

Database Management System Laboratory

Name:- Nisha Assignment:-10 Roll NO:- 3334

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db.student.insert({Rollno:4,name:"Nisha",subject:"TOC",marks:70});
db.student.insert({Rollno:5,name:"Nitika",subject:"oop",marks:80});
db.student.insert({Rollno:6,name:"Nitesh",subject:"DSA",marks:50})
WriteResult({ "nInserted" : 1 })
> db.student.find()
{ "_id" : ObjectId("6333bfa43cb45dc88552f668"), "Rollno" : 1, "name" : "Divya", "subject" :
"DMSA", "marks" : 78 }
{ "_id" : ObjectId("6333bfde3cb45dc88552f669"), "Rollno" : 2, "name" : "Abhay", "subject" :
"OSD", "marks" : 75 }
{ "_id" : ObjectId("6333bfde3cb45dc88552f66a"), "Rollno" : 3, "name" : "Shah", "subject" :
"TOC", "marks" : 69 }
{ "_id" : ObjectId("6333c0253cb45dc88552f66b"), "Rollno" : 4, "name" : "Nisha", "subject" :
"TOC", "marks" : 70 }
{ "_id" : ObjectId("6333c0253cb45dc88552f66c"), "Rollno" : 5, "name" : "Nitika", "subject" :
"oop", "marks" : 80 }
{ "_id" : ObjectId("6333c0253cb45dc88552f66d"), "Rollno" : 6, "name" : "Nitesh", "subject" :
"DSA", "marks" : 50 }
> db.students.aggregate([{$group :{_id :"$subject",marks :{$max :"$marks"}}}])
> db.student.aggregate([{$group :{_id :"$subject",marks :{$max :"$marks"}}}])
{ "_id" : "DSA", "marks" : 50 }
{ "_id" : "oop", "marks" : 80 }
{ "_id" : "TOC", "marks" : 70 }
{ "_id" : "OSD", "marks" : 75 }
{ "_id" : "DMSA", "marks" : 78 }
> db.student.aggregate([{$group :{_id :"$subject",marks :{$avg :"$marks"}}}])
{ "_id" : "DSA", "marks" : 50 }
{ "_id" : "oop", "marks" : 80 }
{ "_id" : "TOC", "marks" : 69.5 }
{ "_id" : "OSD", "marks" : 75 }
{ "_id" : "DMSA", "marks" : 78 }
> db.student.aggregate([{$group :{_id :"$subject",marks :{$min :"$marks"}}}])
{ "_id" : "DSA", "marks" : 50 }
{ "_id" : "oop", "marks" : 80 }
{ "_id" : "TOC", "marks" : 69 }
{ "_id" : "OSD", "marks" : 75 }
{ "_id" : "DMSA", "marks" : 78 }
> db.student.aggregate ([{$group : {_id : "$subject", marks : {$first : "$marks"}}}]);
{ "_id" : "DSA", "marks" : 50 }
{ "_id" : "oop", "marks" : 80 }
{ "_id" : "TOC", "marks" : 69 }
{ "_id" : "OSD", "marks" : 75 }
{ "_id" : "DMSA", "marks" : 78 }
> db.student.aggregate ([{$group : {_id : "$subject", marks : {$last : "$marks"}}}]);
{ "_id" : "DSA", "marks" : 50 }
{ "_id" : "oop", "marks" : 80 }
{ "_id" : "TOC", "marks" : 70 }
{ "_id" : "OSD", "marks" : 75 }
{ "_id" : "DMSA", "marks" : 78 }
> db.student.aggregate ([{$group : {_id : "$subject", marks : {$sum : "$marks"}}}]);
{ "_id" : "DSA", "marks" : 50 }
{ "_id" : "oop", "marks" : 80 }
{ "_id" : "TOC", "marks" : 139 }
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{ "_id" : "OSD", "marks" : 75 }
{ "_id" : "DMSA", "marks" : 78 }

> db.student.aggregate ([{ $match: {subject:"TOC"}}, {$group: {_id:null,count:{$sum:1}}}] );
{ "_id" : null, "count" : 2 }

> db.student.aggregate ([{ $match: {subject:"TOC"}}, {$sort:{marks:1}}]);
{ "_id" : ObjectId("6333bfde3cb45dc88552f66a"), "Rollno" : 3, "name" : "Shah", "subject" :
"TOC", "marks" : 69 }
{ "_id" : ObjectId("6333c0253cb45dc88552f66b"), "Rollno" : 4, "name" : "Nisha", "subject" :
"TOC", "marks" : 70 }
> db.student.aggregate ([{ $match: {subject:"TOC"}}, {$sort:{marks:-1}}]);
{ "_id" : ObjectId("6333c0253cb45dc88552f66b"), "Rollno" : 4, "name" : "Nisha", "subject" :
"TOC", "marks" : 70 }
{ "_id" : ObjectId("6333bfde3cb45dc88552f66a"), "Rollno" : 3, "name" : "Shah", "subject" :
"TOC", "marks" : 69 }
db.student.aggregate ([ {$group: {_id:"$subject",count:{$sum:1}}}] );
{ "_id" : "DSA", "count" : 1 }
{ "_id" : "oop", "count" : 1 }
{ "_id" : "TOC", "count" : 2 }
{ "_id" : "OSD", "count" : 1 }
{ "_id" : "DMSA", "count" : 1 }

> db.student.createIndex({"Rollno":1})

{
  "createdCollectionAutomatically" : false,
  "numIndexesBefore" : 1,
  "numIndexesAfter" : 2,
  "ok" : 1
}
> db.student.getIndexes()
[
  {
    "v" : 2,
    "key" : {
      "_id" : 1
    },
    "name" : "_id_",
    "ns" : "test.student"
  },
  {
    "v" : 2,
    "key" : {
      "Rollno" : 1
    },
    "name" : "Rollno_1",
    "ns" : "test.student"
  }
]
> db.student.dropIndex({"Rollno":1})
{ "nIndexesWas" : 2, "ok" : 1 }
> db.student.getIndexes()
[

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{
  "v" : 2,
  "key" : {
    "_id" : 1
  },
  "name" : "_id_",
  "ns" : "test.student"
}
```

```
]
>
```