**ASSIGNMENT 3:**

**PART A:**

Use RetailStoreDB

db.products.insertMany([

{ product\_id: 101, name: "Laptop", category: "Electronics", price: 55000, stock: 30

},

{ product\_id: 102, name: "Mobile", category: "Electronics", price: 25000, stock: 50

},

{ product\_id: 103, name: "Chair", category: "Furniture", price: 3000, stock: 100 },

{ product\_id: 104, name: "Desk", category: "Furniture", price: 7000, stock: 40 },

{ product\_id: 105, name: "Book", category: "Stationery", price: 250, stock: 200 }

])

db.sales.insertMany([

{ sale\_id: 1, product\_id: 101, quantity: 2, date: new Date("2024-08-10"), customer:

"Ravi" },

{ sale\_id: 2, product\_id: 102, quantity: 3, date: new Date("2024-08-12"), customer:

"Ayesha" },

{ sale\_id: 3, product\_id: 103, quantity: 5, date: new Date("2024-08-14"), customer:

"Ravi" },

{ sale\_id: 4, product\_id: 104, quantity: 1, date: new Date("2024-08-14"), customer:

"John" },

{ sale\_id: 5, product\_id: 105, quantity: 10, date: new Date("2024-08-15"), customer:

"Meena" }

])

**PAART B:**

1. db.products.find({ category: "Electronics" });
2. db.sales.find({ customer: "Ravi" });
3. db.products.find({ price: { $gt: 5000 } });
4. db.products.find({ stock: { $lt: 50 } });
5. db.sales.find({ date: new Date("2024-08-14") });
6. db.sales.aggregate([

{

$group: {

\_id: "$product\_id",

total\_quantity\_sold: { $sum: "$quantity" }

}

},

{

$project: {

\_id: 0,

product\_id: "$\_id",

total\_quantity\_sold: 1

}

}

])

1. db.sales.aggregate([

{

$lookup: {

from: "products",

localField: "product\_id",

foreignField: "product\_id",

as: "product\_info"

}

},

{ $unwind: "$product\_info" },

{

$project: {

product: "$product\_info.name",

revenue: { $multiply: ["$quantity", "$product\_info.price"] }

}

},

{

$group: {

\_id: "$product",

total\_revenue: { $sum: "$revenue" }

}

},

{

$project: {

\_id: 0,

product: "$\_id",

total\_revenue: 1

}

}

])

1. db.sales.find({ quantity: { $gt: 3 } }, { customer: 1, quantity: 1 });
2. db.products.find().sort({ stock: -1 });
3. db.sales.aggregate([

{

$group: {

\_id: "$product\_id",

total\_quantity\_sold: { $sum: "$quantity" }

}

},

{ $sort: { total\_quantity\_sold: -1 } },

{ $limit: 2 },

{

$lookup: {

from: "products",

localField: "\_id",

foreignField: "product\_id",

as: "product"

}

},

{ $unwind: "$product" },

{

$project: {

product\_name: "$product.name",

total\_quantity\_sold: 1

}

}

]);