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MongoDB – CASE STUDY 1

DB Name : productdb

Collection Name : products

```
[
  {
    "id": "1",
    "product_name": "Intelligent Fresh Chips",
    "product_price": 655.00,
    "product_material": "Concrete",
    "product_color": "mint green"
  },
  {
    "id": "2",
    "product_name": "Practical Fresh Sausages",
    "product_price": 911.0,
    "product_material": "Cotton",
    "product_color": "indigo"
  },
  {
    "id": "3",
    "product_name": "Refined Steel Car",
    "product_price": 690.00,
    "product_material": "Rubber",
    "product_color": "gold"
  },
  {
    "id": "4",
    "product_name": "Gorgeous Plastic Pants",
    "product_price": 492.00,
    "product_material": "Soft",
    "product_color": "plum"
  },
  {
    "id": "5",
    "product_name": "Sleek Cotton Chair",
    "product_price": 33.00,
    "product_material": "Fresh",
    "product_color": "black"
  },
  {
    "id": "6",
    "product_name": "Awesome Wooden Towels",
    "product_price": 474.00,
    "product_material": "Plastic",
    "product_color": "orange"
  },
]
```

```
{
  "id": "7",
  "product_name": "Practical Soft Shoes",
  "product_price": 500.00,
  "product_material": "Rubber",
  "product_color": "pink"
},
{
  "id": "8",
  "product_name": "Incredible Steel Hat",
  "product_price": 78.00,
  "product_material": "Rubber",
  "product_color": "violet"
},
{
  "id": "9",
  "product_name": "Awesome Wooden Ball",
  "product_price": 28.00,
  "product_material": "Soft",
  "product_color": "azure"
},
{
  "id": "10",
  "product_name": "Generic Wooden Pizza",
  "product_price": 84.00,
  "product_material": "Frozen",
  "product_color": "indigo"
},
{
  "id": "11",
  "product_name": "Unbranded Wooden Cheese",
  "product_price": 26.00,
  "product_material": "Soft",
  "product_color": "black"
},
{
  "id": "12",
  "product_name": "Unbranded Plastic Salad",
  "product_price": 89.00,
  "product_material": "Wooden",
  "product_color": "pink"
},
{
  "id": "13",
  "product_name": "Gorgeous Cotton Keyboard",
  "product_price": 37.00,
  "product_material": "Concrete",
  "product_color": "sky blue"
},
{
  "id": "14",
  "product_name": "Incredible Steel Shirt",
  "product_price": 54.00,
  "product_material": "Metal",
  "product_color": "white"
},
{
  "id": "15",
```

```
    "product_name": "Ergonomic Cotton Hat",
    "product_price": 43.00,
    "product_material": "Rubber",
    "product_color": "mint green"
  },
  {
    "id": "16",
    "product_name": "Small Soft Chair",
    "product_price": 47.00,
    "product_material": "Cotton",
    "product_color": "teal"
  },
  {
    "id": "17",
    "product_name": "Incredible Metal Car",
    "product_price": 36.00,
    "product_material": "Fresh",
    "product_color": "indigo"
  },
  {
    "id": "18",
    "product_name": "Licensed Plastic Bacon",
    "product_price": 88.00,
    "product_material": "Steel",
    "product_color": "yellow"
  },
  {
    "id": "19",
    "product_name": "Intelligent Cotton Chips",
    "product_price": 46.00,
    "product_material": "Soft",
    "product_color": "azure"
  },
  {
    "id": "20",
    "product_name": "Handcrafted Wooden Bacon",
    "product_price": 36.00,
    "product_material": "Concrete",
    "product_color": "lime"
  },
  {
    "id": "21",
    "product_name": "Unbranded Granite Chicken",
    "product_price": 90.00,
    "product_material": "Metal",
    "product_color": "gold"
  },
  {
    "id": "22",
    "product_name": "Ergonomic Soft Hat",
    "product_price": 99.00,
    "product_material": "Rubber",
    "product_color": "black"
  },
  {
    "id": "23",
    "product_name": "Intelligent Steel Pizza",
    "product_price": 95.00,
```

```

    "product_material": "Cotton",
    "product_color": "azure"
  },
  {
    "id": "24",
    "product_name": "Tasty Rubber Cheese",
    "product_price": 47.00,
    "product_material": "Frozen",
    "product_color": "orchid"
  },
  {
    "id": "25",
    "product_name": "Licensed Steel Car",
    "product_price": 20.00,
    "product_material": "Cotton",
    "product_color": "indigo"
  }
]

```

QUERIES :

1. Find all the information about each product

localhost:27017 > productdb > products Open MongoDB shell

Documents 25 Aggregations Schema Indexes 1 Validation

🔍 {} Generate query Explain Reset Find Options

ADD DATA EXPORT DATA UPDATE DELETE 25 1 - 25 of 25 ↺ ↻ ⌵ ⌶ ⌵

★ products	_id ObjectId	id String	product_name String	product_price Int32	product_material String	product_color String	
1	ObjectId('68810110544070a...	"1"	"Intelligent Fresh Chips"	655	"Concrete"	"mint green"	✎ 🗑️ 🔍
2	ObjectId('68810110544070a...	"2"	"Practical Fresh Sausages"	911	"Cotton"	"indigo"	✎ 🗑️ 🔍
3	ObjectId('68810110544070a...	"3"	"Refined Steel Car"	690	"Rubber"	"gold"	✎ 🗑️ 🔍
4	ObjectId('68810110544070a...	"4"	"Gorgeous Plastic Pants"	492	"Soft"	"plum"	✎ 🗑️ 🔍
5	ObjectId('68810110544070a...	"5"	"Sleek Cotton Chair"	33	"Fresh"	"black"	✎ 🗑️ 🔍
6	ObjectId('68810110544070a...	"6"	"Awesome Wooden Towels"	474	"Plastic"	"orange"	✎ 🗑️ 🔍
7	ObjectId('68810110544070a...	"7"	"Practical Soft Shoes"	500	"Rubber"	"pink"	✎ 🗑️ 🔍
8	ObjectId('68810110544070a...	"8"	"Incredible Steel Hat"	78	"Rubber"	"violet"	✎ 🗑️ 🔍
9	ObjectId('68810110544070a...	"9"	"Awesome Wooden Ball"	28	"Soft"	"azure"	✎ 🗑️ 🔍
10	ObjectId('68810110544070a...	"10"	"Generic Wooden Pizza"	84	"Frozen"	"indigo"	✎ 🗑️ 🔍
11	ObjectId('68810110544070a...	"11"	"Unbranded Wooden Cheese"	26	"Soft"	"black"	✎ 🗑️ 🔍
12	ObjectId('68810110544070a...	"12"	"Unbranded Plastic Salad"	89	"Wooden"	"pink"	✎ 🗑️ 🔍
13	ObjectId('68810110544070a...	"13"	"Gorgeous Cotton Keyboard"	37	"Concrete"	"sky blue"	✎ 🗑️ 🔍
14	ObjectId('68810110544070a...	"14"	"Incredible Steel Shirt"	54	"Metal"	"white"	✎ 🗑️ 🔍
15	ObjectId('68810110544070a...	"15"	"Ergonomic Cotton Hat"	43	"Rubber"	"mint green"	✎ 🗑️ 🔍
16	ObjectId('68810110544070a...	"16"	"Small Soft Chair"	47	"Cotton"	"teal"	✎ 🗑️ 🔍
17	ObjectId('68810110544070a...	"17"	"Incredible Metal Car"	36	"Fresh"	"indigo"	✎ 🗑️ 🔍
18	ObjectId('68810110544070a...	"18"	"Licensed Plastic Bacon"	88	"Steel"	"yellow"	✎ 🗑️ 🔍
19	ObjectId('68810110544070a...	"19"	"Intelligent Cotton Chips"	46	"Soft"	"azure"	✎ 🗑️ 🔍
20	ObjectId('68810110544070a...	"20"	"Handcrafted Wooden Bacon"	36	"Concrete"	"lime"	✎ 🗑️ 🔍
21	ObjectId('68810110544070a...	"21"	"Unbranded Granite Chicke...	90	"Metal"	"gold"	✎ 🗑️ 🔍
22	ObjectId('68810110544070a...	"22"	"Ergonomic Soft Hat"	99	"Rubber"	"black"	✎ 🗑️ 🔍
23	ObjectId('68810110544070a...	"23"	"Intelligent Steel Pizza"	95	"Cotton"	"azure"	✎ 🗑️ 🔍
24	ObjectId('68810110544070a...	"24"	"Tasty Rubber Cheese"	47	"Frozen"	"orchid"	✎ 🗑️ 🔍
25	ObjectId('68810110544070a...	"25"	"Licensed Steel Car"	20	"Cotton"	"indigo"	✎ 🗑️ 🔍

2. Find the product price which is between 400 to 800

localhost:27017 > productdb > products Open MongoDB shell

Documents 25 Aggregations Schema Indexes 1 Validation

🔍 {product_price: { \$gte: 400, \$lte: 800 }} Generate query ↗ Explain Reset Find ↩ Options ▶

➕ ADD DATA 📄 EXPORT DATA ✎ UPDATE 🗑 DELETE ? 25 1 - 5 of 5 ↺ ↻ ⌵ ☰ {} 🗃

	_id ObjectId	id String	product_name String	product_price Int32	product_material String	product_color String	
1	ObjectId('68810110544070a...	"1"	"Intelligent Fresh Chips"	655	"Concrete"	"mint green"	✎ 🗃 🗑
2	ObjectId('68810110544070a...	"3"	"Refined Steel Car"	690	"Rubber"	"gold"	✎ 🗃 🗑
3	ObjectId('68810110544070a...	"4"	"Gorgeous Plastic Pants"	492	"Soft"	"plum"	✎ 🗃 🗑
4	ObjectId('68810110544070a...	"6"	"Awesome Wooden Towels"	474	"Plastic"	"orange"	✎ 🗃 🗑
5	ObjectId('68810110544070a...	"7"	"Practical Soft Shoes"	500	"Rubber"	"pink"	✎ 🗃 🗑

3. Find the product price which is not between 400 to 600

localhost:27017 > productdb > products Open MongoDB shell

Documents 25 Aggregations Schema Indexes 1 Validation

🔍 { \$or: [{ product_price: { \$lt: 400 } }, { product_price: { \$gt: 600 } }] } Generate query ↗ Explain Reset Find ↩ Options ▶

➕ ADD DATA 📄 EXPORT DATA ✎ UPDATE 🗑 DELETE ? 25 1 - 22 of 22 ↺ ↻ ⌵ ☰ {} 🗃

	_id ObjectId	id String	product_name String	product_price Int32	product_material String	product_color Strin	
1	ObjectId('68810110544070a...	"1"	"Intelligent Fresh Chips"	655	"Concrete"	"mint green"	✎ 🗃 🗑
2	ObjectId('68810110544070a...	"2"	"Practical Fresh Sausages"	911	"Cotton"	"indigo"	✎ 🗃 🗑
3	ObjectId('68810110544070a...	"3"	"Refined Steel Car"	690	"Rubber"	"gold"	✎ 🗃 🗑
4	ObjectId('68810110544070a...	"5"	"Sleek Cotton Chair"	33	"Fresh"	"black"	✎ 🗃 🗑
5	ObjectId('68810110544070a...	"8"	"Incredible Steel Hat"	78	"Rubber"	"violet"	✎ 🗃 🗑
6	ObjectId('68810110544070a...	"9"	"Awesome Wooden Ball"	28	"Soft"	"azure"	✎ 🗃 🗑
7	ObjectId('68810110544070a...	"10"	"Generic Wooden Pizza"	84	"Frozen"	"indigo"	✎ 🗃 🗑
8	ObjectId('68810110544070a...	"11"	"Unbranded Wooden Cheese"	26	"Soft"	"black"	✎ 🗃 🗑
9	ObjectId('68810110544070a...	"12"	"Unbranded Plastic Salad"	89	"Wooden"	"pink"	✎ 🗃 🗑
10	ObjectId('68810110544070a...	"13"	"Gorgeous Cotton Keyboard"	37	"Concrete"	"sky blue"	✎ 🗃 🗑
11	ObjectId('68810110544070a...	"14"	"Incredible Steel Shirt"	54	"Metal"	"white"	✎ 🗃 🗑
12	ObjectId('68810110544070a...	"15"	"Ergonomic Cotton Hat"	43	"Rubber"	"mint green"	✎ 🗃 🗑
13	ObjectId('68810110544070a...	"16"	"Small Soft Chair"	47	"Cotton"	"teal"	✎ 🗃 🗑
14	ObjectId('68810110544070a...	"17"	"Incredible Metal Car"	36	"Fresh"	"indigo"	✎ 🗃 🗑
15	ObjectId('68810110544070a...	"18"	"Licensed Plastic Bacon"	88	"Steel"	"yellow"	✎ 🗃 🗑
16	ObjectId('68810110544070a...	"19"	"Intelligent Cotton Chips"	46	"Soft"	"azure"	✎ 🗃 🗑
17	ObjectId('68810110544070a...	"20"	"Handcrafted Wooden Bacon"	36	"Concrete"	"lime"	✎ 🗃 🗑
18	ObjectId('68810110544070a...	"21"	"Unbranded Granite Chicke...	90	"Metal"	"gold"	✎ 🗃 🗑
19	ObjectId('68810110544070a...	"22"	"Ergonomic Soft Hat"	99	"Rubber"	"black"	✎ 🗃 🗑
20	ObjectId('68810110544070a...	"23"	"Intelligent Steel Pizza"	95	"Cotton"	"azure"	✎ 🗃 🗑
21	ObjectId('68810110544070a...	"24"	"Tasty Rubber Cheese"	47	"Frozen"	"orchid"	✎ 🗃 🗑
22	ObjectId('68810110544070a...	"25"	"Licensed Steel Car"	20	"Cotton"	"indigo"	✎ 🗃 🗑

4. List the four products which are greater than 500 in price

\$match

Open docs

1 {

2 "product_price": { "\$gt": 500 }

3 }

4 }

STAGE OUTPUT

Options

Sample of 3 documents

_id: ObjectId('68810110544070a4e1a40cc...')

id: "1"

product_name: "Intelligent Fresh Chips"

product_price: 655

product_material: "Concrete"

product_color: "mint green"

_id: ObjectId('68810110544070a4e1a40cc...')

id: "2"

product_name: "Practical Fresh Sausages"

product_price: 911

product_material: "Cotton"

product_color: "indigo"

_id: ObjectId('68810110544070a4e1a40cc...')

id: "3"

product_name: "Refined Steel Car"

product_price: 690

product_material: "Rubber"

product_color: "gold"

\$limit

Open docs

1 2

STAGE OUTPUT

Options

Sample of 2 documents

_id: ObjectId('68810110544070a4e1a40cc...')

id: "1"

product_name: "Intelligent Fresh Chips"

product_price: 655

product_material: "Concrete"

product_color: "mint green"

_id: ObjectId('68810110544070a4e1a40cc...')

id: "2"

product_name: "Practical Fresh Sausages"

product_price: 911

product_material: "Cotton"

product_color: "indigo"

5. Find the product name and product material of each product

localhost:27017 > productdb > products Open MongoDB shell

Documents 25 Aggregations Schema Indexes 1 Validation

Query: `{}` Generate query Explain Reset Find Options

Project: `{ product_name: 1, product_material: 1, _id: 0 }`

Sort: `{ field: -1 } or [['field', -1]]` Max Time MS: 60000

Collation: `{ locale: 'simple' }` Skip: 0 Limit: 0

Index Hint: `{ field: -1 }`

EXPORT DATA 25 1 - 25 of 25 Refresh Previous Next Table JSON CSV

	product_name String	product_material String
1	"Intelligent Fresh Chips"	"Concrete"
2	"Practical Fresh Sausages"	"Cotton"
3	"Refined Steel Car"	"Rubber"
4	"Gorgeous Plastic Pants"	"Soft"
5	"Sleek Cotton Chair"	"Fresh"
6	"Awesome Wooden Towels"	"Plastic"
7	"Practical Soft Shoes"	"Rubber"
8	"Incredible Steel Hat"	"Rubber"
9	"Awesome Wooden Ball"	"Soft"
10	"Generic Wooden Pizza"	"Frozen"
11	"Unbranded Wooden Cheese"	"Soft"
12	"Unbranded Plastic Salad"	"Wooden"
13	"Gorgeous Cotton Keyboard"	"Concrete"
14	"Incredible Steel Shirt"	"Metal"
15	"Ergonomic Cotton Hat"	"Rubber"
16	"Small Soft Chair"	"Cotton"
17	"Incredible Metal Car"	"Fresh"
18	"Licensed Plastic Bacon"	"Steel"
19	"Intelligent Cotton Chips"	"Soft"
20	"Handcrafted Wooden Bacon"	"Concrete"
21	"Unbranded Granite Chicke...	"Metal"
22	"Ergonomic Soft Hat"	"Rubber"
23	"Intelligent Steel Pizza"	"Cotton"
24	"Tasty Rubber Cheese"	"Frozen"
25	"Licensed Steel Car"	"Cotton"

6. Find the product with a row id of 10

localhost:27017 > productdb > products Open MongoDB shell

Documents 25 Aggregations Schema Indexes 1 Validation

Query: `{ id: "10" }` Generate query Explain Reset Find Options

ADD DATA **EXPORT DATA** **UPDATE** **DELETE** Help

25 1 - 1 of 1 Refresh Previous Next Table JSON CSV

	_id ObjectId	id String	product_name String	product_price Int32	product_material String	product_color String
1	ObjectId('68810110544078a...')	"10"	"Generic Wooden Pizza"	84	"Frozen"	"indigo"

7. Find all products which contain the value "soft" in product material (case-insensitive)

localhost:27017 > productdb > products Open MongoDB shell

Documents 25 Aggregations Schema Indexes 1 Validation

`{product_material: { $regex: /soft/i }}` Generate query Explain Reset Find Options

ADD DATA EXPORT DATA UPDATE DELETE 25 1 - 4 of 4

	_id ObjectId	id String	product_name String	product_price Int32	product_material String	product_color String
1	ObjectId('68810110544070a...')	"4"	"Gorgeous Plastic Pants"	492	"Soft"	"plum"
2	ObjectId('68810110544070a...')	"9"	"Awesome Wooden Ball"	28	"Soft"	"azure"
3	ObjectId('68810110544070a...')	"11"	"Unbranded Wooden Cheese"	26	"Soft"	"black"
4	ObjectId('68810110544070a...')	"19"	"Intelligent Cotton Chips"	46	"Soft"	"azure"

8. Find products with color = "indigo" and price = 492.00

localhost:27017 > productdb > products Open MongoDB shell

Documents 25 Aggregations Schema Indexes 1 Validation

`{ product_color: "indigo", product_price: 492.00 }` Generate query Explain Reset Find Options

ADD DATA EXPORT DATA UPDATE DELETE 25 0 - 0 of 0



No results

Try modifying your query to get results.

9. Delete the products with duplicate product_price

\$group

Open docs

```
1 {
2   _id: "$product_price",
3   count: { "$sum": 1 },
4   ids: { "$push": "$_id" }
5 }
6
```

STAGE OUTPUT

Sample of 10 documents

OPTIONS

_id: 500

count: 1

ids: Array (1)

_id: 26

count: 1

ids: Array (1)

_id: 89

count: 1

ids: Array (1)

_id: 43

count: 1

ids: Array (1)

_id: 88

count: 1

ids: Array (1)

_id: 28

count: 1

ids: Array (1)

_id: 655

count: 1

ids: Array (1)

\$match

Open docs

```
1 {
2   count: { "$gt": 1 }
3 }
4
```

STAGE OUTPUT

Sample of 2 documents

OPTIONS

_id: 36

count: 2

ids: Array (2)

_id: 47

count: 2

ids: Array (2)

localhost:27017 > productdb > products

Open MongoDB shell

Documents 25 Aggregations Schema Indexes 1 Validation

{ product_price: { \$in: [47, 36] } }

Generate query Explain Reset Find Options

ADD DATA EXPORT DATA UPDATE DELETE

25 1 - 4 of 4

	_id ObjectId	id String	product_name String	product_price Int32	product_material String	product_color String	
1	ObjectId('68810110544070a...')	"16"	"Small Soft Chair"	47	"Cotton"	"teal"	
2	ObjectId('68810110544070a...')	"17"	"Incredible Metal Car"	36	"Fresh"	"indigo"	
3	ObjectId('68810110544070a...')	"20"	"Handcrafted Wooden Bacon"	36	"Concrete"	"lime"	
4	ObjectId('68810110544070a...')	"24"	"Tasty Rubber Cheese"	47	"Frozen"	"orchid"	

