

۱-۱. در دیتابیس ایجاد شده یک Collection با نام products بسازید.

```
Command Prompt - mongo
---
Enable MongoDB's free cloud-based monitoring service, which will then receive and display
metrics about your deployment (disk utilization, CPU, operation statistics, etc).

The monitoring data will be available on a MongoDB website with a unique URL accessible to you
and anyone you share the URL with. MongoDB may use this information to make product
improvements and to suggest MongoDB products and deployment options to you.

To enable free monitoring, run the following command: db.enableFreeMonitoring()
To permanently disable this reminder, run the following command: db.disableFreeMonitoring()
---
> show dbs
admin 0.000GB
blog 0.000GB
config 0.000GB
local 0.000GB
store 0.000GB
> db.createCollection( product)
uncaught exception: ReferenceError: product is not defined :
@(shell):1:1
> use product
switched to db product
>
```

. اطلاعات JSON شماره ۱ را با دستور مناسب به کالکشن products اضافه کنید

```
Command Prompt - mongo
---
> show dbs
admin 0.000GB
blog 0.000GB
config 0.000GB
local 0.000GB
store 0.000GB
> db.createCollection( product)
uncaught exception: ReferenceError: product is not defined :
@(shell):1:1
> use product
switched to db product
> db.product.insert({
...   "type": "Audio Album",
...   "title": "BlackStar",
...   "description": "BlackStar is the twenty-fifth and final studio album by English musician David Bowie. It was released worldwide through ISO, RCA, Columbia, and Sony on 8 January 2016, coinci
ding with Bowie's 69th birthday",
...   "shipping": {
...     "weight": 8,
...     "dimensions": {
...       "width": 15,
...       "height": 15,
...       "depth": 1
...     }
...   },
...   "pricing": {
...     "list": 1450,
...     "retail": 2450,
...     "savings": 110,
...     "pct_savings": 5
...   },
...   "details": {
...     "title": "BlackStar [Original Recording Reissued]",
...     "artist": "David Bowie",
...     "genre": [
...       "Experimental rock",
...       "Art rock",
...       "Avant-garde jazz"
...     ],
...     "tracks": [
...       "Blackstar",
...       "'Tis a Pity She Was a Whore",
...       "Lazarus",
...       "Sue (Or in a Season of Crime)",
...       "Girl Loves Me",
...       "Dollar Days",
...       "I Can't Give Everything Away"
...     ]
...   }
... })
writeResult({ "nInserted" : 1 })
>
```

B. اطلاعات JSON های باقیمانده را با یک دستور به کالکشن products اضافه کنی

```

...
    },
    {
      "type": "Film",
      "shipping": {
        "weight": 18,
        "dimensions": {
          "width": 16,
          "height": 16,
          "depth": 1
        }
      },
      "pricing": {
        "list": 7100,
        "retail": 8000,
        "savings": 420,
        "pet_savings": 9
      },
      "details": {
        "title": "Inception",
        "director": [
          "Christopher Nolan"
        ],
        "writer": [
          "Christopher Nolan"
        ],
        "aspect_ratio": "1.50:1"
      }
    }
  ]
}
)

{
  "acknowledged": true,
  "insertedIds": [
    ObjectId("6032c43e08a98021d94dc519"),
    ObjectId("6032c43e08a98021d94dc51a"),
    ObjectId("6032c43e08a98021d94dc51b"),
    ObjectId("6032c43e08a98021d94dc51c")
  ]
}
}
}

```

A. نمایش داکيومنت های موجود در

```

C:\Command Prompt - MongoDB
{
  "pct_savings": 9
},
"details": {
  "title": "Inception",
  "director": {
    "Christopher Nolan"
  },
  "writer": {
    "Christopher Nolan"
  },
  "aspect_ratio": "1.50:1"
}
}
}
db.product.find()
[ { "_id": ObjectId("6032b885f8c02a46cc827a78"), "type": "Audio Album", "title": "BlackStar", "description": "BlackStar is the twenty-fifth and final studio album by English musician David Bowie. It w
as released worldwide through ISO, RCA, Columbia, and Sony on 8 January 2016, coinciding with Bowie's 69th birthday, "shipping": { "weight": 8, "dimensions": { "width": 15, "height": 15, "depth":
1 } }, "pricing": { "list": 1450, "retail": 2450, "savings": 110, "pct_savings": 5 }, "details": { "title": "BlackStar [Original Recording Reissued]", "artist": "David Bowie", "genre": [ "Expe
riential rock", "Art rock", "Avant-garde jazz" ], "tracks": [ "Blackstar", "Tis a Pity She Was a Whore", "Lazarus", "Sue (Or In a Season of Crime)", "Girl Loves Me", "Dollar Days", "I Can't Give Every
thing Away" ] } },
{ "_id": ObjectId("6032c43e08a98021d94dc519"), "type": "Audio Album", "title": "Funeral", "description": "Funeral is the debut studio album by Canadian indie rock band Arcade Fire, released on Septe
mber 14, 2004 by Merge Records.", "shipping": { "weight": 10, "dimensions": { "width": 12, "height": 10, "depth": 1 } }, "pricing": { "list": 2450, "retail": 3450, "savings": 310, "pct_savings
": 2 }, "details": { "title": "Funeral [Original Recording Reissued]", "artist": "Arcade Fire", "genre": [ "Indie rock", "Alternative rock", "Art rock", "Baroque pop", "Rock" ], "tracks": [ "Neigh
borhood #1 (Tunnels)", "Neighborhood #2 (Laika)", "Une am\u00e9e sans lumi\u00e8re", "Crown of Love", "Wake Up", "Haiti", "Rebellion (Lies)" ] } },
{ "_id": ObjectId("6032c43e08a98021d94dc51a"), "type": "Film", "shipping": { "weight": 10, "dimensions": { "width": 20, "height": 30, "depth": 1 } }, "pricing": { "list": 2200, "retail": 5100
, "savings": 200, "pct_savings": 10 }, "details": { "title": "The Matrix", "director": [ "Andy Wachowski", "Larry Wachowski" ], "writer": [ "Andy Wachowski", "Larry Wachowski" ], "aspect_ratio":
"1.66:1" } },
{ "_id": ObjectId("6032c43e08a98021d94dc51b"), "type": "Film", "shipping": { "weight": 25, "dimensions": { "width": 12, "height": 21, "depth": 2 } }, "pricing": { "list": 5200, "retail": 1010
0, "savings": 500, "pct_savings": 15 }, "details": { "title": "InterStellar", "director": [ "Christopher Nolan" ], "writer": [ "Christopher Nolan", "Jonathan Nolan" ], "aspect_ratio": "1.33:1" } },
{ "_id": ObjectId("6032c43e08a98021d94dc51c"), "type": "Film", "shipping": { "weight": 18, "dimensions": { "width": 16, "height": 16, "depth": 1 } }, "pricing": { "list": 7100, "retail": 8000
, "savings": 429, "pct_savings": 9 }, "details": { "title": "Inception", "director": [ "Christopher Nolan" ], "writer": [ "Christopher Nolan" ], "aspect_ratio": "1.50:1" } } ]

```

B. نمایش داکيومنت های موجود در products به صورت خوانا .

```
Command Prompt - mongo
> use product
switched to db product
> db.product.find().pretty()
{
  "_id" : ObjectId("6032b885f8c02a46cc827a78"),
  "type" : "Audio Album",
  "title" : "BlackStar",
  "description" : "BlackStar is the twenty-fifth and final studio album by English musician David Bowie. It was released worldwide through ISO, RCA, Columbia, and Sony on 8 January 2016, coinciding with Bowie's 69th birthday.",
  "shipping" : {
    "weight" : 8,
    "dimensions" : {
      "width" : 15,
      "height" : 15,
      "depth" : 1
    }
  },
  "pricing" : {
    "list" : 1450,
    "retail" : 2450,
    "savings" : 110,
    "pct_savings" : 5
  },
  "details" : {
    "title" : "BlackStar [Original Recording Reissued]",
    "artist" : "David Bowie",
    "genre" : [
      "Experimental rock",
      "Art rock",
      "Avant-garde jazz"
    ],
    "tracks" : [
      "Blackstar",
      "L'is a Pity She Was a Whore",
      "Lazarus",
      "Sue (Or in a Season of Crime)",
      "Girl Loves Me",
      "Dollar Days",
      "I Can't Give Everything Away"
    ]
  }
}
{
  "_id" : ObjectId("6032c43e08a98021d94dc519"),
  "type" : "Audio Album",
  "title" : "Funeral",
  "description" : "Funeral is the debut studio album by Canadian indie rock band Arcade Fire, released on September 14, 2004 by Merge Records.",
  "shipping" : {
    "weight" : 10,
    "dimensions" : {
      "width" : 12,
      "height" : 10,

```

C. نمایش داکيومنت های موجود در products بدون فیلد "\_id."

```
Command Prompt - mongo
{
  "_id" : ObjectId("6032c43e08a98021d94dc51c"), "type" : "Film", "shipping" : { "weight" : 18, "dimensions" : { "width" : 16, "height" : 16, "depth" : 1 } }, "pricing" : { "list" : 7100, "retail" : 8000, "savings" : 429, "pct_savings" : 9 }, "details" : { "title" : "Inception", "director" : [ "Christopher Nolan" ], "writer" : [ "Christopher Nolan" ], "aspect_ratio" : "1.50:1" } }
> db.product.find({},{"_id":0})
uncaught exception: SyntaxError: missing : after property id
@shell:1:22
> db.product.find({},{"_id":0})
uncaught exception: SyntaxError: missing : after property id
@shell:1:25
> db.product.find({},{"_id":0})
{ "type" : "Audio Album", "title" : "BlackStar", "description" : "BlackStar is the twenty-fifth and final studio album by English musician David Bowie. It was released worldwide through ISO, Columbia, and Sony on 8 January 2016, coinciding with Bowie's 69th birthday.", "shipping" : { "weight" : 8, "dimensions" : { "width" : 15, "height" : 15, "depth" : 1 } }, "pricing" : { "list" : 1450, "retail" : 2450, "savings" : 110, "pct_savings" : 5 }, "details" : { "title" : "BlackStar [Original Recording Reissued]", "artist" : "David Bowie", "genre" : [ "Experimental rock", "Art rock", "Avant-garde jazz" ], "tracks" : [ "Blackstar", "L'is a Pity She Was a Whore", "Lazarus", "Sue (Or in a Season of Crime)", "Girl Loves Me", "Dollar Days", "I Can't Give Everything Away" ] } }
{ "type" : "Audio Album", "title" : "Funeral", "description" : "Funeral is the debut studio album by Canadian indie rock band Arcade Fire, released on September 14, 2004 by Merge Records.", "shipping" : { "weight" : 10, "dimensions" : { "width" : 12, "height" : 10, "depth" : 1 } }, "pricing" : { "list" : 2450, "retail" : 3450, "savings" : 310, "pct_savings" : 2 }, "details" : { "title" : "Funeral [Original Recording Reissued]", "artist" : "Arcade Fire", "genre" : [ "Indie rock", "Alternative rock", "Art rock", "Baroque pop", "Rock" ], "tracks" : [ "Neighborhood #1 (Tunnels)", "Neighborhood #2 (Laika)", "Une année sans lumière", "Crown of Love", "Make Up", "Haiti", "Rebellion (Lies)" ] } }
{ "type" : "Film", "shipping" : { "weight" : 10, "dimensions" : { "width" : 20, "height" : 30, "depth" : 1 } }, "pricing" : { "list" : 2200, "retail" : 5100, "savings" : 200, "pct_savings" : 10 }, "details" : { "title" : "The Matrix", "director" : [ "Andy Wachowski", "Larry Wachowski" ], "writer" : [ "Andy Wachowski", "Larry Wachowski" ], "aspect_ratio" : "1.66:1" } }
{ "type" : "Film", "shipping" : { "weight" : 25, "dimensions" : { "width" : 12, "height" : 21, "depth" : 2 } }, "pricing" : { "list" : 5200, "retail" : 10100, "savings" : 500, "pct_savings" : 15 }, "details" : { "title" : "InterStellar", "director" : [ "Christopher Nolan" ], "writer" : [ "Christopher Nolan", "Jonathan Nolan" ], "aspect_ratio" : "1.33:1" } }
{ "type" : "Film", "shipping" : { "weight" : 18, "dimensions" : { "width" : 16, "height" : 16, "depth" : 1 } }, "pricing" : { "list" : 7100, "retail" : 8000, "savings" : 429, "pct_savings" : 9 }, "details" : { "title" : "Inception", "director" : [ "Christopher Nolan" ], "writer" : [ "Christopher Nolan" ], "aspect_ratio" : "1.50:1" } }
>
```

D. نمایش داکيومنت ها با "Album Audio: type."

```

Command Prompt - mongo
> "savings" : 500, "pct_savings" : 15, "details" : { "title" : "InterStellar", "director" : [ "Christopher Nolan" ], "writer" : [ "Christopher Nolan", "Jonathan Nolan" ], "aspect_ratio" : "1.33:1" } ^
{
  "_id" : ObjectId("6032c43e08a98021d94dc51c"), "type" : "Film", "shipping" : { "weight" : 18, "dimensions" : { "width" : 16, "height" : 16, "depth" : 1 } }, "pricing" : { "list" : 7100, "retail" : 8000
"savings" : 429, "pct_savings" : 9 }, "details" : { "title" : "Inception", "director" : [ "Christopher Nolan" ], "writer" : [ "Christopher Nolan" ], "aspect_ratio" : "1.50:1" } }
db.product.find({"type":Audio Album:1});
{
  "_id" : ObjectId("6032c2085f8c02a6cc827a787"),
  "_id" : ObjectId("6032c43e08a98021d94dc519") }
{
  "_id" : ObjectId("6032c43e08a98021d94dc51a") }
{
  "_id" : ObjectId("6032c43e08a98021d94dc51b") }
{
  "_id" : ObjectId("6032c43e08a98021d94dc51c") }

> db.product.find({},{"type:Audio Album"});
uncaught exception: SyntaxError: missing : after property id
@shell:1:38
> db.product.find({"type:Audio Album"});
uncaught exception: SyntaxError: missing : after property id
@shell:1:35
> db.product.find({"type":"Audio Album"});
{
  "_id" : ObjectId("6032c2085f8c02a6cc827a787"), "type" : "Audio Album", "title" : "BlackStar", "description" : "BlackStar is the twenty-fifth and final studio album by English musician David Bowie. It w
as released worldwide through ISO, RCA, Columbia, and Sony on 8 January 2016, coinciding with Bowie's 69th birthday.", "shipping" : { "weight" : 8, "dimensions" : { "width" : 15, "height" : 15, "depth" :
1 } }, "pricing" : { "list" : 1450, "retail" : 2450, "savings" : 110, "pct_savings" : 5 }, "details" : { "title" : "BlackStar [Original Recording Reissued]", "artist" : "David Bowie", "genre" : [ "Expe
riential rock", "Art rock", "Avant-garde jazz" ], "tracks" : [ "Blackstar", "'Tis a Pity She Was a Whore", "Lazarus", "Sue (Or in a Season of Crime)", "Girl Loves Me", "Dollar Days", "I Can't Give Every
thing Away" ] } }
{
  "_id" : ObjectId("6032c43e08a98021d94dc519"), "type" : "Audio Album", "title" : "Funeral", "description" : "Funeral is the debut studio album by Canadian indie rock band Arcade Fire, released on Septe
mber 14, 2004 by Merge Records.", "shipping" : { "weight" : 10, "dimensions" : { "width" : 12, "height" : 10, "depth" : 1 } }, "pricing" : { "list" : 2450, "retail" : 3450, "savings" : 310, "pct_savings
" : 2 }, "details" : { "title" : "Funeral [Original Recording Reissued]", "artist" : "Arcade Fire", "genre" : [ "Indie rock", "Alternative rock", "Art rock", "Baroque pop", "Rock" ], "tracks" : [ "Neigh
borhood #1 (Tunnels)", "Neighborhood #2 (L\u00faka)", "Une ann\u00e9e sans lumi\u00e8re", "Crown of Love", "Wake Up", "Haiti", "Rebellion (Lies)" ] } }
>

```

E. نمایش داکيومنت هایی که مقدار فیلد "retail" در قسمت "pricing" آنها کمتر از 5000 باشد

```

Command Prompt - mongo
> db.product.find({"pricing.retail":{"$lt:5000}});
{ "_id" : ObjectId("6032b885f8c02a46cc827a78"), "type" : "Audio Album", "title" : "BlackStar", "description" : "BlackStar is the twenty-fifth and final studio album by English musician David Bowie. It was released worldwide through ISO, RCA, Columbia, and Sony on 8 January 2016, coinciding with Bowie's 69th birthday", "shipping" : { "weight" : 8, "dimensions" : { "width" : 15, "height" : 15, "depth" : 1 } }, "pricing" : { "list" : 1450, "retail" : 2450, "savings" : 110, "pct_savings" : 5 }, "details" : { "title" : "BlackStar [Original Recording Reissued]", "artist" : "David Bowie", "genre" : [ "Experimental rock", "Art rock", "Avant-garde jazz" ], "tracks" : [ "BlackStar", "'Tis a Pity She Was a Whore", "Lazarus", "Sue (Or in a Season of Crime)", "Girl Loves Me", "Dollar Days", "I Can't Give Every Thing Away" ] } }
{ "_id" : ObjectId("6032c43e08a98021d94dc519"), "type" : "Audio Album", "title" : "Funeral", "description" : "Funeral is the debut studio album by Canadian indie rock band Arcade Fire, released on September 14, 2004 by Merge Records.", "shipping" : { "weight" : 10, "dimensions" : { "width" : 12, "height" : 10, "depth" : 1 } }, "pricing" : { "list" : 2450, "retail" : 3450, "savings" : 310, "pct_savings" : 2 }, "details" : { "title" : "Funeral [Original Recording Reissued]", "artist" : "Arcade Fire", "genre" : [ "Indie rock", "Alternative rock", "Art rock", "Baroque pop", "Rock" ], "tracks" : [ "Neighborhood #1 (Tunnels)", "Neighborhood #2 (L\u00f4ka)", "Une ann\u00e9e sans lumi\u00e8re", "Crown of Love", "Wake up", "Haiti", "Rebellion (Lies)" ] } }

```

F. نمایش داکيومنت هایی که مقدار فیلد "type" آنها "Film" نباشد

```

> db.product.find({"type":{"not:/Film/gn}})
{ "_id" : ObjectId("6032b885f8c02a46cc827a78"), "type" : "Audio Album", "title" : "BlackStar", "description" : "BlackStar is the twenty-fifth and final studio album by English musician David Bowie. It was released worldwide through ISO, RCA, Columbia, and Sony on 8 January 2016, coinciding with Bowie's 69th birthday", "shipping" : { "weight" : 8, "dimensions" : { "width" : 15, "height" : 15, "depth" : 1 } }, "pricing" : { "list" : 1450, "retail" : 2450, "savings" : 110, "pct_savings" : 5 }, "details" : { "title" : "BlackStar [Original Recording Reissued]", "artist" : "David Bowie", "genre" : [ "Experimental rock", "Art rock", "Avant-garde jazz" ], "tracks" : [ "Blackstar", "It's a Pity She Was a Whore", "Lazarus", "Sue (Or in a Season of Crime)", "Girl Loves Me", "Dollar Days", "I Can't Give Everythng Away" ] } }
{ "_id" : ObjectId("6032c43e08a98021d94dc519"), "type" : "Audio Album", "title" : "Funeral", "description" : "Funeral is the debut studio album by Canadian indie rock band Arcade Fire, released on September 14, 2004 by Merge Records.", "shipping" : { "weight" : 10, "dimensions" : { "width" : 12, "height" : 10, "depth" : 1 } }, "pricing" : { "list" : 2450, "retail" : 3450, "savings" : 310, "pct_savings" : 2 }, "details" : { "title" : "Funeral [Original Recording Reissued]", "artist" : "Arcade Fire", "genre" : [ "Indie rock", "Alternative rock", "Art rock", "Baroque pop", "Rock" ], "tracks" : [ "Neighborhood #1 (Tunnels)", "Neighborhood #2 (Laika)", "Une ann e sans lumi re", "Crown of Love", "Make Up", "Haiti", "Rebellion (Lies)" ] } }
>

```

G. نمایش داکيومنت هایی که مقدار فیلد "weight" آنها در قسمت "shipping" بیشتر از 15 باشد

```

db.product.find({"shipping_weight":{"$gt:15}})
{"_id" : ObjectId("6032c43e08a98021d94dc51b"), "type" : "Film", "shipping" : { "weight" : 25, "dimensions" : { "width" : 12, "height" : 21, "depth" : 2 } }, "pricing" : { "list" : 5200, "retail" : 1010
"savings" : 500, "pct_savings" : 15 }, "details" : { "title" : "InterStellar", "director" : [ "Christopher Nolan" ], "writer" : [ "Christopher Nolan", "Jonathan Nolan" ], "aspect_ratio" : "1.33:1" }
{"_id" : ObjectId("6032c43e08a98021d94dc51c"), "type" : "Film", "shipping" : { "weight" : 18, "dimensions" : { "width" : 16, "height" : 16, "depth" : 1 } }, "pricing" : { "list" : 7100, "retail" : 8800
"savings" : 429, "pct_savings" : 9 }, "details" : { "title" : "Inception", "director" : [ "Christopher Nolan" ], "writer" : [ "Christopher Nolan" ], "aspect_ratio" : "1.50:1" }

```

مقدار 2500 آیدیت کنید

```

    "director" : [
      "Christopher Nolan"
    ],
    "writer" : [
      "Christopher Nolan"
    ],
    "aspect_ratio" : "1.50:1"
  }
}

> db.product.update({"details.title":"The Matrix"},{$set:{"pricing.list:2500}})
Uncaught exception: SyntaxError: "" literal not terminated before end of script :
@($shell):1:77
> db.product.update({"details.title":"The Matrix"},{$set:{"pricing.list:2500}})
writeResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
> db.product.find().pretty()
{
  "_id" : ObjectId("6022b885f8c02a46cc827a78"),
  "type" : "Audio Album",
  "title" : "BlackStar",
  "description" : "BlackStar is the twenty-fifth and final studio album by English musician David Bowie. It was released worldwide through ISO, RCA, Columbia, and Sony on 8 January 2016, coinciding with Bowie's 69th birthday",
  "shipping" : {
    "weight" : 8,
    "dimensions" : {
      "width" : 15,
      "height" : 15,
      "depth" : 1
    }
  },
  "pricing" : {
    "list" : 1450,
    "retail" : 2450,
    "savings" : 110,
    "pct_savings" : 5
  },
  "details" : {
    "title" : "BlackStar [Original Recording Reissued]",
    "artist" : "David Bowie",
    "genre" : [
      "Experimental rock",
      "Art rock",
      "Avant-garde jazz"
    ],
    "tracks" : [
      "Blackstar",
      "'Tis a Pity She Was a Whore",

```

```

    "Rock"
  },
  "tracks": [
    "Neighborhood #1 (Tunnels)",
    "Neighborhood #2 (Laika)",
    "Une ann e sans lumi re",
    "Grown of Love",
    "Wake Up",
    "Haiti",
    "Rebellion (Lies)"
  ]
}

{
  "_id": ObjectId("6032c43e08a98021d94dc51a"),
  "type": "Film",
  "shipping": {
    "weight": 10,
    "dimensions": {
      "width": 20,
      "height": 30,
      "depth": 1
    }
  },
  "pricing": {
    "list": 2500,
    "retail": 5100,
    "savings": 200,
    "pct_savings": 10
  },
  "details": {
    "title": "The Matrix",
    "director": [
      "Andy Wachowski",
      "Larry Wachowski"
    ],
    "writer": [
      "Andy Wachowski",
      "Larry Wachowski"
    ],
    "aspect_ratio": "1.66:1"
  }
}

{
  "_id": ObjectId("6032c43e08a98021d94dc51b"),
  "type": "Film",
  "shipping": {
    "weight": 25,
    "dimensions": {
      "width": 12,
      "height": 21,
      "depth": 2
    }
  }
}

```



```

Command Prompt - mongo
config 0.000GB
local 0.000GB
product 0.000GB
store 0.000GB
> use product
switched to db product
> db.product.find((kand({"type":"Film"},("shipping.dimensions.depth":1))))
uncaught exception: SyntaxError: expected property name, got '8' :
@shell:1:17
> db.product.find((kand({"type":"Film"},("shipping.dimensions.depth":1))))
uncaught exception: SyntaxError: missing : after property id :
@shell:1:21
> db.product.find(("type":"Film" and "shipping.dimensions.depth":1)
....
....
....
>
> db.product.find({$and:[{"type":"Film"},("shipping.dimensions.depth":1)]})
{ "_id" : ObjectId("6032c43e08a98021d94dc51a"), "type" : "Film", "shipping" : { "weight" : 10, "dimensions" : { "width" : 20, "height" : 30, "depth" : 1 } }, "pricing" : { "list" : 2500, "retail" : 5100
"savings" : 200, "pct_savings" : 10 }, "details" : { "title" : "The Matrix", "director" : [ "Andy Wachowski", "Larry Wachowski" ], "writer" : [ "Andy Wachowski", "Larry Wachowski" ], "aspect_ratio" :
"1.66:1" } }
{ "_id" : ObjectId("6032c43e08a98021d94dc51c"), "type" : "Film", "shipping" : { "weight" : 18, "dimensions" : { "width" : 16, "height" : 16, "depth" : 1 } }, "pricing" : { "list" : 7100, "retail" : 8000
"savings" : 429, "pct_savings" : 9 }, "details" : { "title" : "Inception", "director" : [ "Christopher Nolan" ], "writer" : [ "Christopher Nolan" ], "aspect_ratio" : "1.50:1" } }

```

```

Command Prompt - mongo
config 0.000GB
local 0.000GB
product 0.000GB
store 0.000GB
> use product
switched to db product
> db.product.find(({"type":"File"},{"shipping.dimensions.depth":1})))
uncaught exception: SyntaxError: expected property name, got '8' :
@shell:1:17
> db.product.find(({"type":"file"},{"shipping.dimensions.depth":1})))
uncaught exception: SyntaxError: missing : after property id :
@shell:1:21
> db.product.find(("type":"File" and "shipping.dimensions.depth":1)
...
...
> db.product.find({$and:[{"type":"Film"}, {"shipping.dimensions.depth":1}]}))
{ "_id" : ObjectId("6032c43e08a98021d94dc51a"), "type" : "Film", "shipping" : { "weight" : 10, "dimensions" : { "width" : 20, "height" : 30, "depth" : 1 } }, "pricing" : { "list" : 2500, "retail" : 5100
"savings" : 200, "pct_savings" : 10 }, "details" : { "title" : "The Matrix", "director" : [ "Andy Wachowski", "Larry Wachowski" ], "writer" : [ "Andy Wachowski", "Larry Wachowski" ], "aspect_ratio" :
"1.66:1" } }
{ "_id" : ObjectId("6032c43e08a98021d94dc51c"), "type" : "Film", "shipping" : { "weight" : 18, "dimensions" : { "width" : 16, "height" : 16, "depth" : 1 } }, "pricing" : { "list" : 7100, "retail" : 8000
"savings" : 429, "pct_savings" : 9 }, "details" : { "title" : "Inception", "director" : [ "Christopher Nolan" ], "writer" : [ "Christopher Nolan" ], "aspect_ratio" : "1.50:1" } }
}
}
}

db.product.aggregate([{$match:{type:"Film"}},{$count:" number of type Film: "}]
{ " number of type Film: " : 3 }

```

K. نمایش داکيومنت هایی که فیلد "writer" آنها در بخش "details" شامل "Nolan Jonathan" باشد

```
Command Prompt - mongo
>
>
>
>
> db.product.aggregate([{$match:{"type":"Film"}},{$count:" number of type Film: " }])
{ " number of type Film: " : 3 }
>
>
>
>
> db.product.find({"details.writer":{"$in":["Jonathan Nolan"]}})
uncaught exception: SyntaxError: missing : after property id :
@shell:1:39
> db.product.find({"details.writer":{"$in:"Jonathan Nolan"}})
Error: error: {
  "ok" : 0,
  "errmsg" : "$in needs an array",
  "code" : 2,
  "codeName" : "BadValue"
}
> db.product.find({"details.writer":{"$in":["Jonathan Nolan"]}})
{ "_id" : ObjectId("6032c43e08a98021d94dc51b"), "type" : "Film", "shipping" : { "weight" : 25, "dimensions" : { "width" : 12, "height" : 21, "depth" : 2 } }, "pricing" : { "list" : 5200, "retail" : 1010
0, "savings" : 500, "pct_savings" : 15 }, "details" : { "title" : "InterStellar", "director" : [ "Christopher Nolan" ], "writer" : [ "Christopher Nolan", "Jonathan Nolan" ], "aspect_ratio" : "1.33:1" }
}>
```

L. نمایش داکيومنت با بیشترین مقدار "savings" موجود در قسمت "pricing"

```
Command Prompt - mongo
>
>
>
>
> db.product.find().sort({"pricing.savings":-1}).limit(1)
{ "_id" : ObjectId("6032c43e08a98021d94dc51b"), "type" : "Film", "shipping" : { "weight" : 25, "dimensions" : { "width" : 12, "height" : 21, "depth" : 2 } }, "pricing" : { "list" : 5200, "retail" : 1010
0, "savings" : 500, "pct_savings" : 15 }, "details" : { "title" : "InterStellar", "director" : [ "Christopher Nolan" ], "writer" : [ "Christopher Nolan", "Jonathan Nolan" ], "aspect_ratio" : "1.33:1" }
}>
```



M. نمایش داکيومنت هایی که مقدار فیلد "title" در بخش "details" آنها دارای حرف "x" باشد.

```
Command Prompt - mongo
and anyone you share the URL with. MongoDB may use this information to make product
improvements and to suggest MongoDB products and deployment options to you.

To enable free monitoring, run the following command: db.enableFreeMonitoring()
To permanently disable this reminder, run the following command: db.disableFreeMonitoring()

> show dbs
admin      0.000GB
blog       0.000GB
config     0.000GB
local      0.000GB
product    0.000GB
store      0.000GB
> use product
switched to db product
> db.product.find({"details.title":{"$in":["w*[x]/gm"]}})
{ "_id" : ObjectId("6032c43e08a98021d94dc51a"), "type" : "Film", "shipping" : { "weight" : 10, "dimensions" : { "width" : 20, "height" : 30, "depth" : 1 } }, "pricing" : { "list" : 2500, "retail" : 5100
, "savings" : 200, "pct_savings" : 10 }, "details" : { "title" : "The Matrix", "director" : [ "Andy Wachowski", "Larry Wachowski" ], "writer" : [ "Andy Wachowski", "Larry Wachowski" ], "aspect_ratio" :
"1.66:1" } }
>
```

N. داکيومنت با فیلد "1.66:1 ratio\_aspect" : در بخش "details" را از collection حذف کنید.

```
Command Prompt - mongo
>
>
>
>
> db.product.remove({"details.aspect_ratio":"1.66:1"})
WriteResult({ "nRemoved" : 1 })
> db.product.find().pretty()
{
  "_id" : ObjectId("6032b885f8c02a46cc827a78"),
  "type" : "Audio Album",
  "title" : "BlackStar",
  "description" : "BlackStar is the twenty-fifth and final studio album by English musician David Bowie. It was released worldwide through ISO, RCA, Columbia, and Sony on 8 January 2016, coincidin
g with Bowie's 69th birthday",
  "shipping" : {
    "weight" : 8,
    "dimensions" : {
      "width" : 15,
      "height" : 15,
      "depth" : 1
    }
  },
  "pricing" : {
    "list" : 1450,
    "retail" : 2450,
    "savings" : 110,
    "pct_savings" : 5
  },
  "details" : {
    "title" : "BlackStar [Original Recording Reissued]",
    "artist" : "David Bowie",
    "genre" : [
      "Experimental rock",
      "Art rock",
      "Avant-garde jazz"
    ],
    "tracks" : [
      "Blackstar",
      "'Tis a Pity She Was a Whore",
      "Lazarus",
      "Sue (Or in a Season of Crime)",
      "Girl Loves Me",
      "Dollar Days",
      "I Can't Give Everything Away"
    ]
  }
}
{
  "_id" : ObjectId("6032c43e08a98021d94dc519"),
  "type" : "Audio Album",
  "title" : "Funeral",
  "description" : "Funeral is the debut studio album by Canadian indie rock band Arcade Fire, released on September 14, 2004 by Merge Records.",
}
```