**Practical No-10**

**Write a program to implement Aggregation and Indexing in MongoDB.**

use College

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show dbs

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db.createCollection("Student")

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db.Student.insert({Roll\_no:1,Name:"Premraj",Gender:"Male",Age:20,Marks:89})

db.Student.insert({Roll\_no:2,Name:"Nikita",Gender:"Female",Age:19,Marks:80})

db.Student.insert({Roll\_no:3,Name:"Manasi",Gender:"Female",Age:19,Marks:56})

db.Student.insert({Roll\_no:4,Name:"Rohan",Gender:"Male",Age:19,Marks:78})

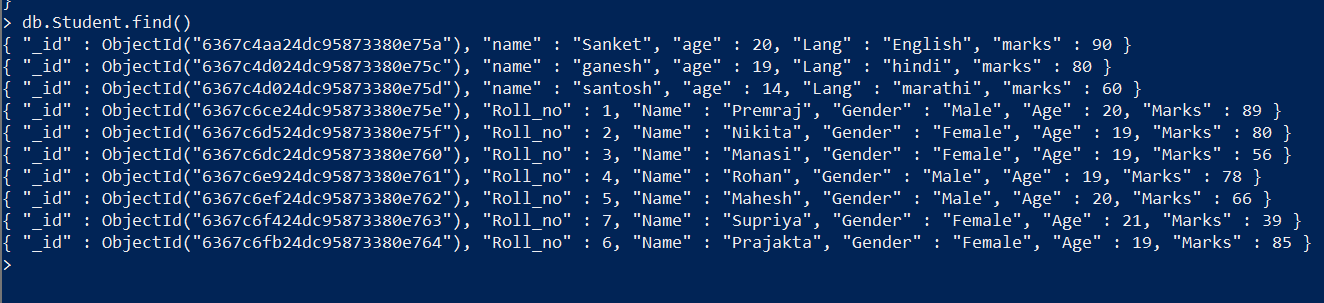
db.Student.insert({Roll\_no:5,Name:"Mahesh",Gender:"Male",Age:20,Marks:66})

db.Student.insert({Roll\_no:7,Name:"Supriya",Gender:"Female",Age:21,Marks:39})

db.Student.save({Roll\_no:6,Name:"Prajakta",Gender:"Female",Age:19,Marks:85})

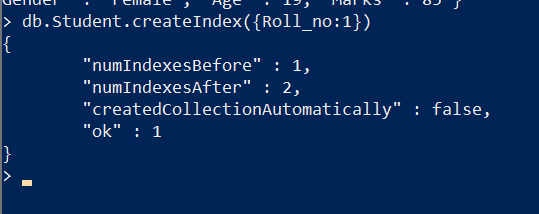
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db.Student.find()



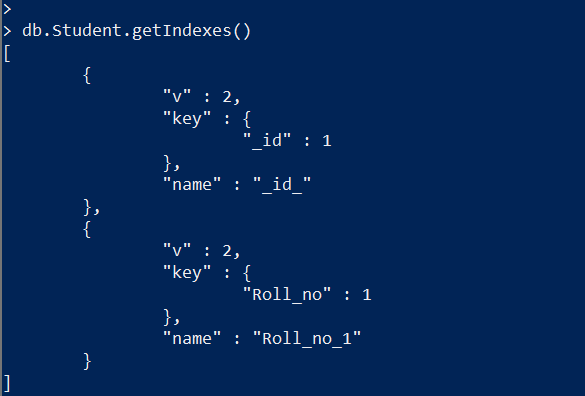
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db.Student.createIndex({Roll\_no:1})



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db.Student.getIndexes()



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**insert records:-**

db.Student.update({Name:"Premraj"},{$set:{Subject:"TOC"}},{multi:true})

db.Student.update({Name:"Nikita"},{$set:{Subject:"DBMS"}},{multi:true})

db.Student.update({Name:"Manasi"},{$set:{Subject:"TOC"}},{multi:true})

db.Student.update({Name:"Prajakta"},{$set:{Subject:"SEPM"}},{multi:true})

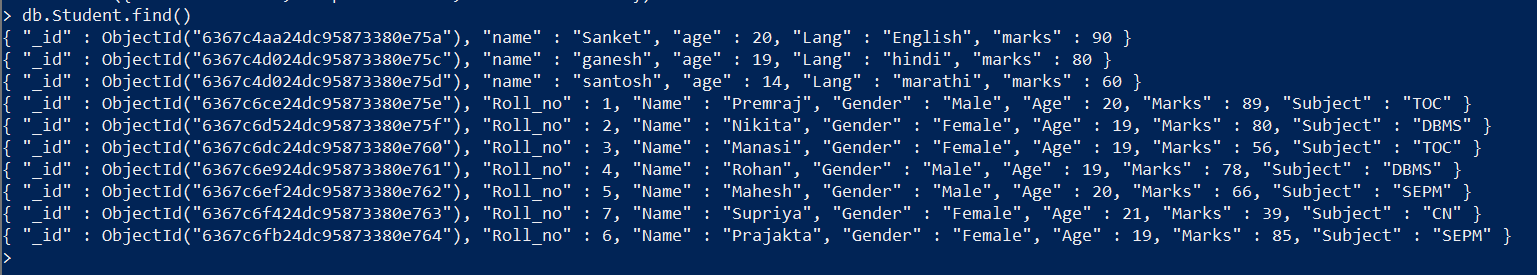
db.Student.update({Name:"Supriya"},{$set:{Subject:"CN"}},{multi:true})

db.Student.update({Name:"Mahesh"},{$set:{Subject:"SEPM"}},{multi:true})

db.Student.update({Name:"Rohan"},{$set:{Subject:"DBMS"}},{multi:true})

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db.Student.find()



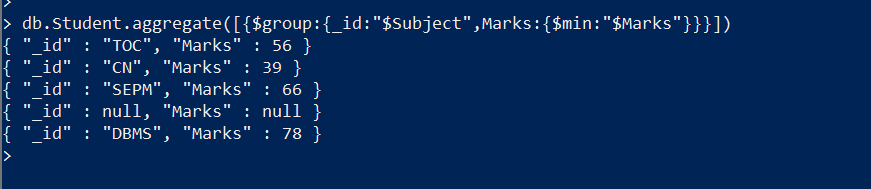
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**min marks of records:-**

db.Student.aggregate([

{$group:{\_id:"$Subject",Marks:{$min:"$Marks"}}

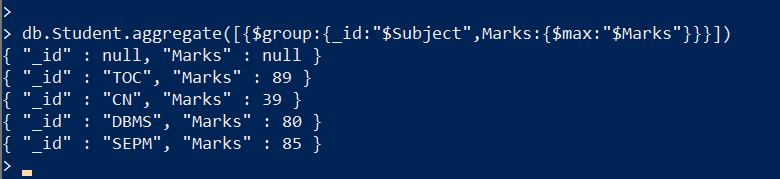
}])



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**max marks of records:-**

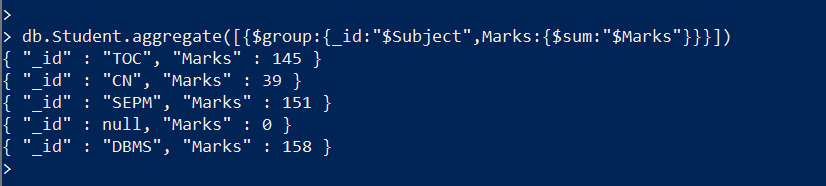
db.Student.aggregate([{$group:{\_id:"$Subject",Marks:{$max:"$Marks"}}}])



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**sum of marks of records:-**

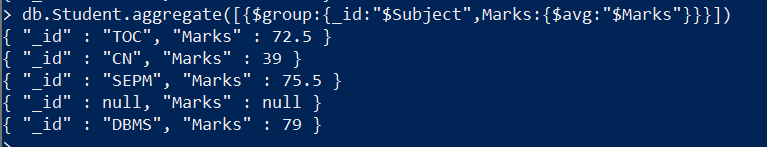
db.Student.aggregate([{$group:{\_id:"$Subject",Marks:{$sum:"$Marks"}}}])



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**avg marks of records:-**

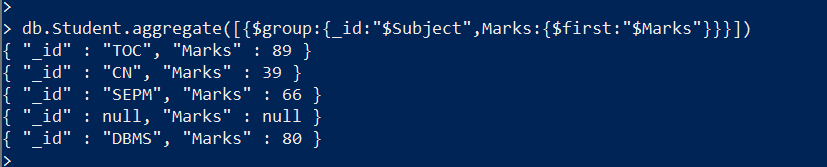
db.Student.aggregate([{$group:{\_id:"$Subject",Marks:{$avg:"$Marks"}}}])



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**first marks of records:-**

db.Student.aggregate([{$group:{\_id:"$Subject",Marks:{$first:"$Marks"}}}])



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**last marks of records:-**

db.Student.aggregate([{$group:{\_id:"$Subject",Marks:{$last:"$Marks"}}}])

