// Step 1: Use the database and drop it if it exists

use salesDB

db.dropDatabase()

// Step 2: Insert new sample data

db.sales.insertMany([

    { item: "apple", quantity: 10, price: 1 },

    { item: "banana", quantity: 5, price: 0.5 },

    { item: "apple", quantity: 8, price: 1 },

    { item: "orange", quantity: 15, price: 0.75 },

    { item: "banana", quantity: 10, price: 0.5 },

    { item: "apple", quantity: 5, price: 1 },

    { item: "orange", quantity: 10, price: 0.75 },

    { item: "grape", quantity: 12, price: 0.9 },

    { item: "banana", quantity: 6, price: 0.5 },

    { item: "grape", quantity: 5, price: 0.9 }

]);

// Step 3: Define the Map and Reduce functions

var mapFunction = function() {

    emit(this.item, this.quantity);

};

var reduceFunction = function(key, values) {

    return Array.sum(values);

};

// Step 4: Execute MapReduce

db.sales.mapReduce(

    mapFunction,

    reduceFunction,

    { out: "sales\_summary" }

);

// Step 5: View the results

db.sales\_summary.find().pretty();

//NEW

var mapFunctionRevenue = function() {

    var revenue = this.quantity \* this.price;

    emit(this.item, { totalQuantity: this.quantity, totalRevenue: revenue });

};

var reduceFunctionRevenue = function(key, values) {

    var reducedValue = { totalQuantity: 0, totalRevenue: 0 };

    values.forEach(function(value) {

        reducedValue.totalQuantity += value.totalQuantity;

        reducedValue.totalRevenue += value.totalRevenue;

    });

    return reducedValue;

};

db.sales.mapReduce(

    mapFunctionRevenue,

    reduceFunctionRevenue,

    { out: "sales\_revenue\_summary" }

);

db.sales\_revenue\_summary.find().pretty();