* 1. **db.ProductCollection.aggregate([{$match:{prodCat:"Electronics"}}]).pretty();**

{

"\_id" : 1,

"prodCat" : "Electronics",

"price" : 40000,

"quantity" : 2,

"orderInfo" : {

"\_id" : "O001",

"orderdate" : ISODate("2014-01-01T00:00:00Z"),

"address" : {

"street" : "66,Airoli",

"city" : "Mumbai",

"state" : "MS",

"zipcode" : 700987,

"coords" : [

-73.856077,

40.848447

]

},

"email" : "capgemini@capgemini.com",

"mobiles" : [

8888108810

]

},

"productName" : "Laptop"

}

{

"\_id" : 2,

"prodCat" : "Electronics",

"price" : 15000,

"quantity" : 10,

"orderInfo" : {

"\_id" : "O002",

"orderdate" : ISODate("2010-03-12T00:00:00Z"),

"address" : {

"street" : "FC Road",

"city" : "Pune",

"state" : "MS",

"zipcode" : 40081,

"coords" : [

-23.80007,

30.1123456

]

},

"email" : "icres@ibm.com",

"mobiles" : [

9856342189

]

},

"productName" : "Mobile"

}

{

"\_id" : 5,

"prodCat" : "Electronics",

"price" : 70000,

"quantity" : 10,

"orderInfo" : {

"\_id" : "O003",

"orderdate" : ISODate("2012-06-17T00:00:00Z"),

"address" : {

"street" : "GT Road",

"city" : "Sahibabad",

"state" : "UP",

"zipcode" : 567777,

"coords" : [

-11.80007,

13.1123456

]

},

"email" : "techm@techm.com",

"mobiles" : [

7865452222

]

},

"productName" : "TV"

}

{

"\_id" : 10,

"prodCat" : "Electronics",

"price" : 500000,

"quantity" : 16,

"orderInfo" : {

"\_id" : "O004",

"orderdate" : ISODate("2010-02-12T00:00:00Z"),

"address" : {

"street" : "Sambhaji Chowk",

"city" : "Pune",

"state" : "MS",

"zipcode" : 474003,

"coords" : [

-82.90007,

49.8983456

]

},

"email" : "gym@ibm.com",

"mobiles" : [

4367687687

]

},

"productName" : "Laptop"

}

* 1. **db.ProductCollection.aggregate([{$group:{\_id:"$prodCat", count:{$sum:1}}}]).pr**

**etty();**

{ "\_id" : "Jewellery", "count" : 1 }

{ "\_id" : "Electronics", "count" : 4 }

{ "\_id" : "Clothing", "count" : 2 }

{ "\_id" : "Accessories", "count" : 1 }

* 1. **db.ProductCollection.aggregate([{$match:{prodCat:"Jewellery"}},{$group:{\_id:"$**

**prodCat", count:{$sum:1}}}]).pretty();**

{ "\_id" : "Jewellery", "count" : 1 }

* 1. **db.ProductCollection.aggregate([{$group:{\_id:"$prodCat",avgAmount:{$avg:{$mult**

**iply:["$price","$quantity"]}},avgQuantity:{$avg:"$quantity"}}}])**

{ "\_id" : "Jewellery", "avgAmount" : 4000, "avgQuantity" : 1 }

{ "\_id" : "Electronics", "avgAmount" : 2232500, "avgQuantity" : 9.5 }

{ "\_id" : "Clothing", "avgAmount" : 2346800, "avgQuantity" : 5 }

{ "\_id" : "Accessories", "avgAmount" : 33600, "avgQuantity" : 14 }

* 1. **db.ProductCollection.aggregate([{$match:{quantity:{$gt:30}}},{$project:{produc**

**tName:1,price:1,prodCat:1}}])**

{ "\_id" : 2, "prodCat" : "Electronics", "price" : 15000, "productName" : "Mobile

" }

{ "\_id" : 10, "prodCat" : "Electronics", "price" : 500000, "productName" : "Lapt

op" }

* 1. **db.ProductCollection.aggregate([{$sort:{quantity:1}}]).pretty();**

{

"\_id" : 6,

"prodCat" : "Jewellery",

"price" : 4000,

"quantity" : 1,

"orderInfo" : {

"\_id" : "O004",

"orderdate" : ISODate("2010-05-16T00:00:00Z"),

"address" : {

"street" : "Salt Lake",

"city" : "Kolkata",

"state" : "West Bengol",

"zipcode" : 222224,

"coords" : [

-67.850007,

9.456666

]

},

"email" : "vaishali@gmail.com",

"mobiles" : [

8888108850,

9402312123

]

},

"productName" : "Bangles"

}

{

"\_id" : 1,

"prodCat" : "Electronics",

"price" : 40000,

"quantity" : 2,

"orderInfo" : {

"\_id" : "O001",

"orderdate" : ISODate("2014-01-01T00:00:00Z"),

"address" : {

"street" : "66,Airoli",

"city" : "Mumbai",

"state" : "MS",

"zipcode" : 700987,

"coords" : [

-73.856077,

40.848447

]

},

"email" : "capgemini@capgemini.com",

"mobiles" : [

8888108810

]

},

"productName" : "Laptop"

}

{

"\_id" : 3,

"prodCat" : "Clothing",

"price" : 1200,

"quantity" : 3,

"orderInfo" : {

"\_id" : "O003",

"orderdate" : ISODate("2014-03-05T00:00:00Z"),

"address" : {

"street" : "56,Nigadi",

"city" : "Pune",

"state" : "MS",

"zipcode" : 411044,

"coords" : [

-45.897677,

56.987647

]

},

"email" : "gestabin@capgemini.com",

"mobiles" : [

7867676686,

"9087987987"

]

},

"orderstatus" : "Pending",

"productName" : "Polo Tshirt"

}

{

"\_id" : 5,

"prodCat" : "Electronics",

"price" : 70000,

"quantity" : 10,

"orderInfo" : {

"\_id" : "O003",

"orderdate" : ISODate("2012-06-17T00:00:00Z"),

"address" : {

"street" : "GT Road",

"city" : "Sahibabad",

"state" : "UP",

"zipcode" : 567777,

"coords" : [

-11.80007,

13.1123456

]

},

"email" : "techm@techm.com",

"mobiles" : [

7865452222

]

},

"productName" : "TV"

}

{

"\_id" : 7,

"prodCat" : "Accessories",

"price" : 2400,

"quantity" : 14,

"orderInfo" : {

"\_id" : "O007",

"orderdate" : ISODate("2012-07-11T00:00:00Z"),

"address" : {

"street" : "MG Road",

"city" : "Delhi",

"state" : "Delhi",

"zipcode" : 547567,

"coords" : [

-11.80007,

63.9897656

]

},

"email" : "capg@techm.com",

"mobiles" : [

7865786967

]

},

"productName" : "Watch"

}

{

"\_id" : 2,

"prodCat" : "Electronics",

"price" : 15000,

"quantity" : 45,

"orderInfo" : {

"\_id" : "O002",

"orderdate" : ISODate("2010-03-12T00:00:00Z"),

"address" : {

"street" : "FC Road",

"city" : "Pune",

"state" : "MS",

"zipcode" : 40081,

"coords" : [

-23.80007,

30.1123456

]

},

"email" : "icres@ibm.com",

"mobiles" : [

9856342189

]

},

"productName" : "Mobile"

}

{

"\_id" : 10,

"prodCat" : "Electronics",

"price" : 500000,

"quantity" : 60,

"orderInfo" : {

"\_id" : "O004",

"orderdate" : ISODate("2010-02-12T00:00:00Z"),

"address" : {

"street" : "Sambhaji Chowk",

"city" : "Pune",

"state" : "MS",

"zipcode" : 474003,

"coords" : [

-82.90007,

49.8983456

]

},

"email" : "gym@ibm.com",

"mobiles" : [

4367687687

]

},

"productName" : "Laptop"

}

* 1. **db.ProductCollection.aggregate([{$group:{\_id:"$prodCat",total:{$sum:"$price"}}**

**}])**

{ "\_id" : "Jewellery", "total" : 4000 }

{ "\_id" : "Electronics", "total" : 625000 }

{ "\_id" : "Clothing", "total" : 671200 }

{ "\_id" : "Accessories", "total" : 2400 }



**db.ProductCollection.aggregate([{$group:{\_id:1,ProductName:{$max:"$productName**

**"},quantity:{$max:"$quantity"}}}])**

{ "\_id" : 1, "ProductName" : "Watch", "quantity" : 60 }

* 1. **db.ProductCollection.aggregate([{$project:{productName:1,year: { $year: "$orde**

**rInfo.orderdate" }}},{$match:{year:2010}}])**

{ "\_id" : 2, "productName" : "Mobile", "year" : 2010 }

{ "\_id" : 6, "productName" : "Bangles", "year" : 2010 }

{ "\_id" : 8, "productName" : "Jeans", "year" : 2010 }

{ "\_id" : 10, "productName" : "Laptop", "year" : 2010 }

* 1. **db.ProductCollection.aggregate([{$project:{productName:1,price:1,prodCat:1}},{**

**$sort:{prodCat:1}}])**

{ "\_id" : 7, "prodCat" : "Accessories", "price" : 2400, "productName" : "Watch"

}

{ "\_id" : 3, "prodCat" : "Clothing", "price" : 1200, "productName" : "Polo Tshir

t" }

{ "\_id" : 8, "prodCat" : "Clothing", "price" : 670000, "productName" : "Jeans" }

{ "\_id" : 1, "prodCat" : "Electronics", "price" : 40000, "productName" : "Laptop

" }

{ "\_id" : 2, "prodCat" : "Electronics", "price" : 15000, "productName" : "Mobile

" }

{ "\_id" : 5, "prodCat" : "Electronics", "price" : 70000, "productName" : "TV" }

{ "\_id" : 10, "prodCat" : "Electronics", "price" : 500000, "productName" : "Lapt

op" }

{ "\_id" : 6, "prodCat" : "Jewellery", "price" : 4000, "productName" : "Bangles"

}