```
Command Prompt - mongo

> use b2
switched to db b2
> db.student.insert({rollno : 201 , subject : "Physics" , marks : 40 })
WriteResult({ "nInserted" : 1 })
> db.student.insertMany([
... { rollno : 202 , subject : "Physics" , marks : 44 } ,
... { rollno : 201 , subject : "Chemistry" , marks : 40 } ,
... { rollno : 202 , subject : "Chemistry" , marks : 38 } ,
... { rollno : 201 , subject : "Math" , marks : 92 } ,
... { rollno : 202 , subject : "Math" , marks : 88 } ,
... { rollno : 203 , subject : "Physics" ,marks : 45 } ,
... { rollno : 203 , subject : "Chemistry" , marks :41 } ,
... { rollno : 203 , subject : "Math" , marks : 94 } ,
... { rollno : 204 , subject : "Physics" , marks : 32 } ,
... { rollno : 204 , subject : "Chemistry" , marks : 40 } ] )
{
        "acknowledged" : true,
        "insertedIds" : [
                ObjectId("5fa7eb298e612b224bb37dcf"),
                ObjectId("5fa7eb298e612b224bb37dd0"),
                ObjectId("5fa7eb298e612b224bb37dd1"),
                ObjectId("5fa7eb298e612b224bb37dd2"),
                ObjectId("5fa7eb298e612b224bb37dd3"),
                ObjectId("5fa7eb298e612b224bb37dd4"),
                ObjectId("5fa7eb298e612b224bb37dd5"),
                ObjectId("5fa7eb298e612b224bb37dd6"),
                ObjectId("5fa7eb298e612b224bb37dd7"),
                ObjectId("5fa7eb298e612b224bb37dd8")
        ]
}
>
>
> var mapFunction = function(){
... var key = this.rollno ;
... var value = { total_marks : this.marks , count : 1 , percentage : 0};
... emit (key,value);
... };
>
>
> var reduceFunction = function(key , values ) {
... var reducedObject = { total_marks : 0 ,count : 0 ,percentage : 0 } ;
... values.forEach( function(value) {
...         reducedObject.total_marks += value.total_marks;
...         reducedObject.count += value.count ;
```

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```
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          "insertedIds" : [
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                    ObjectId("5fa7eb298e612b224bb37dd0"),
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                    ObjectId("5fa7eb298e612b224bb37dd3"),
                    ObjectId("5fa7eb298e612b224bb37dd4"),
                    ObjectId("5fa7eb298e612b224bb37dd5"),
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                    ObjectId("5fa7eb298e612b224bb37dd7"),
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> var mapFunction = function(){
... var key = this.rollno ;
... var value = { total_marks : this.marks , count : 1 , percentage : 0};
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... };
>
>
> var reduceFunction = function(key , values ) {
... var reducedObject = { total_marks : 0 ,count : 0 ,percentage : 0 } ;
... values.forEach( function(value) {
...       reducedObject.total_marks += value.total_marks;
...       reducedObject.count += value.count ;
... });
...
... return reducedObject ;
... };
>
>
> var finalizeFunction = function ( key,reducedValue ) {
...
... if(reducedValue.count > 0 )
...    reducedValue.percentage = reducedValue.total_marks / reducedValue.count ;
...
... return reducedValue;
... };
>
>
>
```

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```
> db.student.mapReduce(    mapFunction ,    reduceFunction ,    {    out : "result",    finalize : finalizeFunction    } )
{
        "result" : "result",
        "timeMillis" : 172,
        "counts" : {
                "input" : 11,
                "emit" : 11,
                "reduce" : 4,
                "output" : 4
        },
        "ok" : 1
}
>
>
> db.result.find({}).pretty()
{
        "_id" : 201,
        "value" : {
                "total_marks" : 172,
                "count" : 3,
                "percentage" : 57.333333333333336
        }
}
{
        "_id" : 202,
        "value" : {
                "total_marks" : 170,
                "count" : 3,
                "percentage" : 56.666666666666664
        }
}
{
        "_id" : 203,
        "value" : {
                "total_marks" : 180,
                "count" : 3,
                "percentage" : 60
        }
}
{
        "_id" : 204,
        "value" : {
                "total_marks" : 72,
                "count" : 2,
                "percentage" : 36
        }
}
>
```