

```
}
{
  "products" : [
    {
      "product_id" : 3,
      "name" : "Dell XPS",
      "price" : 1599.99
    }
  ]
}
{
  "products" : [
    {
      "product_id" : 6,
      "name" : "Xbox Series X",
      "price" : 499.99
    }
  ]
}
}

> db.categories.aggregate([{$unwind:"$products"},{},$$project:{"_id":0,"products.product_id":1,"products.name":1,"products.price":1}},{$sort:{"product
s.name":1}}]).pretty();
2024-06-12T12:30:27.843+0530 E QUERY [js] uncaught exception: Error: command failed: {
  "ok" : 0,
  "errmsg" : "A pipeline stage specification object must contain exactly one field.",
  "code" : 40323,
  "codeName" : "Location40323"
} : aggregate failed :
_getErrorWithCode@src/mongo/shell/utils.js:25:13
doassert@src/mongo/shell/assert.js:18:14
_assertCommandWorked@src/mongo/shell/assert.js:604:17
assert.commandWorked@src/mongo/shell/assert.js:694:16
DB.prototype._runAggregate@src/mongo/shell/db.js:266:5
DBCollection.prototype.aggregate@src/mongo/shell/collection.js:1024:12
@(shell):1:1
>
>
>
>
> db.categories.aggregate([{$unwind:"$products"},{},$$project:{"_id":0,"products.product_id":1,"products.name":1,"products.price":1}},{$sort:{"product
```

```
    }  
  }  
}  
}  
> db.categories.find({}, {"_id":0, "products.product_id":1, "products.name":1, "products.price":1}, {$sort: {"products.name":1}}).pretty();  
{ }  
{  
  "products" : [  
    {  
      "product_id" : 2,  
      "name" : "MacBook Pro",  
      "price" : 1999.99  
    },  
  ]  
},  
{  
  "products" : [  
    {  
      "product_id" : 4,  
      "name" : "Sony Playstation 5",  
      "price" : 499.99  
    },  
    {  
      "product_id" : 5,  
      "name" : "Nintendo",  
      "price" : 149.99  
    },  
    {  
      "product_id" : 7,  
      "name" : "IBM",  
      "price" : 599.99  
    },  
    {  
      "product_id" : 7,  
      "name" : "IBM",  
      "price" : 599.99  
    }  
  ]  
}
```

```
    },  
    {  
      "product_id" : 7,  
      "name" : "IBM",  
      "price" : 599.99  
    },  
    {  
      "product_id" : 7,  
      "name" : "IBM",  
      "price" : 599.99  
    }  
  ]  
}  
{  
  "_id" : ObjectId("6667ef4788a67067af60c589"),  
  "products" : [  
    {  
      "product_id" : 1,  
      "name" : "iphone 12",  
      "price" : 999.99  
    }  
  ]  
}  
{  
  "_id" : ObjectId("6667efc188a67067af60c58a"),  
  "products" : [  
    {  
      "product_id" : 3,  
      "name" : "Dell XPS",  
      "price" : 1599.99  
    }  
  ]  
}  
{  
  "_id" : ObjectId("6667f0c188a67067af60c58b"),  
  "products" : [  
    {  
      "product_id" : 6
```

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```
{ "products" : { "product_id" : 1, "name" : "iphone 12", "quantity" : 10 } }
{ "products" : { "product_id" : 3, "name" : "Dell XPS", "quantity" : 8 } }
> db.categories.aggregate([{$unwind:"$products"},{$match:{"products.quantity":{$lt:15}}},{$project:{"_id":0,"products.product_id":1,"products.name":1,"products.quantity":1}},{$sort:{"products.quantity":1}}]);
{ "products" : { "product_id" : 2, "name" : "MacBook Pro", "quantity" : 5 } }
{ "products" : { "product_id" : 3, "name" : "Dell XPS", "quantity" : 8 } }
{ "products" : { "product_id" : 1, "name" : "iphone 12", "quantity" : 10 } }
{ "products" : { "product_id" : 5, "name" : "Nintendo", "quantity" : 12 } }
> db.categories.find({},{"products.product_id":1,"products.name":1,"products.price":1},{ $sort:{"products.name":1}}).pretty();
{ "_id" : ObjectId("6667e85e88a67067af60c586") }
{
  "_id" : ObjectId("6667e9a388a67067af60c587"),
  "products" : [
    {
      "product_id" : 2,
      "name" : "MacBook Pro",
      "price" : 1999.99
    }
  ]
}
{
  "_id" : ObjectId("6667ed2d88a67067af60c588"),
  "products" : [
    {
      "product_id" : 4,
      "name" : "Sony Playstation 5",
      "price" : 499.99
    },
    {
      "product_id" : 5,
      "name" : "Nintendo",
      "price" : 149.99
    },
    {
      "product_id" : 7,
      "name" : "IBM",
      "price" : 599.99
    }
  ]
}
```

```
> db.categories.aggregate([{$unwind:"$products"},{$match:{"products.quantity":{$lt:15}},{$project:{"_id":0,"products.product_id":1,"products.name":1,"products.quantity":1}}]);
2024-06-12T12:08:47.598+0530 E QUERY [js] uncaught exception: TypeError: db.categories.aggregate is not a function :
@ (shell):1:1
```

```
> db.categories.aggregate([{$unwind:"$products"},{$match:{"products.quantity":{$lt:15}},{$project:{"_id":0,"products.product_id":1,"products.name":1,"products.quantity":1}}]);
{ "products" : { "product_id" : 2, "name" : "MacBook Pro", "quantity" : 5 } }
{ "products" : { "product_id" : 5, "name" : "Nintendo", "quantity" : 12 } }
{ "products" : { "product_id" : 1, "name" : "iphone 12", "quantity" : 10 } }
{ "products" : { "product_id" : 3, "name" : "Dell XPS", "quantity" : 8 } }
```

```
> db.categories.aggregate([{$unwind:"$products"},{$match:{"products.quantity":{$lt:15}},{$project:{"_id":0,"products.product_id":1,"products.name":1,"products.quantity":1}},{$sort:{"products.quantity":1}}]);
{ "products" : { "product_id" : 2, "name" : "MacBook Pro", "quantity" : 5 } }
{ "products" : { "product_id" : 3, "name" : "Dell XPS", "quantity" : 8 } }
{ "products" : { "product_id" : 1, "name" : "iphone 12", "quantity" : 10 } }
{ "products" : { "product_id" : 5, "name" : "Nintendo", "quantity" : 12 } }
> db.categories.find({},{"products.product_id":1,"products.name":1,"products.price":1},{sort:{"products.name":1}}).pretty();
{ "_id" : ObjectId("6667e85e88a67067af60c586") }
```

```
{
  "_id" : ObjectId("6667e9a388a67067af60c587"),
  "products" : [
    {
      "product_id" : 2,
      "name" : "MacBook Pro",
      "price" : 1999.99
    }
  ]
}
```

```
{
  "_id" : ObjectId("6667ed2d88a67067af60c588"),
  "products" : [
    {
      "product_id" : 4,
      "name" : "Sony Playstation 5",
      "price" : 499.99
    },
    {
      "product_id" : 5
    }
  ]
}
```



```
]
}
> db.categories.find({"products.quantity":{"$lt:15}},{"_id":0,"products.product_id":1,"products.name":1,"products.quantity":1});
{ "products" : [ { "product_id" : 2, "name" : "MacBook Pro", "quantity" : 5 } ] }
{ "products" : [ { "product_id" : 4, "name" : "Sony Playstation 5", "quantity" : 15 }, { "product_id" : 5, "name" : "Nintendo", "quantity" : 12 }, { "product_id" : 7, "name" : "IBM", "quantity" : 20 }, { "product_id" : 7, "name" : "IBM", "quantity" : 20 } ] }
{ "products" : [ { "product_id" : 1, "name" : "iphone 12", "quantity" : 10 } ] }
{ "products" : [ { "product_id" : 3, "name" : "Dell XPS", "quantity" : 8 } ] }
> db.categories.find({"products.quantity":{"$lt:15}},{"_id":0,"products.product_id":1,"products.name":1,"products.quantity":1}).pretty();
{
  "products" : [
    {
      "product_id" : 2,
      "name" : "MacBook Pro",
      "quantity" : 5
    }
  ]
}
{
  "products" : [
    {
      "product_id" : 4,
      "name" : "Sony Playstation 5",
      "quantity" : 15
    },
    {
      "product_id" : 5,
      "name" : "Nintendo",
      "quantity" : 12
    },
    {
      "product_id" : 7,
      "name" : "IBM",
      "quantity" : 20
    },
    {
      "product_id" : 7,
      "name" : "IBM"
```

```

    "products" : [
      {
        "product_id" : 1,
        "name" : "iphone 12",
        "price" : 999.99
      }
    ]
  }
}

{
  "products" : [
    {
      "product_id" : 6,
      "name" : "Xbox Series X",
      "price" : 499.99
    }
  ]
}

> db.categories.find({"products.quantity":{"$lt:15"},"_id":0,"products.product_id":1,"products.name":1,"products.quantity":1});
{ "products" : [ { "product_id" : 2, "name" : "MacBook Pro", "quantity" : 5 } ] }
{ "products" : [ { "product_id" : 4, "name" : "Sony Playstation 5", "quantity" : 15 }, { "product_id" : 5, "name" : "Nintendo", "quantity" : 12 }, { "product_id" : 7, "name" : "IBM", "quantity" : 20 }, { "product_id" : 7, "name" : "IBM", "quantity" : 20 } ] }
{ "products" : [ { "product_id" : 1, "name" : "iphone 12", "quantity" : 10 } ] }
{ "products" : [ { "product_id" : 3, "name" : "Dell XPS", "quantity" : 8 } ] }
> db.categories.find({"products.quantity":{"$lt:15"},"_id":0,"products.product_id":1,"products.name":1,"products.quantity":1}).pretty();
{
  "products" : [
    {
      "product_id" : 2,
      "name" : "MacBook Pro",
      "quantity" : 5
    }
  ]
}
{
  "products" : [
    {
      "product_id" : 4,
      "name" : "Sony Playstation 5",
      "quantity" : 15
    }
  ]
}

```


$$\left\{ \begin{array}{l} \text{ } \\ \text{ } \\ \text{ } \end{array} \right\}$$

switched to db layadb

```
> db.categories.find({"category_id":{"$ne:3},"price":{"$lt:1500}},{"_id":0,"products.name":1,"product_id":1});
> db.categories.find({"category_id":{"$ne:3},"products.price":{"$lt:1500}},{"_id":0,"products.name":1,"product_id":1});
{ "products" : [ { "name" : "iphone 12" } ] }
{ "products" : [ { "name" : "Xbox Series X" } ] }
> db.categories.find({"category_id":{"$ne:3},"products.price":{"$lt:1500}},{"_id":0,"products.name":1,"product_id":1,"products.price":1});
{ "products" : [ { "name" : "iphone 12", "price" : 999.99 } ] }
{ "products" : [ { "name" : "Xbox Series X", "price" : 499.99 } ] }
>
>
> db.categories.find({$and:[{"category_id":{"$ne:3}},{"products.price":{"$lt:1500}}]},{"_id":0,"products.name":1,"product_id":1,"products.price":1});
{ "products" : [ { "name" : "iphone 12", "price" : 999.99 } ] }
{ "products" : [ { "name" : "Xbox Series X", "price" : 499.99 } ] }
> db.categories.find({$or:[{"category_id":{"$ne:3}},{"products.price":{"$lt:1500}}]},{"_id":0,"products.name":1,"product_id":1,"products.price":1});
{ }
{ "products" : [ { "name" : "MacBook Pro", "price" : 1999.99 } ] }
{ "products" : [ { "name" : "Sony Playstation 5", "price" : 499.99 }, { "name" : "Nintendo", "price" : 149.99 } ] }
{ "products" : [ { "name" : "iphone 12", "price" : 999.99 } ] }
{ "products" : [ { "name" : "Dell XPS", "price" : 1599.99 } ] }
{ "products" : [ { "name" : "Xbox Series X", "price" : 499.99 } ] }
> db.categories.find({$nor:[{"category_id":{"$ne:3}},{"products.price":{"$lt:1500}}]},{"_id":0,"products.name":1,"product_id":1,"products.price":1});
> db.categories.find({$and:[{"category_id":{"$ne:3}},{"products.price":{"$lt:1500}}]},{"_id":0,"products.name":1,"products.product_id":1,"products.price":1});
{ "products" : [ { "product_id" : 1, "name" : "iphone 12", "price" : 999.99 } ] }
{ "products" : [ { "product_id" : 6, "name" : "Xbox Series X", "price" : 499.99 } ] }
> db.categories.find({$or:[{"category_id":{"$ne:3}},{"products.price":{"$lt:1500}}]},{"_id":0,"products.name":1,"products.product_id":1,"products.price":1});
{ }
{ "products" : [ { "product_id" : 2, "name" : "MacBook Pro", "price" : 1999.99 } ] }
{ "products" : [ { "product_id" : 4, "name" : "Sony Playstation 5", "price" : 499.99 }, { "product_id" : 5, "name" : "Nintendo", "price" : 149.99 } ] }
{ "products" : [ { "product_id" : 1, "name" : "iphone 12", "price" : 999.99 } ] }
{ "products" : [ { "product_id" : 3, "name" : "Dell XPS", "price" : 1599.99 } ] }
{ "products" : [ { "product_id" : 6, "name" : "Xbox Series X", "price" : 499.99 } ] }
>
> db.categories.updateOne({"category_id":3},{ $push:{"products":{"product_id":7,"name":"IBM","price":599.99,"quantity":20}}});
```

```

getErrorWithCode@src/mongo/shell/utils.js:25:13
doassert@src/mongo/shell/assert.js:18:14
_assertCommandWorked@src/mongo/shell/assert.js:604:17
assert.commandWorked@src/mongo/shell/assert.js:694:16
DB.prototype._runAggregate@src/mongo/shell/db.js:266:5
DBCollection.prototype.aggregate@src/mongo/shell/collection.js:1024:12
@(shell):1:1
>
>
>
>
> db.categories.aggregate([{$unwind:"$products"},{ },{$project:{"_id":0,"products.product_id":1,"products.name":1,"products.price":1}},{$sort:{"products.name":1}}]);
2024-06-12T12:32:24.166+0530 E QUERY [js] uncaught exception: Error: command failed: {
  "ok" : 0,
  "errmsg" : "A pipeline stage specification object must contain exactly one field.",
  "code" : 40323,
  "codeName" : "Location40323"
} : aggregate failed :
getErrorWithCode@src/mongo/shell/utils.js:25:13
doassert@src/mongo/shell/assert.js:18:14
_assertCommandWorked@src/mongo/shell/assert.js:604:17
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DB.prototype._runAggregate@src/mongo/shell/db.js:266:5
DBCollection.prototype.aggregate@src/mongo/shell/collection.js:1024:12
@(shell):1:1
>
> db.categories.aggregate([{$unwind:"$products"},{$project:{"_id":0,"products.product_id":1,"products.name":1,"products.price":1}},{$sort:{"products.name":1}}]);
{ "products" : { "product_id" : 3, "name" : "Dell XPS", "price" : 1599.99 } }
{ "products" : { "product_id" : 7, "name" : "IBM", "price" : 599.99 } }
{ "products" : { "product_id" : 7, "name" : "IBM", "price" : 599.99 } }
{ "products" : { "product_id" : 2, "name" : "MacBook Pro", "price" : 1999.99 } }
{ "products" : { "product_id" : 5, "name" : "Nintendo", "price" : 149.99 } }
{ "products" : { "product_id" : 4, "name" : "Sony Playstation 5", "price" : 499.99 } }
{ "products" : { "product_id" : 6, "name" : "Xbox Series X", "price" : 499.99 } }
{ "products" : { "product_id" : 1, "name" : "iphone 12", "price" : 999.99 } }
>

```