

Взять любой online терминал mongodb

- https://www.tutorialspoint.com/mongodb_terminal_online.php
- <https://www.mplay.run/mongodb-online-terminal>
- <https://docs.mongodb.com/manual/tutorial/getting-started/>

2. Создать базу данных

use products

```
>>> use products
switched to db products
>>> |
```

3. Вставить 4 документа по товарам на сайте. Атрибуты:

- Название
- Категория (2 товара из одной категории, 2 товара из другой)
- Цена
- Количество товаров на складе

```
db.warehouse.insertMany([ {name: 'Samsung', category:'phone', price: 8, stock: 70}, {name: 'Marshall', category:'headphones', price: 5, stock: 10}, {name: 'JBL', category:'headphones', price: 3, stock: 130} ])
```

```
db.warehouse.insertOne({name: 'IPhone', category:'phone', price: 10, stock: 50})
```

```
>>> db.warehouse.insertMany([ {name: 'Samsung', category:'phone', price: 8, stock: 70},
{name: 'Marshall', category:'headphones', price: 5, stock: 10}, {name: 'JBL',
category:'headphones', price: 3, stock: 130} ] )
{
  "acknowledged" : true,
  "insertedIds" : [
    ObjectId("5ddaf664a19f584e4ed81b61"),
    ObjectId("5ddaf664a19f584e4ed81b62"),
    ObjectId("5ddaf664a19f584e4ed81b63")
  ]
}
>>> db.warehouse.insertOne({name: 'IPhone', category:'phone', price: 10, stock: 50})
{
  "acknowledged" : true,
  "insertedId" : ObjectId("5ddaf66ba19f584e4ed81b64")
}
```

4. Рассчитать остаточную стоимость товаров в каждой категории (сумма цены, умноженной на остаток)

```
db.warehouse.aggregate([ { $project: { name: 1, category: 1, price: 1, stock: 1,
total: { $multiply: [ "$price", "$stock" ] } } } , { $out: "totalCollection" } ])
```

```
db.totalCollection.find()
```

```
>>> db.warehouse.aggregate([ { $project: { name: 1, category: 1, price: 1, stock: 1,
total: { $multiply: [ "$price", "$stock" ] } } }, { $out: "totalCollection" } ])
>>> db.totalCollection.find()
{ "_id" : ObjectId("5ddaf664a19f584e4ed81b61"), "name" : "Samsung", "category" :
"phone", "price" : 8, "stock" : 70, "total" : 560 }
{ "_id" : ObjectId("5ddaf664a19f584e4ed81b62"), "name" : "Marshall", "category" :
"headphones", "price" : 5, "stock" : 10, "total" : 50 }
{ "_id" : ObjectId("5ddaf664a19f584e4ed81b63"), "name" : "JBL", "category" :
"headphones", "price" : 3, "stock" : 130, "total" : 390 }
{ "_id" : ObjectId("5ddaf66ba19f584e4ed81b64"), "name" : "iPhone", "category" : "phone",
"price" : 10, "stock" : 50, "total" : 500 }
```

```
const mapfunction = function () { emit( this.category, this.total ); };
```

```
const reducefunction = function (keyCategory, valuesTotal) {
return Array.sum(valuesTotal);}
```

```
>>> const mapfunction = function () { emit( this.category, this.total ); };
>>> const reducefunction = function (keyCategory, valuesTotal) {
... return Array.sum(valuesTotal);
... }
```

```
db.totalCollection.mapReduce(mapfunction, reducefunction, { out:
'mapReduceCollections' })
```

```
db.mapReduceCollections.find()
```

```
>>> db.totalCollection.mapReduce(mapfunction, reducefunction, { out:
'mapReduceCollections' })
{
  "result" : "mapReduceCollections",
  "timeMillis" : 131,
  "counts" : {
    "input" : 4,
    "emit" : 4,
    "reduce" : 2,
    "output" : 2
  },
  "ok" : 1
}
>>> db.mapReduceCollections.find()
{ "_id" : "headphones", "value" : 440 }
{ "_id" : "phone", "value" : 1060 }
```

```
db.totalCollection.remove({})
( или db.totalCollection.drop() )
```

```
>>> db.totalCollection.remove({})
WriteResult({ "nRemoved" : 4 })
```

5. Уменьшить количество товара на 1

```
db.warehouse.updateMany(
{stock: { $gt: 0 }},
{ $inc: { stock: -1 } } )
```

db.warehouse.find()

```
>>> db.warehouse.updateMany(
... {stock: {$gt: 0}},
... {$inc: {stock: -1}} )
...
{ "acknowledged" : true, "matchedCount" : 4, "modifiedCount" : 4 }
>>> db.warehouse.find()
{ "_id" : ObjectId("5ddbd8b32eafe2826e60d044"), "name" : "Samsung", "category" :
"phone", "price" : 8, "stock" : 69 }
{ "_id" : ObjectId("5ddbd8b32eafe2826e60d045"), "name" : "Marshall", "category" :
"headphones", "price" : 5, "stock" : 9 }
{ "_id" : ObjectId("5ddbd8b32eafe2826e60d046"), "name" : "JBL", "category" :
"headphones", "price" : 3, "stock" : 129 }
{ "_id" : ObjectId("5ddbd8b82eafe2826e60d047"), "name" : "iPhone", "category" : "phone",
"price" : 10, "stock" : 49 }
```

6. Вывести top-2 самых дорогих товара

db.warehouse.find().sort({price:-1}).limit(2)

```
>>> db.warehouse.find().sort({price:-1}).limit(2)
{ "_id" : ObjectId("5ddbd8b82eafe2826e60d047"), "name" : "iPhone", "category" : "phone",
"price" : 10, "stock" : 49 }
{ "_id" : ObjectId("5ddbd8b32eafe2826e60d044"), "name" : "Samsung", "category" :
"phone", "price" : 8, "stock" : 69 }
```