

MongoDB Queries

MongoDB Queries

1. Retrieve documents from the orders in ascending order by total?

ANS. `db.orders.find().sort({ total: 1 });`

2. Retrieve the oldest paymentMethod from the payments collection as "_id"?

ANS. `db.payments.find({}, { paymentMethod: 1 }).sort({ payment_date: 1 }).limit(1);`

3. Retrieve the 2nd and 3rd buyers from the buyers collection?

ANS. `db.buyers.find().skip(1).limit(2);`

4. Retrieve the most expensive product from order_details?

ANS. `db.order_details.find().sort({ price: -1 }).limit(1);`

5. Retrieve the first order from the orders as per the order_date?

ANS. `db.orders.find().sort({ order_date: 1 }).limit(1);`

6. Retrieve the last 3 orders from the orders collection who have less total amount?

ANS. `db.orders.find().sort({ total: 1 }).limit(3);`

7. Retrieve the most recent shipped order from the orders collection?

ANS. `db.orders.find({ status: "shipped" }).sort({ ship_date: -1 }).limit(1);`

8. Get the total revenue from all orders?

ANS. `db.orders.aggregate([`

```
{
  $group: {
    _id: null,
    totalRevenue: { $sum: "$total" }
  }
}
]);
```

9. Retrieve all the orders that shipped before 2022-05-26?

ANS. `db.orders.find({ ship_date: { $lt: new Date("2022-05-26") } });`

10. Find the maximum price as maxPrice of products and their names as name for each category?

```
ANS. db.products.aggregate([
{
  $group: {
    _id: "$category_id",
    maxPrice: { $max: "$price" },
    name: { $first: "$name" } // Adjust to get all product names if needed
  }
}
]);
```

11. Find the most used payment method as paymentMethod and the number of times it is used as count?

```
ANS. db.payments.aggregate([
{
  $group: {
    _id: "$paymentMethod",
    count: { $sum: 1 }
  }
}
]);
```

```
    }  
  },  
  { $sort: { count: -1 } },  
  { $limit: 1 }  
]);
```

12. Find the total count of orders by status?

```
ANS. db.orders.aggregate([  
  {  
    $group: {  
      _id: "$status",  
      count: { $sum: 1 }  
    }  
  }  
]);
```

13. Retrieve the orders grouped by customer_id with the max total?

```
ANS. db.orders.aggregate([  
  {  
    $group: {  
      _id: "$customer_id",  
      maxTotal: { $max: "$total" }  
    }  
  }  
]);
```

Additional Problems for Set 2

14. Assess the impact of RAM capacity on laptop prices and ratings?

```
ANS. db.laptops.aggregate([
{
  $group: {
    _id: "$ram",
    avgPrice: { $avg: "$price" },
    avgRating: { $avg: "$rating" }
  }
}
]);
```

15. Investigate the price and rating distribution for gaming laptops?

```
ANS. db.laptops.aggregate([
{ $match: { category: "gaming" } },
{
  $group: {
    _id: "$brand",
    avgPrice: { $avg: "$price" },
    avgRating: { $avg: "$rating" },
    avgGpuType: { $first: "$gpuType" }, // Assuming each brand uses one GPU type, adjust as needed
    avgRam: { $avg: "$ram" }
  }
}
]);
```

16. Analyze the warranty periods offered by different brands and their correlation with laptop prices and ratings?

```
ANS. db.laptops.aggregate([
```

```
{
  $group: {
    _id: "$brand",
    avgWarranty: { $avg: "$warranty" },
    avgPrice: { $avg: "$price" },
    avgRating: { $avg: "$rating" }
  }
}
]);
```

17. Examine the relationship between processor brand (Intel, AMD, Apple) and laptop price, rating, and primary storage capacity?

```
ANS. db.laptops.aggregate([
{
  $group: {
    _id: "$processor_brand",
    avgPrice: { $avg: "$price" },
    avgRating: { $avg: "$rating" },
    avgStorage: { $avg: "$storage" }
  }
}
]);
```