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(1BM19CS075)

1)
1.1
>use Faculty
> db.createCollection("faculty")
1.2
> db.faculty.insert({_id:1,name:"abc",designation:"assistant
prof",department:"mech",age:31,salary:90000,specialization:['python','mysql','autocad']});
1.3
> db.faculty.aggregate ({$match:{department:"mech"}}, {$group : {_id : "$designation",
AverageSal :{$avg:"$salary"} } }, {$match:{AverageSal:{$gt:50000}}});

{ "_id" : " associate prof", "AverageSal" : 85000 }
{ "_id" : "assistant prof", "AverageSal" : 70000 }

2)
> use Products
switched to db Products
> db.createCollection("product");
{ "ok" : 1 }
> db.product.insert({pid:1,pname:"keyboard",mdate:2001,price:1800,quantity:2});
WriteResult({ "nInserted" : 1 })

2.1
> db.product.find({},{pname:1,_id:0})
{ "pname" : "keyboard" }
{ "pname" : "mouse" }
{ "pname" : "motherboard" }

2.2
> db.product.find({pid:1},{pid:1,_id:0,mdate:1,quantity:1});
{ "pid" : 1, "mdate" : 2001, "quantity" : 2 }

2.3
> db.product.find({price:{$ne:45000}},{pname:1,_id:0});
{ "pname" : "keyboard" }
{ "pname" : "mouse" }
{ "pname" : "motherboard" }

2.4
> db.product.find({$and:[{quantity:{$eq:30}},{pname:{$eq:"LED TV"}}]},{pname:1,_id:0})

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{ "pname" : "LED TV" }

2.5
> db.product.find({pname:/d$/},{pname:1,quantity:1,_id:0})
{ "pname" : "keyboard", "quantity" : 2 }
{ "pname" : "motherboard", "quantity" : 150 }


3
3.1
> use Hospital
switched to db Hospital
> db.createCollection("hospital");
{ "ok" : 1 }
> db.hospital.insert({_id:1,name:"xyz",diseases:["diabetes","high bp","fever"]});
WriteResult({ "nInserted" : 1 })


3.2.1
> db.hospital.updateMany({},{$pull:{diseases:"fever"}});
{ "acknowledged" : true, "matchedCount" : 3, "modifiedCount" : 2 }
3.2.2
> db.hospital.updateOne({_id:1},{$pop:{diseases:-1}});
{ "acknowledged" : true, "matchedCount" : 1, "modifiedCount" : 1 }


3.3
> db.hospital.find({"diseases.2":"nausea"});
{ "_id" : 3, "name" : "mno", "diseases" : [ "covid", "sarscov", "nausea" ] }


3.4
> db.hospital.find({}).count();
3

> db.hospital.find({}).limit(2);
{ "_id" : 1, "name" : "xyz", "diseases" : [ "high bp" ] }
{ "_id" : 2, "name" : "abc", "diseases" : [ "typhoid", "cholera" ] }

> db.hospital.find({}).size();
3



3.5
> db.hospital.update({_id:3},{$set:{'diseases.1':'sarscov'}});
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
```