

Name:Kavya K
Usn:1NT18IS078
Subject:Big data lab

use marksdb;

Result:switched to db marksdb

db.createCollection("mark");

db.mark.find().pretty();

```
{
  "_id" : ObjectId("60f06409f326e885094c788f"),
  "name" : "kavya",
  "usn" : "1NT18IS078",
  "subject1" : 70,
  "subject2" : 40,
  "subject3" : 80,
  "result" : "P"
}
{
  "_id" : ObjectId("60f06452f326e885094c7890"),
  "name" : "kshithija",
  "usn" : "1NT18IS068",
  "subject1" : 70,
  "subject2" : 20,
  "subject3" : 70,
  "result" : "F"
}
{
  "_id" : ObjectId("60f0647bf326e885094c7891"),
  "name" : "anusha",
  "usn" : "1NT18IS066",
  "subject1" : 70,
  "subject2" : 10,
  "subject3" : 30,
  "result" : "F"
}
{
  "_id" : ObjectId("60f064a1f326e885094c7892"),
  "name" : "vidusha",
  "usn" : "1NT18IS067",
  "subject1" : 70,
  "subject2" : 90,
  "subject3" : 50,
```

```
"result" : "P"
}
{
  "_id" : ObjectId("60f0652ff326e885094c7893"),
  "name" : "vidya",
  "usn" : "1NT18IS055",
  "subject1" : 80,
  "subject2" : 40,
  "subject3" : 50,
  "result" : "P"
}
{
  "_id" : ObjectId("60f06979dc1f69b9b5d68a2e"),
  "name" : "aishwarya",
  "usn" : "1NT18IS044",
  "subject1" : 28,
  "subject2" : 33,
  "subject3" : 50,
  "result" : "F"
}
{
  "_id" : ObjectId("60f06999dc1f69b9b5d68a2f"),
  "name" : "prajna",
  "usn" : "1NT18IS090",
  "subject1" : 55,
  "subject2" : 66,
  "subject3" : 50,
  "result" : "P"
}
{
  "_id" : ObjectId("60f069b7dc1f69b9b5d68a30"),
  "name" : "pravya",
  "usn" : "1NT18IS091",
  "subject1" : 99,
  "subject2" : 66,
  "subject3" : 78,
  "result" : "F"
}
{
  "_id" : ObjectId("60f069dbdc1f69b9b5d68a31"),
  "name" : "piyush",
  "usn" : "1NT18IS092",
  "subject1" : 45,
  "subject2" : 33,
```

```
    "subject3" : 22,
    "result" : "F"
  }
  {
    "_id" : ObjectId("60f069f6dc1f69b9b5d68a32"),
    "name" : "ahana",
    "usn" : "1NT18IS093",
    "subject1" : 88,
    "subject2" : 77,
    "subject3" : 66,
    "result" : "P"
  }
  {
    "_id" : ObjectId("60f06a17dc1f69b9b5d68a33"),
    "name" : "roshan",
    "usn" : "1NT18IS094",
    "subject1" : 37,
    "subject2" : 33,
    "subject3" : 48,
    "result" : "F"
  }
  {
    "_id" : ObjectId("60f06a54dc1f69b9b5d68a34"),
    "name" : "radha",
    "usn" : "1NT18IS095",
    "subject1" : 56,
    "subject2" : 49,
    "subject3" : 48,
    "result" : "P"
  }
  {
    "_id" : ObjectId("60f06a6adc1f69b9b5d68a35"),
    "name" : "vidha",
    "usn" : "1NT18IS096",
    "subject1" : 56,
    "subject2" : 67,
    "subject3" : 48,
    "result" : "P"
  }
  {
    "_id" : ObjectId("60f06ab6dc1f69b9b5d68a36"),
    "name" : "divya",
    "usn" : "1NT18IS097",
    "subject1" : 66,
```

```

      "subject2" : 67,
      "subject3" : 46,
      "result" : "P"
    }
  {
    "_id" : ObjectId("60f06ad7dc1f69b9b5d68a37"),
    "name" : "darshan",
    "usn" : "1NT18IS098",
    "subject1" : 30,
    "subject2" : 42,
    "subject3" : 20,
    "result" : "F"
  }
  {
    "_id" : ObjectId("60f06af3dc1f69b9b5d68a38"),
    "name" : "pradeep",
    "usn" : "1NT18IS099",
    "subject1" : 60,
    "subject2" : 42,
    "subject3" : 93,
    "result" : "P"
  }
  {
    "_id" : ObjectId("60f06b0edc1f69b9b5d68a39"),
    "name" : "kala",
    "usn" : "1NT18IS101",
    "subject1" : 70,
    "subject2" : 62,
    "subject3" : 93,
    "result" : "P"
  }
}

```

1) Demonstrate the usage of \$match, \$group, \$aggregate pipelines.

> db.mark.aggregate([{ \$match : { name: "kavya" } }]).pretty()

```

{
  "_id" : ObjectId("60f06409f326e885094c788f"),
  "name" : "kavya",
  "usn" : "1NT18IS078",
  "subject1" : 70,
  "subject2" : 40,
  "subject3" : 80,
  "result" : "P"
}

```

```
db.mark.aggregate([{$group : {_id:"$name" }}]).pretty()
```

```
{ "_id" : "prajna" }  
{ "_id" : "kshithija" }  
{ "_id" : "ahana" }  
{ "_id" : "kavya" }  
{ "_id" : "vidya" }  
{ "_id" : "piyush" }  
{ "_id" : "anusha" }  
{ "_id" : "pradeep" }  
{ "_id" : "darshan" }  
{ "_id" : "pravya" }  
{ "_id" : "vidha" }  
{ "_id" : "aishwarya" }  
{ "_id" : "vidusha" }  
{ "_id" : "kala" }  
{ "_id" : "roshan" }  
{ "_id" : "radha" }  
{ "_id" : "divya" }
```

```
db.mark.aggregate([{$match : {subject1:{$gt:70}}},{ $group:{_id:"$name" }}]).pretty()
```

```
{ "_id" : "vidya" }  
{ "_id" : "pravya" }  
{ "_id" : "ahana" }
```

2) Demonstrate the Map-reduce aggregate function on this dataset.

```
var mapFunc = function(){emit(this.name,this.subject2);};
```

```
> var reducerFunc = function(name,subject2){return Array.sum(subject2);};
```

```
> db.mark.mapReduce(mapFunc,reducerFunc,{out:"output"});
```

```
{ "result" : "output", "ok" : 1 }
```

```
> db.output.find().pretty()
```

```
{ "_id" : "roshan", "value" : 33 }  
{ "_id" : "aishwarya", "value" : 33 }  
{ "_id" : "vidusha", "value" : 90 }  
{ "_id" : "divya", "value" : 67 }  
{ "_id" : "kala", "value" : 62 }  
{ "_id" : "radha", "value" : 49 }  
{ "_id" : "pravya", "value" : 66 }  
{ "_id" : "vidha", "value" : 67 }  
{ "_id" : "kavya", "value" : 40 }  
{ "_id" : "vidya", "value" : 40 }  
{ "_id" : "piyush", "value" : 33 }
```

```
{ "_id" : "pradeep", "value" : 42 }
{ "_id" : "darshan", "value" : 42 }
{ "_id" : "anusha", "value" : 10 }
{ "_id" : "kshithija", "value" : 20 }
{ "_id" : "ahana", "value" : 77 }
{ "_id" : "prajna", "value" : 66 }
```

3) Count the number of students who have passed in at least two subjects.

```
db.mark.aggregate([ { $match: { $and:  
[{subject1:{$gt:40}},{subject2:{$gt:40}}]},{ $count:"passed_twosubject"} ]});  
{ "passed_twosubject" : 9 }
```

4) Demonstrate the alter and drop commands on this dataset.

```
> db.mark.update({name:"kavya"},{$set:{usn:"1NT18IS077"}})  
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })  
> db.mark.find({name:"kavya"})  
{ "_id" : ObjectId("60f06409f326e885094c788f"), "name" : "kavya", "usn" : "1NT18IS077",  
"subject1" : 70, "subject2" : 40, "subject3" : 80, "result" : "P" }
```

```
> show collections  
mark  
output  
subject  
> db.subject.drop()  
true  
> show collections  
mark  
output
```