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NoSQL

Assignment 4

9/21/24

Find all products where the price is greater than \$500:

The screenshot shows the MongoDB Compass interface. The left sidebar displays the database structure with 'NoSQL' selected. The main panel shows the 'Products' collection in the 'NoSQL\_DB1' database. A query is entered in the 'Documents' tab: `{ "price": { "$gt": 500 } }`. The results table shows 25 documents, with the first 23 visible. The table has columns: `_id` (ObjectId), `product_id` (Int32), `product_name` (String), `category` (String), `price` (Double), `in_stock` (Boolean), and `ratings` (Int32).

	_id ObjectId	product_id Int32	product_name String	category String	price Double	in_stock Boolean	ratings Int32
1	ObjectId('66ef43c99880b...')	101	"Sofa"	"Home Decor"	1282.36	true	3
2	ObjectId('66ef43c99880b...')	102	"Refrigerator"	"Furniture"	1776.68	false	1
3	ObjectId('66ef43c99880b...')	103	"Microwave"	"Furniture"	954.99	true	1
4	ObjectId('66ef43c99880b...')	105	"Watch"	"Computers"	1432.22	true	3
5	ObjectId('66ef43c99880b...')	106	"Sofa"	"Furniture"	1526.35	false	5
6	ObjectId('66ef43c99880b...')	107	"Stove"	"Furniture"	1131.33	false	3
7	ObjectId('66ef43c99880b...')	108	"Camera"	"Home Decor"	1546.52	false	4
8	ObjectId('66ef43c99880b...')	109	"Camera"	"Furniture"	997.72	false	4
9	ObjectId('66ef43c99880b...')	110	"Chair"	"Furniture"	1055.81	true	3
10	ObjectId('66ef43c99880b...')	111	"Watch"	"Home Decor"	866.53	false	4
11	ObjectId('66ef43c99880b...')	115	"Tablet"	"Computers"	1280.89	true	3
12	ObjectId('66ef43c99880b...')	116	"Laptop"	"Furniture"	642.42	false	4
13	ObjectId('66ef43c99880b...')	117	"Smartphone"	"Computers"	1026.97	true	4
14	ObjectId('66ef43c99880b...')	118	"Printer"	"Furniture"	1816.98	true	1
15	ObjectId('66ef43c99880b...')	119	"Printer"	"Electronics"	513.6	true	1
16	ObjectId('66ef43c99880b...')	120	"Lamp"	"Home Decor"	832.56	false	2
17	ObjectId('66ef43c99880b...')	121	"Monitor"	"Home Decor"	1515.99	false	1
18	ObjectId('66ef43c99880b...')	124	"Microwave"	"Electronics"	593.71	true	1
19	ObjectId('66ef43c99880b...')	126	"Printer"	"Computers"	1860.8	false	2
20	ObjectId('66ef43c99880b...')	127	"Refrigerator"	"Electronics"	1620.88	true	2
21	ObjectId('66ef43c99880b...')	128	"Desk"	"Electronics"	1274.14	true	3
22	ObjectId('66ef43c99880b...')	129	"Headphones"	"Electronics"	1745.49	true	4
23	ObjectId('66ef43c99880b...')	130	"Stove"	"Electronics"	1611.27	false	2

Find all products where the price is less than \$200 and they are in stock:

The screenshot shows the MongoDB Compass interface. The left sidebar displays the database structure with 'NoSQL' selected. The main panel shows the 'Products' collection in the 'NoSQL\_DB1' database. A query is entered in the 'Documents' tab: `{ "price": { "$lt": 200 }, "in_stock": true }`. The results table shows 2 documents, with the first 2 visible. The table has columns: `_id` (ObjectId), `product_id` (Int32), `product_name` (String), `category` (String), `price` (Double), `in_stock` (Boolean), and `ratings` (Int32).

	_id ObjectId	product_id Int32	product_name String	category String	price Double	in_stock Boolean	ratings Int32
1	ObjectId('66ef43c99880b...')	112	"Desk"	"Home Decor"	70.33	true	3
2	ObjectId('66ef43c99880b...')	114	"Printer"	"Computers"	82.23	true	3

## Find products where the category is either 'Electronics' or 'Furniture':

MongoDB Compass - NoSQL/NoSQL\_DB1/Products

Connections Edit View Collection Help

Compass

My Queries

CONNECTIONS (1)

Search connections

NoSQL DB1 Products mongooh:NoSQL

NoSQL > NoSQL\_DB1 > Products

Documents 50 Aggregations Schema Indexes 1 Validation

{ "category": { "\$in": ["Electronics", "Furniture"] } }

Generate query \* Explain Reset Find Options

ADD DATA EXPORT DATA UPDATE DELETE

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	* Products	_id ObjectId	product_id Int32	product_name String	category String	price Double	in_stock Boolean	ratings Int32	
1		ObjectId('66ef43c99880b...')	102	"Refrigerator"	"Furniture"	1776.68	false	1	/
2		ObjectId('66ef43c99880b...')	103	"Microwave"	"Furniture"	954.99	true	1	/
3		ObjectId('66ef43c99880b...')	106	"Sofa"	"Furniture"	1526.35	false	5	/
4		ObjectId('66ef43c99880b...')	107	"Stove"	"Furniture"	1131.33	false	3	/
5		ObjectId('66ef43c99880b...')	109	"Camera"	"Furniture"	997.72	false	4	/
6		ObjectId('66ef43c99880b...')	110	"Chair"	"Furniture"	1855.01	true	3	/
7		ObjectId('66ef43c99880b...')	113	"Laptop"	"Electronics"	233.63	true	2	/
8		ObjectId('66ef43c99880b...')	116	"Laptop"	"Furniture"	642.42	false	4	/
9		ObjectId('66ef43c99880b...')	118	"Printer"	"Furniture"	1816.98	true	1	/
10		ObjectId('66ef43c99880b...')	119	"Printer"	"Electronics"	513.6	true	1	/
11		ObjectId('66ef43c99880b...')	124	"Microwave"	"Electronics"	593.71	true	1	/
12		ObjectId('66ef43c99880b...')	127	"Refrigerator"	"Electronics"	1628.68	true	2	/
13		ObjectId('66ef43c99880b...')	128	"Desk"	"Electronics"	1274.14	true	3	/
14		ObjectId('66ef43c99880b...')	129	"Headphones"	"Electronics"	1745.49	true	4	/
15		ObjectId('66ef43c99880b...')	130	"Stove"	"Electronics"	1611.27	false	2	/
16		ObjectId('66ef43c99880b...')	134	"Bookshelf"	"Electronics"	1618.73	false	1	/
17		ObjectId('66ef43c99880b...')	137	"Bookshelf"	"Electronics"	237.9	false	4	/
18		ObjectId('66ef43c99880b...')	140	"Refrigerator"	"Furniture"	1639.67	true	3	/
19		ObjectId('66ef43c99880b...')	141	"Microwave"	"Furniture"	1724.25	true	1	/
20		ObjectId('66ef43c99880b...')	142	"Sofa"	"Electronics"	33.77	false	1	/
21		ObjectId('66ef43c99880b...')	144	"Watch"	"Electronics"	846.47	true	3	/
22		ObjectId('66ef43c99880b...')	146	"Desk"	"Furniture"	257.33	false	4	/
23		ObjectId('66ef43c99880b...')	147	"Television"	"Electronics"	688.48	false	1	/

## Find products that have ratings not in the range of 1, 2, or 3:

MongoDB Compass - NoSQL/NoSQL\_DB1/Products

Connections Edit View Collection Help

Compass

My Queries

CONNECTIONS (1)

Search connections

NoSQL DB1 Products mongooh:NoSQL

NoSQL > NoSQL\_DB1 > Products

Documents 50 Aggregations Schema Indexes 1 Validation

{ "ratings": { "\$nin": [1, 2, 3] } }

Generate query \* Explain Reset Find Options

ADD DATA EXPORT DATA UPDATE DELETE

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	* Products	_id ObjectId	product_id Int32	product_name String	category String	price Double	in_stock Boolean	ratings Int32	
1		ObjectId('66ef43c99880b...')	104	"Camera"	"Home Decor"	256.8	false	4	/
2		ObjectId('66ef43c99880b...')	106	"Sofa"	"Furniture"	1526.35	false	5	/
3		ObjectId('66ef43c99880b...')	108	"Camera"	"Home Decor"	1546.52	false	4	/
4		ObjectId('66ef43c99880b...')	109	"Camera"	"Furniture"	997.72	false	4	/
5		ObjectId('66ef43c99880b...')	111	"Watch"	"Home Decor"	866.53	false	4	/
6		ObjectId('66ef43c99880b...')	116	"Laptop"	"Furniture"	642.42	false	4	/
7		ObjectId('66ef43c99880b...')	117	"Smartphone"	"Computers"	1026.97	true	4	/
8		ObjectId('66ef43c99880b...')	123	"Microwave"	"Computers"	172.42	false	4	/
9		ObjectId('66ef43c99880b...')	129	"Headphones"	"Electronics"	1745.49	true	4	/
10		ObjectId('66ef43c99880b...')	132	"Keyboard"	"Appliances"	1787.27	true	4	/
11		ObjectId('66ef43c99880b...')	133	"Sofa"	"Appliances"	1087.9	false	4	/
12		ObjectId('66ef43c99880b...')	137	"Bookshelf"	"Electronics"	237.9	false	4	/
13		ObjectId('66ef43c99880b...')	138	"Keyboard"	"Appliances"	471.31	true	5	/
14		ObjectId('66ef43c99880b...')	139	"Laptop"	"Computers"	865.67	false	5	/
15		ObjectId('66ef43c99880b...')	146	"Desk"	"Furniture"	257.33	false	4	/
16		ObjectId('66ef43c99880b...')	148	"Lamp"	"Computers"	1886.96	true	4	/

# Find all products where the price is between \$100 and \$300 (both inclusive).

MongoDB Compass - NoSQL/NoSQL\_DB1/Products

Connections Edit View Collection Help

Compass

(1) My Queries

CONNECTIONS (1)

Search connections

NoSQL

MyMongo

NoSQL\_DB1

Plant

Products

my\_Team

students

WebAppData

admin

config

local

NoSQL\_DB1

Products

mongodb:NoSQL

+

NoSQL > NoSQL\_DB1 > Products

> Open MongoDB shell

Documents 50

Aggregations

Schema

Indexes (1)

Validation

Generate query

Explain

Reset

Find

Options

{ "price": { "\$gte": 100, "\$lte": 300 } }

ADD DATA

EXPORT DATA

UPDATE

DELETE

25

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★ Products

_id	ObjectId	product_id	Int32	product_name	String	category	String	price	Double	in_stock	Boolean	ratings	Int32
1	ObjectId("66ef43c99988b...	104		"Camera"		"Home Decor"		256.8		false		4	
2	ObjectId("66ef43c99988b...	113		"Laptop"		"Electronics"		233.63		true		2	
3	ObjectId("66ef43c99988b...	123		"Microwave"		"Computers"		172.42		false		4	
4	ObjectId("66ef43c99988b...	137		"Bookshelf"		"Electronics"		237.9		false		4	
5	ObjectId("66ef43c99988b...	146		"Desk"		"Furniture"		257.33		false		4	

# Find all products where the rating is 5 or the product is out of stock.

MongoDB Compass - NoSQL/NoSQL\_DB1/Products

Connections Edit View Collection Help

Compass

(1) My Queries

CONNECTIONS (1)

Search connections

NoSQL

MyMongo

NoSQL\_DB1

Plant

Products

my\_Team

students

WebAppData

admin

config

local

NoSQL\_DB1

Products

mongodb:NoSQL

+

NoSQL > NoSQL\_DB1 > Products

> Open MongoDB shell

Documents 50

Aggregations

Schema

Indexes (1)

Validation

Generate query

Explain

Reset

Find

Options

{ "\$or": [ { "ratings": 5 }, { "in\_stock": false } ] }

ADD DATA

EXPORT DATA

UPDATE

DELETE

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★ Products

_id	ObjectId	product_id	Int32	product_name	String	category	String	price	Double	in_stock	Boolean	ratings	Int32
1	ObjectId("66ef43c99988b...	102		"Refrigerator"		"Furniture"		1776.66		false		1	
2	ObjectId("66ef43c99988b...	104		"Camera"		"Home Decor"		256.8		false		4	
3	ObjectId("66ef43c99988b...	106		"Sofa"		"Furniture"		1526.35		false		5	
4	ObjectId("66ef43c99988b...	107		"Stove"		"Furniture"		1131.33		false		3	
5	ObjectId("66ef43c99988b...	108		"Camera"		"Home Decor"		1546.52		false		4	
6	ObjectId("66ef43c99988b...	109		"Camera"		"Furniture"		997.72		false		4	
7	ObjectId("66ef43c99988b...	111		"Watch"		"Home Decor"		866.53		false		4	
8	ObjectId("66ef43c99988b...	116		"Laptop"		"Furniture"		642.42		false		4	
9	ObjectId("66ef43c99988b...	120		"Lamp"		"Home Decor"		832.56		false		2	
10	ObjectId("66ef43c99988b...	121		"Monitor"		"Home Decor"		1515.99		false		1	
11	ObjectId("66ef43c99988b...	122		"Blender"		"Home Decor"		473.02		false		3	
12	ObjectId("66ef43c99988b...	123		"Microwave"		"Computers"		172.42		false		4	
13	ObjectId("66ef43c99988b...	126		"Printer"		"Computers"		1860.8		false		2	
14	ObjectId("66ef43c99988b...	130		"Stove"		"Electronics"		1611.27		false		2	
15	ObjectId("66ef43c99988b...	131		"Sofa"		"Home Decor"		389.41		false		1	
16	ObjectId("66ef43c99988b...	133		"Sofa"		"Appliances"		1087.9		false		4	
17	ObjectId("66ef43c99988b...	134		"Bookshelf"		"Electronics"		1618.73		false		1	
18	ObjectId("66ef43c99988b...	135		"Chair"		"Appliances"		1794.26		false		2	
19	ObjectId("66ef43c99988b...	136		"Television"		"Appliances"		649.65		false		1	
20	ObjectId("66ef43c99988b...	137		"Bookshelf"		"Electronics"		237.9		false		4	
21	ObjectId("66ef43c99988b...	138		"Keyboard"		"Appliances"		471.31		true		5	
22	ObjectId("66ef43c99988b...	139		"Laptop"		"Computers"		865.67		false		5	

## Find products where the price is not in the range of \$1000 to \$1500.

MongoDB Compass - NoSQL/NoSQL\_DB1/Products

Connections Edit View Collection Help

Compass

My Queries

CONNECTIONS (1)

Search connections

NoSQL

- MyMongo
- NoSQL\_DB1
  - Plant
  - Products
  - my\_Team
  - students
  - WebAppData
  - admin
  - config
  - local

NoSQL > NoSQL\_DB1 > Products

Documents 50 Aggregations Schema Indexes 1 Validation

Generate query \* Explain Reset Find Options ▶

ADD DATA EXPORT DATA UPDATE DELETE

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* Products	_id ObjectId	product_id Int32	product_name String	category String	price Double	in_stock Boolean	ratings Int32	
1	ObjectId('66ef43c99988b...	101	"Sofa"	"Home Decor"	1202.36	true	3	
2	ObjectId('66ef43c99988b...	102	"Refrigerator"	"Furniture"	1776.68	false	1	
3	ObjectId('66ef43c99988b...	103	"Microwave"	"Furniture"	954.99	true	1	
4	ObjectId('66ef43c99988b...	104	"Camera"	"Home Decor"	256.8	false	4	
5	ObjectId('66ef43c99988b...	105	"Watch"	"Computers"	1432.22	true	3	
6	ObjectId('66ef43c99988b...	106	"Sofa"	"Furniture"	1526.35	false	5	
7	ObjectId('66ef43c99988b...	107	"Stove"	"Furniture"	1131.33	false	3	
8	ObjectId('66ef43c99988b...	108	"Camera"	"Home Decor"	1546.52	false	4	
9	ObjectId('66ef43c99988b...	109	"Camera"	"Furniture"	997.72	false	4	
10	ObjectId('66ef43c99988b...	110	"Chair"	"Furniture"	1855.01	true	3	
11	ObjectId('66ef43c99988b...	111	"Watch"	"Home Decor"	866.53	false	4	
12	ObjectId('66ef43c99988b...	112	"Desk"	"Home Decor"	70.33	true	3	
13	ObjectId('66ef43c99988b...	113	"Laptop"	"Electronics"	233.63	true	2	
14	ObjectId('66ef43c99988b...	114	"Printer"	"Computers"	82.23	true	3	
15	ObjectId('66ef43c99988b...	115	"Tablet"	"Computers"	1280.09	true	3	
16	ObjectId('66ef43c99988b...	116	"Laptop"	"Furniture"	642.42	false	4	
17	ObjectId('66ef43c99988b...	117	"Smartphone"	"Computers"	1026.97	true	4	
18	ObjectId('66ef43c99988b...	118	"Printer"	"Furniture"	1816.98	true	1	
19	ObjectId('66ef43c99988b...	119	"Printer"	"Electronics"	513.6	true	1	
20	ObjectId('66ef43c99988b...	120	"Lamp"	"Home Decor"	832.56	false	2	
21	ObjectId('66ef43c99988b...	121	"Monitor"	"Home Decor"	1515.99	false	1	
22	ObjectId('66ef43c99988b...	122	"Blender"	"Home Decor"	473.02	false	3	

## Find all products in the 'Electronics' or 'Computers' categories that are currently in stock.

MongoDB Compass - NoSQL/NoSQL\_DB1/Products

Connections Edit View Collection Help

Compass

My Queries

CONNECTIONS (1)

Search connections

NoSQL

- MyMongo
- NoSQL\_DB1
  - Plant
  - Products
  - my\_Team
  - students
  - WebAppData
  - admin
  - config
  - local

NoSQL > NoSQL\_DB1 > Products

Documents 50 Aggregations Schema Indexes 1 Validation

Generate query \* Explain Reset Find Options ▶

ADD DATA EXPORT DATA UPDATE DELETE

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* Products	_id ObjectId	product_id Int32	product_name String	category String	price Double	in_stock Boolean	ratings Int32	
1	ObjectId('66ef43c99988b...	105	"Watch"	"Computers"	1432.22	true	3	
2	ObjectId('66ef43c99988b...	113	"Laptop"	"Electronics"	233.63	true	2	
3	ObjectId('66ef43c99988b...	114	"Printer"	"Computers"	82.23	true	3	
4	ObjectId('66ef43c99988b...	115	"Tablet"	"Computers"	1280.09	true	3	
5	ObjectId('66ef43c99988b...	117	"Smartphone"	"Computers"	1026.97	true	4	
6	ObjectId('66ef43c99988b...	119	"Printer"	"Electronics"	513.6	true	1	
7	ObjectId('66ef43c99988b...	124	"Microwave"	"Electronics"	593.71	true	1	
8	ObjectId('66ef43c99988b...	125	"Stove"	"Computers"	339.22	true	1	
9	ObjectId('66ef43c99988b...	127	"Refrigerator"	"Electronics"	1620.88	true	2	
10	ObjectId('66ef43c99988b...	128	"Desk"	"Electronics"	1274.14	true	3	
11	ObjectId('66ef43c99988b...	129	"Headphones"	"Electronics"	1745.49	true	4	
12	ObjectId('66ef43c99988b...	144	"Watch"	"Electronics"	846.47	true	3	
13	ObjectId('66ef43c99988b...	148	"Lamp"	"Computers"	1806.96	true	4	

## Find products where the rating is greater than 2 and the price is less than \$500.

The screenshot shows the MongoDB Compass interface. The left sidebar displays the database structure with 'Products' selected. The main panel shows a query: `{ "ratings": { "$gt": 2 }, "price": { "$lt": 500 } }`. Below the query, a table of 9 products is displayed, all with ratings greater than 2 and prices less than 500.

	_id ObjectId	product_id Int32	product_name String	category String	price Double	in_stock Boolean	ratings Int32
1	ObjectId('66ef43c99880b...')	104	"Camera"	"Home Decor"	256.8	false	4
2	ObjectId('66ef43c99880b...')	112	"Desk"	"Home Decor"	70.33	true	3
3	ObjectId('66ef43c99880b...')	114	"Printer"	"Computers"	82.23	true	3
4	ObjectId('66ef43c99880b...')	122	"Blender"	"Home Decor"	473.02	false	3
5	ObjectId('66ef43c99880b...')	123	"Microwave"	"Computers"	172.42	false	4
6	ObjectId('66ef43c99880b...')	137	"Bookshelf"	"Electronics"	237.9	false	4
7	ObjectId('66ef43c99880b...')	138	"Keyboard"	"Appliances"	471.31	true	5
8	ObjectId('66ef43c99880b...')	145	"Microwave"	"Home Decor"	459.77	true	3
9	ObjectId('66ef43c99880b...')	146	"Desk"	"Furniture"	257.33	false	4

## Write a query of your choice that you would like to show adds value that wasn't included above.

The screenshot shows the MongoDB Compass interface with a new query: `{ "$or": { { "ratings": { "$gte": 4 } }, { "price": { "$lt": 300 } } }`. The results table shows 19 products that match this criteria, including items like 'Sofa', 'Camera', 'Watch', 'Desk', 'Laptop', 'Printer', 'Laptop', 'Smartphone', 'Microwave', 'Headphones', 'Keyboard', 'Sofa', 'Bookshelf', 'Keyboard', 'Laptop', 'Sofa', 'Desk', and 'Furniture'.

	_id ObjectId	product_id Int32	product_name String	category String	price Double	in_stock Boolean	ratings Int32
1	ObjectId('66ef43c99880b...')	104	"Camera"	"Home Decor"	256.8	false	4
2	ObjectId('66ef43c99880b...')	106	"Sofa"	"Furniture"	1526.35	false	5
3	ObjectId('66ef43c99880b...')	108	"Camera"	"Home Decor"	1546.52	false	4
4	ObjectId('66ef43c99880b...')	109	"Camera"	"Furniture"	997.72	false	4
5	ObjectId('66ef43c99880b...')	111	"Watch"	"Home Decor"	866.53	false	4
6	ObjectId('66ef43c99880b...')	112	"Desk"	"Home Decor"	70.33	true	3
7	ObjectId('66ef43c99880b...')	113	"Laptop"	"Electronics"	233.63	true	2
8	ObjectId('66ef43c99880b...')	114	"Printer"	"Computers"	82.23	true	3
9	ObjectId('66ef43c99880b...')	116	"Laptop"	"Furniture"	642.42	false	4
10	ObjectId('66ef43c99880b...')	117	"Smartphone"	"Computers"	1826.97	true	4
11	ObjectId('66ef43c99880b...')	123	"Microwave"	"Computers"	172.42	false	4
12	ObjectId('66ef43c99880b...')	129	"Headphones"	"Electronics"	1745.49	true	4
13	ObjectId('66ef43c99880b...')	132	"Keyboard"	"Appliances"	1787.27	true	4
14	ObjectId('66ef43c99880b...')	133	"Sofa"	"Appliances"	1887.9	false	4
15	ObjectId('66ef43c99880b...')	137	"Bookshelf"	"Electronics"	237.9	false	4
16	ObjectId('66ef43c99880b...')	138	"Keyboard"	"Appliances"	471.31	true	5
17	ObjectId('66ef43c99880b...')	139	"Laptop"	"Computers"	865.67	false	5
18	ObjectId('66ef43c99880b...')	142	"Sofa"	"Electronics"	33.77	false	1
19	ObjectId('66ef43c99880b...')	146	"Desk"	"Furniture"	257.33	false	4