

Introducción a bases de datos

Sesión 5

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1. Ejemplos

1.1. Ejemplo 1

Database Name ^	Storage Size
miNombre	22.5MB
admin	0.0B
config	0.0B
local	0.0B
sample_airbnb	51.1MB
sample_analytics	8.8MB
sample_geospatial	656.0KB
sample_mflix	28.3MB
sample_restaurants	5.4MB
sample_supplies	980.0KB
sample_training	39.6MB
sample_weatherdata	2.3MB

Carga de nuevas bases de datos y colecciones de datos de ejemplo del mismo MongoDB Cluster

Collection Name ^	Documents	Avg. Document Size
comments	50,303	284.1 B
movies	23,530	1.6 KB
sessions	1	540.0 B
theaters	1,564	223.7 B
users	185	159.8 B

sample_mflix.users

Documents Aggregations Schema Explain Plan In

0 FILTER { field: 'value' }

ADD DATA VIEW

```

_id: ObjectId("50b99db4cfa9a34dc7885b6")
name: "Ned Stark"
email: "sean_bean@gameofthron.es"
password: "$2b$12$UREFwSRUoyF0CRqGNK9LZ08HM/jLhgUCNNI39RJAgMUQ74crl31Vu"

_id: ObjectId("50b99db4cfa9a34dc7885b7")
name: "Robert Baratheon"
email: "mark_addy@gameofthron.es"
password: "$2b$12$6qXL69LZpXA2xVDhuPnS0Zd.VURVxz7wg0LY3pn09s7u2S1Z032y"

_id: ObjectId("50b99db5cfa9a34dc7885b8")
name: "Jaime Lannister"
email: "nikolaj_coster-waldau@gameofthron.es"
password: "$2b$12$6vz7w1w0.E15R1lvQ1ZUC./948@gb1uPTXcahDxIadgyC3PS8XCUK"

```

0 FILTER { field: 'value' }

0 PROJECT { "name":1, "email":1 }

0 SORT { field: -1 }

0 COLLATION { locale: 'simple' }

VIEW

```

_id: ObjectId("50b99db4cfa9a34dc7885b6")
name: "Ned Stark"
email: "sean_bean@gameofthron.es"

_id: ObjectId("50b99db4cfa9a34dc7885b7")
name: "Robert Baratheon"
email: "mark_addy@gameofthron.es"

_id: ObjectId("50b99db5cfa9a34dc7885b8")
name: "Jaime Lannister"
email: "nikolaj_coster-waldau@gameofthron.es"

```

Consulta/Proyeccion de la coleccion users de mflix

1.2. Ejemplo 2

0 FILTER {year: 1993}

ADD DATA VIEW

```

_id: ObjectId("573a1399f29313caabcecc19")
plot: "Jude, a college literature professor, falls for one of his students. S..."
genres: Array
runtime: 53
cast: Array
nm_mflix_comments: 1
poster: "https://m.media-amazon.com/images/H/MV5BMTU2MjU5OTc2NF5BM15BanBnXkFtZT..."
title: "Surviving Desire"
fullplot: "Jude, a college literature professor, falls for one of his students. S..."
languages: Array
released: 1993-11-26T00:00:00.000+00:00
directors: Array
writers: Array
awards: Object
lastupdated: "2015-08-12 00:22:48.533000000"
year: 1993
imdb: Object
countries: Array
type: "movie"
tomatoes: Object

_id: ObjectId("573a1399f29313caabcecee6")
plot: "Cops investigate a criminal running an unsuspecting restaurant, while ..."
genres: Array
runtime: 96
rated: "UNRATED"
cast: Array
nm_mflix_comments: 2
poster: "https://m.media-amazon.com/images/H/MV5BMjA4MTMyNjk0M15BM15BanBnXkFtZT..."
title: "The Eight Immortals Restaurant: The Untold Story"
fullplot: "In 1978 in Hong Kong, a grisly murder takes place. Eight years later, ..."
languages: Array
released: 1993-05-13T00:00:00.000+00:00
directors: Array
writers: Array
awards: Object
lastupdated: "2015-08-12 00:41:20.203000000"
year: 1993
imdb: Object
countries: Array
type: "movie"
tomatoes: Object

```

sample_mflix.movies

Documents Aggregations Schema Explain Plan Indexes Vali

0 FILTER {year: {\$gte: 2000}}

ADD DATA VIEW

```
{
  "_id": ObjectId("573a1393f29313caabdcdb42"),
  "plot": "Kate and her actor brother live in N.Y. in the 21st Century. Her ex-bo...",
  "genres": Array,
  "runtime": 138,
  "metacritic": 44,
  "rated": "PG-13",
  "cast": Array,
  "poster": "https://m.media-amazon.com/images/M/MV5BMMNlNzVlOTctYTdhMS00ZnUxLTg0ZG...",
  "title": "Kate & Leopold",
  "fullplot": "Kate and her actor brother live in N.Y. in the 21st Century. Her ex-bo...",
  "languages": Array,
  "released": 2001-12-25T00:00:00.000+00:00,
  "directors": Array,
  "writers": Array,
  "awards": Object,
  "lastupdated": "2015-08-31 00:19:09.717000000",
  "year": 2001,
  "imdb": Object,
  "countries": Array,
  "type": "movie",
  "tomatoes": Object
}
```

```
> {
  "_id": ObjectId("573a1398f29313caabceb1fe"),
  "plot": "A modern day adaptation of Dostoyevsky's classic novel about a young s...",
  "genres": Array,
  "runtime": 126,
  "cast": Array,
  "poster": "https://m.media-amazon.com/images/M/MV5BMTI3MDQ2MzEyOV5BM15BanBnXkFtZT...",
  "title": "Crime and Punishment",
  "fullplot": "A modern day adaptation of Dostoyevsky's classic novel about a young s...",
  "languages": Array,
  "released": 2002-06-01T00:00:00.000+00:00,
  "directors": Array,
  "writers": Array,
  "awards": Object,
  "lastupdated": "2015-08-13 00:34:02.393000000",
  "year": 2002,
  "imdb": Object,
  "countries": Array,
  "type": "movie",
  "tomatoes": Object
}
```

0 FILTER {\$and: [{year: {\$gte: 2012}}, {year: {\$lte: 2019}}]}

ADD DATA VIEW

```
{
  "_id": ObjectId("573a13abf29313caabd23f34"),
  "fullplot": "Shaken by the death of his father and discouraged by his stalled caree...",
  "imdb": Object,
  "year": 2012,
  "plot": "Young writer Sal Paradise has his life shaken by the arrival of free-s...",
  "genres": Array,
  "rated": "R",
  "metacritic": 56,
  "title": "On the Road",
  "lastupdated": "2015-08-18 00:09:34.297000000",
  "languages": Array,
  "writers": Array,
  "type": "movie",
  "tomatoes": Object,
  "poster": "https://m.media-amazon.com/images/M/MV5BMTc1MzU5MDgzMF5BM15BanBnXkFtZT...",
  "num_mflix_comments": 1,
  "released": 2012-05-23T00:00:00.000+00:00,
  "awards": Object,
  "countries": Array,
  "cast": Array,
  "directors": Array,
  "runtime": 124
}
```

```
> {
  "_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,
  "rated": "PG",
  "metacritic": 54,
  "title": "The Secret Life of Walter Mitty",
  "lastupdated": "2015-08-31 00:10:51.747000000",
  "languages": Array,
  "writers": Array,
  "type": "movie",
  "tomatoes": Object,
  "poster": "https://m.media-amazon.com/images/M/MV5BODYyNDYxNDk1N15BM15BanBnXkFtZT...",
  "num_mflix_comments": 1,
  "released": 2013-12-25T00:00:00.000+00:00,
  "awards": Object,
  "countries": Array,
  "cast": Array,
  "directors": Array,
  "runtime": 114
}
```

sample_mflix.movies

Documents

Aggregations

Schema

Explain Plan

Indexes

⌵ FILTER

{ field: 'value' }

⌵ PROJECT

{ field: 0 }

⌵ SORT

{year: -1}

⌵ COLLATION

{ locale: 'simple' }

⬇️ ADD DATA ▾

👤

VIEW

⌵

⌵

⌵

>

```
_id:ObjectId("573a13ae0f20313caabdc260")
plot:"The story behind Hitler's plan of Germany getting the atomic bomb duri..."
genres:Array
runtime:45
cast:Array
num_mflix_comments:5
poster:"https://m.media-amazon.com/images/H/MV5BMjU4TU40NDk0S0V5BM1lOGNkXkFtZT..."
title:"The Saboteurs"
fullPlot:"The story behind Hitler's plan of Germany getting the atomic bomb duri..."
languages:Array
released:2015-01-04T00:00:00+00:00
awards:Object
lastupdated:"2015-00-07 00:56:17.810000000"
year:"2015e"
imdb:Object
countries:Array
type:"series"
```

>

```
_id:ObjectId("573a13ea730aabbdfcb1")
plot:"A documentary that weaves together the stories of Theodore, Franklin a..."
genres:Array
countries:Array
cast:Array
num_mflix_comments:1
poster:"https://m.media-amazon.com/images/H/MV5BMjNDZWQ2MDU0CW9lYi00MGQ3LTgxOG..."
title:"The Roosevelts: An Intimate History"
fullPlot:"A documentary that weaves together the stories of Theodore, Franklin a..."
languages:Array
released:2014-00-14T00:00:00+00:00
awards:Object
lastupdated:"2015-00-23 00:10:24.657000000"
year:"2014e"
imdb:Object
type:"series"
```

2. Retos

2.1. Reto 1

The image displays three screenshots of the MongoDB Compass interface, illustrating various queries and their results.

Top Screenshot: Shows a query with the following configuration:

- FILTER:** `{ field: 'value' }`
- PROJECT:** `{ "date": 1, "name": 1, "text": 1 }`
- SORT:** `{ field: -1 }`
- COLLATION:** `{ locale: 'simple' }`

The results show two documents:

```
{ "_id": ObjectId("5a9427648b0beebe69579cc"),  
  "name": "Andrea Le",  
  "text": "Rem officis eaque repellendus amet eos doloribus. Porro dolor volupta...",  
  "date": 2012-03-26T23:20:10.000+00:00 }  
  
{ "_id": ObjectId("5a9427648b0beebe69579cf"),  
  "name": "Greg Powell",  
  "text": "Fenetur dolorum molestiae ea. Eligendi praesentium unde quod porro. Co...",  
  "date": 1987-02-10T00:29:30.000+00:00 }
```

Middle Screenshot: Shows a query with the following configuration:

- FILTER:** `{ field: 'value' }`
- PROJECT:** `{ "title": 1, "cast": 1, "year": 1 }`
- SORT:** `{ field: -1 }`
- COLLATION:** `{ locale: 'simple' }`

The results show three documents, each with a cast array:

```
{ "_id": ObjectId("573a1390f29313caabed4135"),  
  "cast": Array,  
    0: "Charles Kayser",  
    1: "John Ott",  
  "title": "Blacksmith Scene",  
  "year": 1893 }  
  
{ "_id": ObjectId("573a1390f29313caabed42e8"),  
  "cast": Array,  
    0: "A.C. Abadie",  
    1: "Gilbert M. 'Broncho Billy' Anderson",  
    2: "George Barnes",  
    3: "Justus D. Barnes",  
  "title": "The Great Train Robbery",  
  "year": 1903 }  
  
{ "_id": ObjectId("573a1390f29313caabed4323"),  
  "cast": Array,  
    0: "Martin Fuller",  
    1: "Mrs. William Bechtel",  
    2: "Walter Edwin",  
    3: "Ethel Jewett",  
  "title": "The Land Beyond the Sunset",  
  "year": 1912 }
```

Bottom Screenshot: Shows a query with the following configuration:

- FILTER:** `{ field: 'value' }`
- PROJECT:** `{ "name": 1, "password": 1 }`
- SORT:** `{ field: -1 }`
- COLLATION:** `{ locale: 'simple' }`

The results show three documents:

```
{ "_id": ObjectId("50b99db4cfa9a34dcd7885b6"),  
  "name": "Ned Stark",  
  "password": "$2b$12$UREFwsRuoyF0CRqGNk0LZ08HM/jLHgUCNNI39RJAqMUQ74cr1J1Vu" }  
  
{ "_id": ObjectId("50b99db4cfa9a34dcd7885b7"),  
  "name": "Robert Baratheon",  
  "password": "$2b$12$y6qXLG9LZpXAZxVDhuPnSOZd.VURVxz7wg0LY3pn00s7u2S1Z032y" }  
  
{ "_id": ObjectId("50b99db5cfa9a34dcd7885b8"),  
  "name": "Jaime Lannister",  
  "password": "$2b$12$6vz7wiw0.EI5R1lvq1zUc./9480gb1uPTxcadXiadgyC3P58XCUK" }
```

Consulta/Proyeccion de la colección users de mflix

2.2. Reto 2

sample_mflix.comments

Documents Aggregations Schema Explain Plan Index

FILTER {"name":"Greg Powell"}

ADD DATA VIEW

```
{ "_id": "ObjectId(\"5a9427648b0beebe69579cf\")",  
  "name": "Greg Powell",  
  "email": "greg.powell@fakegmail.com",  
  "movie_id": "ObjectId(\"573a1390f29313caabdc41b1\")",  
  "text": "Tenetur dolorum molestiae ea. Eligendi praesentium unde quod porro. Co...",  
  "date": "1987-02-10T00:29:36.000+00:00" },  
  
{ "_id": "ObjectId(\"5a9427648b0beebe6957afe\")",  
  "name": "Greg Powell",  
  "email": "greg.powell@fakegmail.com",  
  "movie_id": "ObjectId(\"573a1390f29313caabdc754b\")",  
  "text": "Rem nostrum nobis saepe eaque itaque nemo. Fugit dignissimos nisi sapi...",  
  "date": "2013-03-26T16:20:03.000+00:00" },  
  
{ "_id": "ObjectId(\"5a9427648b0beebe6957b50\")",  
  "name": "Greg Powell",  
  "email": "greg.powell@fakegmail.com",  
  "movie_id": "ObjectId(\"573a1390f29313caabdc7e5d\")",  
  "text": "Officia atque ullam esse doloribus laborum. Maiores dicta ratione rem ...",  
  "date": "2004-04-09T08:21:05.000+00:00" }
```

Filtro de comentarios hechos por Greg Powell

sample_mflix.comments

Documents Aggregations Schema Explain Plan Index

FILTER {"\$or":[{"name":"Greg Powell"}, {"name":"Mercedes Tyler"}]}

ADD DATA VIEW

```
{ "_id": "ObjectId(\"5a9427648b0beebe69579cf\")",  
  "name": "Greg Powell",  
  "email": "greg.powell@fakegmail.com",  
  "movie_id": "ObjectId(\"573a1390f29313caabdc41b1\")",  
  "text": "Tenetur dolorum molestiae ea. Eligendi praesentium unde quod porro. Co...",  
  "date": "1987-02-10T00:29:36.000+00:00" },  
  
{ "_id": "ObjectId(\"5a9427648b0beebe69579e7\")",  
  "name": "Mercedes Tyler",  
  "email": "mercedes_tyler@fakegmail.com",  
  "movie_id": "ObjectId(\"573a1390f29313caabdc4323\")",  
  "text": "Eius veritatis vero facilis queraat fuga temporibus. Praesentium exped...",  
  "date": "2002-08-18T04:56:07.000+00:00" },  
  
{ "_id": "ObjectId(\"5a9427648b0beebe6957a78\")",  
  "name": "Mercedes Tyler",  
  "email": "mercedes_tyler@fakegmail.com",  
  "movie_id": "ObjectId(\"573a1390f29313caabdc6399\")",  
  "text": "Voluptate odio minima pariatur recusandae. Architecto illum dicta repu...",  
  "date": "2007-10-17T06:56:56.000+00:00" }
```

Filtro de comentarios hechos por Greg Powell o Mercedes Tyler

sample_mflix.movies

Documents 23.5k TOTAL SIZE 35.9MB AVG. SIZE 1.6KB

Documents Aggregations Schema Explain Plan Indexes Validation

FILTER { field: 'value' } PROJECT {"num_mflix_comments":1} SORT {"num_mflix_comments":-1} COLLATION { locale: 'simple' }

MAX TIME MS 60000 SKIP 0 LIMIT 1

VIEW

Displaying documents 1 -

```
{ "_id": "ObjectId(\"573a1390f29313caabce886\")",  
  "num_mflix_comments": 456 }
```

Muestra el máximo número de comentarios en una película

FILTER

{ field: 'value' }

PROJECT

{ "title": 1 }

SORT

{ "num_mflix_comments": -1 }

COLLATION

{ locale: 'simple' }

MAX TIME MS

60000

SKIP

0

LIMIT

5

OPTIONS

VIEW

Displaying documents

_id: ObjectId("573a1399f29313caabcee886")

title: "The Mask"

_id: ObjectId("573a1399f29313caabcee578")

title: "Dumb & Dumber"

_id: ObjectId("573a13bff29313caabd6001f")

title: "The Unborn"

_id: ObjectId("573a13a7f29313caabd1aa55")

title: "8 Mile"

_id: ObjectId("573a13a5f29313caabd19a0")

title: "About a Boy"

Muestra el título de las cinco películas más comentadas

7

3. Ejercicio

sample_training.companies

Documents Aggregations Schema

FILTER { field: 'value' }

PROJECT { "email_address":1,"phone_number":1 }

SORT { field: -1 }

COLLATION { locale: 'simple' }

VIEW

```
{ "_id": ObjectId("52cdef7c4bab8bd675297d8a"),  
  "email_address": "info@wetpaint.com",  
  "phone_number": "206.859.6300"  
}
```

```
{ "_id": ObjectId("52cdef7c4bab8bd675297d8e"),  
  "email_address": "",  
  "phone_number": ""  
}
```

```
{ "_id": ObjectId("52cdef7c4bab8bd675297d8f"),  
  "email_address": "info@omnidrive.com",  
  "phone_number": "609-675-5852"  
}
```

```
{ "_id": ObjectId("52cdef7c4bab8bd675297d94"),  
  "email_address": "press@twitter.com",  
  "phone_number": ""  
}
```

Ejercicio 1 inciso 1

sample_training.grades

Documents Aggregations Schema Explain Plan

FILTER { field: 'value' }

PROJECT { "class_id":1 }

SORT { field: -1 }

COLLATION { locale: 'simple' }

VIEW

```
{ "_id": ObjectId("56d5f7eb604eb380bed8d8ce"),  
  "class_id": 339  
}
```

```
{ "_id": ObjectId("56d5f7eb604eb380bed8d8cf"),  
  "class_id": 350  
}
```

```
{ "_id": ObjectId("56d5f7eb604eb380bed8d8de"),  
  "class_id": 149  
}
```

```
{ "_id": ObjectId("56d5f7eb604eb380bed8d8d1"),  
  "class_id": 39  
}
```

Ejercicio 1 inciso 2

Documents
Schema
Explain Plan
Indexes

FILTER {("found_month":10)}

+ ADD DATA ▾

VIEW

```

_id: ObjectId("52cdef7c4bab8bd675297da4")
name: "Wetpaint"
permalink: "abc2"
crunchbase_url: "http://www.crunchbase.com/company/wetpaint"
homepage_url: "http://wetpaint-inc.com"
blog_url: "http://digitalquarters.net/"
blog_feed_url: "http://digitalquarters.net/feed/"
twitter_username: "BachelrWetpaint"
category_code: "web"
number_of_employees: 47
founded_year: 2005
founded_month: 10
founded_day: 17
deadpooled_year: 1
tag_list: "wiki, seattle, elowitz, media-industry, media-platform, social-distrib..."
alias_list: ""
email_address: "info@wetpaint.com"
phone_number: "206.859.6390"
description: "Technology Platform Company"
created_at: "2007-05-25T00:51:27.000+00:00"
updated_at: "Sun Dec 08 07:15:44 UTC 2013"
overview: "cpWetpaint is a technology platform company that uses its proprietary..."
> image: Object
> products: Array
> relationships: Array
    
```

↓ SHOW 13 MORE FIELDS

```

_id: ObjectId("52cdef7c4bab8bd675297da4")
name: "Powerset"
permalink: "powerset"
crunchbase_url: "http://www.crunchbase.com/company/powerset"
homepage_url: "http://powerset.com"
blog_url: "http://blog.powerset.com"
blog_feed_url: "http://blog.powerset.com/atom.xml"
twitter_username: "PowerSet"
category_code: "Search"
number_of_employees: 60
founded_year: 2006
founded_month: 10
founded_day: null
deadpooled_year: null
deadpooled_month: null
deadpooled_day: null
deadpooled_year: null
tag_list: "searchengine, google, techcrunch40, natural-language"
alias_list: ""
email_address: "info@powerset.com"
    
```

sample_training.companies

Ejercicio 1 inciso 4

Documents
Aggregations
Schema
Explain Plan
Indexes

{ "author": "machine" }

ADD DATA
VIEW

```

_id: ObjectId("50ab9fbbcf1bfe2536dc3fa")
body: "Amendment I
<p>Congress shall make no law respecting an establishment ..."
permalink: "arJmLnLkTyspAIORGe"
author: "machine"
title: "Bill of Rights"
tags: Array
comments: Array
date: 2012-11-20T05:05:15.231+00:00

_id: ObjectId("50ab9fbbcf1bfe2536dc3fa")
body: "We the People of the United States, in order to form a more perfect Un..."
permalink: "jnsGobovWyKEoXNydtis"
author: "machine"
title: "US Constitution"
tags: Array
comments: Array
date: 2012-11-20T05:05:15.232+00:00

_id: ObjectId("50ab9fbbcf1bfe2536dc3fb")
body: "Four score and seven years ago our fathers brought forth on this conti..."
permalink: "ekoOGzzbyQzUPThsXRfU"
author: "machine"
title: "Gettysburg Address"
tags: Array
comments: Array
date: 2012-11-20T05:05:15.234+00:00

```

sample_training.grades

Ejercicio 1 inciso 6

Documents
Aggregations
Schema
Explain Plan
Indexes

(1) FILTER [{"founded_year":2008,"founded_month":10}]

+ ADD DATA

VIEW

```

_id: ObjectId("52cdef7c4bab8bd6752985ca")
name: "tunesBag"
permalink: "tunesbag"
crunchbase_url: "http://www.crunchbase.com/company/tunesbag"
homepage_url: "http://www.tunesBag.com"
blog_url: "http://tunesBag.blogspot.com/"
blog_feed_url: "http://blog.tunesbag.com/feeds/posts/default?alt=rss"
twitter_username: ""
category_code: "games_video"
number_of_employees: null
founded_year: 2008
founded_month: 10
founded_day: 1
deadpooled_year: null
deadpooled_month: null
deadpooled_day: null
deadpooled_url: null
tag_list: "music, cloud, locker, mp3, music-streaming, streaming"
alias_list: ""
email_address: "office@tunesBag.com"
phone_number: "+43 680 215 27 90"
description: "Social Music Player"
created_at: "Thu Mar 28 15:45:40 UTC 2008"
updated_at: "Thu Jan 19 09:37:48 UTC 2012"
overview: "<p>Austria based tunesBag is a music player with social features on th..."

```

SHOW 17 MORE FIELDS

```

_id: ObjectId("52cdef7d4bab8bd675298d21")
name: "Muecs"
permalink: "muecs"
crunchbase_url: "http://www.crunchbase.com/company/muecs"
homepage_url: "http://www.muecs.com"
blog_url: "http://blog.muecs.com"
blog_feed_url: "http://blog.muecs.com/syndication.axd"
twitter_username: "muecs"
category_code: "software"
number_of_employees: 4
founded_year: 2008
founded_month: 10
founded_day: 1
deadpooled_year: 2012
deadpooled_month: 8
deadpooled_day: 3
deadpooled_url: ""
tag_list: "saas, enterprise-solution, collaboration, location-base, social-media, ..."
alias_list: ""
email_address: "info@muecs.com"

```

sample_training.companies

Ejercicio 1 inciso 8

sample_training.routes

Documents Aggregations Schema

FILTER `{ "$and": [{ "stops": { "$gte": 1 } }, { "stops": { "$lte": 5 } }] }`

ADD DATA VIEW

```

_id: ObjectId("56e9b39b732b6122f8780243")
> airline: Object
  src_airport: "YRT"
  dst_airport: "YEK"
  codeshare: ""
  stops: 1
  airplane: "ATR"

_id: ObjectId("56e9b39b732b6122f87818b3")
> airline: Object
  src_airport: "ABJ"
  dst_airport: "BRU"
  codeshare: ""
  stops: 1
  airplane: 333

_id: ObjectId("56e9b39b732b6122f8781a81")
> airline: Object
  src_airport: "YVR"
  dst_airport: "YBL"
  codeshare: ""
  stops: 1
  airplane: "BEH"

_id: ObjectId("56e9b39b732b6122f8783f97")
> airline: Object
  src_airport: "FCO"
  dst_airport: "HAV"
  codeshare: ""
  stops: 1
  airplane: 767

```

Ejercicio 1 inciso 9

FILTER `{ "number_of_employees": { "$ne": null } }`

PROJECT `{ field: 0 }`

SORT `{ "number_of_employees": 1 }`

COLLATION `{ locale: 'simple' }`

ADD DATA VIEW

```

> _id: ObjectId("52cdef7c4bab8bd675297dbd")
  name: "YouTube"
  permalink: "youtube"
  crunchbase_url: "http://www.crunchbase.com/company/youtube"
  homepage_url: "http://www.youtube.com"
  blog_url: "http://www.youtube.com/blog"
  blog_feed_url: "http://youtube-global.blogspot.com/feeds/posts/default?alt=rss"
  twitter_username: "YouTube"
  category_code: "games_video"
  number_of_employees: 0
  founded_year: 2005
  founded_month: 2
  founded_day: null
  deadpooled_year: null
  deadpooled_month: null
  deadpooled_day: null
  deadpooled_url: ""
  tag_list: "channels, movies, rentals, share, usergeneratedvideo, viralvideo, vide..."
  alias_list: ""
  email_address: ""
  phone_number: "(650) 253-0000"
  description: "Online video sharing"
  created_at: "Sat Jun 23 05:00:28 UTC 2007"
  updated_at: "Thu Jul 04 03:00:06 UTC 2013"
  overview: "<p>YouTube provides a platform for you to create, connect and discover..."

```

SHOW 17 MORE FIELDS

Ejercicio 1 inciso 10

sample_training.companies

Documents Aggregations Schema Explain Plan Indexes

FILTER { field: 'value' }

PROJECT { field: 0 }

SORT { "number_of_employees": -1 }

COLLATION { locale: 'simple' }

ADD DATA VIEW

```
>
{
  "_id": ObjectId("52cdef7c4bab8bd67520856a"),
  "name": "IBM",
  "permalink": "ibm",
  "crunchbase_url": "http://www.crunchbase.com/company/ibm",
  "homepage_url": "http://www.ibm.com",
  "blog_url": "",
  "blog_feed_url": "",
  "twitter_username": "IBM",
  "category_code": "software",
  "number_of_employees": 388000,
  "founded_year": 1896,
  "founded_month": null,
  "founded_day": null,
  "deadpooled_year": null,
  "deadpooled_month": null,
  "deadpooled_day": null,
  "deadpooled_url": "",
  "tag_list": "",
  "alias_list": "",
  "email_address": "ews@us.ibm.com",
  "phone_number": "914-499-1900",
  "description": "",
  "created_at": "Fri Mar 14 22:55:52 UTC 2008",
  "updated_at": "Sat Jan 04 02:56:24 UTC 2014",
  "overview": "<p>IBM, acronym for International Business Machines, is a multinationa..."
}
```

SHOW 17 MORE FIELDS

Ejercicio 1 inciso 11

sample_training.trips

Documents Aggregations Schema

FILTER { field: 'value' }

PROJECT { field: 0 }

SORT { "tripduration": -1 }

COLLATION { locale: 'simple' }

ADD DATA VIEW

```
>
{
  "_id": ObjectId("572bb8222b288919b68ac97c"),
  "tripduration": 326222,
  "start_station_id": 391,
  "start_station_name": "Clark St & Henry St",
  "end_station_id": 310,
  "end_station_name": "State St & Smith St",
  "bikeid": 18591,
  "usertype": "Subscriber",
  "birth_year": 1979,
  "gender": 1,
  "start_station_location": Object,
  "end_station_location": Object,
  "start_time": 2016-01-01T09:58:20.000+00:00,
  "stop_time": 2016-01-04T19:35:23.000+00:00
}
```

Ejercicio 1 inciso 12

sample_training.trips

Documents Aggregations Schema Expla

FILTER { field: 'value' }

PROJECT { field: 0 }

SORT { "tripduration": 1 }

COLLATION { locale: 'simple' }

ADD DATA VIEW

```
>
{
  "_id": ObjectId("572bb8222b288919b68ac2d4"),
  "tripduration": 61,
  "start_station_id": 3150,
  "start_station_name": "E 85 St & York Ave",
  "end_station_id": 3150,
  "end_station_name": "E 85 St & York Ave",
  "bikeid": 22299,
  "usertype": "Subscriber",
  "birth_year": 1989,
  "gender": 1,
  "start_station_location": Object,
  "end_station_location": Object,
  "start_time": 2016-01-01T02:43:19.000+00:00,
  "stop_time": 2016-01-01T02:44:21.000+00:00
}
```

Ejercicio 1 inciso 13



Ejercicio captura de queries favoritos

```

1 {"Ejercicio 1":"Proyeccion"}
2 {"email_address":1,"phone_number":1}
3
4 {"Ejercicio 2":"Proyeccion"}
5 {"class_id":1}
6
7 {"Ejercicio 3":"Filtro"}
8 {"founded_month":10}
9
10 {"Ejercicio 4":"Filtro"}
11 {"founded_year":2008}
12 {"Ejercicio 4":"Proyeccion"}
13 {"name":1}
14
15 {"Ejercicio 5":"Filtro"}
16 {"author":"machine"}
17
18 {"Ejercicio 6":"Filtro"}
19 {"class_id":{"$in":[350, 57, 465]}}
20
21 {"Ejercicio 7":"Filtro"}
22 {"founded_year":2008,"founded_month":10}
23
24 {"Ejercicio 8":"Filtro"}
25 {"number_of_employees":{"$gt":50}}
26
27 {"Ejercicio 9":"Filtro"}
28 {"$and":[{"stops":{"$gte":1}},{"stops":{"$lte":5}}]}
29
30 {"Ejercicio 10":"Filtro"}

```

```
31 {"number_of_employees":{"$ne":null}}
32 {"Ejercicio 10":"Ordenamiento"}
33 {"number_of_employees":1}
34 {"Ejercicio 10":{"Limit":1}}
35
36 {"Ejercicio 11":"Ordenamiento"}
37 {"number_of_employees":-1}
38 {"Ejercicio 11":{"Limit":1}}
39
40 {"Ejercicio 12":"Ordenamiento"}
41 {"tripduration":-1}
42 {"Ejercicio 12":{"Limit":1}}
43
44 {"Ejercicio 13":"Ordenamiento"}
45 {"tripduration":1}
46 {"Ejercicio 13":{"Limit":1}}
```