -1.

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

```
> db.movies.countDocuments({ "genres": "Comedy" })
< 7024
cinema> |
```

L'atribut genres es un array que permet que mes de un genere apareixi. Si volem pel·lícules únicament de comèdia, y no etiquetades amb més gèneres faríem:

```
> db.movies.countDocuments({ "genres": ["Comedy"] })
< 1147
cinema> |
```

EXERCICI 2: Mostra'm tots els documents de les pel·lícules produïdes en 1932, però que el gènere sigui drama o estiguin en francès.

```
> db.movies.find({
  year: 1932,
  $or: [
    { genres: "Drama" },
    { languages: "French" }
  ]
})
< {
  _id: ObjectId('573a1391f29313caabcd9458'),
  plot: 'A young artist draws a face at a canvas on his easel. Suddenly the mouth on the drawing comes into life and starts talking.',
  runtime: 55,
  rated: 'UNRATED',
  cast: [
    'Enrique Rivero',
    'Elizabeth Lee Miller',
    'Pauline Carton',
    'Odette Talazac'
  ],
  num_mflix_comments: 1,
  poster: 'https://m.media-amazon.com/images/M/MVSBWY30DE5ZWtYjlmYi00NjA4LTk4ZWYtMzBhZDE5MjY0YTYxXkEyXkFqcGdeQXVyNzI4MDMyMTU@._V1_.jpg',
  title: 'The Blood of a Poet',
  lastupdated: '2015-09-16 13:13:05.537000000',
  languages: [
    'French'
  ],
  released: '2010-05-20T00:00:00.000Z',
  directors: [
    'Jean Cocteau'
  ],
  writers: [
    'Jean Cocteau'
  ],
  awards: {
    wins: 1,
    nominations: 0,
    text: '1 win.'
  },
  year: 1932,
  imdb: {
    rating: 7.5,
    votes: 3903,
```

```
> db.movies.countDocuments({
  year: 1932,
  $or: [
    { genres: "Drama" },
    { languages: "French" }
  ]
})
< 18
```

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.

```

> db.movies.find({
  countries: "USA",
  "awards.wins": { $gte: 5, $lte: 9 },
  year: { $gte: 2012, $lte: 2014 }
})
< {
  _id: ObjectId('573a13acf29313caabd29366'),
  fullplot: "The manager of the negative assets sector of Life magazine, Walter Mitty, has been working for sixteen years for the magazine and",
  imdb: {
    rating: 7.4,
    votes: 211230,
    id: 359950
  },
  year: 2013,
  plot: "When his job along with that of his co-worker are threatened, Walter takes action in the real world embarking on a global journey tha",
  genres: [
    'Adventure',
    'Comedy',
    'Drama'
  ],
  rated: 'PG',
  metacritic: 54,
  title: 'The Secret Life of Walter Mitty',
  lastupdated: '2015-08-31 00:10:51.747000000',
  languages: [
    'English',
    'Spanish',
    'Icelandic'
  ],
  writers: [
    'Steve Conrad (screenplay)',
    'Steve Conrad (screen story by)',
    'James Thurber (based on the short story by)'
  ],
  type: 'movie',
  tomatoes: {
    website: 'http://WalterMitty.com',
    viewer: {
      rating: 3.7,
      numReviews: 77663,
      meter: 70
    },
  }
}

> db.movies.countDocuments({
  countries: "USA",
  "awards.wins": { $gte: 5, $lte: 9 },
  year: { $gte: 2012, $lte: 2014 }
})
< 166

```

\$gte: >=
\$lte: <=

NIVELL 2

EXERCICI 1: Compte quants comentaris escriu un usuari/ària que utilitza "GAMEOFTHRON.ES" com a domini de correu electrònic.

```
> db.comments.countDocuments({
  email: '@gameofthron\.es$/i
})
< 22841
cinema >
```

/.../ → busca tot un patró en el documents amb tot el que està dins
 \. → Un “.” en qualsevol caràcter en mongosh, si l'escapem, és a dir, posem la barra davant, indiquem que es un punt
 \$ → és l'ancla final, després d'aquest patró no pot haver res més
 i → insensible a majúscules/minúscules

EXERCICI 2: Quants cinemes hi ha en cada codi postal situats dins de l'estat Washington D. C. (DC)?

```
> db.theaters.aggregate([ // Pipeline
  {
    $match: { "location.address.state": "DC" }
  },
  {
    $group: {
      _id: "$location.address.zipcode",
      count: { $sum: 1 }
    }
  },
  {
    $sort: { count: -1 } // En ordre descendent
  },
  {
    $project: { //aquesta etapa pot incloure, transformar o excloure camps
      zipcode: "$_id",
      count: 1,
      _id: 0
    } // per defecte mostra_id, ara mostrerà zipcode
  }
])
< [
  {
    count: 1,
    zipcode: '20002'
  },
  {
    count: 1,
    zipcode: '20010'
  },
  {
    count: 1,
    zipcode: '20016'
  }
]
cinema >
```

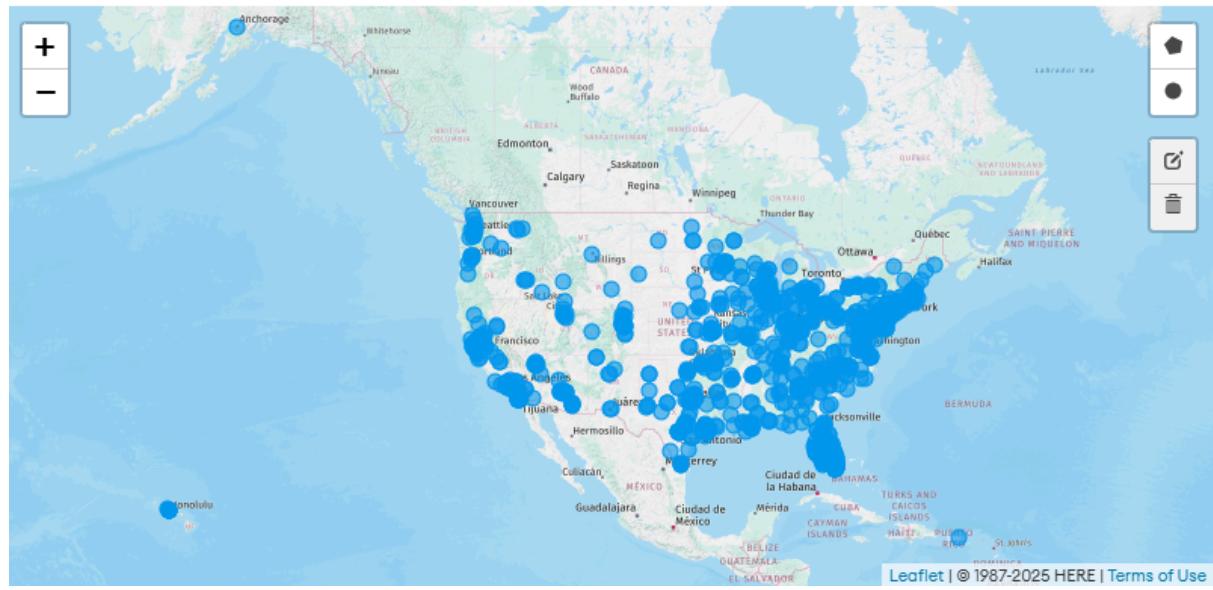
NIVELL 3

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.movies.find({
  directors: "John Landis",
  "imdb.rating": { $gte: 7.5, $lte: 8 }
})
< [
  {
    _id: ObjectId('573a1397f29313caabce6d94'),
    fullplot: "Faber College has one frat house so disreputable it will take anyone. It has a second one full of white, anglo-saxon, rich young men who are s",
    imdb: {
      rating: 7.6,
      votes: 84834,
      id: 77975
    },
    year: 1978,
    plot: "At a 1962 college, Dean Vernon Wormer is determined to expel the entire Delta Tau Chi Fraternity, but those trouble-makers have other plans for hi",
    genres: [
      'Comedy'
    ],
    rated: 'R',
    metacritic: 82,
    title: 'Animal House',
    lastupdated: '2015-09-13 00:02:47.803000000',
    languages: [
      'English',
      'Italian'
    ],
    writers: [
      'Harold Ramis',
      'Douglas Kenney',
      'Chris Miller'
    ],
    type: 'movie',
    tomatoes: {
      website: 'http://www.animalhouse.com/',
      viewer: {
        rating: 3.8,
        numReviews: 184490,
        meter: 89
      },
      dvd: 1998-02-24T00:00:00Z,
      critic: {
        rating: 7.5,
        numReviews: 184490,
        meter: 89
      }
    }
  }
]
```

```
> db.movies.countDocuments({
  directors: "John Landis",
  "imdb.rating": { $gte: 7.5, $lte: 8 }
})
< 4
```

EXERCICI 2: Mostra en un mapa la ubicació de tots els teatres de la base de dades.



Gràcies al format GeoJSON podem fer aquest visualització de les coordenades en un mapa desde l'apartat schema.