

En primer lugar creamos un archivo .js para insertar en nuestra colección “inventory” de la base de datos varios documentos.

```
src > JS ejercicio003.js > ...
1 db.inventory.insertMany([
2   { item: "agenda", qty: 25, size: { h: 14, w: 21, uom: "cm" }, status: "A" },
3   { item: "cuaderno", qty: 50, size: { h: 8.5, w: 11, uom: "in" }, status: "A" },
4   { item: "papel", qty: 100, size: { h: 8.5, w: 11, uom: "in" }, status: "C" },
5   { item: "archivador", qty: 75, size: { h: 22.85, w: 30, uom: "cm" }, status: "D" },
6   { item: "carpeta", qty: 45, size: { h: 10, w: 15.25, uom: "cm" }, status: "A" }
7 ]);
```

Seguidamente, en el terminal, nos conectamos con el MongoDB Compass, creamos una nueva base de datos, cargamos el archivo .js creado anteriormente y comprobamos que se ha creado la colección y los documentos.

```
PS D:\Mis documentos\DB\30-10> cd src
PS D:\Mis documentos\DB\30-10\src> mongo
MongoDB shell version v4.4.1
connecting to: mongodb://127.0.0.1:27017/?compressors=disabled&gssapiServiceName=mongodb
Implicit session: session { "id" : UUID("12c05447-7a70-4c7a-9b06-f74abdab9b1a") }
MongoDB server version: 4.4.1
---
The server generated these startup warnings when booting:
  2020-10-15T13:33:17.538+02:00: ***** SERVER RESTARTED *****
  2020-10-15T13:33:19.530+02:00: Access control is not enabled for the database. Read and write access to data and configuration is unrestricted
---
---
Enable MongoDB's free cloud-based monitoring service, which will then receive and display
metrics about your deployment (disk utilization, CPU, operation statistics, etc).

The monitoring data will be available on a MongoDB website with a unique URL accessible to you
and anyone you share the URL with. MongoDB may use this information to make product
improvements and to suggest MongoDB products and deployment options to you.

To enable free monitoring, run the following command: db.enableFreeMonitoring()
To permanently disable this reminder, run the following command: db.disableFreeMonitoring()
---
> use g1db03
switched to db g1db03
> load("ejercicio003.js")
true
> show collections
inventory
> db.inventory.find()
{ "_id" : ObjectId("5f9927419c13a8a6f1a018fd"), "item" : "agenda", "qty" : 25, "size" : { "h" : 14, "w" : 21, "uom" : "cm" }, "status" : "A" }
{ "_id" : ObjectId("5f9927419c13a8a6f1a018fe"), "item" : "cuaderno", "qty" : 50, "size" : { "h" : 8.5, "w" : 11, "uom" : "in" }, "status" : "A" }
{ "_id" : ObjectId("5f9927419c13a8a6f1a018ff"), "item" : "papel", "qty" : 100, "size" : { "h" : 8.5, "w" : 11, "uom" : "in" }, "status" : "C" }
{ "_id" : ObjectId("5f9927419c13a8a6f1a01900"), "item" : "archivador", "qty" : 75, "size" : { "h" : 22.85, "w" : 30, "uom" : "cm" }, "status" : "D" }
{ "_id" : ObjectId("5f9927419c13a8a6f1a01901"), "item" : "carpeta", "qty" : 45, "size" : { "h" : 10, "w" : 15.25, "uom" : "cm" }, "status" : "A" }
```

Posteriormente, comenzamos a introducir los siguientes métodos find:

- `db.inventory.find({ status: "A" })` : muestra los documentos de la colección inventory que contengan status A.
- `db.inventory.find({ status: { $in: ["A", "D"] } })` : muestra los documentos de la colección inventory específicos que contengan status A y D.
- `db.inventory.find({ status: "A", qty: { $lt: 47 } })` : muestra los documentos de la colección inventory que contengan status A y los documentos que contengan qty menor que 47.

```
> db.inventory.find( { status: "A" } )
{ "_id" : ObjectId("5f9927419c13a8a6f1a018fd"), "item" : "agenda", "qty" : 25, "size" : { "h" : 14, "w" : 21, "uom" : "cm" }, "status" : "A" }
{ "_id" : ObjectId("5f9927419c13a8a6f1a018fe"), "item" : "cuaderno", "qty" : 50, "size" : { "h" : 8.5, "w" : 11, "uom" : "in" }, "status" : "A" }
{ "_id" : ObjectId("5f9927419c13a8a6f1a01901"), "item" : "carpeta", "qty" : 45, "size" : { "h" : 10, "w" : 15.25, "uom" : "cm" }, "status" : "A" }
> db.inventory.find( { status: { $in: [ "A", "D" ] } } )
{ "_id" : ObjectId("5f9927419c13a8a6f1a018fd"), "item" : "agenda", "qty" : 25, "size" : { "h" : 14, "w" : 21, "uom" : "cm" }, "status" : "A" }
{ "_id" : ObjectId("5f9927419c13a8a6f1a018fe"), "item" : "cuaderno", "qty" : 50, "size" : { "h" : 8.5, "w" : 11, "uom" : "in" }, "status" : "A" }
{ "_id" : ObjectId("5f9927419c13a8a6f1a01900"), "item" : "archivador", "qty" : 75, "size" : { "h" : 22.85, "w" : 30, "uom" : "cm" }, "status" : "D" }
{ "_id" : ObjectId("5f9927419c13a8a6f1a01901"), "item" : "carpeta", "qty" : 45, "size" : { "h" : 10, "w" : 15.25, "uom" : "cm" }, "status" : "A" }
> db.inventory.find( { status: "A", qty: { $lt: 47 } } )
{ "_id" : ObjectId("5f9927419c13a8a6f1a018fd"), "item" : "agenda", "qty" : 25, "size" : { "h" : 14, "w" : 21, "uom" : "cm" }, "status" : "A" }
{ "_id" : ObjectId("5f9927419c13a8a6f1a01901"), "item" : "carpeta", "qty" : 45, "size" : { "h" : 10, "w" : 15.25, "uom" : "cm" }, "status" : "A" }
```

Ahora con el comando `db.inventory.find({ $and: [{ status: "A" }, { qty: { $gte: 45 } }] })` se mostrarán los documentos de la colección inventory que cumplan que el status sea A y que qty sea mayor o igual que 45.

```
> db.inventory.find( { $and: [ { status: "A" }, { qty: { $gte: 45 } } ] } )
{ "_id" : ObjectId("5f9927419c13a8a6f1a018fe"), "item" : "cuaderno", "qty" : 50, "size" : { "h" : 8.5, "w" : 11, "uom" : "in" }, "status" : "A" }
{ "_id" : ObjectId("5f9927419c13a8a6f1a01901"), "item" : "carpeta", "qty" : 45, "size" : { "h" : 10, "w" : 15.25, "uom" : "cm" }, "status" : "A" }
```

Por último usare los siguientes comandos para:

- `db.inventory.find({ $or: [{ status: "A" }, { qty: { $lt: 30 } }] })` : mostrar los documentos de la colección inventory que contengan que status sea A o que cumplan que qty sea menor que 30.
- `db.inventory.find({ $or: [{ status: "D" }, { qty: { $lt: 30 } }] })` : igual que el anterior pero en vez de que status sea A, ahora que status sea D.
- `db.inventory.find({ status: "D", $or: [{ qty: { $lt: 30 } }, { item: /^a/ }] })` : mostrar los documentos de la colección inventory que contengan que status sea D y que qty sea menor que 30 o que el nombre del item empiece por a.
- `db.inventory.find({ "size.uom": "cm" })` : mostrar los documentos de la colección inventory que cumplan que en el apartado size, en concreto en uom, sea en cm.
- `db.inventory.find({ "size.w": 11 })` : mostrar los documentos de la colección inventory que cumplan que en el apartado size, en concreto el w, sea igual a 11.
- `db.inventory.find({ "size.w": { $lt: 20 } })` : mostrar los documentos de la colección inventory que cumplan que en el apartado size, en concreto el w, sea menor que 20.

```
> db.inventory.find( { $or: [ { status: "A" }, { qty: { $lt: 30 } } ] } )
{ "_id" : ObjectId("5f9927419c13a8a6f1a018fd"), "item" : "agenda", "qty" : 25, "size" : { "h" : 14, "w" : 21, "uom" : "cm" }, "status" : "A" }
{ "_id" : ObjectId("5f9927419c13a8a6f1a018fe"), "item" : "cuaderno", "qty" : 50, "size" : { "h" : 8.5, "w" : 11, "uom" : "in" }, "status" : "A" }
{ "_id" : ObjectId("5f9927419c13a8a6f1a01901"), "item" : "carpeta", "qty" : 45, "size" : { "h" : 10, "w" : 15.25, "uom" : "cm" }, "status" : "A" }
> db.inventory.find( { $or: [ { status: "D" }, { qty: { $lt: 30 } } ] } )
{ "_id" : ObjectId("5f9927419c13a8a6f1a018fd"), "item" : "agenda", "qty" : 25, "size" : { "h" : 14, "w" : 21, "uom" : "cm" }, "status" : "A" }
{ "_id" : ObjectId("5f9927419c13a8a6f1a01900"), "item" : "archivador", "qty" : 75, "size" : { "h" : 22.85, "w" : 30, "uom" : "cm" }, "status" : "D" }
> db.inventory.find( { status: "D", $or: [ { qty: { $lt: 30 } }, { item: /^a/ } ] } )
{ "_id" : ObjectId("5f9927419c13a8a6f1a01900"), "item" : "archivador", "qty" : 75, "size" : { "h" : 22.85, "w" : 30, "uom" : "cm" }, "status" : "D" }
> db.inventory.find( { "size.uom": "cm" } )
{ "_id" : ObjectId("5f9927419c13a8a6f1a018fd"), "item" : "agenda", "qty" : 25, "size" : { "h" : 14, "w" : 21, "uom" : "cm" }, "status" : "A" }
{ "_id" : ObjectId("5f9927419c13a8a6f1a01900"), "item" : "archivador", "qty" : 75, "size" : { "h" : 22.85, "w" : 30, "uom" : "cm" }, "status" : "D" }
{ "_id" : ObjectId("5f9927419c13a8a6f1a01901"), "item" : "carpeta", "qty" : 45, "size" : { "h" : 10, "w" : 15.25, "uom" : "cm" }, "status" : "A" }
> db.inventory.find( { "size.w": 11 } )
{ "_id" : ObjectId("5f9927419c13a8a6f1a018fe"), "item" : "cuaderno", "qty" : 50, "size" : { "h" : 8.5, "w" : 11, "uom" : "in" }, "status" : "A" }
{ "_id" : ObjectId("5f9927419c13a8a6f1a018ff"), "item" : "papel", "qty" : 100, "size" : { "h" : 8.5, "w" : 11, "uom" : "in" }, "status" : "C" }
> db.inventory.find( { "size.w": { $lt: 20 } } )
{ "_id" : ObjectId("5f9927419c13a8a6f1a018fe"), "item" : "cuaderno", "qty" : 50, "size" : { "h" : 8.5, "w" : 11, "uom" : "in" }, "status" : "A" }
{ "_id" : ObjectId("5f9927419c13a8a6f1a018ff"), "item" : "papel", "qty" : 100, "size" : { "h" : 8.5, "w" : 11, "uom" : "in" }, "status" : "C" }
{ "_id" : ObjectId("5f9927419c13a8a6f1a01901"), "item" : "carpeta", "qty" : 45, "size" : { "h" : 10, "w" : 15.25, "uom" : "cm" }, "status" : "A" }
```