Title: **Create and Read**
Aim: **To apply relational operators in find() command and filter the documents**

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NoSQL Lab 3
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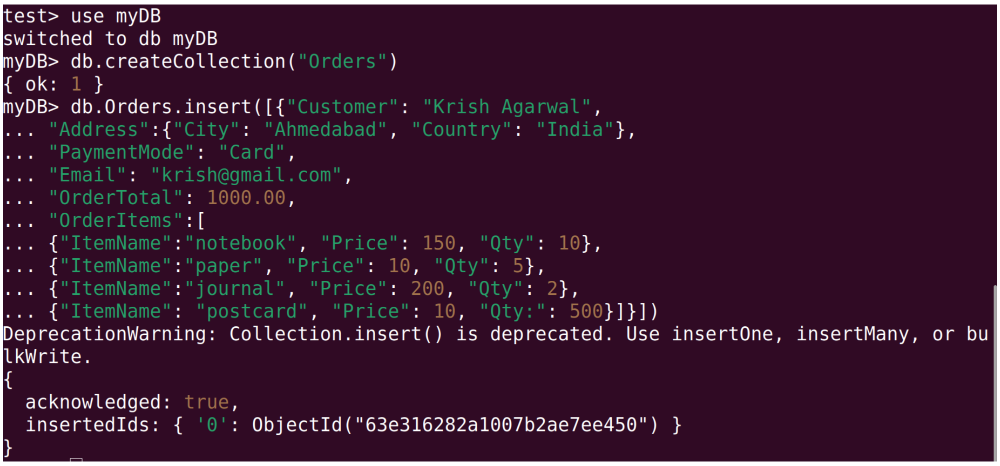
Q1) Create a database with name myDB and will create a collection with name orders.

a) retrieve all documents from the collection.
b) fetch only Customer and Email field.
c) fetch the order where PaymentMode is “Card”.
d) fetch the order where Country is “India” with customer and address key value pairs alone
e) filter the documents where “paper” were also ordered
f) fetch the documents where OrderTotal is greater than 800.
g) fetch the documents wher OrderTotal is greater than or equal to 800.
h) fetch the documents where OrderTotal is less than 800.

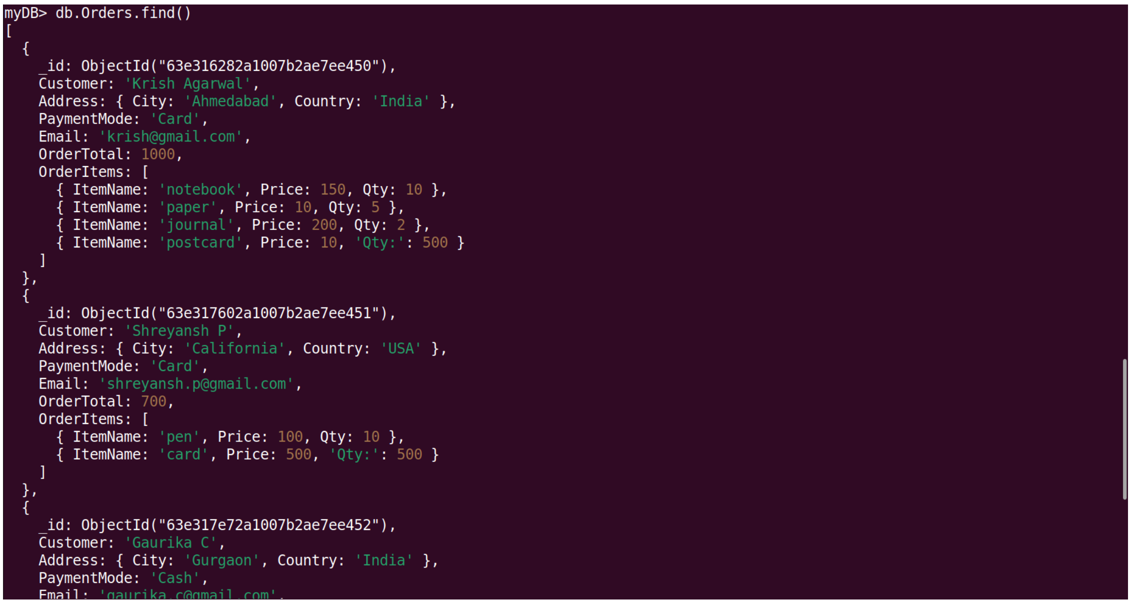
Switching DB, Creating Collection and Insertion



```
test> use myDB
switched to db myDB
myDB> db.createCollection("Orders")
{ ok: 1 }
myDB> db.Orders.insert([{"Customer": "Krish Agarwal",
... "Address":{"City": "Ahmedabad", "Country": "India"},
... "PaymentMode": "Card",
... "Email": "krish@gmail.com",
... "OrderTotal": 1000.00,
... "OrderItems":[
... {"ItemName":"notebook", "Price": 150, "Qty": 10},
... {"ItemName":"paper", "Price": 10, "Qty": 5},
... {"ItemName":"journal", "Price": 200, "Qty": 2},
... {"ItemName": "postcard", "Price": 10, "Qty:": 500}]}])
DeprecationWarning: Collection.insert() is deprecated. Use insertOne, insertMany, or bu
lkWrite.
{
  acknowledged: true,
  insertedIds: { '0': ObjectId("63e316282a1007b2ae7ee450") }
}
```

a) retrieve all documents from the collection.

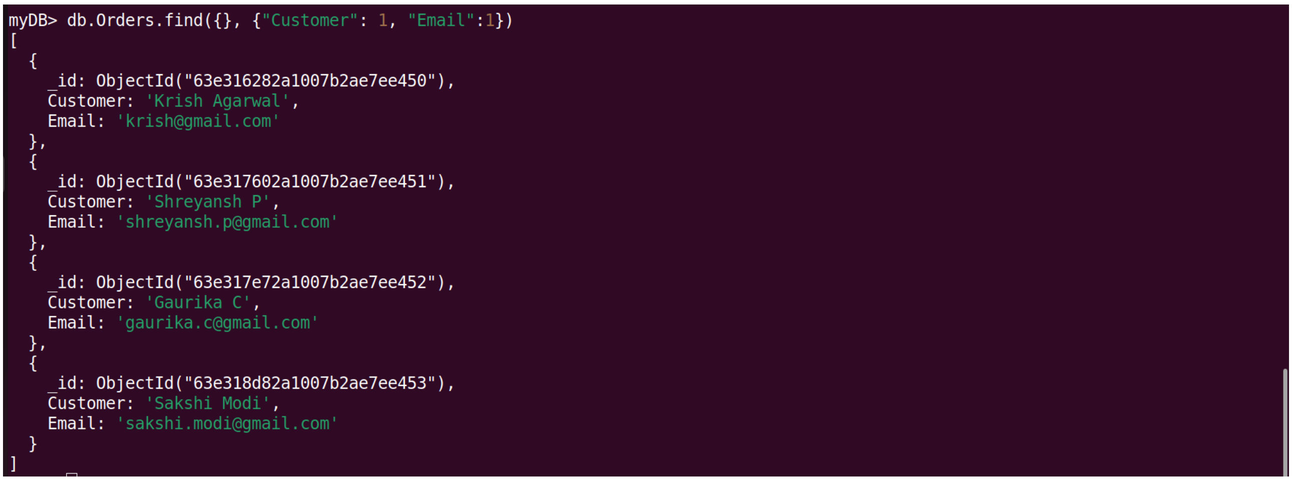
Syntax: db.Orders.find()



```
myDB> db.Orders.find()
[
  {
    _id: ObjectId("63e316282a1007b2ae7ee450"),
    Customer: 'Krish Agarwal',
    Address: { City: 'Ahmedabad', Country: 'India' },
    PaymentMode: 'Card',
    Email: 'krish@gmail.com',
    OrderTotal: 1000,
    OrderItems: [
      { ItemName: 'notebook', Price: 150, Qty: 10 },
      { ItemName: 'paper', Price: 10, Qty: 5 },
      { ItemName: 'journal', Price: 200, Qty: 2 },
      { ItemName: 'postcard', Price: 10, 'Qty:': 500 }
    ]
  },
  {
    _id: ObjectId("63e317602a1007b2ae7ee451"),
    Customer: 'Shreyansh P',
    Address: { City: 'California', Country: 'USA' },
    PaymentMode: 'Card',
    Email: 'shreyansh.p@gmail.com',
    OrderTotal: 700,
    OrderItems: [
      { ItemName: 'pen', Price: 100, Qty: 10 },
      { ItemName: 'card', Price: 500, 'Qty:': 500 }
    ]
  },
  {
    _id: ObjectId("63e317e72a1007b2ae7ee452"),
    Customer: 'Gaurika C',
    Address: { City: 'Gurgaon', Country: 'India' },
    PaymentMode: 'Cash',
    Email: 'gaurika.c@gmail.com',
```

b) fetch only Customer and Email field.

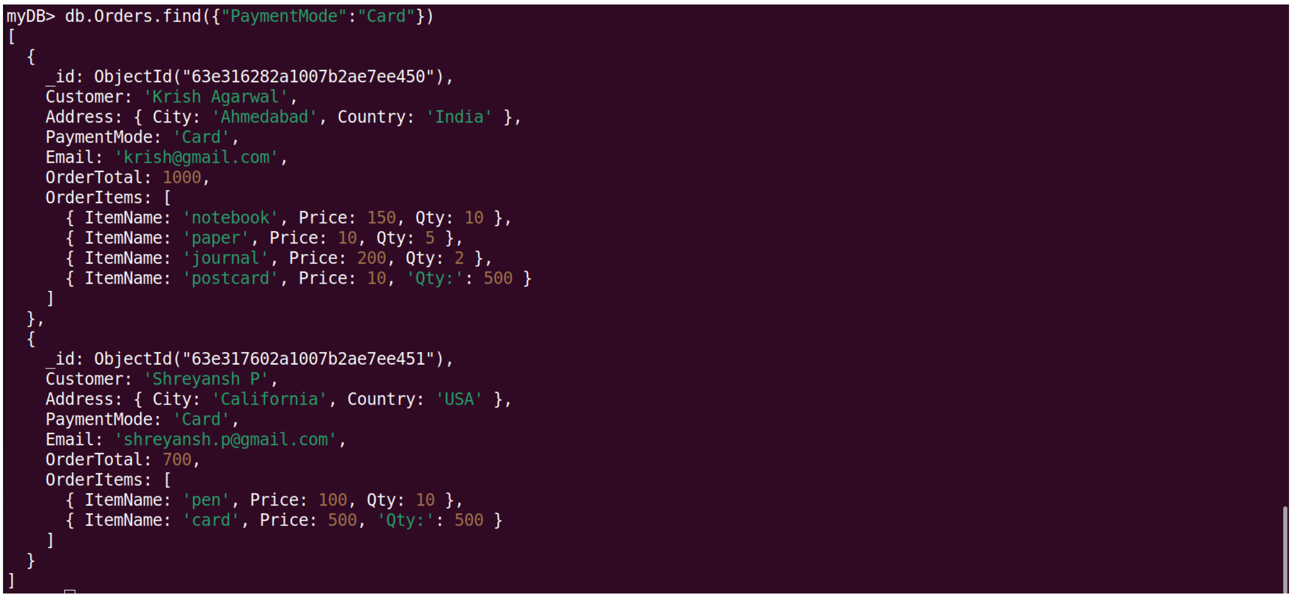
Syntax: db.Orders.find({}, {“Customer”: 1, “Email”: 1})



```
myDB> db.Orders.find({}, {"Customer": 1, "Email":1})
[
  {
    _id: ObjectId("63e316282a1007b2ae7ee450"),
    Customer: 'Krish Agarwal',
    Email: 'krish@gmail.com'
  },
  {
    _id: ObjectId("63e317602a1007b2ae7ee451"),
    Customer: 'Shreyansh P',
    Email: 'shreyansh.p@gmail.com'
  },
  {
    _id: ObjectId("63e317e72a1007b2ae7ee452"),
    Customer: 'Gaurika C',
    Email: 'gaurika.c@gmail.com'
  },
  {
    _id: ObjectId("63e318d82a1007b2ae7ee453"),
    Customer: 'Sakshi Modi',
    Email: 'sakshi.modi@gmail.com'
  }
]
```

c) fetch the order where PaymentMode is “Card”.

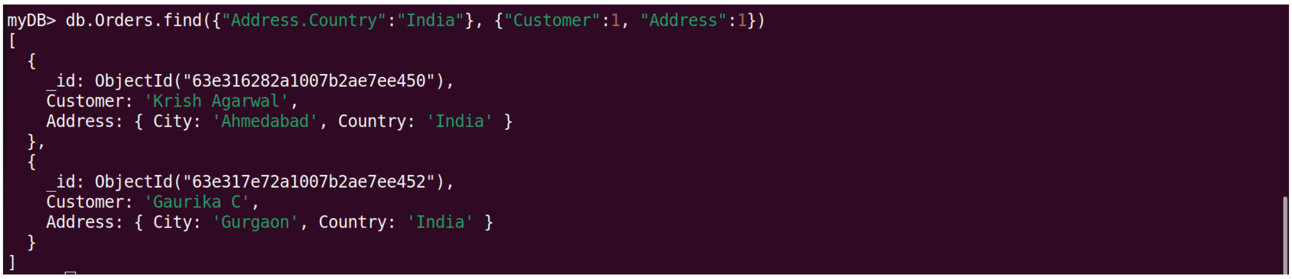
Syntax: db.Orders.find({“PaymentMode”: “Card”})



```
myDB> db.Orders.find({"PaymentMode":"Card"})
[
  {
    _id: ObjectId("63e316282a1007b2ae7ee450"),
    Customer: 'Krish Agarwal',
    Address: { City: 'Ahmedabad', Country: 'India' },
    PaymentMode: 'Card',
    Email: 'krish@gmail.com',
    OrderTotal: 1000,
    OrderItems: [
      { ItemName: 'notebook', Price: 150, Qty: 10 },
      { ItemName: 'paper', Price: 10, Qty: 5 },
      { ItemName: 'journal', Price: 200, Qty: 2 },
      { ItemName: 'postcard', Price: 10, 'Qty:': 500 }
    ]
  },
  {
    _id: ObjectId("63e317602a1007b2ae7ee451"),
    Customer: 'Shreyansh P',
    Address: { City: 'California', Country: 'USA' },
    PaymentMode: 'Card',
    Email: 'shreyansh.p@gmail.com',
    OrderTotal: 700,
    OrderItems: [
      { ItemName: 'pen', Price: 100, Qty: 10 },
      { ItemName: 'card', Price: 500, 'Qty:': 500 }
    ]
  }
]
```

d) fetch the order where Country is “India” with customer and address key value pairs alone.

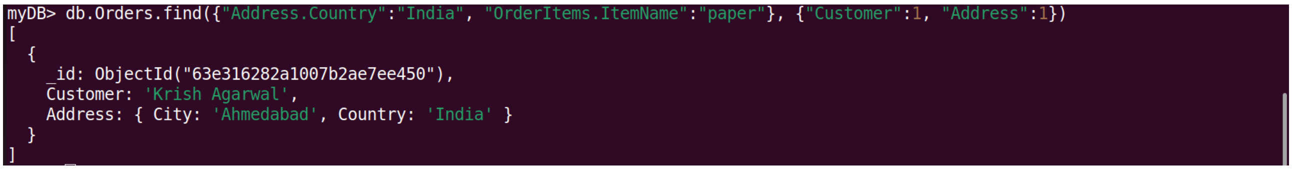
Syntax: db.Orders.find({"Address.Country":"India"}, {"Customer":1, "Address":1})



```
myDB> db.Orders.find({"Address.Country":"India"}, {"Customer":1, "Address":1})
[
  {
    _id: ObjectId("63e316282a1007b2ae7ee450"),
    Customer: 'Krish Agarwal',
    Address: { City: 'Ahmedabad', Country: 'India' }
  },
  {
    _id: ObjectId("63e317e72a1007b2ae7ee452"),
    Customer: 'Gaurika C',
    Address: { City: 'Gurgaon', Country: 'India' }
  }
]
```

e) filter the documents where “paper” were also ordered.

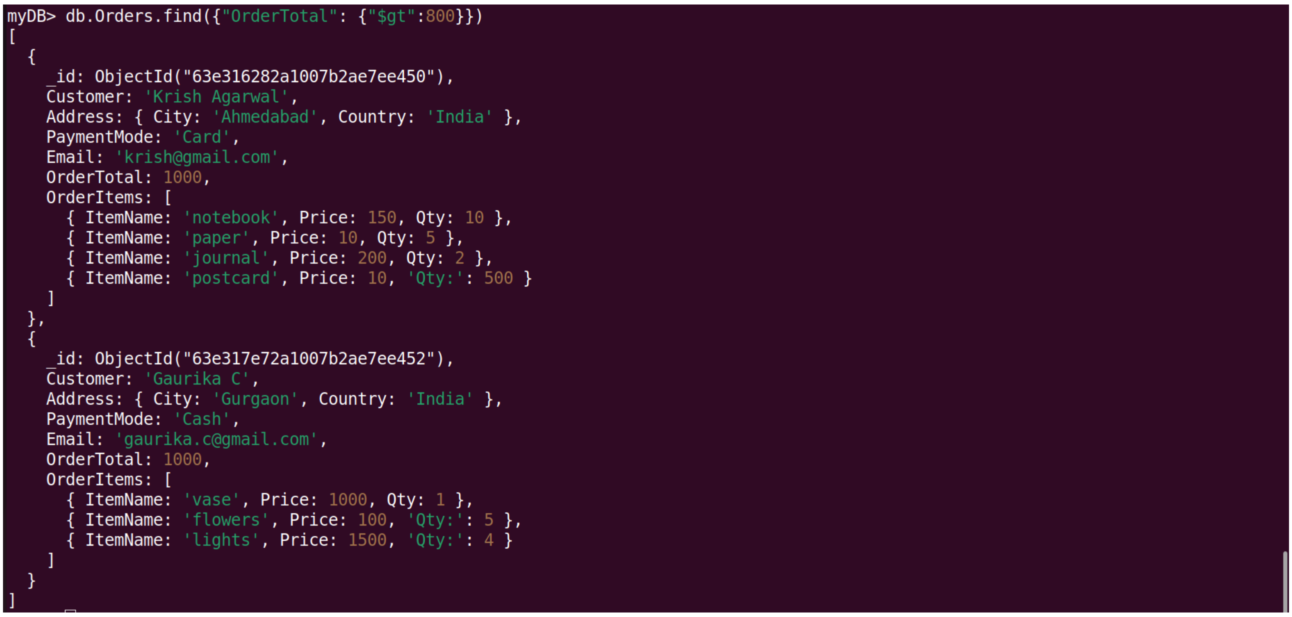
Syntax: db.Orders.find({"Address.Country":"India", "OrderItems.ItemName":"paper"}, {"Customer":1, "Address":1})



```
myDB> db.Orders.find({"Address.Country":"India", "OrderItems.ItemName":"paper"}, {"Customer":1, "Address":1})
[
  {
    _id: ObjectId("63e316282a1007b2ae7ee450"),
    Customer: 'Krish Agarwal',
    Address: { City: 'Ahmedabad', Country: 'India' }
  }
]
```

f) fetch the documents where OrderTotal is greater than 800.

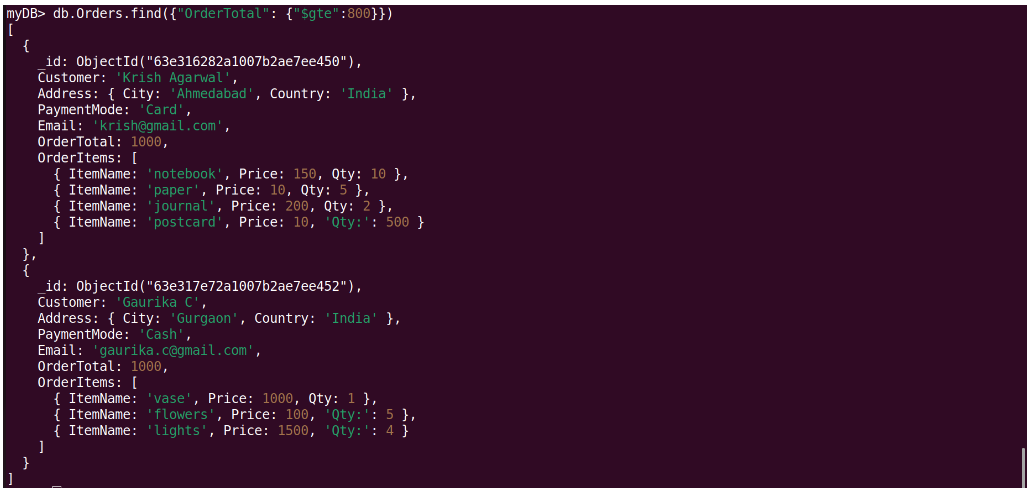
Syntax: db.Orders.find({"OrderTotal": {"$gt":800}})



```
myDB> db.Orders.find({"OrderTotal": {"$gt":800}})
[
  {
    _id: ObjectId("63e316282a1007b2ae7ee450"),
    Customer: 'Krish Agarwal',
    Address: { City: 'Ahmedabad', Country: 'India' },
    PaymentMode: 'Card',
    Email: 'krish@gmail.com',
    OrderTotal: 1000,
    OrderItems: [
      { ItemName: 'notebook', Price: 150, Qty: 10 },
      { ItemName: 'paper', Price: 10, Qty: 5 },
      { ItemName: 'journal', Price: 200, Qty: 2 },
      { ItemName: 'postcard', Price: 10, 'Qty:': 500 }
    ]
  },
  {
    _id: ObjectId("63e317e72a1007b2ae7ee452"),
    Customer: 'Gaurika C',
    Address: { City: 'Gurgaon', Country: 'India' },
    PaymentMode: 'Cash',
    Email: 'gaurika.c@gmail.com',
    OrderTotal: 1000,
    OrderItems: [
      { ItemName: 'vase', Price: 1000, Qty: 1 },
      { ItemName: 'flowers', Price: 100, 'Qty:': 5 },
      { ItemName: 'lights', Price: 1500, 'Qty:': 4 }
    ]
  }
]
```

g) fetch the documents wher OrderTotal is greater than or equal to 800.

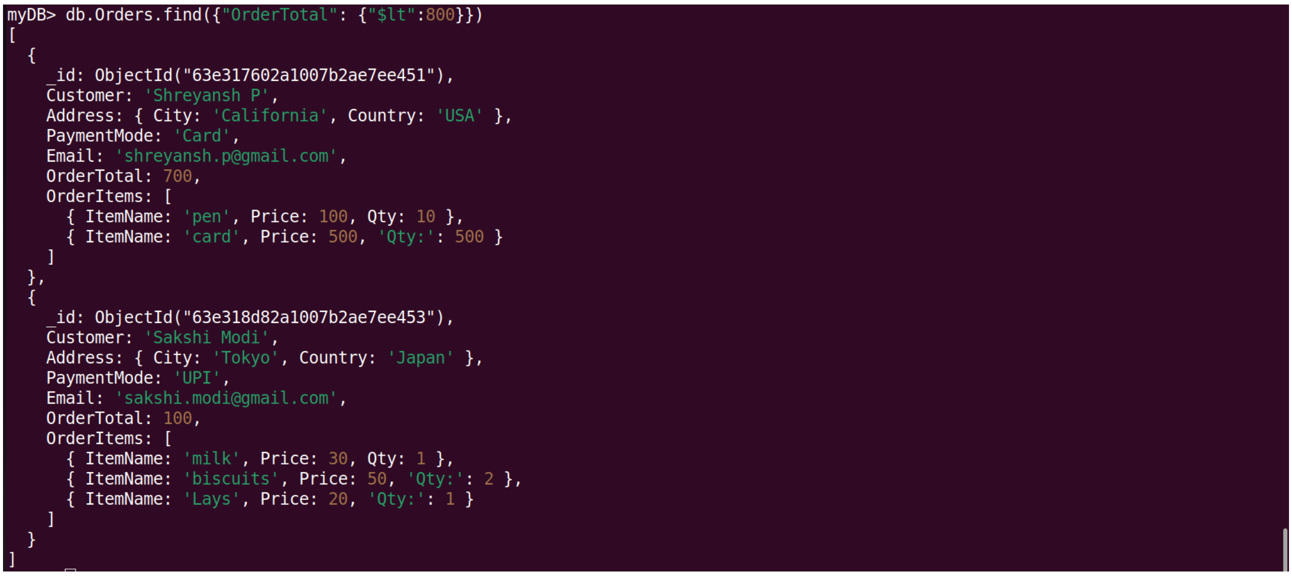
Syntax: db.Orders.find({"OrderTotal": {"$gte":800}})



```
myDB> db.Orders.find({"OrderTotal": {"$gte":800}})
[
  {
    _id: ObjectId("63e316282a1007b2ae7ee450"),
    Customer: 'Krish Agarwal',
    Address: { City: 'Ahmedabad', Country: 'India' },
    PaymentMode: 'Card',
    Email: 'krish@gmail.com',
    OrderTotal: 1000,
    OrderItems: [
      { ItemName: 'notebook', Price: 150, Qty: 10 },
      { ItemName: 'paper', Price: 10, Qty: 5 },
      { ItemName: 'journal', Price: 200, Qty: 2 },
      { ItemName: 'postcard', Price: 10, 'Qty:': 500 }
    ]
  },
  {
    _id: ObjectId("63e317e72a1007b2ae7ee452"),
    Customer: 'Gaurika C',
    Address: { City: 'Gurgaon', Country: 'India' },
    PaymentMode: 'Cash',
    Email: 'gaurika.c@gmail.com',
    OrderTotal: 1000,
    OrderItems: [
      { ItemName: 'vase', Price: 1000, Qty: 1 },
      { ItemName: 'flowers', Price: 100, 'Qty:': 5 },
      { ItemName: 'lights', Price: 1500, 'Qty:': 4 }
    ]
  }
]
```

h) fetch the documents where OrderTotal is less than 800.

Syntax: db.Orders.find({"OrderTotal": {"$lt":800}})



```
myDB> db.Orders.find({"OrderTotal": {"$lt":800}})
[
  {
    _id: ObjectId("63e317602a1007b2ae7ee451"),
    Customer: 'Shreyansh P',
    Address: { City: 'California', Country: 'USA' },
    PaymentMode: 'Card',
    Email: 'shreyansh.p@gmail.com',
    OrderTotal: 700,
    OrderItems: [
      { ItemName: 'pen', Price: 100, Qty: 10 },
      { ItemName: 'card', Price: 500, 'Qty:': 500 }
    ]
  },
  {
    _id: ObjectId("63e318d82a1007b2ae7ee453"),
    Customer: 'Sakshi Modi',
    Address: { City: 'Tokyo', Country: 'Japan' },
    PaymentMode: 'UPI',
    Email: 'sakshi.modi@gmail.com',
    OrderTotal: 100,
    OrderItems: [
      { ItemName: 'milk', Price: 30, Qty: 1 },
      { ItemName: 'biscuits', Price: 50, 'Qty:': 2 },
      { ItemName: 'Lays', Price: 20, 'Qty:': 1 }
    ]
  }
]
```