**1. To create a product details collection which includes the following fields**

**product\_id, product\_name, price, no.quantity, company:{name,purchasedate}**

**Note: create 12 records and repeat multiple products entry with different purchase date**

use products

switched to db products

**. To create a product details collection**

products> db.createCollection("product\_details")

{ ok: 1 }

products> db.product\_details.insert({product\_id:263,product\_name:"iphone11",price:1500000,no\_quantity:3,company:{name:"apple",purchasedate:new Date("jan 12,2001")}})

DeprecationWarning: Collection.insert() is deprecated. Use insertOne, insertMany, or bulkWrite.

{

acknowledged: true,

insertedIds: { '0': ObjectId("644251ce2d1bd584e9f44e84") }

}

products> db.product\_details.insert({product\_id:263,product\_name:"samsung galaxy",price:1500000,no\_quantity:3,company:{name:"samsung",purchasedate:new Date("jan 12,2002")}})

{

acknowledged: true,

insertedIds: { '0': ObjectId("644252922d1bd584e9f44e85") }

}

products> db.product\_details.insert({product\_id:263,product\_name:"oppo a5",price:1500000,no\_quantity:3,company:{name:"oppo",purchasedate:new Date("feb 12,2002")}})

{

acknowledged: true,

insertedIds: { '0': ObjectId("644252c12d1bd584e9f44e86") }

}

products> db.product\_details.insert({product\_id:263,product\_name:"iphone11",price:1500000,no\_quantity:3,company:{name:"apple",purchasedate:new Date("feb 13,2002")}})

{

acknowledged: true,

insertedIds: { '0': ObjectId("644252e82d1bd584e9f44e87") }

}

products> db.product\_details.insert({product\_id:263,product\_name:"iphone11",price:1500000,no\_quantity:3,company:{name:"apple",purchasedate:new Date("feb 13,2012")}})

{

acknowledged: true,

insertedIds: { '0': ObjectId("644253222d1bd584e9f44e88") }

}

products> db.product\_details.insert({product\_id:253,product\_name:"viovo v5",price:1580000,no\_quantity:3,company:{name:"vivo",purchasedate:new Date("feb 03,2012")}})

{

acknowledged: true,

insertedIds: { '0': ObjectId("6442535d2d1bd584e9f44e89") }

}

products> db.product\_details.insert({product\_id:285,product\_name:"iphone11",price:1580000,no\_quantity:3,company:{name:"apple",purchasedate:new Date("feb 03,2018")}})

{

acknowledged: true,

insertedIds: { '0': ObjectId("644253932d1bd584e9f44e8a") }

}

products> db.product\_details.insert({product\_id:290,product\_name:"iphone11",price:1600000,no\_quantity:7,company:{name:"apple",purchasedate:new Date("feb 03,2022")}})

{

acknowledged: true,

insertedIds: { '0': ObjectId("644253d52d1bd584e9f44e8b") }

}

products> db.product\_details.insert({product\_id:320,product\_name:"redmi note10",price:16000,no\_quantity:7,company:{name:"redmi",purchasedate:new Date("jun 04,2022")}})

{

acknowledged: true,

insertedIds: { '0': ObjectId("6442541a2d1bd584e9f44e8c") }

}

products>

products> db.product\_details.insert({product\_id:467,product\_name:"realme narzo",price:16000,no\_quantity:3,company:{name:"realme",purchasedate:new Date("jun 04,2023")}})

{

acknowledged: true,

insertedIds: { '0': ObjectId("644254752d1bd584e9f44e8d") }

}

products> db.product\_details.insert({product\_id:554,product\_name:"asus rog",price:15000,no\_quantity:3,company:{name:"asus",purchasedate:new Date("aug 04,2023")}})

{

acknowledged: true,

insertedIds: { '0': ObjectId("644254ee2d1bd584e9f44e8e") }

}

products> db.product\_details.insert({product\_id:074,product\_name:"asus",price:15000,no\_quantity:3,company:{name:"asus",purchasedate:new Date("feb 04,2023")}})

{

acknowledged: true,

insertedIds: { '0': ObjectId("644255342d1bd584e9f44e8f") }

}

**Output:**

{

\_id: ObjectId("644251ce2d1bd584e9f44e84"),

product\_id: 263,

product\_name: 'iphone11',

price: 1500000,

no\_quantity: 3,

company: {

name: 'apple',

purchasedate: ISODate("2001-01-11T18:30:00.000Z")

}

},

{

\_id: ObjectId("644252922d1bd584e9f44e85"),

product\_id: 263,

product\_name: 'samsung galaxy',

price: 1500000,

no\_quantity: 3,

company: {

name: 'samsung',

purchasedate: ISODate("2002-01-11T18:30:00.000Z")

}

},

{

\_id: ObjectId("644252c12d1bd584e9f44e86"),

product\_id: 263,

product\_name: 'oppo a5',

price: 1500000,

no\_quantity: 3,

company: { name: 'oppo', purchasedate: ISODate("2002-02-11T18:30:00.000Z") }

},

{

\_id: ObjectId("644252e82d1bd584e9f44e87"),

product\_id: 263,

product\_name: 'iphone11',

price: 1500000,

no\_quantity: 3,

company: {

name: 'apple',

purchasedate: ISODate("2002-02-12T18:30:00.000Z")

}

},

{

\_id: ObjectId("644253222d1bd584e9f44e88"),

product\_id: 263,

product\_name: 'iphone11',

price: 1500000,

no\_quantity: 3,

company: {

name: 'apple',

purchasedate: ISODate("2012-02-12T18:30:00.000Z")

}

},

{

\_id: ObjectId("6442535d2d1bd584e9f44e89"),

product\_id: 253,

product\_name: 'viovo v5',

price: 1580000,

no\_quantity: 3,

company: { name: 'vivo', purchasedate: ISODate("2012-02-02T18:30:00.000Z") }

},

{

\_id: ObjectId("644253932d1bd584e9f44e8a"),

product\_id: 285,

product\_name: 'iphone11',

price: 1580000,

no\_quantity: 3,

company: {

name: 'apple',

purchasedate: ISODate("2018-02-02T18:30:00.000Z")

}

},

{

\_id: ObjectId("644253d52d1bd584e9f44e8b"),

product\_id: 290,

product\_name: 'iphone11',

price: 1600000,

no\_quantity: 7,

company: {

name: 'apple',

purchasedate: ISODate("2022-02-02T18:30:00.000Z")

}

},

{

\_id: ObjectId("6442541a2d1bd584e9f44e8c"),

product\_id: 320,

product\_name: 'redmi note10',

price: 16000,

no\_quantity: 7,

company: {

name: 'redmi',

purchasedate: ISODate("2022-06-03T18:30:00.000Z")

}

},

{

\_id: ObjectId("644254752d1bd584e9f44e8d"),

product\_id: 467,

product\_name: 'realme narzo',

price: 16000,

no\_quantity: 3,

company: {

name: 'realme',

purchasedate: ISODate("2023-06-03T18:30:00.000Z")

}

},

{

\_id: ObjectId("644254ee2d1bd584e9f44e8e"),

product\_id: 554,

product\_name: 'asus rog',

price: 15000,

no\_quantity: 3,

company: { name: 'asus', purchasedate: ISODate("2023-08-03T18:30:00.000Z") }

},

{

\_id: ObjectId("644255342d1bd584e9f44e8f"),

product\_id: 60,

product\_name: 'asus',

price: 15000,

no\_quantity: 3,

company: { name: 'asus', purchasedate: ISODate("2023-02-03T18:30:00.000Z") }

}

]

**2. To display five matching of a product name "iphone 11".**

products> db.product\_details.aggregate([{$match:{product\_name:"iphone11"}}])

[

{

\_id: ObjectId("644251ce2d1bd584e9f44e84"),

product\_id: 263,

product\_name: 'iphone11',

price: 1500000,

no\_quantity: 3,

company: {

name: 'apple',

purchasedate: ISODate("2001-01-11T18:30:00.000Z")

}

},

{

\_id: ObjectId("644252e82d1bd584e9f44e87"),

product\_id: 263,

product\_name: 'iphone11',

price: 1500000,

no\_quantity: 3,

company: {

name: 'apple',

purchasedate: ISODate("2002-02-12T18:30:00.000Z")

}

},

{

\_id: ObjectId("644253222d1bd584e9f44e88"),

product\_id: 263,

product\_name: 'iphone11',

price: 1500000,

no\_quantity: 3,

company: {

name: 'apple',

purchasedate: ISODate("2012-02-12T18:30:00.000Z")

}

},

{

\_id: ObjectId("644253932d1bd584e9f44e8a"),

product\_id: 285,

product\_name: 'iphone11',

price: 1580000,

no\_quantity: 3,

company: {

name: 'apple',

purchasedate: ISODate("2018-02-02T18:30:00.000Z")

}

},

{

\_id: ObjectId("644253d52d1bd584e9f44e8b"),

product\_id: 290,

product\_name: 'iphone11',

price: 1600000,

no\_quantity: 7,

company: {

name: 'apple',

purchasedate: ISODate("2022-02-02T18:30:00.000Z")

}

}

]

**. To group all the products based on their company name.**

**example:**

**iPhone 11 - Apple - 5**

products> db.product\_details.aggregate([{$match:{product\_name:"iphone11"}},{$group:{\_id:"$company.name",count:{$sum:1}}}])

[ { \_id: 'apple', count: 5 } ]

**4.To group all the products and its total sum\_price.**

products> db.product\_details.aggregate([{$group:{\_id:"$product\_name",totalsumprice:{$sum:"$price"}}}])

[

{ \_id: 'iphone11', totalsumprice: 7680000 },

{ \_id: 'asus', totalsumprice: 15000 },

{ \_id: 'viovo v5', totalsumprice: 1580000 },

{ \_id: 'redmi note10', totalsumprice: 16000 },

{ \_id: 'oppo a5', totalsumprice: 1500000 },

{ \_id: 'realme narzo', totalsumprice: 16000 },

{ \_id: 'asus rog', totalsumprice: 15000 },

{ \_id: 'samsung galaxy', totalsumprice: 1500000 }

]

**5..To group all the products , total sum\_price, and average price .of a product.**

products> db.product\_details.aggregate([{$group:{\_id:"$product\_name",avgprice:{$avg:"$price"}}}])

[

{ \_id: 'iphone11', avgprice: 1536000 },

{ \_id: 'asus', avgprice: 15000 },

{ \_id: 'viovo v5', avgprice: 1580000 },

{ \_id: 'redmi note10', avgprice: 16000 },

{ \_id: 'oppo a5', avgprice: 1500000 },

{ \_id: 'realme narzo', avgprice: 16000 },

{ \_id: 'asus rog', avgprice: 15000 },

{ \_id: 'samsung galaxy', avgprice: 1500000 }

]

**6. To group all the products and sort it based on the company name.**

products> db.product\_details.find({},{"product\_name":1,"\_id":0}).sort({"product\_name":1})

[

{ product\_name: 'asus' },

{ product\_name: 'asus rog' },

{ product\_name: 'iphone11' },

{ product\_name: 'iphone11' },

{ product\_name: 'iphone11' },

{ product\_name: 'iphone11' },

{ product\_name: 'iphone11' },

{ product\_name: 'oppo a5' },

{ product\_name: 'realme narzo' },

{ product\_name: 'redmi note10' },

{ product\_name: 'samsung galaxy' },

{ product\_name: 'viovo v5' }

]

**Decending order:**

**products> db.product\_details.find({},{"product\_name":1,"\_id":0}).sort({"product\_name":-1})**

**[**

**{ product\_name: 'viovo v5' },**

**{ product\_name: 'samsung galaxy' },**

**{ product\_name: 'redmi note10' },**

**{ product\_name: 'realme narzo' },**

**{ product\_name: 'oppo a5' },**

**{ product\_name: 'iphone11' },**

**{ product\_name: 'iphone11' },**

**{ product\_name: 'iphone11' },**

**{ product\_name: 'iphone11' },**

**{ product\_name: 'iphone11' },**

**{ product\_name: 'asus rog' },**

**{ product\_name: 'asus' }**

**]**