

NAME - Kishanlal Choudhary
ROLL NO - 31114
CLASS - TE 1
SUBJECT - DBMS
DATE - 26/10/23
Assignment No - 11

```
-----START-----  
  
> use 31114_db  
switched to db 31114_db  
  
> show collections  
products  
  
> db.createCollection("products");  
{ "ok" : 1 }  
  
> db.products.insertMany(  
  [ { "name" : "samsung m12", "brand" : "samsung", "cost" : 12000, "qty" : 21},  
    { "name" : "iphone 12", "brand" : "apple", "cost" : 80000, "qty" : 20},  
    { "name" : "oneplus t", "brand" : "oneplus", "cost" : 45000, "qty" : 30},  
    { "name" : "motorola m3", "brand" : "motorola", "cost" : 30000, "qty" : 50},  
    { "name" : "samsung a12", "brand" : "samsung", "cost" : 32000, "qty" : 25},  
    { "name" : "iphone 13", "brand" : "apple", "cost" : 89000, "qty" : 45},  
    { "name" : "oneplus g", "brand" : "oneplus", "cost" : 45000, "qty" : 63}  
  ]  
)  
{  
  acknowledged: true,  
  insertedIds: {  
    ObjectId("653a233d718a2bdd2cd21b79"),  
    ObjectId("653a233d718a2bdd2cd21b7a"),  
    ObjectId("653a233d718a2bdd2cd21b7b"),  
    ObjectId("653a233d718a2bdd2cd21b7c"),  
    ObjectId("653a233d718a2bdd2cd21b7d"),  
    ObjectId("653a233d718a2bdd2cd21b7e"),  
    ObjectId("653a233d718a2bdd2cd21b7f")  
  }  
}  
  
> db.products.aggregate();  
[  
  {  
    _id: ObjectId("653a233d718a2bdd2cd21b79"),  
    name: 'samsung m12',  
    brand: 'samsung',  
    cost: 12000,  
    qty: 21  
  },  
  {  
    _id: ObjectId("653a233d718a2bdd2cd21b7a"),  
    name: 'iphone 12',  
    brand: 'apple',  
    cost: 80000,  
    qty: 20  
  },  
  {  
    _id: ObjectId("653a233d718a2bdd2cd21b7b"),
```

```

    name: 'oneplus t',
    brand: 'oneplus',
    cost: 45000,
    qty: 30
  },
  {
    _id: ObjectId("653a233d718a2bdd2cd21b7c"),
    name: 'motorola m3',
    brand: 'motorola',
    cost: 30000,
    qty: 50
  },
  {
    _id: ObjectId("653a233d718a2bdd2cd21b7d"),
    name: 'samsung a12',
    brand: 'samsung',
    cost: 32000,
    qty: 25
  },
  {
    _id: ObjectId("653a233d718a2bdd2cd21b7e"),
    name: 'iphone 13',
    brand: 'apple',
    cost: 89000,
    qty: 45
  },
  {
    _id: ObjectId("653a233d718a2bdd2cd21b7f"),
    name: 'oneplus g',
    brand: 'oneplus',
    cost: 45000,
    qty: 63
  }
]

```

```
> var mapFunction = function(){emit(this.brand, this.qty*this.cost)};
```

```
> var reduceFunction = function(key, values){return Array.sum(values)};
```

```
> db.products.mapReduce(mapFunction, reduceFunction, {out:"brand_total_cost"});
{ result: 'total_cost_of_products', ok: 1 }
```

```
> db.brand_total_cost.find();
```

```

[
  { _id: 'oneplus', value: 4185000 },
  { _id: 'motorola', value: 1500000 },
  { _id: 'samsung', value: 1052000 },
  { _id: 'apple', value: 5605000 }
]

```

```
> var mapFunction = function(){emit(this.brand, {cost:this.cost, qty:this.qty})};
```

```

> var reduceFunction = function(key, values){
... var reduceValue = {total_product:0, total_qty:0, average_cost:0};
... values.forEach(function(value){
... reduceValue.total_product += 1;
... reduceValue.total_qty += value.qty;
... reduceValue.average_cost += value.cost;});
... reduceValue.average_cost /= reduceValue.total_product;

```

```
... return reduceValue;}

> db.products.mapReduce(mapFunction, reduceFunction, {out:"brand_stats"});
{ result: 'brand_stats', ok: 1 }

> db.brand_stats.find();
[
  {
    _id: 'oneplus',
    value: { total_product: 2, total_qty: 93, average_cost: 45000 }
  },
  {
    _id: 'motorola',
    value: { total_product: 1, total_qty: 50, average_cost: 30000 }
  },
  {
    _id: 'samsung',
    value: { total_product: 2, total_qty: 46, average_cost: 22000 }
  },
  {
    _id: 'apple',
    value: { total_product: 2, total_qty: 65, average_cost: 84500 }
  }
]
```

-----END-----