

Installer the MongoDB database.

Installer l'outil [Mongo Database Tool](#), en plus du mongo compass.

En utilisant mongo Shell :

- Créer une base de données nommé : « starter ».
  - > show dbs
  - admin 0.000GB
  - config 0.000GB
  - local 0.000GB
  - **starter 0.000GB**
- 
- Créer une collections products.

```
> use starter
```

```
switched to db starter
```

```
> db.createCollection({'products'})
```

```
> show collections
```

```
products
```

Importer le fichier ci-joint dans votre base de données mongo, le fichier csv ci-joint. Pour ce faire :

Ajouter son chemin d'installation dans la variable Path.

**Done**

Depuis votre console, exécuter la requête mongoimport pour importer votre fichier csv dans la base de données « starter » et dans la collection « products » :

```
C:\Program Files\MongoDB\Server\4.4\bin>mongoimport -d starter -c products --type csv --file products.csv --headerline
```

```
2021-01-18T16:58:51.177+0100 connected to: mongodb://localhost/
```

```
2021-01-18T16:58:51.208+0100 77 document(s) imported successfully. 0 document(s) failed to import.
```

Faire les requêtes suivantes :

Afficher les données de la collection en utilisant `db.products.find()` ;

```
> db.products.find()
```

```
{ "_id" : ObjectId("6005b03b8f59b4c247cba1e6"), "ProductID" : 2, "ProductName" : "Chang",  
  "SupplierID" : 1, "CategoryID" : 1, "QuantityPerUnit" : "24 - 12 oz bottles", "UnitPrice" : 19,  
  "UnitsInStock" : 17, "UnitsOnOrder" : 40, "ReorderLevel" : 25, "Discontinued" : 0 }
```

```
{ "_id" : ObjectId("6005b03b8f59b4c247cba1e7"), "ProductID" : 1, "ProductName" : "Chai",  
  "SupplierID" : 1, "CategoryID" : 1, "QuantityPerUnit" : "10 boxes x 20 bags", "UnitPrice" : 18,  
  "UnitsInStock" : 39, "UnitsOnOrder" : 0, "ReorderLevel" : 10, "Discontinued" : 0 }
```

```
{ "_id" : ObjectId("6005b03b8f59b4c247cba1e8"), "ProductID" : 4, "ProductName" : "Chef  
Anton's Cajun Seasoning", "SupplierID" : 2, "CategoryID" : 2, "QuantityPerUnit" : "48 - 6 oz  
jars", "UnitPrice" : 22, "UnitsInStock" : 53, "UnitsOnOrder" : 0, "ReorderLevel" : 0,  
  "Discontinued" : 0 }
```

```
{ "_id" : ObjectId("6005b03b8f59b4c247cba1e9"), "ProductID" : 5, "ProductName" : "Chef  
Anton's Gumbo Mix", "SupplierID" : 2, "CategoryID" : 2, "QuantityPerUnit" : "36 boxes",  
  "UnitPrice" : 21.35, "UnitsInStock" : 0, "UnitsOnOrder" : 0, "ReorderLevel" : 0, "Discontinued" :  
  1 }
```

```
{ "_id" : ObjectId("6005b03b8f59b4c247cba1ea"), "ProductID" : 3, "ProductName" : "Aniseed  
Syrup", "SupplierID" : 1, "CategoryID" : 2, "QuantityPerUnit" : "12 - 550 ml bottles",  
  "UnitPrice" : 10, "UnitsInStock" : 13, "UnitsOnOrder" : 70, "ReorderLevel" : 25, "Discontinued"  
  : 0 }
```

Type "it" for more

```
> it
```

Combien de documents sont inclus dans la collection « products ».

```
db.products.find().count()
```

```
77
```

Modifier la taille du batch de MongoDB pour afficher juste 10 éléments.

```
> db.products.find().limit(10).pretty()
```

```
{
```

```
    "_id" : ObjectId("6005b03b8f59b4c247cba1e6"),
    "ProductID" : 2,
    "ProductName" : "Chang",
    "SupplierID" : 1,
    "CategoryID" : 1,
    "QuantityPerUnit" : "24 - 12 oz bottles",
    "UnitPrice" : 19,
    "UnitsInStock" : 17,
    "UnitsOnOrder" : 40,
    "ReorderLevel" : 25,
    "Discontinued" : 0
  }
{
  "_id" : ObjectId("6005b03b8f59b4c247cba1e7"),
  "ProductID" : 1,
  "ProductName" : "Chai",
  "SupplierID" : 1,
  "CategoryID" : 1,
  "QuantityPerUnit" : "10 boxes x 20 bags",
  "UnitPrice" : 18,
  "UnitsInStock" : 39,
  "UnitsOnOrder" : 0,
  "ReorderLevel" : 10,
  "Discontinued" : 0
}
{
  "_id" : ObjectId("6005b03b8f59b4c247cba1e8"),
  "ProductID" : 4,
```

```
"ProductName" : "Chef Anton's Cajun Seasoning",
"SupplierID" : 2,
"CategoryID" : 2,
"QuantityPerUnit" : "48 - 6 oz jars",
"UnitPrice" : 22,
"UnitsInStock" : 53,
"UnitsOnOrder" : 0,
"ReorderLevel" : 0,
"Discontinued" : 0
}
{
  "_id" : ObjectId("6005b03b8f59b4c247cba1e9"),
  "ProductID" : 5,
  "ProductName" : "Chef Anton's Gumbo Mix",
  "SupplierID" : 2,
  "CategoryID" : 2,
  "QuantityPerUnit" : "36 boxes",
  "UnitPrice" : 21.35,
  "UnitsInStock" : 0,
  "UnitsOnOrder" : 0,
  "ReorderLevel" : 0,
  "Discontinued" : 1
}
{
  "_id" : ObjectId("6005b03b8f59b4c247cba1ea"),
  "ProductID" : 3,
  "ProductName" : "Aniseed Syrup",
  "SupplierID" : 1,
```

```
"CategoryID" : 2,
"QuantityPerUnit" : "12 - 550 ml bottles",
"UnitPrice" : 10,
"UnitsInStock" : 13,
"UnitsOnOrder" : 70,
"ReorderLevel" : 25,
"Discontinued" : 0
}
{
  "_id" : ObjectId("6005b03b8f59b4c247cba1eb"),
  "ProductID" : 6,
  "ProductName" : "Grandma's Boysenberry Spread",
  "SupplierID" : 3,
  "CategoryID" : 2,
  "QuantityPerUnit" : "12 - 8 oz jars",
  "UnitPrice" : 25,
  "UnitsInStock" : 120,
  "UnitsOnOrder" : 0,
  "ReorderLevel" : 25,
  "Discontinued" : 0
}
{
  "_id" : ObjectId("6005b03b8f59b4c247cba1ec"),
  "ProductID" : 9,
  "ProductName" : "Mishi Kobe Niku",
  "SupplierID" : 4,
  "CategoryID" : 6,
  "QuantityPerUnit" : "18 - 500 g pkgs.",
```

```
"UnitPrice" : 97,
"UnitsInStock" : 29,
"UnitsOnOrder" : 0,
"ReorderLevel" : 0,
"Discontinued" : 1
}
{
  "_id" : ObjectId("6005b03b8f59b4c247cba1ed"),
  "ProductID" : 8,
  "ProductName" : "Northwoods Cranberry Sauce",
  "SupplierID" : 3,
  "CategoryID" : 2,
  "QuantityPerUnit" : "12 - 12 oz jars",
  "UnitPrice" : 40,
  "UnitsInStock" : 6,
  "UnitsOnOrder" : 0,
  "ReorderLevel" : 0,
  "Discontinued" : 0
}
{
  "_id" : ObjectId("6005b03b8f59b4c247cba1ee"),
  "ProductID" : 7,
  "ProductName" : "Uncle Bob's Organic Dried Pears",
  "SupplierID" : 3,
  "CategoryID" : 7,
  "QuantityPerUnit" : "12 - 1 lb pkgs.",
  "UnitPrice" : 30,
  "UnitsInStock" : 15,
```

```

    "UnitsOnOrder" : 0,
    "ReorderLevel" : 10,
    "Discontinued" : 0
  }
  {
    "_id" : ObjectId("6005b03b8f59b4c247cba1ef"),
    "ProductID" : 10,
    "ProductName" : "Ikura",
    "SupplierID" : 4,
    "CategoryID" : 8,
    "QuantityPerUnit" : "12 - 200 ml jars",
    "UnitPrice" : 31,
    "UnitsInStock" : 31,
    "UnitsOnOrder" : 0,
    "ReorderLevel" : 0,
    "Discontinued" : 0
  }

```

Exécuter les deux commandes suivantes l'une après l'autre

```
db.products.find({supplierID:{ $eq:19}}).pretty();
```

```
db.products.find({SupplierID:{ $eq:19}}).pretty();
```

Que remarquez-vous ?

Exécuter les deux commandes suivantes l'une après l'autre

```
db.products.find({supplierID:{ $eq:19}}).pretty();
```

- Display nothing because we use supplierID with lowercase

```
db.products.find({SupplierID:{ $eq:19}}).pretty();
```

```
{
  "_id" : ObjectId("6005b03b8f59b4c247cba20c"),
  "ProductID" : 40,
  "ProductName" : "Boston Crab Meat",
  "SupplierID" : 19,
  "CategoryID" : 8,
  "QuantityPerUnit" : "24 - 4 oz tins",
  "UnitPrice" : 18.4,
  "UnitsInStock" : 123,
  "UnitsOnOrder" : 0,
  "ReorderLevel" : 30,
  "Discontinued" : 0
}
```

```
{
  "_id" : ObjectId("6005b03b8f59b4c247cba20d"),
  "ProductID" : 41,
  "ProductName" : "Jack's New England Clam Chowder",
  "SupplierID" : 19,
  "CategoryID" : 8,
  "QuantityPerUnit" : "12 - 12 oz cans",
  "UnitPrice" : 9.65,
  "UnitsInStock" : 85,
  "UnitsOnOrder" : 0,
  "ReorderLevel" : 10,
  "Discontinued" : 0
}
```



Sélectionner les documents qui ont un SupplierID égale à 19 et UnitPrice moins que 10.

```
> db.products.find({ SupplierID:19,UnitPrice:{ $gt:10} }).pretty()
```

```
{
  "_id" : ObjectId("6005b03b8f59b4c247cba20c"),
  "ProductID" : 40,
  "ProductName" : "Boston Crab Meat",
  "SupplierID" : 19,
  "CategoryID" : 8,
  "QuantityPerUnit" : "24 - 4 oz tins",
  "UnitPrice" : 18.4,
  "UnitsInStock" : 123,
  "UnitsOnOrder" : 0,
  "ReorderLevel" : 30,
  "Discontinued" : 0
}
```

```
> db.products.find({ SupplierID:19,UnitPrice:{ $lt:10} }).pretty()
```

```
{
  "_id" : ObjectId("6005b03b8f59b4c247cba20d"),
  "ProductID" : 41,
  "ProductName" : "Jack's New England Clam Chowder",
  "SupplierID" : 19,
  "CategoryID" : 8,
  "QuantityPerUnit" : "12 - 12 oz cans",
  "UnitPrice" : 9.65,
  "UnitsInStock" : 85,
  "UnitsOnOrder" : 0,
  "ReorderLevel" : 10,
}
```

```

    "Discontinued" : 0
  }
}

```

Dans le shell, créer la variable suivante :

```

var allProducts=db.products.find();

```

> var allProducts=db.products.find()

> allProducts

```

{ "_id" : ObjectId("6005b03b8f59b4c247cba1e6"), "ProductID" : 2, "ProductName" : "Chang",
"SupplierID" : 1, "CategoryID" : 1, "QuantityPerUnit" : "24 - 12 oz bottles", "UnitPrice" : 19,
"UnitsInStock" : 17, "UnitsOnOrder" : 40, "ReorderLevel" : 25, "Discontinued" : 0 }

{ "_id" : ObjectId("6005b03b8f59b4c247cba1e7"), "ProductID" : 1, "ProductName" : "Chai",
"SupplierID" : 1, "CategoryID" : 1, "QuantityPerUnit" : "10 boxes x 20 bags", "UnitPrice" : 18,
"UnitsInStock" : 39, "UnitsOnOrder" : 0, "ReorderLevel" : 10, "Discontinued" : 0 }

{ "_id" : ObjectId("6005b03b8f59b4c247cba1e8"), "ProductID" : 4, "ProductName" : "Chef
Anton's Cajun Seasoning", "SupplierID" : 2, "CategoryID" : 2, "QuantityPerUnit" : "48 - 6 oz
jars", "UnitPrice" : 22, "UnitsInStock" : 53, "UnitsOnOrder" : 0, "ReorderLevel" : 0,
"Discontinued" : 0 }

```

> Tape “it” for more

Exécuter le bout de code suivant dans votre shell

```

while(allProducts.hasNext()){ printjson(allProducts.next()); };

```

> while(allProducts.hasNext()){ printjson(allProducts.next()); }

```

{
  "_id" : ObjectId("6005b03b8f59b4c247cba1fa"),
  "ProductID" : 19,
  "ProductName" : "Teatime Chocolate Biscuits",
  "SupplierID" : 8,
  "CategoryID" : 3,
  "QuantityPerUnit" : "10 boxes x 12 pieces",
  "UnitPrice" : 9.2,
  "UnitsInStock" : 25,

```

```
"UnitsOnOrder" : 0,
"ReorderLevel" : 5,
"Discontinued" : 0
}
{
  "_id" : ObjectId("6005b03b8f59b4c247cba1fb"),
  "ProductID" : 21,
  "ProductName" : "Sir Rodney's Scones",
  "SupplierID" : 8,
  "CategoryID" : 3,
  "QuantityPerUnit" : "24 pkgs. x 4 pieces",
  "UnitPrice" : 10,
  "UnitsInStock" : 3,
  "UnitsOnOrder" : 40,
  "ReorderLevel" : 5,
  "Discontinued" : 0
}
{
  "_id" : ObjectId("6005b03b8f59b4c247cba1fc"),
  "ProductID" : 22,
  "ProductName" : "Gustaf's K  ckebr  d",
  "SupplierID" : 9,
  "CategoryID" : 5,
  "QuantityPerUnit" : "24 - 500 g pkgs.",
  "UnitPrice" : 21,
  "UnitsInStock" : 104,
  "UnitsOnOrder" : 0,
  "ReorderLevel" : 25,
```

```
    "Discontinued" : 0
  }
```

> Tape “it” for more

Afficher tous les éléments du curseur : `db.products.find()` en utilisant la fonction `forEach`.

```
> db.products.find().forEach((products)=>{printjson(products)})
```

```
{
  "_id" : ObjectId("6005b03b8f59b4c247cba1e6"),
  "ProductID" : 2,
  "ProductName" : "Chang",
  "SupplierID" : 1,
  "CategoryID" : 1,
  "QuantityPerUnit" : "24 - 12 oz bottles",
  "UnitPrice" : 19,
  "UnitsInStock" : 17,
  "UnitsOnOrder" : 40,
  "ReorderLevel" : 25,
  "Discontinued" : 0
}
{
```

```
  "_id" : ObjectId("6005b03b8f59b4c247cba1e7"),
  "ProductID" : 1,
  "ProductName" : "Chai",
  "SupplierID" : 1,
  "CategoryID" : 1,
  "QuantityPerUnit" : "10 boxes x 20 bags",
  "UnitPrice" : 18,
```

```
"UnitsInStock" : 39,
"UnitsOnOrder" : 0,
"ReorderLevel" : 10,
"Discontinued" : 0
}
{
  "_id" : ObjectId("6005b03b8f59b4c247cba1e8"),
  "ProductID" : 4,
  "ProductName" : "Chef Anton's Cajun Seasoning",
  "SupplierID" : 2,
  "CategoryID" : 2,
  "QuantityPerUnit" : "48 - 6 oz jars",
  "UnitPrice" : 22,
  "UnitsInStock" : 53,
  "UnitsOnOrder" : 0,
  "ReorderLevel" : 0,
  "Discontinued" : 0
}
{
  "_id" : ObjectId("6005b03b8f59b4c247cba1e9"),
  "ProductID" : 5,
  "ProductName" : "Chef Anton's Gumbo Mix",
  "SupplierID" : 2,
  "CategoryID" : 2,
  "QuantityPerUnit" : "36 boxes",
  "UnitPrice" : 21.35,
  "UnitsInStock" : 0,
  "UnitsOnOrder" : 0,
```

```
    "ReorderLevel" : 0,  
    "Discontinued" : 1  
  }  
> Tape "it" for more
```

Dans le shell Mongo, executer la commande suivante

```
db.products.find({CategoryID:4},{ProductName:1}).pretty();
```

```
> db.products.find({CategoryID:4},{ProductName:1}).pretty();
```

```
{  
  "_id" : ObjectId("6005b03b8f59b4c247cba1f0"),  
  "ProductName" : "Queso Manchego La Pastora"  
}  
  
{  
  "_id" : ObjectId("6005b03b8f59b4c247cba1f1"),  
  "ProductName" : "Queso Cabrales"  
}  
  
{  
  "_id" : ObjectId("6005b03b8f59b4c247cba203"),  
  "ProductName" : "Gorgonzola Telino"  
}  
  
{ "_id" : ObjectId("6005b03b8f59b4c247cba204"), "ProductName" : "Geitost" }  
  
{  
  "_id" : ObjectId("6005b03b8f59b4c247cba205"),  
  "ProductName" : "Mascarpone Fabioli"  
}  
  
{  
  "_id" : ObjectId("6005b03b8f59b4c247cba220"),
```

```
    "ProductName" : "Raclette Courdavault"
  }
  {
    "_id" : ObjectId("6005b03b8f59b4c247cba221"),
    "ProductName" : "Camembert Pierrot"
  }
  {
    "_id" : ObjectId("6005b03b8f59b4c247cba22b"),
    "ProductName" : "Gudbrandsdalsost"
  }
  {
    "_id" : ObjectId("6005b03b8f59b4c247cba22d"),
    "ProductName" : "Flotemysost"
  }
  {
    "_id" : ObjectId("6005b03b8f59b4c247cba22e"),
    "ProductName" : "Mozzarella di Giovanni"
  }
  {
    "_id" : ObjectId("60054a6cd020a8ea8dfd8064"),
    "ProductName" : "Raclette Marocaine"
  }
  {
    "_id" : ObjectId("600747e1874caea2c1c4e3ba"),
    "ProductName" : "Raclette Marocaine"
  }
  {
    "_id" : ObjectId("6007488a874caea2c1c4e3bf"),
```

```

    "ProductName" : "Raclette Marocaine Spéciale"
  }
  {
    "_id" : ObjectId("6007488a874caea2c1c4e3c0"),
    "ProductName" : "Raclette Marocaine Spéciale"
  }
  {
    "_id" : ObjectId("6007488a874caea2c1c4e3c1"),
    "ProductName" : "Raclette Marocaine Spéciale"
  }
  {
    "_id" : ObjectId("6007488a874caea2c1c4e3c2"),
    "ProductName" : "Raclette Marocaine Spéciale"
  }
}

```

En utilisant le shell, créer un index de type « text » pour « ProductName » :

```

db.products.createIndex({ ProductName:"text" })
{
  "createdCollectionAutomatically" : false,
  "numIndexesBefore" : 1,
  "numIndexesAfter" : 2,
  "ok" : 1
}
db.products.find({ CategoryID:4},{ ProductName:1 }).pretty();

> db.products.find({ CategoryID:4},{ ProductName:1 }).pretty();
{
  "_id" : ObjectId("6005b03b8f59b4c247cba1f0"),

```



```
    "ProductName" : "Queso Manchego La Pastora"
  }
  {
    "_id" : ObjectId("6005b03b8f59b4c247cba1f1"),
    "ProductName" : "Queso Cabrales"
  }
  {
    "_id" : ObjectId("6005b03b8f59b4c247cba203"),
    "ProductName" : "Gorgonzola Telino"
  }
  { "_id" : ObjectId("6005b03b8f59b4c247cba204"), "ProductName" : "Geitost" }
  {
    "_id" : ObjectId("6005b03b8f59b4c247cba205"),
    "ProductName" : "Mascarpone Fabioli"
  }
  {
    "_id" : ObjectId("6005b03b8f59b4c247cba220"),
    "ProductName" : "Raclette Courdavault"
  }
  {
    "_id" : ObjectId("6005b03b8f59b4c247cba221"),
    "ProductName" : "Camembert Pierrot"
  }
  {
    "_id" : ObjectId("6005b03b8f59b4c247cba22b"),
    "ProductName" : "Gudbrandsdalsost"
  }
  {
```

```
    "_id" : ObjectId("6005b03b8f59b4c247cba22d"),
    "ProductName" : "Flotemysost"
  }
  {
    "_id" : ObjectId("6005b03b8f59b4c247cba22e"),
    "ProductName" : "Mozzarella di Giovanni"
  }
  {
    "_id" : ObjectId("60054a6cd020a8ea8dfd8064"),
    "ProductName" : "Raclette Marocaine"
  }
  {
    "_id" : ObjectId("600747e1874caea2c1c4e3ba"),
    "ProductName" : "Raclette Marocaine"
  }
  {
    "_id" : ObjectId("6007488a874caea2c1c4e3bf"),
    "ProductName" : "Raclette Marocaine Spéciale"
  }
  {
    "_id" : ObjectId("6007488a874caea2c1c4e3c0"),
    "ProductName" : "Raclette Marocaine Spéciale"
  }
  {
    "_id" : ObjectId("6007488a874caea2c1c4e3c1"),
    "ProductName" : "Raclette Marocaine Spéciale"
  }
  {
```

```
"_id" : ObjectId("6007488a874caea2c1c4e3c2"),
  "ProductName" : "Raclette Marocaine Spéciale"
}
```

Ensuite, executer la commande suivante:

```
db.products.find({CategoryID:4},{ProductName:1}).sort({ProductName:-1}).pretty();
```

```
> db.products.find({CategoryID:4},{ProductName:1}).sort({ProductName:-1}).pretty()
```

```
{
  "_id" : ObjectId("6007488a874caea2c1c4e3bf"),
  "ProductName" : "Raclette Marocaine Spéciale"
}
{
  "_id" : ObjectId("6007488a874caea2c1c4e3c0"),
  "ProductName" : "Raclette Marocaine Spéciale"
}
{
  "_id" : ObjectId("6007488a874caea2c1c4e3c1"),
  "ProductName" : "Raclette Marocaine Spéciale"
}
{
  "_id" : ObjectId("6007488a874caea2c1c4e3c2"),
  "ProductName" : "Raclette Marocaine Spéciale"
}
{
  "_id" : ObjectId("60054a6cd020a8ea8dfd8064"),
  "ProductName" : "Raclette Marocaine"
}
```

```
{
  "_id" : ObjectId("600747e1874caea2c1c4e3ba"),
  "ProductName" : "Raclette Marocaine"
}
{
  "_id" : ObjectId("6005b03b8f59b4c247cba220"),
  "ProductName" : "Raclette Courdavault"
}
{
  "_id" : ObjectId("6005b03b8f59b4c247cba1f0"),
  "ProductName" : "Queso Manchego La Pastora"
}
{
  "_id" : ObjectId("6005b03b8f59b4c247cba1f1"),
  "ProductName" : "Queso Cabrales"
}
{
  "_id" : ObjectId("6005b03b8f59b4c247cba22e"),
  "ProductName" : "Mozzarella di Giovanni"
}
{
  "_id" : ObjectId("6005b03b8f59b4c247cba205"),
  "ProductName" : "Mascarpone Fabioli"
}
{
  "_id" : ObjectId("6005b03b8f59b4c247cba22b"),
  "ProductName" : "Gudbrandsdalsost"
}
```

```

{
  "_id" : ObjectId("6005b03b8f59b4c247cba203"),
  "ProductName" : "Gorgonzola Telino"
}
{ "_id" : ObjectId("6005b03b8f59b4c247cba204"), "ProductName" : "Geitost" }
{
  "_id" : ObjectId("6005b03b8f59b4c247cba22d"),
  "ProductName" : "Flotemysost"
}
{
  "_id" : ObjectId("6005b03b8f59b4c247cba221"),
  "ProductName" : "Camembert Pierrot"
}

```

Afficher les documents de products ayant un « CategoryID » égal à un, par ordre ascendant de ProductName.

```
> db.products.find({CategoryID:1},{ProductName:1}).sort({ProductName:1}).pretty()
```

```

{ "_id" : ObjectId("6005b03b8f59b4c247cba1e7"), "ProductName" : "Chai" }
{ "_id" : ObjectId("6005b03b8f59b4c247cba1e6"), "ProductName" : "Chang" }
{
  "_id" : ObjectId("6005b03b8f59b4c247cba20b"),
  "ProductName" : "Chartreuse verte"
}
{
  "_id" : ObjectId("6005b03b8f59b4c247cba20a"),
  "ProductName" : "CÃ'te de Blaye"
}
{
  "_id" : ObjectId("6005b03b8f59b4c247cba1f7"),

```

```
"ProductName" : "GuaranÃ¡ FantÃ¡stica"
}
{
  "_id" : ObjectId("6005b03b8f59b4c247cba20f"),
  "ProductName" : "Ipoh Coffee"
}
{
  "_id" : ObjectId("6005b03b8f59b4c247cba231"),
  "ProductName" : "LakkalikÃ¶Ã¶ri"
}
{
  "_id" : ObjectId("6005b03b8f59b4c247cba229"),
  "ProductName" : "Laughing Lumberjack Lager"
}
{
  "_id" : ObjectId("60074861874caea2c1c4e3bc"),
  "ProductName" : "Moroccan Steeleye Stout"
}
{
  "_id" : ObjectId("60074861874caea2c1c4e3be"),
  "ProductName" : "Moroccan Steeleye Stout"
}
{
  "_id" : ObjectId("6005b03b8f59b4c247cba22a"),
  "ProductName" : "Outback Lager"
}
{
  "_id" : ObjectId("6005b03b8f59b4c247cba230"),
```

```

    "ProductName" : "Rheinbräu Klosterbier"
  }
  {
    "_id" : ObjectId("6005b03b8f59b4c247cba206"),
    "ProductName" : "Sasquatch Ale"
  }
  {
    "_id" : ObjectId("6005b03b8f59b4c247cba21a"),
    "ProductName" : "Steeleye Stout"
  }

```

Limiter le nombre des documents à afficher à 2 ;

```
> db.products.find({ CategoryID:1 }, { ProductName:1 }).sort({ ProductName:1 }).limit(2).pretty()
```

```

{ "_id" : ObjectId("6005b03b8f59b4c247cba1e7"), "ProductName" : "Chai" }
{ "_id" : ObjectId("6005b03b8f59b4c247cba1e6"), "ProductName" : "Chang" }

```

```
db.products.find().sort({ ProductID:-1 }).limit(1).pretty();
```

Qu'affiche la commande ci-hauts.

Il va limiter affichage à un document à par ordre descendant de ProductID.

Exécuter la commande suivante :

```

db.products.insert(
{
  "_id" : ObjectId("60054a6cd020a8ea8dfd8064"),
  "ProductID" : 78,
  "ProductName" : "Raclette Marocaine",

```

```
"SupplierID" : 28,  
"CategoryID" : 4,  
"QuantityPerUnit" : "5 kg pkg.",  
"UnitPrice" : 65,  
"UnitsInStock" : 179,  
"UnitsOnOrder" : 10,  
"ReorderLevel" : 0,  
"Discontinued" : 0  
}  
);
```

```
> db.products.insert(  
... {  
...   "_id" : ObjectId("60054a6cd020a8ea8dfd8064"),  
...   "ProductID" : 78,  
...   "ProductName" : "Raclette Marocaine",  
...   "SupplierID" : 28,  
...   "CategoryID" : 4,  
...   "QuantityPerUnit" : "5 kg pkg.",  
...   "UnitPrice" : 65,  
...   "UnitsInStock" : 179,  
...   "UnitsOnOrder" : 10,  
...   "ReorderLevel" : 0,  
...   "Discontinued" : 0  
... }  
... );  
WriteResult({ "nInserted" : 1 })
```

Que remarquez-vous ?

Maintenant, exécuter la commande suivante :

```
db.products.insert(  
{  
  "ProductID" : 78,  
  "ProductName" : "Raclette Marocaine",  
  "SupplierID" : 28,  
  "CategoryID" : 4,  
  "QuantityPerUnit" : "5 kg pkg.",
```



```
    "UnitPrice" : 65,  
    "UnitsInStock" : 179,  
    "UnitsOnOrder" : 10,  
    "ReorderLevel" : 0,  
    "Discontinued" : 0  
}  
);
```

```
> db.products.insert(  
... {  
...     "ProductID" : 78,  
...     "ProductName" : "Raclette Marocaine",  
...     "SupplierID" : 28,  
...     "CategoryID" : 4,  
...     "QuantityPerUnit" : "5 kg pkg.",  
...     "UnitPrice" : 65,  
...     "UnitsInStock" : 179,  
...     "UnitsOnOrder" : 10,  
...     "ReorderLevel" : 0,  
...     "Discontinued" : 0  
... }  
... );  
WriteResult({ "nInserted" : 1 })  
> _
```

Maintenant, exécuter la commande suivante :

```
db.products.insertMany(  
[  
    "ProductID" : 79,  
    "ProductName" : "Sirop d'érable Marocain",  
    "SupplierID" : 29,  
    "CategoryID" : 2,  
    "QuantityPerUnit" : "24 - 500 ml bottles",  
    "UnitPrice" : 28.5,  
    "UnitsInStock" : 113,  
    "UnitsOnOrder" : 0,
```

```
        "ReorderLevel" : 25,  
        "Discontinued" : 0  
    },  
    {  
        "ProductID" : 80,  
        "ProductName" : "Moroccan Steeleye Stout",  
        "SupplierID" : 16,  
        "CategoryID" : 1,  
        "QuantityPerUnit" : "24 - 12 oz bottles",  
        "UnitPrice" : 18,  
        "UnitsInStock" : 20,  
        "UnitsOnOrder" : 0,  
        "ReorderLevel" : 15,  
        "Discontinued" : 0  
    }  
]  
);
```

```

> db.products.insertMany(
... [{
...   "ProductID" : 79,
...   "ProductName" : "Sirop d'érable Marocain",
...   "SupplierID" : 29,
...   "CategoryID" : 2,
...   "QuantityPerUnit" : "24 - 500 ml bottles",
...   "UnitPrice" : 28.5,
...   "UnitsInStock" : 113,
...   "UnitsOnOrder" : 0,
...   "ReorderLevel" : 25,
...   "Discontinued" : 0
... }
... ,
... {
...   "ProductID" : 80,
...   "ProductName" : "Moroccan Steeleye Stout",
...   "SupplierID" : 16,
...   "CategoryID" : 1,
...   "QuantityPerUnit" : "24 - 12 oz bottles",
...   "UnitPrice" : 18,
...   "UnitsInStock" : 20,
...   "UnitsOnOrder" : 0,
...   "ReorderLevel" : 15,
...   "Discontinued" : 0
... }
... ]
... );
{
  "acknowledged" : true,
  "insertedIds" : [
    ObjectId("60074861874caea2c1c4e3bd"),
    ObjectId("60074861874caea2c1c4e3be")
  ]
}

```

Exécuter la commande suivante :

```

db.products.insert(
{
  "ProductID" : 81,
  "ProductName" : "Raclette Marocaine Spéciale",
  "SupplierID" : 28,
  "CategoryID" : 4,
  "QuantityPerUnit" : "5 kg pkg.",
  "UnitPrice" : 65,
  "UnitsInStock" : 179,

```

```

    "UnitsOnOrder" : 10,
    "ReorderLevel" : 0,
    "Discontinued" : 0,
    "DateFirstShip": new Date()
  }
);

```

```

> db.products.insert(
... {
...   "ProductID" : 81,
...   "ProductName" : "Raclette Marocaine Spéciale",
...   "SupplierID" : 28,
...   "CategoryID" : 4,
...   "QuantityPerUnit" : "5 kg pkg.",
...   "UnitPrice" : 65,
...   "UnitsInStock" : 179,
...   "UnitsOnOrder" : 10,
...   "ReorderLevel" : 0,
...   "Discontinued" : 0,
...   "DateFirstShip": new Date()
... }
... ) ;
writeResult({ "nInserted" : 1 })

```

Quel est la différence entre ce document et les documents déjà inséré.

Exécuter la commande suivante :

```
db.products.find({DateFirstShip:{$exists:true}}) ;
```

```

> db.products.find({DateFirstShip:{$exists:true}}).pretty() ;
{
  "_id" : ObjectId("6007488a874caea2c1c4e3bf"),
  "ProductID" : 81,
  "ProductName" : "Raclette Marocaine Spéciale",
  "SupplierID" : 28,
  "CategoryID" : 4,
  "QuantityPerUnit" : "5 kg pkg.",
  "UnitPrice" : 65,
  "UnitsInStock" : 179,
  "UnitsOnOrder" : 10,
  "ReorderLevel" : 0,
  "Discontinued" : 0,
  "DateFirstShip" : ISODate("2021-01-19T21:00:58.106Z")
}

```

Que renvoi-t-elle?

Exécuter la commande suivante:

`db.shutdownServer();`

```
> db.shutdownServer()  
shutdown command only works with the admin database; try 'use admin'  
>
```

Faites la modification, pour que la méthode précédente s'exécute bien.

```
> use admin  
switched to db admin  
> db.shutdownServer()  
server should be down...  
>
```

Exécuter `quit()` ;

```
> quit()  
  
C:\Program Files\MongoDB\Server\4.4\bin>_
```

## LES REPONSES

```
> db.products.find({ UnitPrice: { $lt: 10 } })
```

```
{ "_id" : ObjectId("6005b03b8f59b4c247cba1f2"), "ProductID" : 13, "ProductName" : "Konbu",  
"SupplierID" : 6, "CategoryID" : 8, "QuantityPerUnit" : "2 kg box", "UnitPrice" : 6,  
"UnitsInStock" : 24, "UnitsOnOrder" : 0, "ReorderLevel" : 5, "Discontinued" : 0 }
```

```
{ "_id" : ObjectId("6005b03b8f59b4c247cba1f7"), "ProductID" : 24, "ProductName" :  
"GuaranÃ¡ FantÃ¡stica", "SupplierID" : 10, "CategoryID" : 1, "QuantityPerUnit" : "12 - 355 ml  
cans", "UnitPrice" : 4.5, "UnitsInStock" : 20, "UnitsOnOrder" : 0, "ReorderLevel" : 0,  
"Discontinued" : 1 }
```

```
{ "_id" : ObjectId("6005b03b8f59b4c247cba1fa"), "ProductID" : 19, "ProductName" : "Teatime  
Chocolate Biscuits", "SupplierID" : 8, "CategoryID" : 3, "QuantityPerUnit" : "10 boxes x 12  
pieces", "UnitPrice" : 9.2, "UnitsInStock" : 25, "UnitsOnOrder" : 0, "ReorderLevel" : 5,  
"Discontinued" : 0 }
```

```
{ "_id" : ObjectId("6005b03b8f59b4c247cba1fd"), "ProductID" : 23, "ProductName" :  
"TunnbrÃ¶d", "SupplierID" : 9, "CategoryID" : 5, "QuantityPerUnit" : "12 - 250 g pkgs.",  
"UnitPrice" : 9, "UnitsInStock" : 61, "UnitsOnOrder" : 0, "ReorderLevel" : 25, "Discontinued" : 0  
}
```

```
{ "_id" : ObjectId("6005b03b8f59b4c247cba204"), "ProductID" : 33, "ProductName" : "Geitost",  
"SupplierID" : 15, "CategoryID" : 4, "QuantityPerUnit" : "500 g", "UnitPrice" : 2.5,  
"UnitsInStock" : 112, "UnitsOnOrder" : 0, "ReorderLevel" : 20, "Discontinued" : 0 }
```

```
{ "_id" : ObjectId("6005b03b8f59b4c247cba20d"), "ProductID" : 41, "ProductName" : "Jack's  
New England Clam Chowder", "SupplierID" : 19, "CategoryID" : 8, "QuantityPerUnit" : "12 - 12  
oz cans", "UnitPrice" : 9.65, "UnitsInStock" : 85, "UnitsOnOrder" : 0, "ReorderLevel" : 10,  
"Discontinued" : 0 }
```

```
{ "_id" : ObjectId("6005b03b8f59b4c247cba211"), "ProductID" : 45, "ProductName" : "Rogede  
sild", "SupplierID" : 21, "CategoryID" : 8, "QuantityPerUnit" : "1k pkg.", "UnitPrice" : 9.5,  
"UnitsInStock" : 5, "UnitsOnOrder" : 70, "ReorderLevel" : 15, "Discontinued" : 0 }
```

```
{ "_id" : ObjectId("6005b03b8f59b4c247cba214"), "ProductID" : 47, "ProductName" : "Zaanse  
koeken", "SupplierID" : 22, "CategoryID" : 3, "QuantityPerUnit" : "10 - 4 oz boxes", "UnitPrice" :  
9.5, "UnitsInStock" : 36, "UnitsOnOrder" : 0, "ReorderLevel" : 0, "Discontinued" : 0 }
```

```
{ "_id" : ObjectId("6005b03b8f59b4c247cba217"), "ProductID" : 52, "ProductName" : "Filo  
Mix", "SupplierID" : 24, "CategoryID" : 5, "QuantityPerUnit" : "16 - 2 kg boxes", "UnitPrice" :  
7, "UnitsInStock" : 38, "UnitsOnOrder" : 0, "ReorderLevel" : 25, "Discontinued" : 0 }
```

```
{ "_id" : ObjectId("6005b03b8f59b4c247cba219"), "ProductID" : 54, "ProductName" :  
"TourtiÃ`re", "SupplierID" : 25, "CategoryID" : 6, "QuantityPerUnit" : "16 pies", "UnitPrice" :  
7.45, "UnitsInStock" : 21, "UnitsOnOrder" : 0, "ReorderLevel" : 10, "Discontinued" : 0 }
```

```
{ "_id" : ObjectId("6005b03b8f59b4c247cba230"), "ProductID" : 75, "ProductName" :  
"RhÃ¶nbrÃu Klosterbier", "SupplierID" : 12, "CategoryID" : 1, "QuantityPerUnit" : "24 - 0.5 l  
bottles", "UnitPrice" : 7.75, "UnitsInStock" : 125, "UnitsOnOrder" : 0, "ReorderLevel" : 25,  
"Discontinued" : 0 }
```

```
> var allProducts=db.products.find()
```

```
> allProducts
```

```
{ "_id" : ObjectId("6005b03b8f59b4c247cba1e6"), "ProductID" : 2, "ProductName" : "Chang",  
"SupplierID" : 1, "CategoryID" : 1, "QuantityPerUnit" : "24 - 12 oz bottles", "UnitPrice" : 19,  
"UnitsInStock" : 17, "UnitsOnOrder" : 40, "ReorderLevel" : 25, "Discontinued" : 0 }
```

```
{ "_id" : ObjectId("6005b03b8f59b4c247cba1e7"), "ProductID" : 1, "ProductName" : "Chai",  
"SupplierID" : 1, "CategoryID" : 1, "QuantityPerUnit" : "10 boxes x 20 bags", "UnitPrice" : 18,  
"UnitsInStock" : 39, "UnitsOnOrder" : 0, "ReorderLevel" : 10, "Discontinued" : 0 }
```

```
{ "_id" : ObjectId("6005b03b8f59b4c247cba1e8"), "ProductID" : 4, "ProductName" : "Chef  
Anton's Cajun Seasoning", "SupplierID" : 2, "CategoryID" : 2, "QuantityPerUnit" : "48 - 6 oz  
jars", "UnitPrice" : 22, "UnitsInStock" : 53, "UnitsOnOrder" : 0, "ReorderLevel" : 0,  
"Discontinued" : 0 }
```

```
{ "_id" : ObjectId("6005b03b8f59b4c247cba1e9"), "ProductID" : 5, "ProductName" : "Chef  
Anton's Gumbo Mix", "SupplierID" : 2, "CategoryID" : 2, "QuantityPerUnit" : "36 boxes",  
"UnitPrice" : 21.35, "UnitsInStock" : 0, "UnitsOnOrder" : 0, "ReorderLevel" : 0, "Discontinued" :  
1 }
```

```
{ "_id" : ObjectId("6005b03b8f59b4c247cba1ea"), "ProductID" : 3, "ProductName" : "Aniseed  
Syrup", "SupplierID" : 1, "CategoryID" : 2, "QuantityPerUnit" : "12 - 550 ml bottles",  
"UnitPrice" : 10, "UnitsInStock" : 13, "UnitsOnOrder" : 70, "ReorderLevel" : 25, "Discontinued"  
: 0 }
```

```
{ "_id" : ObjectId("6005b03b8f59b4c247cba1eb"), "ProductID" : 6, "ProductName" :  
"Grandma's Boysenberry Spread", "SupplierID" : 3, "CategoryID" : 2, "QuantityPerUnit" : "12 -  
8 oz jars", "UnitPrice" : 25, "UnitsInStock" : 120, "UnitsOnOrder" : 0, "ReorderLevel" : 25,  
"Discontinued" : 0 }
```

```
{ "_id" : ObjectId("6005b03b8f59b4c247cba1ec"), "ProductID" : 9, "ProductName" : "Mishi  
Kobe Niku", "SupplierID" : 4, "CategoryID" : 6, "QuantityPerUnit" : "18 - 500 g pkgs.",  
"UnitPrice" : 97, "UnitsInStock" : 29, "UnitsOnOrder" : 0, "ReorderLevel" : 0, "Discontinued" : 1  
}
```

```
{ "_id" : ObjectId("6005b03b8f59b4c247cba1ed"), "ProductID" : 8, "ProductName" :  
"Northwoods Cranberry Sauce", "SupplierID" : 3, "CategoryID" : 2, "QuantityPerUnit" : "12 - 12  
oz jars", "UnitPrice" : 40, "UnitsInStock" : 6, "UnitsOnOrder" : 0, "ReorderLevel" : 0,  
"Discontinued" : 0 }
```

```
{ "_id" : ObjectId("6005b03b8f59b4c247cba1ee"), "ProductID" : 7, "ProductName" : "Uncle  
Bob's Organic Dried Pears", "SupplierID" : 3, "CategoryID" : 7, "QuantityPerUnit" : "12 - 1 lb  
pkgs.", "UnitPrice" : 30, "UnitsInStock" : 15, "UnitsOnOrder" : 0, "ReorderLevel" : 10,  
"Discontinued" : 0 }
```

```
{ "_id" : ObjectId("6005b03b8f59b4c247cba1ef"), "ProductID" : 10, "ProductName" : "Ikura",  
"SupplierID" : 4, "CategoryID" : 8, "QuantityPerUnit" : "12 - 200 ml jars", "UnitPrice" : 31,  
"UnitsInStock" : 31, "UnitsOnOrder" : 0, "ReorderLevel" : 0, "Discontinued" : 0 }
```

```
{ "_id" : ObjectId("6005b03b8f59b4c247cba1f0"), "ProductID" : 12, "ProductName" : "Queso  
Manchego La Pastora", "SupplierID" : 5, "CategoryID" : 4, "QuantityPerUnit" : "10 - 500 g  
pkgs.", "UnitPrice" : 38, "UnitsInStock" : 86, "UnitsOnOrder" : 0, "ReorderLevel" : 0,  
"Discontinued" : 0 }
```

```
{ "_id" : ObjectId("6005b03b8f59b4c247cba1f1"), "ProductID" : 11, "ProductName" : "Queso  
Cabrales", "SupplierID" : 5, "CategoryID" : 4, "QuantityPerUnit" : "1 kg pkg.", "UnitPrice" : 21,  
"UnitsInStock" : 22, "UnitsOnOrder" : 30, "ReorderLevel" : 30, "Discontinued" : 0 }
```

```
{ "_id" : ObjectId("6005b03b8f59b4c247cba1f2"), "ProductID" : 13, "ProductName" : "Konbu",  
"SupplierID" : 6, "CategoryID" : 8, "QuantityPerUnit" : "2 kg box", "UnitPrice" : 6,  
"UnitsInStock" : 24, "UnitsOnOrder" : 0, "ReorderLevel" : 5, "Discontinued" : 0 }
```

```
{ "_id" : ObjectId("6005b03b8f59b4c247cba1f3"), "ProductID" : 14, "ProductName" : "Tofu",  
"SupplierID" : 6, "CategoryID" : 7, "QuantityPerUnit" : "40 - 100 g pkgs.", "UnitPrice" : 23.25,  
"UnitsInStock" : 35, "UnitsOnOrder" : 0, "ReorderLevel" : 0, "Discontinued" : 0 }
```

```
{ "_id" : ObjectId("6005b03b8f59b4c247cba1f4"), "ProductID" : 15, "ProductName" : "Genen  
Shouyu", "SupplierID" : 6, "CategoryID" : 2, "QuantityPerUnit" : "24 - 250 ml bottles",  
"UnitPrice" : 15.5, "UnitsInStock" : 39, "UnitsOnOrder" : 0, "ReorderLevel" : 5, "Discontinued" :  
0 }
```

```
{ "_id" : ObjectId("6005b03b8f59b4c247cba1f5"), "ProductID" : 16, "ProductName" :  
"Pavlova", "SupplierID" : 7, "CategoryID" : 3, "QuantityPerUnit" : "32 - 500 g boxes",
```



```
"UnitPrice" : 17.45, "UnitsInStock" : 29, "UnitsOnOrder" : 0, "ReorderLevel" : 10,
"Discontinued" : 0 }
```

```
{ "_id" : ObjectId("6005b03b8f59b4c247cba1f6"), "ProductID" : 17, "ProductName" : "Alice
Mutton", "SupplierID" : 7, "CategoryID" : 6, "QuantityPerUnit" : "20 - 1 kg tins", "UnitPrice" :
39, "UnitsInStock" : 0, "UnitsOnOrder" : 0, "ReorderLevel" : 0, "Discontinued" : 1 }
```

```
{ "_id" : ObjectId("6005b03b8f59b4c247cba1f7"), "ProductID" : 24, "ProductName" :
"GuaranÃ¡ FantÃ¡stica", "SupplierID" : 10, "CategoryID" : 1, "QuantityPerUnit" : "12 - 355 ml
cans", "UnitPrice" : 4.5, "UnitsInStock" : 20, "UnitsOnOrder" : 0, "ReorderLevel" : 0,
"Discontinued" : 1 }
```

```
{ "_id" : ObjectId("6005b03b8f59b4c247cba1f8"), "ProductID" : 20, "ProductName" : "Sir
Rodney's Marmalade", "SupplierID" : 8, "CategoryID" : 3, "QuantityPerUnit" : "30 gift boxes",
"UnitPrice" : 81, "UnitsInStock" : 40, "UnitsOnOrder" : 0, "ReorderLevel" : 0, "Discontinued" : 0
}
```

```
{ "_id" : ObjectId("6005b03b8f59b4c247cba1f9"), "ProductID" : 18, "ProductName" :
"Carnarvon Tigers", "SupplierID" : 7, "CategoryID" : 8, "QuantityPerUnit" : "16 kg pkg.",
"UnitPrice" : 62.5, "UnitsInStock" : 42, "UnitsOnOrder" : 0, "ReorderLevel" : 0, "Discontinued" :
0 }
```

Type "it" for more

```
> while(ap.hasNext()){ printjson(ap.next()); }
```

uncaught exception: ReferenceError: ap is not defined :

@(shell):1:7

```
> db.products.find().forEach((starter)=> { starter.allProducts })
```

```
> db.products.find().forEach((starter) => { starter.allProducts })
```

```
> db.products.find().forEach( find() => ( { print (allProducts) } ) )
```

uncaught exception: SyntaxError: invalid arrow-function arguments (parentheses around the arrow-function may help) :

@(shell):1:28

```
> db.products.find().forEach( find() { print (allProducts) } )
```

uncaught exception: SyntaxError: missing ) after argument list :

@(shell):1:35

```
> db.products.find().forEach(print(allProducts))
```

```
DBQuery: starter.products -> { }
```

```
uncaught exception: TypeError: func is not a function :
```

```
DBQuery.prototype.forEach@src/mongo/shell/query.js:512:9
```

```
@(shell):1:1
```

```
> db.products.find().forEach( find() => { print (find().CategoryID) } )
```

```
uncaught exception: SyntaxError: invalid arrow-function arguments (parentheses around the arrow-function may help) :
```

```
@(shell):1:28
```

```
> db.products.find().forEach( find() { print (find().CategoryID) } )
```

```
uncaught exception: SyntaxError: missing ) after argument list :
```

```
@(shell):1:35
```

```
> db.products.find({ CategoryID:4},{ ProductName:1 }).pretty();
```

```
{
  "_id" : ObjectId("6005b03b8f59b4c247cba1f0"),
  "ProductName" : "Queso Manchego La Pastora"
}
{
  "_id" : ObjectId("6005b03b8f59b4c247cba1f1"),
  "ProductName" : "Queso Cabrales"
}
{
  "_id" : ObjectId("6005b03b8f59b4c247cba203"),
  "ProductName" : "Gorgonzola Telino"
}
{ "_id" : ObjectId("6005b03b8f59b4c247cba204"), "ProductName" : "Geitost" }
{
  "_id" : ObjectId("6005b03b8f59b4c247cba205"),
  "ProductName" : "Mascarpone Fabioli"
}
```

```

{
  "_id" : ObjectId("6005b03b8f59b4c247cba220"),
  "ProductName" : "Raclette Courdavault"
}
{
  "_id" : ObjectId("6005b03b8f59b4c247cba221"),
  "ProductName" : "Camembert Pierrot"
}
{
  "_id" : ObjectId("6005b03b8f59b4c247cba22b"),
  "ProductName" : "Gudbrandsdalsost"
}
{
  "_id" : ObjectId("6005b03b8f59b4c247cba22d"),
  "ProductName" : "Flotemysost"
}
{
  "_id" : ObjectId("6005b03b8f59b4c247cba22e"),
  "ProductName" : "Mozzarella di Giovanni"
}

```

```
> db.products.find({CategoryID:4},{ProductName:1}).sort({ProductName:-1}).pretty()
```

```

{
  "_id" : ObjectId("6005b03b8f59b4c247cba220"),
  "ProductName" : "Raclette Courdavault"
}
{

```

```
"_id" : ObjectId("6005b03b8f59b4c247cba1f0"),
"ProductName" : "Queso Manchego La Pastora"
}
{
  "_id" : ObjectId("6005b03b8f59b4c247cba1f1"),
  "ProductName" : "Queso Cabrales"
}
{
  "_id" : ObjectId("6005b03b8f59b4c247cba22e"),
  "ProductName" : "Mozzarella di Giovanni"
}
{
  "_id" : ObjectId("6005b03b8f59b4c247cba205"),
  "ProductName" : "Mascarpone Fabioli"
}
{
  "_id" : ObjectId("6005b03b8f59b4c247cba22b"),
  "ProductName" : "Gudbrandsdalsost"
}
{
  "_id" : ObjectId("6005b03b8f59b4c247cba203"),
  "ProductName" : "Gorgonzola Telino"
}
{ "_id" : ObjectId("6005b03b8f59b4c247cba204"), "ProductName" : "Geitost" }
{
  "_id" : ObjectId("6005b03b8f59b4c247cba22d"),
  "ProductName" : "Flotemysost"
}
```

```

{
  "_id" : ObjectId("6005b03b8f59b4c247cba221"),
  "ProductName" : "Camembert Pierrot"
}
> db.products.insert(
... {
...   "_id" : ObjectId("60054a6cd020a8ea8dfd8064"),
...   "ProductID" : 78,
...   "ProductName" : "Raclette Marocaine",
...   "SupplierID" : 28,
...   "CategoryID" : 4,
...   "QuantityPerUnit" : "5 kg pkg.",
...   "UnitPrice" : 65,
...   "UnitsInStock" : 179,
...   "UnitsOnOrder" : 10,
...   "ReorderLevel" : 0,
...   "Discontinued" : 0
... }
... );
WriteResult({ "nInserted" : 1 })
> db.products.insert(
... {
...   "_id" : ObjectId("60054a6cd020a8ea8dfd8064"),
...   "ProductID" : 78,
...   "ProductName" : "Raclette Marocaine",
...   "SupplierID" : 28,
...   "CategoryID" : 4,
...   "QuantityPerUnit" : "5 kg pkg.",

```

```

...     "UnitPrice" : 65,
...     "UnitsInStock" : 179,
...     "UnitsOnOrder" : 10,
...     "ReorderLevel" : 0,
...     "Discontinued" : 0
... }
... );
WriteResult({
    "nInserted" : 0,
    "writeError" : {
        "code" : 11000,
        "errmsg" : "E11000 duplicate key error collection: starter.products index: _id_ dup key:
{ _id: ObjectId('60054a6cd020a8ea8dfd8064') }"
    }
})
> db.products.insert(
... {
...     "_id" : ObjectId("60054a6cd020a8ea8dfd8064"),
...     "ProductID" : 78,
...     "ProductName" : "Raclette Marocaine",
...     "SupplierID" : 28,
...     "CategoryID" : 4,
...     "QuantityPerUnit" : "5 kg pkg.",
...     "UnitPrice" : 65,
...     "UnitsInStock" : 179,
...     "UnitsOnOrder" : 10,
...     "ReorderLevel" : 0,
...     "Discontinued" : 0
... }

```

```

... );
WriteResult({
    "nInserted" : 0,
    "writeError" : {
        "code" : 11000,
        "errmsg" : "E11000 duplicate key error collection: starter.products index: _id_ dup key:
{ _id: ObjectId('60054a6cd020a8ea8dfd8064') }"
    }
})
> db.products.insert(
... {
...     "ProductID" : 78,
...     "ProductName" : "Raclette Marocaine",
...     "SupplierID" : 28,
...     "CategoryID" : 4,
...     "QuantityPerUnit" : "5 kg pkg.",
...     "UnitPrice" : 65,
...     "UnitsInStock" : 179,
...     "UnitsOnOrder" : 10,
...     "ReorderLevel" : 0,
...     "Discontinued" : 0
... }
... );
WriteResult({ "nInserted" : 1 })
> db.products.insertMany(
... [{
...     "ProductID" : 79,
...     "ProductName" : "Sirop d'érable Marocain",
...     "SupplierID" : 29,

```

```

...     "CategoryID" : 2,
...     "QuantityPerUnit" : "24 - 500 ml bottles",
...     "UnitPrice" : 28.5,
...     "UnitsInStock" : 113,
...     "UnitsOnOrder" : 0,
...     "ReorderLevel" : 25,
...     "Discontinued" : 0
... }

... ,
... {
...     "ProductID" : 80,
...     "ProductName" : "Moroccan Steeleye Stout",
...     "SupplierID" : 16,
...     "CategoryID" : 1,
...     "QuantityPerUnit" : "24 - 12 oz bottles",
...     "UnitPrice" : 18,
...     "UnitsInStock" : 20,
...     "UnitsOnOrder" : 0,
...     "ReorderLevel" : 15,
...     "Discontinued" : 0
... }
... ]
... );
{
    "acknowledged" : true,
    "insertedIds" : [
        ObjectId("60074861874caea2c1c4e3bb"),
        ObjectId("60074861874caea2c1c4e3bc")
    ]
}

```



```

    ]
}
> db.products.insertMany(
... [{
...   "ProductID" : 79,
...   "ProductName" : "Sirop d'érable Marocain",
...   "SupplierID" : 29,
...   "CategoryID" : 2,
...   "QuantityPerUnit" : "24 - 500 ml bottles",
...   "UnitPrice" : 28.5,
...   "UnitsInStock" : 113,
...   "UnitsOnOrder" : 0,
...   "ReorderLevel" : 25,
...   "Discontinued" : 0
... }
... ,
... {
...   "ProductID" : 80,
...   "ProductName" : "Moroccan Steeleye Stout",
...   "SupplierID" : 16,
...   "CategoryID" : 1,
...   "QuantityPerUnit" : "24 - 12 oz bottles",
...   "UnitPrice" : 18,
...   "UnitsInStock" : 20,
...   "UnitsOnOrder" : 0,
...   "ReorderLevel" : 15,
...   "Discontinued" : 0
... }

```

```

... ]
... );
{
    "acknowledged" : true,
    "insertedIds" : [
        ObjectId("60074861874caea2c1c4e3bd"),
        ObjectId("60074861874caea2c1c4e3be")
    ]
}
> db.products.insert(
... {
...     "ProductID" : 81,
...     "ProductName" : "Raclette Marocaine Spéciale",
...     "SupplierID" : 28,
...     "CategoryID" : 4,
...     "QuantityPerUnit" : "5 kg pkg.",
...     "UnitPrice" : 65,
...     "UnitsInStock" : 179,
...     "UnitsOnOrder" : 10,
...     "ReorderLevel" : 0,
...     "Discontinued" : 0,
...     "DateFirstShip": new Date()
... }
... );
WriteResult({ "nInserted" : 1 })
> db.products.insert(
... {
...     "ProductID" : 81,

```

```

...     "ProductName" : "Raclette Marocaine Spéciale",
...     "SupplierID" : 28,
...     "CategoryID" : 4,
...     "QuantityPerUnit" : "5 kg pkg.",
...     "UnitPrice" : 65,
...     "UnitsInStock" : 179,
...     "UnitsOnOrder" : 10,
...     "ReorderLevel" : 0,
...     "Discontinued" : 0,
... "DateFirstShip": new Date()
... }
... );
WriteResult({ "nInserted" : 1 })
> db.products.insert(
... {
...     "ProductID" : 81,
...     "ProductName" : "Raclette Marocaine Spéciale",
...     "SupplierID" : 28,
...     "CategoryID" : 4,
...     "QuantityPerUnit" : "5 kg pkg.",
...     "UnitPrice" : 65,
...     "UnitsInStock" : 179,
...     "UnitsOnOrder" : 10,
...     "ReorderLevel" : 0,
...     "Discontinued" : 0,
... "DateFirstShip": new Date()
... }
... );

```

```
WriteResult({ "nInserted" : 1 })
```

```
> db.products.insert(
```

```
... {
```

```
...   "ProductID" : 81,
```

```
...   "ProductName" : "Raclette Marocaine Spéciale",
```

```
...   "SupplierID" : 28,
```

```
...   "CategoryID" : 4,
```

```
...   "QuantityPerUnit" : "5 kg pkg.",
```

```
...   "UnitPrice" : 65,
```

```
...   "UnitsInStock" : 179,
```

```
...   "UnitsOnOrder" : 10,
```

```
...   "ReorderLevel" : 0,
```

```
...   "Discontinued" : 0,
```

```
... "DateFirstShip": new Date()
```

```
... }
```

```
... );
```

```
WriteResult({ "nInserted" : 1 })
```

```
> db.products.find({DateFirstShip:{$exists:true}})
```

```
{ "_id" : ObjectId("6007488a874caea2c1c4e3bf"), "ProductID" : 81, "ProductName" : "Raclette  
Marocaine Spéciale", "SupplierID" : 28, "CategoryID" : 4, "QuantityPerUnit" : "5 kg pkg.",  
"UnitPrice" : 65, "UnitsInStock" : 179, "UnitsOnOrder" : 10, "ReorderLevel" : 0, "Discontinued"  
: 0, "DateFirstShip" : ISODate("2021-01-19T21:00:58.106Z") }
```

```
{ "_id" : ObjectId("6007488a874caea2c1c4e3c0"), "ProductID" : 81, "ProductName" : "Raclette  
Marocaine Spéciale", "SupplierID" : 28, "CategoryID" : 4, "QuantityPerUnit" : "5 kg pkg.",  
"UnitPrice" : 65, "UnitsInStock" : 179, "UnitsOnOrder" : 10, "ReorderLevel" : 0, "Discontinued"  
: 0, "DateFirstShip" : ISODate("2021-01-19T21:00:58.254Z") }
```

```
{ "_id" : ObjectId("6007488a874caea2c1c4e3c1"), "ProductID" : 81, "ProductName" : "Raclette  
Marocaine Spéciale", "SupplierID" : 28, "CategoryID" : 4, "QuantityPerUnit" : "5 kg pkg.",  
"UnitPrice" : 65, "UnitsInStock" : 179, "UnitsOnOrder" : 10, "ReorderLevel" : 0, "Discontinued"  
: 0, "DateFirstShip" : ISODate("2021-01-19T21:00:58.339Z") }
```

```
{ "_id" : ObjectId("6007488a874caea2c1c4e3c2"), "ProductID" : 81, "ProductName" : "Raclette  
Marocaine Spéciale", "SupplierID" : 28, "CategoryID" : 4, "QuantityPerUnit" : "5 kg pkg.",
```

```
"UnitPrice" : 65, "UnitsInStock" : 179, "UnitsOnOrder" : 10, "ReorderLevel" : 0, "Discontinued" : 0, "DateFirstShip" : ISODate("2021-01-19T21:00:58.425Z") }
```

```
> db.products.find({DateFirstShip:{$exists:true}}).pretty()
```

```
{
```

```
  "_id" : ObjectId("6007488a874caea2c1c4e3bf"),
```

```
  "ProductID" : 81,
```

```
  "ProductName" : "Raclette Marocaine Spéciale",
```

```
  "SupplierID" : 28,
```

```
  "CategoryID" : 4,
```

```
  "QuantityPerUnit" : "5 kg pkg.",
```

```
  "UnitPrice" : 65,
```

```
  "UnitsInStock" : 179,
```

```
  "UnitsOnOrder" : 10,
```

```
  "ReorderLevel" : 0,
```

```
  "Discontinued" : 0,
```

```
  "DateFirstShip" : ISODate("2021-01-19T21:00:58.106Z")
```

```
}
```

```
{
```

```
  "_id" : ObjectId("6007488a874caea2c1c4e3c0"),
```

```
  "ProductID" : 81,
```

```
  "ProductName" : "Raclette Marocaine Spéciale",
```

```
  "SupplierID" : 28,
```

```
  "CategoryID" : 4,
```

```
  "QuantityPerUnit" : "5 kg pkg.",
```

```
  "UnitPrice" : 65,
```

```
  "UnitsInStock" : 179,
```

```
  "UnitsOnOrder" : 10,
```

```
  "ReorderLevel" : 0,
```

```
  "Discontinued" : 0,
```

```
"DateFirstShip" : ISODate("2021-01-19T21:00:58.254Z")
}
{
  "_id" : ObjectId("6007488a874caea2c1c4e3c1"),
  "ProductID" : 81,
  "ProductName" : "Raclette Marocaine Spéciale",
  "SupplierID" : 28,
  "CategoryID" : 4,
  "QuantityPerUnit" : "5 kg pkg.",
  "UnitPrice" : 65,
  "UnitsInStock" : 179,
  "UnitsOnOrder" : 10,
  "ReorderLevel" : 0,
  "Discontinued" : 0,
  "DateFirstShip" : ISODate("2021-01-19T21:00:58.339Z")
}
{
  "_id" : ObjectId("6007488a874caea2c1c4e3c2"),
  "ProductID" : 81,
  "ProductName" : "Raclette Marocaine Spéciale",
  "SupplierID" : 28,
  "CategoryID" : 4,
  "QuantityPerUnit" : "5 kg pkg.",
  "UnitPrice" : 65,
  "UnitsInStock" : 179,
  "UnitsOnOrder" : 10,
  "ReorderLevel" : 0,
  "Discontinued" : 0,
```

```

    "DateFirstShip" : ISODate("2021-01-19T21:00:58.425Z")
  }
>
> db.shutdownServer()
shutdown command only works with the admin database; try 'use admin'
> use admin
switched to db admin
> use starter
switched to db starter
> db.shutdownServer({
...   force: <boolean>,
...   timeoutSecs: <int>
... })
uncaught exception: SyntaxError: expected expression, got '<' :
@(shell):2:9
> db.shutdownServer({ force: <true>, timeoutSecs: <int> })
uncaught exception: SyntaxError: expected expression, got '<' :
@(shell):1:29
> db.shutdownServer({ force: <true>, timeoutSecs: <10> })
uncaught exception: SyntaxError: expected expression, got '<' :
@(shell):1:29
> db.getSiblingDB("starter").shutdownServer({ "force" : true })
shutdown command only works with the admin database; try 'use admin'
> db.getSiblingDB("admin").shutdownServer({ "force" : true })
server should be down...
> quit()

```

C:\Program Files\MongoDB\Server\4.4\bin>