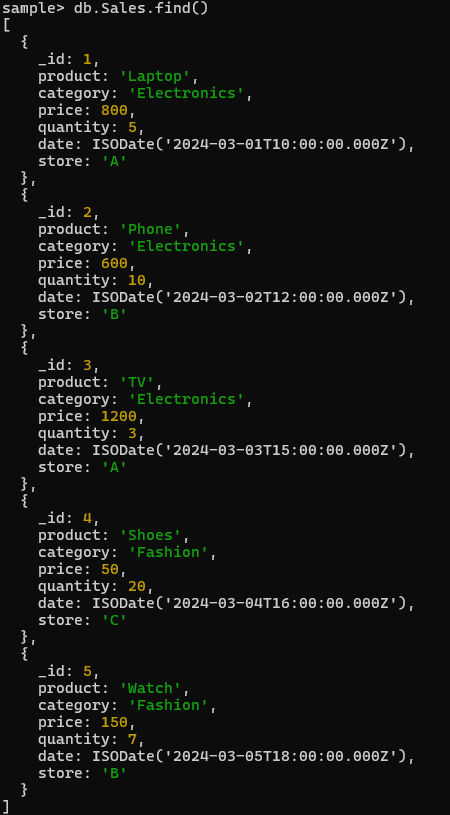
**Aggregate Function**

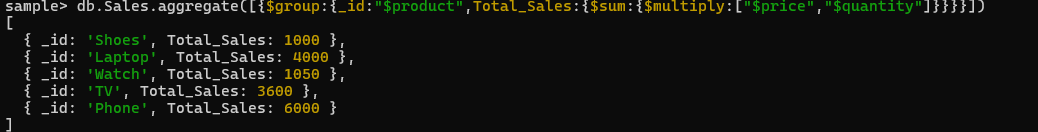
**Creating Sales Collection:**



**Query with Output**

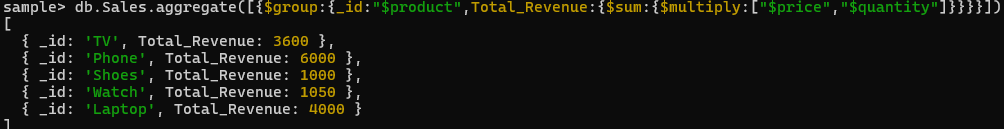
1. **Total sales per product**.

db.Sales.aggregate([{$group:{\_id:"$product",Total\_Sales:{$sum:{$multiply:["$price","$quantity"]}}}}])

****

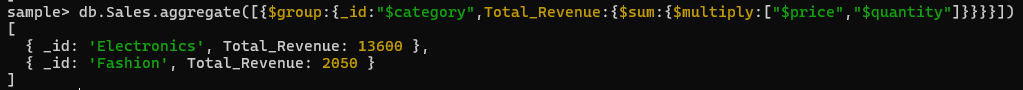
**2. Total revenue per product**.

db.Sales.aggregate([{$group:{\_id:"$product",Total\_Revenue:{$sum:{$multiply:["$price","$quantity"]}}}}])



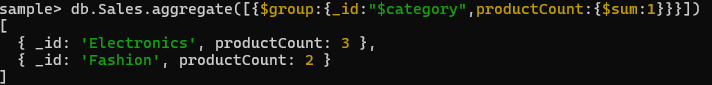
**3. Total revenue per category.**

db.Sales.aggregate([{$group:{\_id:"$category",Total\_Revenue:{$sum:{$multiply:["$price","$quantity"]}}}}])



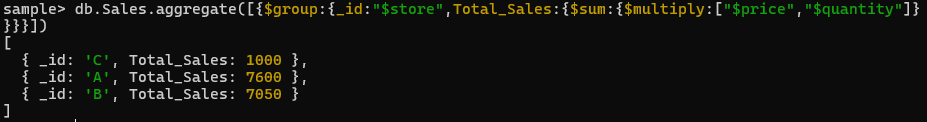
**4. Count of products per category.**

db.Sales.aggregate([{$group:{\_id:"$category",productCount:{$sum:1}}}])



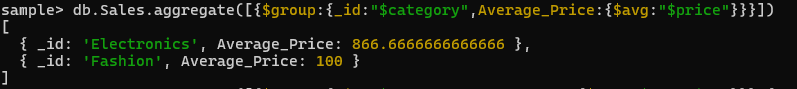
**5. Store-wise total sales.**

db.Sales.aggregate([{$group:{\_id:"$store",Total\_Sales:{$sum:{$multiply:["$price","$quantity"]}}}}])



**6. Average price of products per category**.

db.Sales.aggregate([{$group:{\_id:"$category",Average\_Price:{$avg:"$price"}}}])



**7. Top-selling product**.

db.Sales.aggregate([{$group:{\_id:"$product",Total\_Sales:{$sum:"$quantity"}}},{$sort:{Total\_Sales:-1}},{$limit:1}])



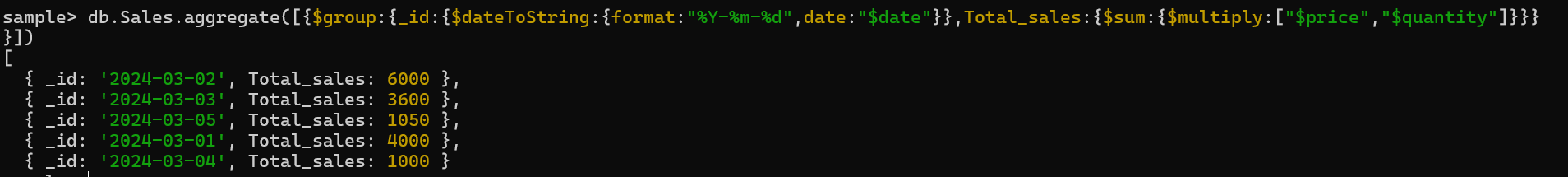
**8. Total sales for Electronics category.**

db.Sales.aggregate([{$match:{category:"Electronics"}},{$group:{\_id:"Electronics",Total\_Sales:{$sum:{$multiply:["$price","$quantity"]}}}}])



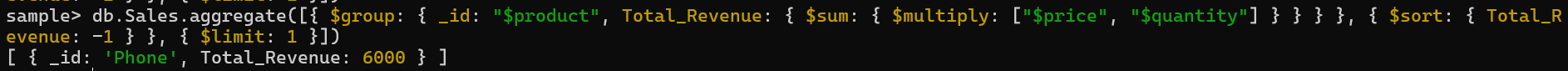
**9. Sales trend over time (day-wise total sales).**

db.Sales.aggregate([{$group:{\_id:{$dateToString:{format:"%Y-%m-%d",date:"$date"}},Total\_sales:{$sum:{$multiply:["$price","$quantity"]}}}}])



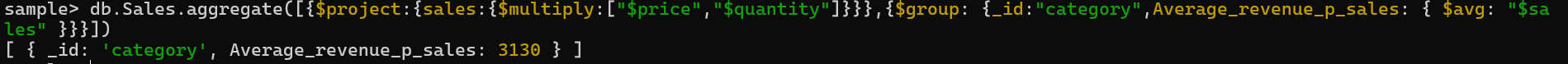
**10. Highest revenue-generating product.**

db.Sales.aggregate([{ $group: { \_id: "$product", Total\_Revenue: { $sum: { $multiply: ["$price", "$quantity"] } } } }, { $sort: { Total\_Revenue: -1 } }, { $limit: 1 }])



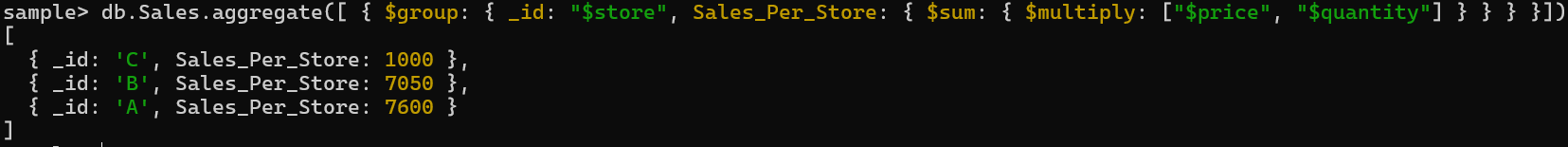
**11. Average revenue per sale**.

db.Sales.aggregate([{$project:{sales:{$multiply:["$price","$quantity"]}}},{$group: {\_id:"category",Average\_revenue\_p\_sales: { $avg: "$sales" }}}])



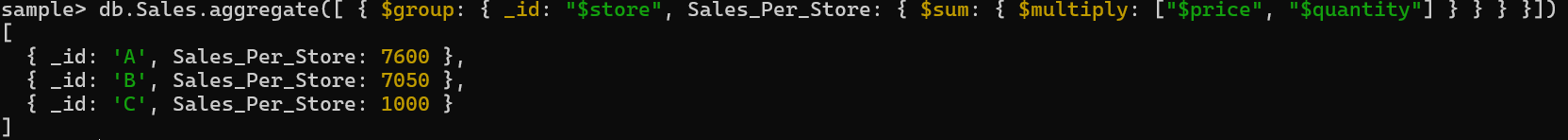
**12. Sales performance per store**.

db.Sales.aggregate([ { $group: { \_id: "$store", Sales\_Per\_Store: { $sum: { $multiply: ["$price", "$quantity"] } } } }])



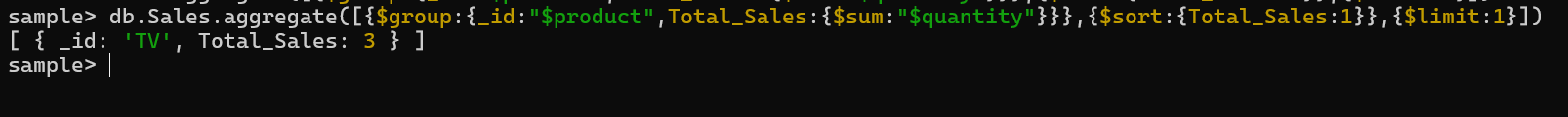
**13. Products sold more than 5 times**.

db.Sales.aggregate([{$group:{\_id:”$product”,Total\_Sales:{$sum:”$quantity”}}},{$match:{Total\_Sales:{$gt:5}}}])

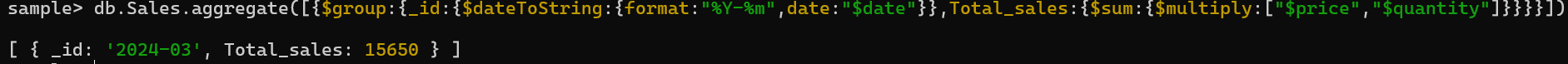


**14. Least sold product.**

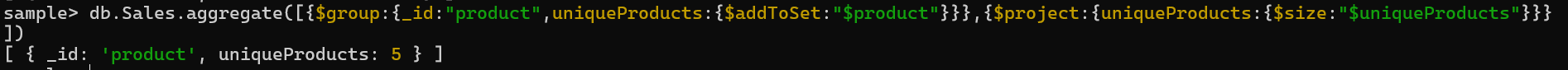
db.Sales.aggregate([{$group:{\_id:”$product”,Total\_Sales:{$sum:”$quantity”}}},{$sort:{Total\_Sales:1}},{$limit:1}])



**15. Monthly sales summary**.

db.Sales.aggregate([{$group:{\_id:{$dateToString:{format:"%Y-%m",date:"$date"}},Total\_sales:{$sum:{$multiply:["$price","$quantity"]}}}}])

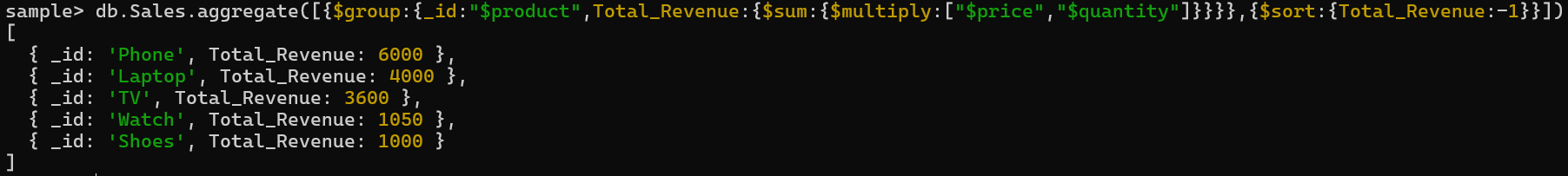
**16. Number of unique products sold.**

db.Sales.aggregate([{$group:{\_id:"product",uniqueProducts:{$addToSet:"$product"}}},{$project:{uniqueProducts:{$size:"$uniqueProducts"}}}])

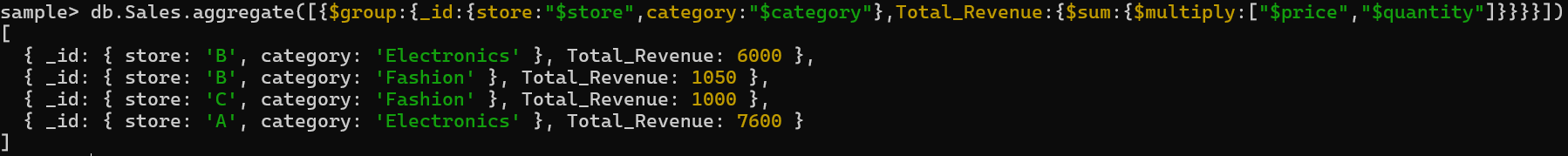
**17. Maximum and minimum priced product.**

db.Sales.aggregate([{$group:{\_id:"price",Max\_Price:{$max:"$price"},MinPrice:{$min:"$price"}}}])

**18. Total revenue per product in descending order**.

db.Sales.aggregate([{$group:{\_id:"$product",Total\_Revenue:{$sum:{$multiply:["$price","$quantity"]}}}},{$sort:{Total\_Revenue:-1}}])

**19. Revenue generated per store per category.**

db.Sales.aggregate([{$group:{\_id:{store:"$store",category:"$category"},Total\_Revenue:{$sum:{$multiply:["$price","$quantity"]}}}}])

**20. Products contributing more than 50% revenue**.

db.Sales.aggregate([{$group:{\_id:"$product",Total\_Revenue:{$sum:{$multiply:["$price","$quantity"]}}}},{$match:{Total\_Revenue:{$gt:{$multiply:["$Total\_Revenue",0.5]}}}}])