

- ```
kustu04@ukipcstu04: ~
> db.student.aggregate([{$group: {'_id': {}, Minimum: {$min: '$Mk'}}}]).pretty()
{ "id": { }, "Minimum": 55 }
> db.student.aggregate([{$group: {'_id': {}, Maximum: {$max: '$Mk'}}}]).pretty()
{ "id": { }, "Maximum": 84 }
> db.student.aggregate([{$group: {'_id': '$Age', Maximum: {$max: '$Mk'}}}]).pretty()
{ "id": 45, "Maximum": 84 }
{ "id": 48, "Maximum": 84 }
{ "id": 33, "Maximum": 70 }
> db.student.aggregate([{$group: {'_id': "$name", url: {$addToSet: '$Mk'}}}])
{ "_id": null, "url": [55, 84, 70] }

> show dbs
Marks 0.000GB
Person 0.000GB
admin 0.000GB
config 0.000GB
local 0.000GB
music 0.000GB
varun 0.000GB

> use Student
switched to db Student
> db.createCollection('studentmarks')
{ "ok" : 1 }
> show collections
studentmarks
> db.studentmarks.insert({'Name': 'Mala', 'maths_marks': 45, 'english_marks': 53, ''}) db.studentmarks.insert({'Name': 'Mala', 'maths_marks': 45, 'engli
sh_marks': 53, 's'})db.studentmarks.insert({'Name': 'Mala', 'maths_marks': 45, 'english_marks': 53, 'sc'})db.studentmarks.insert({'Name': 'Mala', 'maths_
marks': 45, 'english_marks': 53, 'sct'})db.studentmarks.insert({'Name': 'Mala', 'maths_marks': 45, 'english_marks': 53, 'scledb.studentmark
s.insert({'Name': 'Mala', 'maths_marks': 45, 'english_marks': 53, 'scledb.studentmarks.insert({'Name': 'Mala', 'maths_marks': 45, 'english_marks': 53, 'sciedb.studentmark
s.insert({'Name': 'Mala', 'maths_marks': 45, 'english_marks': 53, 'sciedb.studentmarks.insert({'Name': 'Mala', 'maths_marks': 45, 'english_marks': 53, 'sc
iedb.studentmarks.insert({'Name': 'Mala', 'maths_marks': 45, 'english_marks': 53, 'sciedb.studentmarks.insert({'Name': 'Mala', 'maths_marks': 45, 'english_marks': 53, 'sc
sh_marks': 53, 'sciedb.studentmarks.insert({'Name': 'Mala', 'maths_marks': 45, 'english_marks': 53, 'sc'})db.studentmarks.insert({'Name': 'Mala', 'maths_
marks': 45, 'english_marks': 53, 'sc'})db.studentmarks.insert({'Name': 'Mala', 'maths_marks': 45, 'english_marks': 53, 's'})db.studentmarks.insert({'Name': 'Mala', 'maths_
marks': 45, 'english_marks': 53, ''}) db.studentmarks.insert({'Name': 'Mala', 'maths_marks': 45, 'english_marks': 53, 's'})db.studentmarks.insert({'Name': 'Mala', 'maths_
marks': 45, 'english_marks': 53, 'ss
]])]
2018-07-06T11:39:42.603+0530 E QUERY [thread1] SyntaxError: expected expression, got '' @(<shell>):1:0
> db.studentmarks.insert({'name': 'Mala', 'maths_marks': 45, 'english_marks': 53, 'science_marks': 72}, {'name': 'Vanu', 'maths_marks': 80, 'english_marks'
> 75, 'science_marks': 85}, {'name': 'Kala', 'maths_marks': 32, 'english_marks': 46, 'science_marks': 53}, {'name': 'Arulli', 'maths_marks': 78, 'english_marks':
> 85, 'science_marks': 80}, {'name': 'Shayu', 'maths_marks': 80, 'english_marks': 76, 'science_marks': 65}, {'name': 'Kumaran', 'maths_marks': 32, 'english_marks':
> 73, 'science_marks': 84}, {'name': 'Lucky', 'maths_marks': 66, 'english_marks': 90, 'science_marks': 45}, {'name': 'Gva', 'maths_marks': 71, 'english_marks':
> 75, 'science_marks': 56}, {'name': 'Raam', 'maths_marks': 41, 'english_marks': 65, 'science_marks': 88}])
BulkWriteResult({
```

- 
- ukistu04@ukipcstu04: ~
- ```

2018-07-06T11:58:21.051+0530 E QUERY [thread1] SyntaxError: missing : after property id @(shell):1:47
> db.studentmarks.update({'maths_marks':45},{ $set: {'maths_marks':51}})
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
> db.studentmarks.find().pretty()
{
  "_id" : ObjectId("5b3f0a0a332de5f06142df00"),
  "name" : "Mala",
  "maths_marks" : 51,
  "english_marks" : 53,
  "science_marks" : 72
}
{
  "_id" : ObjectId("5b3f0a0a332de5f06142df01"),
  "name" : "Vanu",
  "maths_marks" : 80,
  "english_marks" : 75,
  "science_marks" : 85
}
{
  "_id" : ObjectId("5b3f0a0a332de5f06142df02"),
  "name" : "Kala",
  "maths_marks" : 32,
  "english_marks" : 46,
  "science_marks" : 53
}
{
  "_id" : ObjectId("5b3f0a0a332de5f06142df03"),
  "name" : "Aruli",
  "maths_marks" : 78,
  "english_marks" : 85,
  "science_marks" : 80
}
{
  "_id" : ObjectId("5b3f0a0a332de5f06142df04"),
  "name" : "Shayu",
  "maths_marks" : 80,
  "english_marks" : 76,
  "science_marks" : 65
}
{
  "_id" : ObjectId("5b3f0a0a332de5f06142df05"),
  "name" : "Kumaran"
}

```

5) List the names of students who got more than 50 marks in Maths Subject.

```
ukistu04@ukipcstu04: ~  
ukistu04@ukipcstu04: ~  
ukistu04@ukipcstu04: ~  
} db.studentmarks.find({"maths_marks":{$gt:50}}).pretty()  
{  
  "id" : ObjectId("5b3f0a0a332de5f06142df00"),  
  "name" : "Mala",  
  "maths_marks" : 51,  
  "english_marks" : 53,  
  "science_marks" : 72  
}  
{  
  "id" : ObjectId("5b3f0a0a332de5f06142df01"),  
  "name" : "Vanu",  
  "maths_marks" : 80,  
  "english_marks" : 75,  
  "science_marks" : 85  
}  
{  
  "id" : ObjectId("5b3f0a0a332de5f06142df03"),  
  "name" : "Arull",  
  "maths_marks" : 78,  
  "english_marks" : 85,  
  "science_marks" : 80  
}  
{  
  "id" : ObjectId("5b3f0a0a332de5f06142df04"),  
  "name" : "Shayu",  
  "maths_marks" : 80,  
  "english_marks" : 76,  
  "science_marks" : 65  
}  
{  
  "id" : ObjectId("5b3f0a0a332de5f06142df06"),  
  "name" : "Lucky",  
  "maths_marks" : 66,  
  "english_marks" : 90,  
  "science_marks" : 45  
}  
{  
  "id" : ObjectId("5b3f0a0a332de5f06142df07"),  
  "name" : "Gva",  
}
```

6) Add a new column(field) for Average for all students.

```
ukistu04@ukipcstu04: ~  
ukistu04@ukipcstu04: ~  
ukistu04@ukipcstu04: ~  
} db.studentmarks.aggregate([ $addFields: { 'Average': '' } ]).pretty()  
{  
  "id" : ObjectId("5b3f0a0a332de5f06142df00"),  
  "name" : "Mala",  
  "maths_marks" : 51,  
  "english_marks" : 53,  
  "science_marks" : 72,  
  "Average" : ""  
}  
{  
  "id" : ObjectId("5b3f0a0a332de5f06142df01"),  
  "name" : "Vanu",  
  "maths_marks" : 80,  
  "english_marks" : 75,  
  "science_marks" : 85,  
  "Average" : ""  
}  
{  
  "id" : ObjectId("5b3f0a0a332de5f06142df02"),  
  "name" : "Kala",  
  "maths_marks" : 32,  
  "english_marks" : 46,  
  "science_marks" : 53,  
  "Average" : ""  
}  
{  
  "id" : ObjectId("5b3f0a0a332de5f06142df03"),  
  "name" : "Arull",  
  "maths_marks" : 78,  
  "english_marks" : 85,  
  "science_marks" : 80,  
  "Average" : ""  
}  
{  
  "id" : ObjectId("5b3f0a0a332de5f06142df04"),  
  "name" : "Shayu",  
  "maths_marks" : 80,  
  "english_marks" : 76,  
  "science_marks" : 65,  
  "Average" : ""  
}
```

7) Update Marks_Science=75 to Lucky .

```
ukistu04@ukipcstu04: ~  
ukistu04@ukipcstu04: ~  
ukistu04@ukipcstu04: ~  
"science_marks" : 53  
{  
  "id" : ObjectId("5b3f0a0a332de5f06142df03"),  
  "name" : "Aruli",  
  "maths_marks" : 78,  
  "english_marks" : 85,  
  "science_marks" : 80  
}  
{  
  "id" : ObjectId("5b3f0a0a332de5f06142df04"),  
  "name" : "Shayun",  
  "maths_marks" : 80,  
  "english_marks" : 76,  
  "science_marks" : 65  
}  
{  
  "id" : ObjectId("5b3f0a0a332de5f06142df05"),  
  "name" : "Kumaran",  
  "maths_marks" : 32,  
  "english_marks" : 73,  
  "science_marks" : 84  
}  
{  
  "id" : ObjectId("5b3f0a0a332de5f06142df06"),  
  "name" : "Lucky",  
  "maths_marks" : 66,  
  "english_marks" : 90,  
  "Marks_science" : 75  
}  
{  
  "id" : ObjectId("5b3f0a0a332de5f06142df07"),  
  "name" : "Gva",  
  "maths_marks" : 71,  
  "english_marks" : 75,  
  "science_marks" : 56  
}  
{  
  "id" : ObjectId("5b3f0a0a332de5f06142df08"),  
  "name" : "Raam",  
  "maths_marks" : 41,  
  "english_marks" : 65  
}
```

8) List the names who got more than 50 marks in all subjects.

```
ukistu04@ukipcstu04: ~  
ukistu04@ukipcstu04: ~  
ukistu04@ukipcstu04: ~  
> db.studentmarks.find({"maths_marks":"science_marks":"english_marks":{$gt:50}}).pretty()  
2018-07-06T12:33:43.525+0530 E QUERY [thread1] SyntaxError: missing } after property list @(shell):1:51  
> db.studentmarks.find({"maths_marks":{$gt:50}}).pretty()  
{  
  "id" : ObjectId("5b3f0a0a332de5f06142df00"),  
  "name" : "Male",  
  "maths_marks" : 51,  
  "english_marks" : 53,  
  "science_marks" : 72  
}  
{  
  "id" : ObjectId("5b3f0a0a332de5f06142df01"),  
  "name" : "Vanu",  
  "maths_marks" : 80,  
  "english_marks" : 75,  
  "science_marks" : 85  
}  
{  
  "id" : ObjectId("5b3f0a0a332de5f06142df03"),  
  "name" : "Aruli",  
  "maths_marks" : 78,  
  "english_marks" : 85,  
  "science_marks" : 80  
}  
{  
  "id" : ObjectId("5b3f0a0a332de5f06142df04"),  
  "name" : "Shayun",  
  "maths_marks" : 80,  
  "english_marks" : 76,  
  "science_marks" : 65  
}  
{  
  "id" : ObjectId("5b3f0a0a332de5f06142df06"),  
  "name" : "Lucky",  
  "maths_marks" : 66,  
  "english_marks" : 90,  
  "Marks_science" : 75  
}  
{  
  "id" : ObjectId("5b3f0a0a332de5f06142df07"),  
  "name" : "Gva",  
  "maths_marks" : 71,  
  "science_marks" : 56  
}
```

```
ukistu04@ukipcstu04: ~  
ukistu04@ukipcstu04: ~  
ukistu04@ukipcstu04: ~  
    "english_marks" : 65,  
    "science_marks" : 88  
  }  
  > db.studentmarks.find({"science_marks":{$gt:50}}).pretty()  
  {  
    "_id" : ObjectId("5b3f0a0a332de5f06142df00"),  
    "name" : "Male",  
    "maths_marks" : 51,  
    "english_marks" : 53,  
    "science_marks" : 72  
  },  
  {  
    "_id" : ObjectId("5b3f0a0a332de5f06142df01"),  
    "name" : "Vanu",  
    "maths_marks" : 80,  
    "english_marks" : 75,  
    "science_marks" : 85  
  },  
  {  
    "_id" : ObjectId("5b3f0a0a332de5f06142df02"),  
    "name" : "Kala",  
    "maths_marks" : 32,  
    "english_marks" : 46,  
    "science_marks" : 53  
  },  
  {  
    "_id" : ObjectId("5b3f0a0a332de5f06142df03"),  
    "name" : "Aruli",  
    "maths_marks" : 78,  
    "english_marks" : 85,  
    "science_marks" : 80  
  },  
  {  
    "_id" : ObjectId("5b3f0a0a332de5f06142df04"),  
    "name" : "Shayuu",  
    "maths_marks" : 80,  
    "english_marks" : 76,  
    "science_marks" : 65  
  },  
  {  
    "_id" : ObjectId("5b3f0a0a332de5f06142df05"),  
    "name" : "Kumaran",  
  }  
}
```

9) List the names who got less than 50 marks in Maths subject and more than 50 marks in English

```
ukistu04@ukipcstu04: ~  
ukistu04@ukipcstu04: ~  
ukistu04@ukipcstu04: ~  
    "maths_marks" : 32,  
    "english_marks" : 73,  
    "science_marks" : 84  
  }  
  {  
    "_id" : ObjectId("5b3f0a0a332de5f06142df06"),  
    "name" : "Lucky",  
    "maths_marks" : 66,  
    "english_marks" : 90,  
    "Marks_science" : 75  
  },  
  {  
    "_id" : ObjectId("5b3f0a0a332de5f06142df07"),  
    "name" : "Gva",  
    "maths_marks" : 71,  
    "english_marks" : 75,  
    "science_marks" : 56  
  },  
  {  
    "_id" : ObjectId("5b3f0a0a332de5f06142df08"),  
    "name" : "Raam",  
    "maths_marks" : 41,  
    "english_marks" : 65,  
    "science_marks" : 88  
  }  
  > db.studentmarks.find({$and:[{"maths_marks":{$lt:50}],{"english_marks":{$gt:'50'}}}).pretty()  
  > db.studentmarks.find({$and:[{"maths_marks":{$lt:50}],{"english_marks":{$gt:50}}}).pretty()  
  {  
    "_id" : ObjectId("5b3f0a0a332de5f06142df05"),  
    "name" : "Kumaran",  
    "maths_marks" : 32,  
    "english_marks" : 73,  
    "science_marks" : 84  
  },  
  {  
    "_id" : ObjectId("5b3f0a0a332de5f06142df08"),  
    "name" : "Raam",  
    "maths_marks" : 41,  
    "english_marks" : 65,  
    "science_marks" : 88  
  }  
}
```

10) List the names who got less than 40 in both Maths and Science.

```
ukistu04@ukipcstu04: ~  
ukistu04@ukipcstu04: ~  
ukistu04@ukipcstu04: ~  
"english_marks" : 75,  
"science_marks" : 56  
}  
{  
  "_id" : ObjectId("5b3f0a0a332de5f06142df08"),  
  "name" : "Raam",  
  "maths_marks" : 41,  
  "english_marks" : 65,  
  "science_marks" : 88  
}  
}  
> db.studentmarks.find({$and:[{"maths_marks":{$lt:50}},{"english_marks":{$gt:'50'}}]).pretty()  
> db.studentmarks.find({$and:[{"maths_marks":{$lt:50}},{"english_marks":{$gt:50}}]).pretty()  
{  
  "_id" : ObjectId("5b3f0a0a332de5f06142df05"),  
  "name" : "Kumaran",  
  "maths_marks" : 32,  
  "english_marks" : 73,  
  "science_marks" : 84  
}  
}  
{  
  "_id" : ObjectId("5b3f0a0a332de5f06142df08"),  
  "name" : "Raam",  
  "maths_marks" : 41,  
  "english_marks" : 65,  
  "science_marks" : 88  
}  
}  
> db.studentmarks.find({$or:[{"maths_marks":{$lt:40}},{"science_marks":{$lt:40}}]).pretty()  
{  
  "_id" : ObjectId("5b3f0a0a332de5f06142df02"),  
  "name" : "Kala",  
  "maths_marks" : 32,  
  "english_marks" : 46,  
  "science_marks" : 53  
}  
}  
{  
  "_id" : ObjectId("5b3f0a0a332de5f06142df05"),  
  "name" : "Kumaran",  
  "maths_marks" : 32,  
  "english_marks" : 73,  
  "science_marks" : 84  
}  
}
```

12) Update John's Math mark as 87 and English mark as 23, if john not available upsert.

```
ukistu04@ukipcstu04: ~  
ukistu04@ukipcstu04: ~  
ukistu04@ukipcstu04: ~  
{  
  "_id" : ObjectId("5b3f0a0a332de5f06142df04"),  
  "name" : "Shayu",  
  "maths_marks" : 80,  
  "english_marks" : 76,  
  "science_marks" : 65  
}  
{  
  "_id" : ObjectId("5b3f0a0a332de5f06142df05"),  
  "name" : "Kumaran",  
  "maths_marks" : 32,  
  "english_marks" : 73,  
  "science_marks" : 84  
}  
{  
  "_id" : ObjectId("5b3f0a0a332de5f06142df06"),  
  "name" : "Lucky",  
  "maths_marks" : 66,  
  "english_marks" : 90,  
  "Marks_science" : 75  
}  
{  
  "_id" : ObjectId("5b3f0a0a332de5f06142df07"),  
  "name" : "Gva",  
  "maths_marks" : 71,  
  "english_marks" : 75,  
  "science_marks" : 56  
}  
{  
  "_id" : ObjectId("5b3f0a0a332de5f06142df08"),  
  "name" : "Raam",  
  "maths_marks" : 41,  
  "english_marks" : 65,  
  "science_marks" : 88  
}  
{  
  "_id" : ObjectId("5b3f1b24332de5f06142df09"),  
  "name" : "Jhon",  
  "maths_marks" : 85,  
  "english_marks" : 23  
}
```

13) Rename the english_marks column/field for John to science_marks

```
ukistu04@ukipcstu04: ~  
ukistu04@ukipcstu04: ~  
{  
  "id" : ObjectId("5b3f0a0a332de5f06142df04"),  
  "name" : "Shayu",  
  "maths_marks" : 80,  
  "english_marks" : 76,  
  "science_marks" : 65  
}  
{  
  "id" : ObjectId("5b3f0a0a332de5f06142df05"),  
  "name" : "Kumaran",  
  "maths_marks" : 32,  
  "english_marks" : 73,  
  "science_marks" : 84  
}  
{  
  "id" : ObjectId("5b3f0a0a332de5f06142df06"),  
  "name" : "Lucky",  
  "maths_marks" : 66,  
  "Marks_science" : 75,  
  "science_marks" : 90  
}  
{  
  "id" : ObjectId("5b3f0a0a332de5f06142df07"),  
  "name" : "Gva",  
  "maths_marks" : 71,  
  "english_marks" : 75,  
  "science_marks" : 56  
}  
{  
  "id" : ObjectId("5b3f0a0a332de5f06142df08"),  
  "name" : "Raam",  
  "maths_marks" : 41,  
  "english_marks" : 65,  
  "science_marks" : 88  
}  
{  
  "id" : ObjectId("5b3f1b24332de5f06142df09"),  
  "name" : "Jhon",  
  "maths_marks" : 85,  
  "english_marks" : 23  
}  
}
```

14) Remove Kumaran's document from collection

```
ukistu04@ukipcstu04: ~  
ukistu04@ukipcstu04: ~  
> db.studentmarks.remove({'name': 'Kumaran'})  
WriteResult({ "nRemoved" : 1 })  
> db.studentmarks.find().pretty()  
{  
  "id" : ObjectId("5b3f0a0a332de5f06142df00"),  
  "name" : "Mala",  
  "maths_marks" : 51,  
  "english_marks" : 53,  
  "science_marks" : 72  
}  
{  
  "id" : ObjectId("5b3f0a0a332de5f06142df01"),  
  "name" : "Vanu",  
  "maths_marks" : 80,  
  "english_marks" : 75,  
  "science_marks" : 85  
}  
{  
  "id" : ObjectId("5b3f0a0a332de5f06142df02"),  
  "name" : "Kala",  
  "maths_marks" : 32,  
  "english_marks" : 46,  
  "science_marks" : 53  
}  
{  
  "id" : ObjectId("5b3f0a0a332de5f06142df03"),  
  "name" : "Aruli",  
  "maths_marks" : 78,  
  "english_marks" : 85,  
  "science_marks" : 80  
}  
{  
  "id" : ObjectId("5b3f0a0a332de5f06142df04"),  
  "name" : "Shayu",  
  "maths_marks" : 80,  
  "english_marks" : 76,  
  "science_marks" : 65  
}  
{  
  "id" : ObjectId("5b3f0a0a332de5f06142df06"),  
  "name" : "Lucky",  
}
```