\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Match\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

customerOrder> db.customers.aggregate({$match:{age:{$gt:20},"address.city":"Kop"}})

[

{

\_id: ObjectId("653d09458017e404b2476a32"),

name: 'Mahesh Bhosale',

email: 'mahesh@gmail.com',

contact: 3213132134,

age: 21,

address: { city: 'Kop', zip: 416101 },

interestCategories: [ 'Laptop', 'Mobile', 'Book' ],

orders: [ { ordID: 4, prodName: 'Shirt', quantity: 3, price: 550 } ]

},

{

\_id: ObjectId("653d4d408017e404b2476a34"),

name: 'Abhishek Bhosale',

email: 'abhi@gmail.com',

contact: 32131343234,

age: 21,

address: { city: 'Kop', zip: 416101 },

interestCategories: [ 'Laptop', 'Mobile', 'Food' ],

orders: [ { ordID: 4, prodName: 'mobile', quantity: 1, price: 15550 } ]

}

]

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Group\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

customerOrder> db.customers.aggregate({$group:{\_id:"$address.city",totalage:{$sum:"$age"}}})

[

{ \_id: 'Kop', totalage: 62 },

{ \_id: 'baramati', totalage: 20 },

{ \_id: 'sinnar', totalage: 21 }

]

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Project\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

customerOrder> db.customers.aggregate({$match:{name:"Abhishek Bhosale"}},{$project:{name:1,orders:1,interestCategories:1,age:1}})

[

{

\_id: ObjectId("653d4d408017e404b2476a34"),

name: 'Abhishek Bhosale',

age: 21,

interestCategories: [ 'Laptop', 'Mobile', 'Food' ],

orders: [ { ordID: 4, prodName: 'mobile', quantity: 1, price: 15550 } ]

}

]

customerOrder> db.customers.find({name:"Abhishek Bhosale"})

[

{

\_id: ObjectId("653d4d408017e404b2476a34"),

name: 'Abhishek Bhosale',

email: 'abhi@gmail.com',

contact: 32131343234,

age: 21,

address: { city: 'Kop', zip: 416101 },

interestCategories: [ 'Laptop', 'Mobile', 'Food' ],

orders: [ { ordID: 4, prodName: 'mobile', quantity: 1, price: 15550 } ]

}

]

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*SORT\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

customerOrder> db.customers.aggregate({$sort:{age:1,name:-1}})

[

{

\_id: ObjectId("653f9d765fd8f0dec2ccc356"),

address: { city: 'Kop' },

name: 'Not existing account'

},

{

\_id: ObjectId("653d02bb8017e404b2476a30"),

name: 'Sumit Sunke',

email: 'sumit@gmail.com',

contact: 9011099001,

age: 20,

address: { city: 'Kop', zip: 416108 },

interestCategories: [ 'Mobile', 'Laptop', 'Shirts', 'Watch', 'Books' ],

orders: [ { ordID: 1, prodName: 'Mobile', quantity: 1, price: 15000 } ]

},

{

\_id: ObjectId("653d09458017e404b2476a31"),

name: 'Rushi Mane',

email: 'rushi@yahoo.com',

contact: 9879878765,

age: 20,

address: { city: 'baramati', zip: 413133 },

interestCategories: [ 'Bike', 'Mobile', 'Watch' ],

orders: [

{ ordID: 2, prodName: 'Watch', quantity: 1, price: 350 },

{ ordID: 3, prodName: 'Belt', quantity: 2, price: 150 }

]

},

{

\_id: ObjectId("653d4d408017e404b2476a33"),

name: 'Pavan Thorat',

email: 'pavan@gmail.com',

contact: 9879435335,

age: 21,

address: { city: 'sinnar', zip: 404115 },

interestCategories: [ 'Movies', 'Mobile', 'Shirts' ],

orders: [

{ ordID: 4, prodName: 'Movies', quantity: 1, price: 450 },

{ ordID: 3, prodName: 'Shirt', quantity: 2, price: 190 }

]

},

{

\_id: ObjectId("653d09458017e404b2476a32"),

name: 'Mahesh Bhosale',

email: 'mahesh@gmail.com',

contact: 3213132134,

age: 21,

address: { city: 'Kop', zip: 416101 },

interestCategories: [ 'Laptop', 'Mobile', 'Book' ],

orders: [ { ordID: 4, prodName: 'Shirt', quantity: 3, price: 550 } ]

},

{

\_id: ObjectId("653d4d408017e404b2476a34"),

name: 'Abhishek Bhosale',

email: 'abhi@gmail.com',

contact: 32131343234,

age: 21,

address: { city: 'Kop', zip: 416101 },

interestCategories: [ 'Laptop', 'Mobile', 'Food' ],

orders: [ { ordID: 4, prodName: 'mobile', quantity: 1, price: 15550 } ]

}

]

customerOrder>

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Limit and Skip\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

customerOrder> db.customers.aggregate({$limit:3})

[

{

\_id: ObjectId("653d02bb8017e404b2476a30"),

name: 'Sumit Sunke',

email: 'sumit@gmail.com',

contact: 9011099001,

age: 20,

address: { city: 'Kop', zip: 416108 },

interestCategories: [ 'Mobile', 'Laptop', 'Shirts', 'Watch', 'Books' ],

orders: [ { ordID: 1, prodName: 'Mobile', quantity: 1, price: 15000 } ]

},

{

\_id: ObjectId("653d09458017e404b2476a31"),

name: 'Rushi Mane',

email: 'rushi@yahoo.com',

contact: 9879878765,

age: 20,

address: { city: 'baramati', zip: 413133 },

interestCategories: [ 'Bike', 'Mobile', 'Watch' ],

orders: [

{ ordID: 2, prodName: 'Watch', quantity: 1, price: 350 },

{ ordID: 3, prodName: 'Belt', quantity: 2, price: 150 }

]

},

{

\_id: ObjectId("653d09458017e404b2476a32"),

name: 'Mahesh Bhosale',

email: 'mahesh@gmail.com',

contact: 3213132134,

age: 21,

address: { city: 'Kop', zip: 416101 },

interestCategories: [ 'Laptop', 'Mobile', 'Book' ],

orders: [ { ordID: 4, prodName: 'Shirt', quantity: 3, price: 550 } ]

}

]

customerOrder> db.customers.aggregate({$skip:3})

[

{

\_id: ObjectId("653d4d408017e404b2476a33"),

name: 'Pavan Thorat',

email: 'pavan@gmail.com',

contact: 9879435335,

age: 21,

address: { city: 'sinnar', zip: 404115 },

interestCategories: [ 'Movies', 'Mobile', 'Shirts' ],

orders: [

{ ordID: 4, prodName: 'Movies', quantity: 1, price: 450 },

{ ordID: 3, prodName: 'Shirt', quantity: 2, price: 190 }

]

},

{

\_id: ObjectId("653d4d408017e404b2476a34"),

name: 'Abhishek Bhosale',

email: 'abhi@gmail.com',

contact: 32131343234,

age: 21,

address: { city: 'Kop', zip: 416101 },

interestCategories: [ 'Laptop', 'Mobile', 'Food' ],

orders: [ { ordID: 4, prodName: 'mobile', quantity: 1, price: 15550 } ]

},

{

\_id: ObjectId("653f9d765fd8f0dec2ccc356"),

address: { city: 'Kop' },

name: 'Not existing account'

}

]

customerOrder> db.customers.aggregate({$skip:3,$limit:2})

MongoServerError: A pipeline stage specification object must contain exactly one field.

customerOrder> db.customers.aggregate({$skip:3},{$limit:2})

[

{

\_id: ObjectId("653d4d408017e404b2476a33"),

name: 'Pavan Thorat',

email: 'pavan@gmail.com',

contact: 9879435335,

age: 21,

address: { city: 'sinnar', zip: 404115 },

interestCategories: [ 'Movies', 'Mobile', 'Shirts' ],

orders: [

{ ordID: 4, prodName: 'Movies', quantity: 1, price: 450 },

{ ordID: 3, prodName: 'Shirt', quantity: 2, price: 190 }

]

},

{

\_id: ObjectId("653d4d408017e404b2476a34"),

name: 'Abhishek Bhosale',

email: 'abhi@gmail.com',

contact: 32131343234,

age: 21,

address: { city: 'Kop', zip: 416101 },

interestCategories: [ 'Laptop', 'Mobile', 'Food' ],

orders: [ { ordID: 4, prodName: 'mobile', quantity: 1, price: 15550 } ]

}

]

customerOrder>

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Indexing\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

customerOrder> db.customers.createIndex({name:1})

name\_1

customerOrder> db.customers.getIndex()

TypeError: db.customers.getIndex is not a function

customerOrder> db.customers.getIndexes()

[

{ v: 2, key: { \_id: 1 }, name: '\_id\_' },

{ v: 2, key: { name: 1 }, name: 'name\_1' }

]

customerOrder> db.customers.ensureIndex()

TypeError: Cannot convert undefined or null to object

customerOrder> db.customers.createIndex({name:1,age:1})

name\_1\_age\_1

customerOrder> db.customers.getIndexes()

[

{ v: 2, key: { \_id: 1 }, name: '\_id\_' },

{ v: 2, key: { name: 1 }, name: 'name\_1' },

{ v: 2, key: { name: 1, age: 1 }, name: 'name\_1\_age\_1' }

]

customerOrder> db.customers.ensureIndex({name\_1})

ReferenceError: name\_1 is not defined

customerOrder> db.customers.ensureIndex({name\_1:1})

[ 'name\_1\_1' ]

customerOrder> db.customers.ensureIndex({name\_1:-1})

[ 'name\_1\_-1' ]

customerOrder> db.customers.getIndexes()

[

{ v: 2, key: { \_id: 1 }, name: '\_id\_' },

{ v: 2, key: { name: 1 }, name: 'name\_1' },

{ v: 2, key: { name: 1, age: 1 }, name: 'name\_1\_age\_1' },

{ v: 2, key: { name\_1: 1 }, name: 'name\_1\_1' },

{ v: 2, key: { name\_1: -1 }, name: 'name\_1\_-1' }

]

customerOrder> db.customers.dropIndex({name\_1:-1})

{ nIndexesWas: 5, ok: 1 }

customerOrder> db.customers.getIndexes()

[

{ v: 2, key: { \_id: 1 }, name: '\_id\_' },

{ v: 2, key: { name: 1 }, name: 'name\_1' },

{ v: 2, key: { name: 1, age: 1 }, name: 'name\_1\_age\_1' },

{ v: 2, key: { name\_1: 1 }, name: 'name\_1\_1' }

]

customerOrder> db.customers.dropIndex({name\_1:1})

{ nIndexesWas: 4, ok: 1 }

customerOrder> db.customers.getIndexes()

[

{ v: 2, key: { \_id: 1 }, name: '\_id\_' },

{ v: 2, key: { name: 1 }, name: 'name\_1' },

{ v: 2, key: { name: 1, age: 1 }, name: 'name\_1\_age\_1' }

]

customerOrder>

db.customers.aggregate([

{

$group: {

\_id: null, // Use null as the \_id to group all documents into one group

distinctCities: { $addToSet: "$city" }

}

},

{

$project: {

\_id: 0,

distinctCityCount: { $size: "$distinctCities" }

}

}

])