

01 Introducción a índices

Indexes support the efficient execution of queries in MongoDB. Without indexes, MongoDB must perform a collection scan, i.e. scan every document in a collection, to select those documents that match the query statement. If an appropriate index exists for a query, MongoDB can use the index to limit the number of documents it must inspect.

Indexes are special data structures [1] that store a small portion of the collection's data set in an easy to traverse form. The index stores the value of a specific field or set of fields, ordered by the value of the field. The ordering of the index entries supports efficient equality matches and range-based query operations. In addition, MongoDB can return sorted results by using the ordering in the index.

Método createIndex()

<https://docs.mongodb.com/manual/reference/method/db.collection.createIndex/#db.collection.createIndex>

Sintaxis

`db.collection.createIndex(keys, options)`

Parameter	Type	Description
key	document	A document that contains the field and value pairs where the field is the index key and the value describes the type of index for that field. For an ascending index on a field, specify a value of 1; for descending index, specify a value of -1. Starting in 3.6, you cannot specify * as the index name.
options	document	Optional. A document that contains a set of options that controls the creation of the index.

Práctica

```
> db.clientes.createIndex({apellidos: 1})
{
  "createdCollectionAutomatically" : false,
  "numIndexesBefore" : 1,
  "numIndexesAfter" : 2,
  "ok" : 1
}
```

Método getIndexes()

<https://docs.mongodb.com/manual/reference/method/db.collection.getIndexes/index.html>

Sintaxis

```
db.collection.getIndexes()
```

Práctica

```
> db.clientes.getIndexes()
[
  {
    "v" : 2,
    "key" : {
      "_id" : 1
    },
    "name" : "_id_",
    "ns" : "gimnasio.clientes"
  },
  {
    "v" : 2,
    "key" : {
      "apellidos" : 1
    },
    "name" : "apellidos_1",
    "ns" : "gimnasio.clientes"
  }
]
```

Método dropIndex()

<https://docs.mongodb.com/manual/reference/method/db.collection.dropIndex/>

Sintaxis

```
db.collection.dropIndex(index)
```

Parameter	Type	Description
index	string or document	Optional. Specifies the index to drop. You can specify the index either by the index name or by the index specification document.

Práctica

```
> db.clientes.dropIndex("apellidos_1")
{ "nIndexesWas" : 2, "ok" : 1 }
```

*db.<collections>.dropIndexes() Para eliminarlos todos excepto el de _id

Index Names

The default name for an index is the concatenation of the indexed keys and each key's direction in the index (i.e. 1 or -1) using underscores as a separator. For example, an index created on { item : 1, quantity: -1 } has the name item_1_quantity_-1.

You can create indexes with a custom name, such as one that is more human-readable than the default. For example, consider an application that frequently queries the products collection to populate data on existing inventory.

You can view index names using the db.collection.getIndexes() method. You cannot rename an index once created. Instead, you must drop and re-create the index with a new name.

Práctica

```
> db.clientes.createIndex({apellidos: 1},{name: "Consultas simples por apellido"})
```