

Группировка значений по полю класса и сортировка получившихся значений по убыванию.

```
> db.Student.aggregate(  
  {  
    "$group" : { "_id" : "$class", "total" : { "$sum" : 1 } }  
  },  
  {  
    $sort : { total : -1 }  
  }  
);  
< [ { _id: '9A', total: 2 },  
  { _id: '4 kurs', total: 1 },  
  { _id: '1C', total: 1 },  
  { _id: '7B', total: 1 } ]  
>
```

```
db.Student.aggregate(  
  {  
    "$group" : { "_id" : "$class", "total" : { "$sum" : 1 } }  
  },  
  {  
    $sort : { total : -1 }  
  }  
);
```

```

> db.Student.aggregate(
  {
    "$group" : { "_id" : "$class", "total" : { "$sum" : 1 }}
  },
  {
    $sort : {total : -1}
  },
  {
    $match:{total:2}
  }
);
< [ { _id: '9A', total: 2 } ]
> |

```

```

db.Student.aggregate(
  {
    "$group" : { "_id" : "$class", "total" : { "$sum" : 1 }}
  },
  {
    $sort : {total : -1}
  },
  {
    $match:{total:2}
  }
);

```

Пример группировки через lookup.

```
> db.Student.aggregate([
  {
    $lookup:
    {
      from: "Teacher",
      localField: "name",
      foreignField: "name",
      as: "testAggr1"
    }
  }
])
```

```
db.Student.aggregate([
{
  $lookup:
  {
    from: "Teacher",
    localField: "name",
    foreignField: "name",
    as: "testAggr1"
  }
})
```

```
}  
))
```

## Результат:

```
[ { _id:  
  { _bsontype: 'ObjectID',  
    id: <Buffer 5f 74 55 7f 50 a3 e5 24 1c 30 43 b2> },  
  name: 'Artem',  
  class: '9A',  
  testAggr1: [] },  
  { _id:  
    { _bsontype: 'ObjectID',  
      id: <Buffer 5f 74 55 8b 50 a3 e5 24 1c 30 43 b3> },  
    name: 'Ortem',  
    class: '7B',  
    testAggr1: [] },  
    { _id:  
      { _bsontype: 'ObjectID',  
        id: <Buffer 5f 74 55 d4 50 a3 e5 24 1c 30 43 b4> },  
      name: 'Kolya',  
      class: '1C',  
      testAggr1:  
        [ { _id:  
          { _bsontype: 'ObjectID',  
            id: <Buffer 5f 8e d4 4f 7c c9 b2 1c 70 ab 8b 0d> },  
          name: 'Kolya',  
          cabNum: 105,  
          exp: '0 year',  
          isZavUch: false } ] },  
        { _id:  
          { _bsontype: 'ObjectID',  
            id: <Buffer 5f 74 55 ed 50 a3 e5 24 1c 30 43 b5> },  
          name: 'Mikheev',
```

```

class: '4 kurs',
testAggr1: [] },
{ _id:
  { _bsontype: 'ObjectID',
    id: <Buffer 5f 74 56 06 50 a3 e5 24 1c 30 43 b6> },
  name: 'Maheev',
  class: '9A',
  testAggr1: [] } ]

```

агрегированный запрос через mapReduce

```

>
>
> var map = function(){emit(this.name,this.class);}
> var reduce = function(nm,cls){return Array.sum(cls);}
> var map = function(){emit(this.name,this.class);}
> db.Student.mapReduce(map,reduce,{out: "test_mr"})
{ "result" : "test_mr", "ok" : 1 }
> db.test_mr.find()
{ "_id" : "Maheev", "value" : "9A" }
{ "_id" : "Ortem", "value" : "7B" }
{ "_id" : "Kolya", "value" : "1C" }
{ "_id" : "Mikheev", "value" : "4 kurs" }
{ "_id" : "Artem", "value" : "9A" }
>

```

```

> var map = function(){emit(this.name,this.class);}
> var reduce = function(nm,cls){return Array.sum(cls);}
> var map = function(){emit(this.name,this.class);}
> db.Student.mapReduce(map,reduce,{out: "test_mr"})
{ "result" : "test_mr", "ok" : 1 }

```

## Результат

```
> db.test_mr.find()
```

```
{ "_id" : "Maheev", "value" : "9A" }
```

```
{ "_id" : "Ortem", "value" : "7B" }
```

```
{ "_id" : "Kolya", "value" : "1C" }
```

```
{ "_id" : "Mikheev", "value" : "4 kurs" }
```

```
{ "_id" : "Artem", "value" : "9A" }
```

```
>
```