**MONGODB ASSIGNMENT 3**

1. **Total sales per product.**

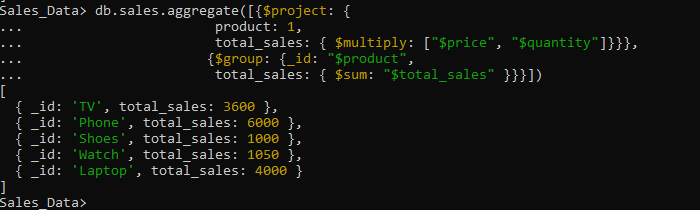
db.sales.aggregate([{$project: {

product: 1,

total\_sales: { $multiply: ["$price", "$quantity"]}}},

{$group: {\_id: "$product",

total\_sales: { $sum: "$total\_sales" }}}])

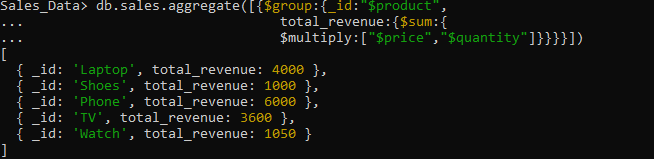


1. **Total revenue per product.**

db.sales.aggregate([{$group:{\_id:"$product",

total\_revenue:{$sum:{

$multiply:["$price","$quantity"]}}}}])

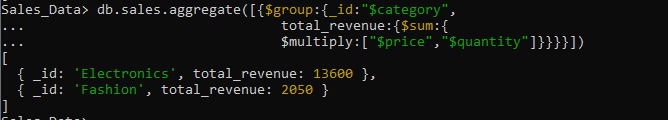


1. **Total revenue per category.**

db.sales.aggregate([{$group:{\_id:"$category",

total\_revenue:{$sum:{

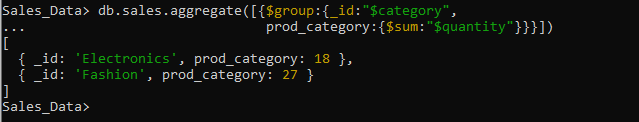
$multiply:["$price","$quantity"]}}}}])



1. **Count of products per category**.

db.sales.aggregate([{$group:{\_id:"$category",

prod\_category:{$sum:"$quantity"}}}])

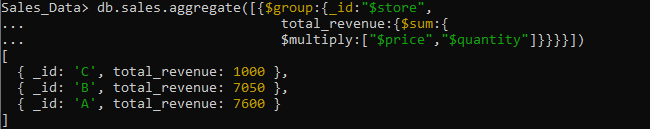


1. **Store-wise total sales.**

db.sales.aggregate([{$group:{\_id:"$store",

total\_revenue:{$sum:{

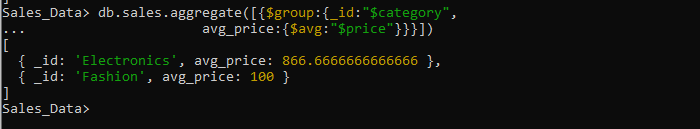
$multiply:["$price","$quantity"]}}}}])



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

**db.sales.aggregate([{$group:{\_id:"$category",**

**avg\_price:{$avg:"$price"}}}])**

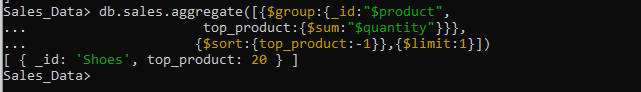
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1. **Top-selling product.**

**db.sales.aggregate([{$group:{\_id:"$product",**

**top\_product:{$sum:"$quantity"}}},**

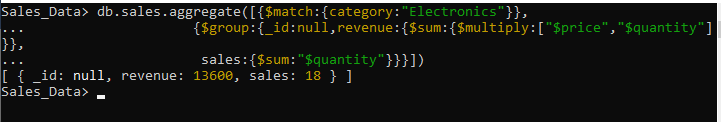
**{$sort:{top\_product:-1}},{$limit:1}])**

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1. **Total sales for Electronics category.**

**db.sales.aggregate([{$match:{category:"Electronics"}},**

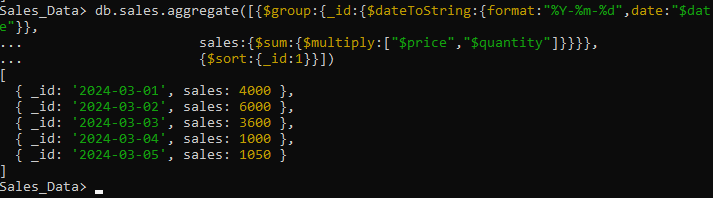
**{$group:{\_id:null,revenue:{$sum:{$multiply:["$price","$quantity"]}}, sales:{$sum:"$quantity"}}}])**

****

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

db.sales.aggregate([{$group:{\_id:{$dateToString:{format:"%Y-%m-%d",date:"$date"}},

sales:{$sum:{$multiply:["$price","$quantity"]}}}},

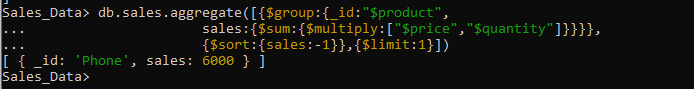
{$sort:{\_id:1}}])

1. **Highest revenue-generating product.**

**db.sales.aggregate([{$group:{\_id:"$product",**

**sales:{$sum:{$multiply:["$price","$quantity"]}}}},**

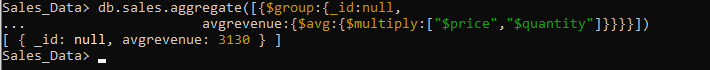
**{$sort:{sales:-1}},{$limit:1}])**

****

1. **Average revenue per sale.**

**db.sales.aggregate([{$group:{\_id:null,**

**avgrevenue:{$avg:{$multiply:["$price","$quantity"]}}}}])**

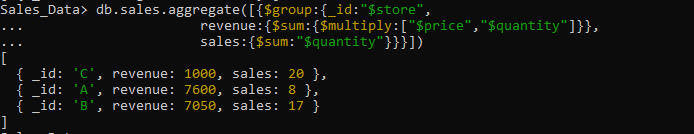
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1. **Sales performance per store.**

**db.sales.aggregate([{$group:{\_id:"$store",**

**revenue:{$sum:{$multiply:["$price","$quantity"]}},**

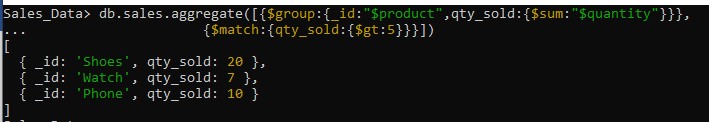
**sales:{$sum:"$quantity"}}}])**

****

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

**db.sales.aggregate([{$group:{\_id:"$product",qty\_sold:{$sum:"$quantity"}}},**

**{$match:{qty\_sold:{$gt:5}}}])**

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1. **Least sold product.**

**db.sales.aggregate([{$group:{\_id:"$product",qty\_sold:{$sum:"$quantity"}}},**

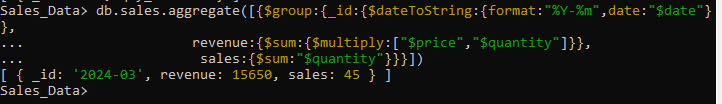
**{$sort:{qty\_sold:1}},{$limit:1}])**

1. **Monthly sales summary.**

**db.sales.aggregate([{$group:{\_id:{$dateToString:{format:"%Y-%m",date:"$date"}},**

**revenue:{$sum:{$multiply:["$price","$quantity"]}},**

**sales:{$sum:"$quantity"}}}])**

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1. **Number of unique products sold.**

**db.sales.distinct("product").length**

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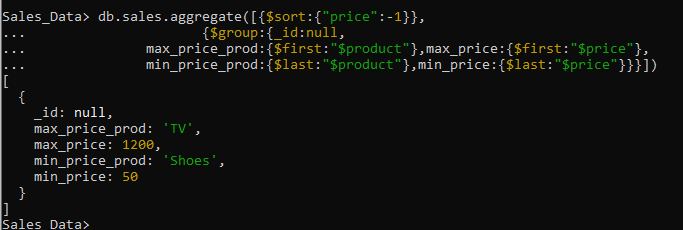
1. **Maximum and minimum priced product.**

**db.sales.aggregate([{$sort:{"price":-1}},**

**{$group:{\_id:null,**

**max\_price\_prod:{$first:"$product"},max\_price:{$first:"$price"},**

**min\_price\_prod:{$last:"$product"},min\_price:{$last:"$price"}}}])**

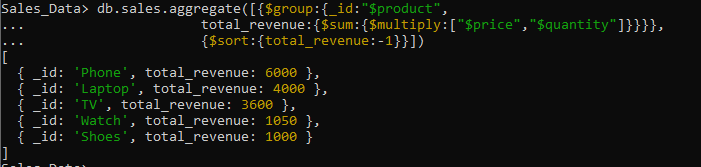
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1. **Total revenue per product in descending order.**

**db.sales.aggregate([{$group:{\_id:"$product",**

**total\_revenue:{$sum:{$multiply:["$price","$quantity"]}}}},**

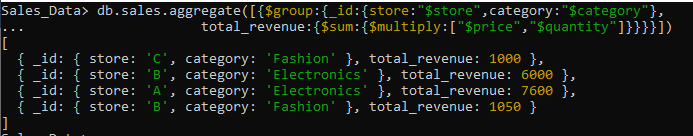
**{$sort:{total\_revenue:-1}}])**

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1. **Revenue generated per store per category.**

**db.sales.aggregate([{$group:{\_id:{store:"$store",category:"$category"},**

**total\_revenue:{$sum:{$multiply:["$price","$quantity"]}}}}])**

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

db.sales.aggregate([{$group:{\_id:null,

total\_revenue:{$sum:{$multiply:["$price","$quantity"]}}}},

{$group:{\_id:"$product",

prod\_revenue:{$sum:{$multiply:["$price","$quantity"]}}}},

{$match:{$expr:{$gt:["$prod\_revenue",{$multiply:["$total\_revenue",0.5]}]}}}]) 