

**db.collection.find()**

above method gets all documents from collection

to get condition based output

**db.collection.find({ condition })**

to get particular fields of document

**db.collection.find({ condition }, { fields list })**

**db.newbooks.find({}, {"\_id":0,"bkName":1,"bkSubject":1,"bkPrice":1});**

```
> db.newbooks.find({}, {"_id":0,"bkName":1,"bkSubject":1,"bkPrice":1});
{ "bkName" : "OSI Rules", "bkSubject" : "N+", "bkPrice" : 345 }
{ "bkName" : "OOps with C++", "bkSubject" : "C++", "bkPrice" : 120 }
{ "bkName" : "Data structures", "bkSubject" : "C", "bkPrice" : 450 }
{ "bkName" : "Web App In C#", "bkSubject" : "C#", "bkPrice" : 275 }
{ "bkName" : "SQL Qrs", "bkSubject" : "SQL", "bkPrice" : 547 }
{ "bkName" : "Java for beginners", "bkSubject" : "Java", "bkPrice" : 800 }
{ "bkName" : "ummys for HTML", "bkSubject" : "HTML", "bkPrice" : 538 }
{ "bkName" : "Clear CCNA", "bkSubject" : "CCNA", "bkPrice" : 725 }
{ "bkName" : "Spirit of C", "bkSubject" : "C", "bkPrice" : 350 }
{ "bkName" : "Web App in Java", "bkSubject" : "Java", "bkPrice" : 485 }
{ "bkName" : "Libraries in C", "bkSubject" : "C", "bkPrice" : 574 }
{ "bkName" : "Sockets is C#", "bkSubject" : ".Net", "bkPrice" : 741 }
{ "bkName" : "Services in ASP", "bkSubject" : ".Net", "bkPrice" : 654 }
{ "bkName" : "FWAD", "bkSubject" : "Server 2008", "bkPrice" : 1587 }
{ "bkName" : "WAN @ access", "bkSubject" : "CCNA", "bkPrice" : 2511 }
{ "bkName" : "Routing Techniques", "bkSubject" : "CCNA", "bkPrice" : 745 }
{ "bkName" : "Scripting in html", "bkSubject" : "Java Script", "bkPrice" : 354 }
{ "bkName" : "Graphics in C", "bkSubject" : "C", "bkPrice" : 650 }
{ "bkName" : "COM+", "bkSubject" : ".Net", "bkPrice" : 545 }
{ "bkName" : "Mobile app in Java", "bkSubject" : "Java", "bkPrice" : 1154 }
```

Grouping records by subject (MySQL)

```
64 • select
65   bk_subject, count(*), sum(bk_stock), avg(bk_price), min(bk_price), max(bk_price)
66   from book
67   where bk_subject in('C','CCNA','HTML','Java','Net') -- condition on table column
68   group by bk_subject
69   having count(*)>=4 -- condition on calculated value column
70   order by sum(bk_stock) desc;
```

	bk_subject	count(*)	sum(bk_stock)	avg(bk_price)	min(bk_price)	max(bk_price)
▶	C	4	820	475.0000	350	650
	CCNA	4	585	790.0000	350	1450
	.Net	4	307	618.7500	400	780

Grouping documents by subject (Mongo)

```
db.newbooks.aggregate( [ {$group : { _id:"$bkSubject", "total titles":{$sum:1}, "total stock" : {$sum:"$bkStock"}, "least price" : {$min:"$bkPrice"} }} ] );
```

```
> db.newbooks.aggregate( [ {$group : { _id:"$bkSubject", "total titles":{$sum:1}, "total stock" : {$sum:"$bkStock"}, "least price" : {$min:"$bkPrice"} }} ] );
{ "_id" : "C", "total titles" : 4, "total stock" : 109, "least price" : 350 }
{ "_id" : "CCNP", "total titles" : 2, "total stock" : 116, "least price" : 486 }
{ "_id" : "Java", "total titles" : 3, "total stock" : 120, "least price" : 485 }
{ "_id" : "Server 2008", "total titles" : 1, "total stock" : 21, "least price" : 1587 }
{ "_id" : "Java Script", "total titles" : 1, "total stock" : 23, "least price" : 354 }
{ "_id" : "C#", "total titles" : 1, "total stock" : 10, "least price" : 275 }
{ "_id" : "HTML", "total titles" : 2, "total stock" : 64, "least price" : 538 }
{ "_id" : "N+", "total titles" : 1, "total stock" : 20, "least price" : 345 }
{ "_id" : "SQL", "total titles" : 1, "total stock" : 41, "least price" : 547 }
{ "_id" : "C++", "total titles" : 1, "total stock" : 60, "least price" : 120 }
{ "_id" : "CCNA", "total titles" : 4, "total stock" : 194, "least price" : 635 }
{ "_id" : ".Net", "total titles" : 4, "total stock" : 133, "least price" : 545 }
```

with having example

```
db.newbooks.aggregate( [ {$group : { _id:"$bkSubject", "total titles":{$sum:1}, "total stock" : {$sum:"$bkStock"}, "least price" : {$min:"$bkPrice"} }}, {$match:{"total stock":{$gt:50}}} ] );
```

```
> db.newbooks.aggregate( [ {$group : { _id:"$bkSubject", "total titles":{$sum:1}, "total stock" : {$sum:"$bkStock"}, "least price" : {$min:"$bkPrice"} }}, {$match:{"total stock":{$gt:50}}} ] );
{ "_id" : "HTML", "total titles" : 2, "total stock" : 64, "least price" : 538 }
{ "_id" : "C++", "total titles" : 1, "total stock" : 60, "least price" : 120 }
{ "_id" : "CCNA", "total titles" : 4, "total stock" : 194, "least price" : 635 }
{ "_id" : ".Net", "total titles" : 4, "total stock" : 133, "least price" : 545 }
{ "_id" : "C", "total titles" : 4, "total stock" : 109, "least price" : 350 }
{ "_id" : "Java", "total titles" : 3, "total stock" : 120, "least price" : 485 }
{ "_id" : "CCNP", "total titles" : 2, "total stock" : 116, "least price" : 486 }
```

using match to filter records

to get books which are having subject as 'C'

**db.newbooks.aggregate([ {"\$match" : {bkSubject:"C"} } ]]);**

```
> db.newbooks.aggregate([ {"$match" : {bkSubject:"C"} } ]]);
{ "_id" : ObjectId("634fad9db9d1349f1110e877"), "bkId" : "B0003", "bkName" : "Data structures", "bkSubject" : "C", "bkAuthor" : "Raghu", "bkPrice" : 450, "bkStock" : 10 }
{ "_id" : ObjectId("634fad9db9d1349f1110e87d"), "bkId" : "B0009", "bkName" : "Spirit of C", "bkSubject" : "C", "bkAuthor" : "Mulish", "bkPrice" : 350, "bkStock" : 21 }
{ "_id" : ObjectId("634fad9db9d1349f1110e87f"), "bkId" : "B0011", "bkName" : "Libraries in C", "bkSubject" : "C", "bkAuthor" : "Raju", "bkPrice" : 574, "bkStock" : 54 }
{ "_id" : ObjectId("634fad9db9d1349f1110e886"), "bkId" : "B0018", "bkName" : "Graphics in C", "bkSubject" : "C", "bkAuthor" : "XYZ", "bkPrice" : 650, "bkStock" : 24 }
```

to get list of books which having price as >1000

**db.newbooks.aggregate([ {"\$match" : {\$expr : {\$gt:["\$bkPrice",1000]} } } ]]);**

```
> db.newbooks.aggregate([ {"$match" : {$expr : {$gt:["$bkPrice",1000]} } } ]]);
{ "_id" : ObjectId("634fad9db9d1349f1110e882"), "bkId" : "B0014", "bkName" : "FWAD", "bkSubject" : "Server 2008", "bkAuthor" : "MOC", "bkPrice" : 1587, "bkStock" : 21 }
{ "_id" : ObjectId("634fad9db9d1349f1110e883"), "bkId" : "B0015", "bkName" : "WAN @ access", "bkSubject" : "CCNA", "bkAuthor" : "CISCO", "bkPrice" : 2511, "bkStock" : 64 }
{ "_id" : ObjectId("634fad9db9d1349f1110e888"), "bkId" : "B0020", "bkName" : "Mobile app in Java", "bkSubject" : "Java", "bkAuthor" : "M cooper", "bkPrice" : 1154, "bkStock" : 35 }
```

```
> db.student.find();
{ "_id" : ObjectId("634fafbe9d1349f1110e88e"), "studentName" : "Raju", "marks" : [ 32, 45, 64 ] }
{ "_id" : ObjectId("634fafbe9d1349f1110e88f"), "studentName" : "Krishna", "marks" : [ 52, 65, 44 ] }
{ "_id" : ObjectId("634fafbe9d1349f1110e890"), "studentName" : "Srinivas", "marks" : [ 61, 23, 70 ] }
{ "_id" : ObjectId("634fafbe9d1349f1110e891"), "studentName" : "Anand", "marks" : [ 50, 20, 45 ] }
{ "_id" : ObjectId("634fafbe9d1349f1110e892"), "studentName" : "Koti", "marks" : [ 40, 70, 35 ] }
> db.student.find({},{"_id":0, "studentName":1, "marks":1});
{ "studentName" : "Raju", "marks" : [ 32, 45, 64 ] }
{ "studentName" : "Krishna", "marks" : [ 52, 65, 44 ] }
{ "studentName" : "Srinivas", "marks" : [ 61, 23, 70 ] }
{ "studentName" : "Anand", "marks" : [ 50, 20, 45 ] }
{ "studentName" : "Koti", "marks" : [ 40, 70, 35 ] }
```

Here, each student has name and array of marks

**db.student.find({},{"\_id":0, "studentName":1, "marks":1, "total" : {\$sum:"\$marks"} }]);**

```
> db.student.find({},{"_id":0, "studentName":1, "marks":1, "total" : {$sum:"$marks"} }]);
{ "studentName" : "Raju", "marks" : [ 32, 45, 64 ], "total" : 141 }
{ "studentName" : "Krishna", "marks" : [ 52, 65, 44 ], "total" : 161 }
{ "studentName" : "Srinivas", "marks" : [ 61, 23, 70 ], "total" : 154 }
{ "studentName" : "Anand", "marks" : [ 50, 20, 45 ], "total" : 115 }
{ "studentName" : "Koti", "marks" : [ 40, 70, 35 ], "total" : 145 }
```

filter based on total calculated value

```
db.student.aggregate( [ {"$match" : {$expr : {$gte : [ {$sum : "$marks"},150] } } } ] );
```

```
> db.student.aggregate( [ {"$match" : {$expr : {$gte : [ {$sum : "$marks"},150] } } } ] );  
{ "_id" : ObjectId("634fafbeb9d1349f1110e88f"), "studentName" : "Krishna", "marks" : [ 52, 65, 44 ] }  
{ "_id" : ObjectId("634fafbeb9d1349f1110e890"), "studentName" : "Srinivas", "marks" : [ 61, 23, 70 ] }
```