

Uki 6 Coding Accelerator Program x mongoDB Exercise1.pdf x +

classroom.google.com/c/NDM1MTg3MzY3MTda

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## MongoDB Exercise 2

name	maths_marks	english_marks	science_marks
Mala	45	53	72
Vanu	80	75	85
Kala	32	46	53
Aruli	78	85	80
Shayu	80	76	65
Kumaran	32	73	84
Lucky	66	90	45
Gva	71	75	56
Raam	41	65	88

Windows taskbar: 17:10 20/01/2020

### 1) Create a Database called student

```
C:\Program Files\MongoDB\Server\4.2\bin\mongo.exe
> use student
switched to db student
>
```

Windows taskbar: 21:48 13/01/2020

### 2) Create a collection called studentmarks

```
C:\Program Files\MongoDB\Server\4.2\bin\mongo.exe
> use student
switched to db student
> db.createCollection("studentmarks")
{ "ok" : 1 }
>
```

3) Create the documents listed in above table.

```
Command Prompt - mongo
> 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":"Aruli",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({
  "writeErrors" : [ ],
  "writeConcernErrors" : [ ],
  "nInserted" : 9,
  "nUpserted" : 0,
  "nMatched" : 0,
  "nModified" : 0,
  "nRemoved" : 0,
  "upserted" : [ ]
})
> db.studentmarks.find()
```

name	maths_marks	english_marks	science_marks
Mala	45	53	72
Vanu	80	75	85
Kala	32	46	53
Aruli	78	85	80
Shayu	80	76	65
Kumaran	32	73	84
Lucky	66	90	45
Gva	71	75	56
Raam	41	65	88

```
{ "_id" : ObjectId("5e2595fd7f928ded8d0918ab"), "name" : "Mala", "maths_marks" : 45, "english_marks" : 53, "science_marks" : 72 }
{ "_id" : ObjectId("5e2595fd7f928ded8d0918ac"), "name" : "Vanu", "maths_marks" : 80, "english_marks" : 75, "science_marks" : 85 }
{ "_id" : ObjectId("5e2595fd7f928ded8d0918ad"), "name" : "Kala", "maths_marks" : 32, "english_marks" : 46, "science_marks" : 53 }
{ "_id" : ObjectId("5e2595fd7f928ded8d0918ae"), "name" : "Aruli", "maths_marks" : 78, "english_marks" : 85, "science_marks" : 80 }
{ "_id" : ObjectId("5e2595fd7f928ded8d0918af"), "name" : "Shayu", "maths_marks" : 80, "english_marks" : 76, "science_marks" : 65 }
{ "_id" : ObjectId("5e2595fd7f928ded8d0918b0"), "name" : "Kumaran", "maths_marks" : 32, "english_marks" : 73, "science_marks" : 84 }
{ "_id" : ObjectId("5e2595fd7f928ded8d0918b1"), "name" : "Lucky", "maths_marks" : 66, "english_marks" : 90, "science_marks" : 45 }
{ "_id" : ObjectId("5e2595fd7f928ded8d0918b2"), "name" : "Gva", "maths_marks" : 71, "english_marks" : 75, "science_marks" : 56 }
{ "_id" : ObjectId("5e2595fd7f928ded8d0918b3"), "name" : "Raam", "maths_marks" : 41, "english_marks" : 65, "science_marks" : 88 }
```

- 1) Create a Database called student
- 2) Create a collection called studentmarks
- 3) Create the documents listed in above table.
- 4) Increase the maths marks of Mala by 6 marks
- 5) List the names of students who got more than 50 marks in Maths Subject.
- 6) Add a new column(field) for Average for all students.
- 7) Update Marks\_Science=75 to Lucky.
- 8) List the names who got more than 50 marks in English subject.

4) Increase the maths marks of Mala by 6 marks

Command Prompt - mongo

```
> db.studentmarks.update({name:"Mala"},{$inc:{maths_marks:6}})
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
> db.studentmarks.find({name:"Mala"})
{ "_id" : ObjectId("5e2595fd7f928ded8d918ab"), "name" : "Mala", "maths_marks" : 51, "english_marks" : 53, "science_marks" : 72 }
```

### MongoDB Exercise 2

name	maths_marks	english_marks	science_marks
Mala	45	53	72
Vanu	80	75	85
Kala	32	46	53
Aruli	78	85	80
Shayu	80	76	65
Kumaran	32	73	84
Lucky	66	90	45
Gva	71	75	56
Raam	41	65	88

- 1) Create a Database called **student**
- 2) Create a collection called **studentmarks**
- 3) Create the documents listed in above table.
- 4) Increase the maths marks of Mala by 6 marks
- 5) List the names of students who got more than 50 marks in Maths Subject.
- 6) Add a new column(field) for Average for all students.
- 7) Update Marks\_Science=75 to Lucky.
- 8) List the names who got more than 50 marks in Maths Subject.

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

Command Prompt - mongo

```
> db.studentmarks.find({maths_marks:{$gt:50}},{_id:0,english_marks:0,science_marks:0})
{ "name" : "Mala", "maths_marks" : 51 }
{ "name" : "Vanu", "maths_marks" : 80 }
{ "name" : "Aruli", "maths_marks" : 78 }
{ "name" : "Shayu", "maths_marks" : 80 }
{ "name" : "Lucky", "maths_marks" : 66 }
{ "name" : "Gva", "maths_marks" : 71 }
```

### MongoDB Exercise 2

name	maths_marks	english_marks	science_marks
Mala	45	53	72
Vanu	80	75	85
Kala	32	46	53
Aruli	78	85	80
Shayu	80	76	65
Kumaran	32	73	84
Lucky	66	90	45
Gva	71	75	56
Raam	41	65	88

- 1) Create a Database called **student**
- 2) Create a collection called **studentmarks**
- 3) Create the documents listed in above table.
- 4) Increase the maths marks of Mala by 6 marks
- 5) List the names of students who got more than 50 marks in Maths Subject.
- 6) Add a new column(field) for Average for all students.
- 7) Update Marks\_Science=75 to Lucky.
- 8) List the names who got more than 50 marks in Maths Subject.

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

```
Command Prompt - mongo
> db.studentmarks({},{$set:{avarage:false}},false,true)
2020-01-20T19:45:38.142+0530 EN QUERY [js] uncaught exception: TypeError: db.studentmarks is not a function :
@shell):1:1
> db.studentmarks.insert({},{$set:{avarage:false}},false,true)
WriteResult({"nInserted": 1})
> db.studentmarks.find()
{"_id": ObjectId("5e2595fd7f928ded8d0918ab"), "name": "Mala", "maths_marks": 51, "english_marks": 53, "science_marks": 72 }
{"_id": ObjectId("5e2595fd7f928ded8d0918ac"), "name": "Vanu", "maths_marks": 80, "english_marks": 75, "science_marks": 85 }
{"_id": ObjectId("5e2595fd7f928ded8d0918ad"), "name": "Kala", "maths_marks": 32, "english_marks": 46, "science_marks": 53 }
{"_id": ObjectId("5e2595fd7f928ded8d0918ae"), "name": "Aruli", "maths_marks": 78, "english_marks": 85, "science_marks": 80 }
{"_id": ObjectId("5e2595fd7f928ded8d0918af"), "name": "Shayu", "maths_marks": 80, "english_marks": 76, "science_marks": 65 }
{"_id": ObjectId("5e2595fd7f928ded8d0918b0"), "name": "Kumaran", "maths_marks": 32, "english_marks": 73, "science_marks": 84 }
{"_id": ObjectId("5e2595fd7f928ded8d0918b1"), "name": "Lucky", "maths_marks": 66, "english_marks": 90, "science_marks": 45 }
{"_id": ObjectId("5e2595fd7f928ded8d0918b2"), "name": "Gva", "maths_marks": 71, "english_marks": 75, "science_marks": 56 }
{"_id": ObjectId("5e2595fd7f928ded8d0918b3"), "name": "Raam", "maths_marks": 41, "english_marks": 65, "science_marks": 88 }
{"_id": ObjectId("5e25b62354b44b9756d9fefe") }
```

	Vanu	80	75	85
Mala	51	53	72	
Vanu	80	75	85	
Kala	32	46	53	
Aruli	78	85	80	
Shayu	80	76	65	
Kumaran	32	73	84	
Lucky	66	90	45	
Gva	71	75	56	
Raam	41	65	88	

- 1) Create a Database called **student**
- 2) Create a collection called **studentmarks**
- 3) Create the documents listed in above table.
- 4) Increase the maths marks of Mala by 6 marks
- 5) List the names of students who got more than 50 marks in Maths Subject.
- 6) Add a new column(field) for Average for all students.
- 7) Update Marks\_Science=75 to Lucky .
- 8) List the names who got more than 50 marks in all subjects.
- 9) List the names who got less than 50 marks in Maths subject and more than 50 marks in English
- 10) List the names who got less than 40 in both Maths and Science.
- 11) Remove Science column/

7) Update Marks\_Science=75 to Lucky .

```
Command Prompt - mongo
> db.studentmarks.update({name:"Lucky"},{$set:{science_marks:75}})
WriteResult({"nMatched": 1, "nUpserted": 0, "nModified": 1})
> db.studentmarks.find({name:"Lucky"})
{"_id": ObjectId("5e2595fd7f928ded8d0918b1"), "name": "Lucky", "maths_marks": 66, "english_marks": 90, "science_marks": 75 }
```

	Vanu	80	75	85
Kala	32	46	53	
Aruli	78	85	80	
Shayu	80	76	65	
Kumaran	32	73	84	
Lucky	66	90	45	
Gva	71	75	56	
Raam	41	65	88	

- 1) Create a Database called **student**
- 2) Create a collection called **studentmarks**
- 3) Create the documents listed in above table.
- 4) Increase the maths marks of Mala by 6 marks
- 5) List the names of students who got more than 50 marks in Maths Subject.
- 6) Add a new column(field) for Average for all students.
- 7) Update Marks\_Science=75 to Lucky .
- 8) List the names who got more than 50 marks in all subjects.
- 9) List the names who got less than 50 marks in Maths subject and more than 50 marks in English
- 10) List the names who got less than 40 in both Maths and Science.
- 11) Remove Science column/
- 12) Update Mala's Math marks as 42 and English marks as 23 (if present available insert)

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

Command Prompt - mongo

```
> db.studentmarks.find({'$and':[{'maths_marks':{'$gt':50}},{'science_marks':{'$gt':50}},{'english_marks':{'$gt':50}}]},{'_id':0,maths_marks:0,science_marks:0,english_marks:0})
```

```
{ "name" : "Mala" }
{ "name" : "Vanu" }
{ "name" : "Aruli" }
{ "name" : "Shayu" }
{ "name" : "Lucky" }
{ "name" : "Gva" }
```

name	maths_marks	science_marks	english_marks
Vanu	80	75	85
Kala	32	46	53
Aruli	78	85	80
Shayu	80	76	65
Kumaran	32	73	84
Lucky	66	90	45
Gva	71	75	56
Raam	41	65	88

- 1) Create a Database called **student**
- 2) Create a collection called **studentmarks**
- 3) Create the documents listed in above table.
- 4) Increase the maths marks of Mala by 6 marks
- 5) List the names of students who got more than 50 marks in Maths Subject.
- 6) Add a new column(field) for Average for all students.
- 7) Update Marks\_Science=75 to Lucky .
- 8) List the names who got more than 50 marks in all subjects.
- 9) List the names who got less than 50 marks in Maths subject and more than 50 marks in English
- 10) List the names who got less than 40 in both Maths and Science.
- 11) Remove Science column/
- 12) Update maths marks of all students with English marks 25 and Science available marks.

studentmarks

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

Command Prompt - mongo

```
> db.studentmarks.find({'$and':[{'maths_marks':{'$lt':50}},{'english_marks':{'$gt':50}}]},{'_id':0,maths_marks:0,science_marks:0,english_marks:0})
```

```
{ "name" : "Kumaran" }
{ "name" : "Raam" }
```

name	maths_marks	english_marks	science_marks
Mala	45	53	72
Vanu	80	75	85
Kala	32	46	53
Aruli	78	85	80
Shayu	80	76	65
Kumaran	32	73	84
Lucky	66	90	45
Gva	71	75	56
Raam	41	65	88

- 1) Create a Database called **student**
- 2) Create a collection called **studentmarks**
- 3) Create the documents listed in above table.
- 4) Increase the maths marks of Mala by 6 marks
- 5) List the names of students who got more than 50 marks in Maths Subject.
- 6) Add a new column(field) for Average for all students.
- 7) Update Marks\_Science=75 to Lucky .
- 8) List the names who got more than 50 marks in all subjects.
- 9) List the names who got less than 50 marks in Maths subject and more than 50 marks in English

studentmarks



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

MongoDB Exercise 2

name	maths_marks	english_marks	science_marks
Mala	45	53	72
Vanu	80	75	85
Kala	32	46	53
Aruli	78	85	80
Shayu	80	76	65
Kumaran	32	73	84
Lucky	66	90	45
Gva	71	75	56
Raam	41	65	88

- 1) Create a Database called **student**
- 2) Create a collection called **studentmarks**
- 3) Create the documents listed in above table.
- 4) Increase the maths marks of Mala by 6 marks
- 5) List the names of students who got more than 50 marks in Maths Subject.
- 6) Add a new column(field) for Average for all students.

11) Remove Science column/field for Raam

MongoDB Exercise 2

- 1) Create a Database called **student**
- 2) Create a collection called **studentmarks**
- 3) Create the documents listed in above table.
- 4) Increase the maths marks of Mala by 6 marks
- 5) List the names of students who got more than 50 marks in Maths Subject.
- 6) Add a new column(field) for Average for all students.
- 7) Update Marks\_Science=75 to Lucky .
- 8) List the names who got more than 50 marks in all subjects.
- 9) List the names who got less than 50 marks in Maths subject and more than 50 marks in English
- 10) List the names who got less than 40 in both Maths and Science.
- 11) Remove Science column/field for Raam
- 12) Update John's Math mark as 87 and English mark as 23, if john not available upsert.
- 13) Rename the english\_marks column/field for John to english\_marks
- 14) Remove Kumaran's document from collection

name	maths_marks	english_marks	science_marks
Mala	51	53	72
Vanu	80	75	85
Kala	32	46	53
Aruli	78	85	80
Shayu	80	76	65
Kumaran	32	73	84
Lucky	66	90	75
Gva	71	75	56
Raam	41	65	88

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

```
Command Prompt - mongo
> db.studentmarks.update({}, {name: "John", maths_marks: 87, english_marks: 23}, {upsert: true})
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
> db.studentmarks.find()
{"_id" : ObjectId("5e2595fd7f928ded8d0918ab"), "name" : "John", "maths_marks" : 87, "english_marks" : 23 }
{"_id" : ObjectId("5e2595fd7f928ded8d0918ac"), "name" : "Vanu", "maths_marks" : 80, "english_marks" : 75, "science_marks" : 85 }
{"_id" : ObjectId("5e2595fd7f928ded8d0918ad"), "name" : "Kala", "maths_marks" : 32, "english_marks" : 46, "science_marks" : 53 }
{"_id" : ObjectId("5e2595fd7f928ded8d0918ae"), "name" : "Aruli", "maths_marks" : 78, "english_marks" : 85, "science_marks" : 80 }
{"_id" : ObjectId("5e2595fd7f928ded8d0918af"), "name" : "Shayu", "maths_marks" : 80, "english_marks" : 76, "science_marks" : 65 }
{"_id" : ObjectId("5e2595fd7f928ded8d0918b0"), "name" : "Kumaran", "maths_marks" : 32, "english_marks" : 73, "science_marks" : 84 }
{"_id" : ObjectId("5e2595fd7f928ded8d0918b1"), "name" : "Lucky", "maths_marks" : 66, "english_marks" : 90, "science_marks" : 75 }
{"_id" : ObjectId("5e2595fd7f928ded8d0918b2"), "name" : "Gva", "maths_marks" : 71, "english_marks" : 75, "science_marks" : 56 }
{"_id" : ObjectId("5e2595fd7f928ded8d0918b3"), "name" : "Raam", "maths_marks" : 41, "english_marks" : 65 }
{"_id" : ObjectId("5e25b62354b44b9756d9f6fc") }
```

- 1) Create a Database called student
- 2) Create a collection called studentmarks
- 3) Create the documents listed in above table.
- 4) Increase the maths marks of Mala by 6 marks
- 5) List the names of students who got more than 50 marks in Maths Subject.
- 6) Add a new column(field) for Average for all students.
- 7) Update Marks\_Science=75 to Lucky.
- 8) List the names who got more than 50 marks in all subjects.
- 9) List the names who got less than 50 marks in Maths subject and more than 50 marks in English
- 10) List the names who got less than 40 in both Maths and Science.
- 11) Remove Science column/field for Raam
- 12) Update John's Math mark as 87 and English mark as 23, if john not available upsert.
- 13) Rename the english\_marks column/field for John to science\_marks
- 14) Remove Kumaran's document from collection
- 15) Find Kala's or Aruli's math

13) Rename the english\_marks column/field for John to science\_marks

```
Command Prompt - mongo
> db.studentmarks.update({name: "John"}, {$rename: {english_marks: "science_marks"}})
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
> db.studentmarks.find()
{"_id" : ObjectId("5e2595fd7f928ded8d0918ab"), "name" : "John", "maths_marks" : 87, "science_marks" : 23 }
{"_id" : ObjectId("5e2595fd7f928ded8d0918ac"), "name" : "Vanu", "maths_marks" : 80, "english_marks" : 75, "science_marks" : 85 }
{"_id" : ObjectId("5e2595fd7f928ded8d0918ad"), "name" : "Kala", "maths_marks" : 32, "english_marks" : 46, "science_marks" : 53 }
{"_id" : ObjectId("5e2595fd7f928ded8d0918ae"), "name" : "Aruli", "maths_marks" : 78, "english_marks" : 85, "science_marks" : 80 }
{"_id" : ObjectId("5e2595fd7f928ded8d0918af"), "name" : "Shayu", "maths_marks" : 80, "english_marks" : 76, "science_marks" : 65 }
{"_id" : ObjectId("5e2595fd7f928ded8d0918b0"), "name" : "Kumaran", "maths_marks" : 32, "english_marks" : 73, "science_marks" : 84 }
{"_id" : ObjectId("5e2595fd7f928ded8d0918b1"), "name" : "Lucky", "maths_marks" : 66, "english_marks" : 90, "science_marks" : 75 }
{"_id" : ObjectId("5e2595fd7f928ded8d0918b2"), "name" : "Gva", "maths_marks" : 71, "english_marks" : 75, "science_marks" : 56 }
{"_id" : ObjectId("5e2595fd7f928ded8d0918b3"), "name" : "Raam", "maths_marks" : 41, "english_marks" : 65 }
{"_id" : ObjectId("5e25b62354b44b9756d9f6fc") }
```

- 1) Create a Database called student
- 2) Create a collection called studentmarks
- 3) Create the documents listed in above table.
- 4) Increase the maths marks of Mala by 6 marks
- 5) List the names of students who got more than 50 marks in Maths Subject.
- 6) Add a new column(field) for Average for all students.
- 7) Update Marks\_Science=75 to Lucky.
- 8) List the names who got more than 50 marks in all subjects.
- 9) List the names who got less than 50 marks in Maths subject and more than 50 marks in English
- 10) List the names who got less than 40 in both Maths and Science.
- 11) Remove Science column/field for Raam
- 12) Update John's Math mark as 87 and English mark as 23, if john not available upsert.
- 13) Rename the english\_marks column/field for John to science\_marks
- 14) Remove Kumaran's document from collection
- 15) Find Kala's or Aruli's math

#### 14) Remove Kumaran's document from collection

```
Command Prompt - mongo
> db.studentmarks.remove({name:"Kumaran"})
WriteResult({ "nRemoved" : 1 })
> db.studentmarks.find()
{ "_id" : ObjectId("5e2595fd7f928ded8d0918ab"), "name" : "John", "maths_marks" : 87, "science_marks" : 23 }
{ "_id" : ObjectId("5e2595fd7f928ded8d0918ac"), "name" : "Vanu", "maths_marks" : 80, "english_marks" : 75, "science_marks" : 85 }
{ "_id" : ObjectId("5e2595fd7f928ded8d0918ad"), "name" : "Kala", "maths_marks" : 32, "english_marks" : 46, "science_marks" : 53 }
{ "_id" : ObjectId("5e2595fd7f928ded8d0918ae"), "name" : "Aruli", "maths_marks" : 78, "english_marks" : 85, "science_marks" : 80 }
{ "_id" : ObjectId("5e2595fd7f928ded8d0918af"), "name" : "Shayu", "maths_marks" : 80, "english_marks" : 76, "science_marks" : 65 }
{ "_id" : ObjectId("5e2595fd7f928ded8d0918b1"), "name" : "Lucky", "maths_marks" : 66, "english_marks" : 90, "science_marks" : 75 }
{ "_id" : ObjectId("5e2595fd7f928ded8d0918b2"), "name" : "Gva", "maths_marks" : 71, "english_marks" : 75, "science_marks" : 56 }
{ "_id" : ObjectId("5e2595fd7f928ded8d0918b3"), "name" : "Raam", "maths_marks" : 41, "english_marks" : 65 }
{ "_id" : ObjectId("5e25b62354b44b9756d9fefe") }
```

1) Create a Database called **student**  
2) Create a collection called **studentmarks**  
3) Create the documents listed in above table.  
4) Increase the maths marks of Mala by 6 marks  
5) List the names of students who got more than 50 marks in Maths Subject.  
6) Add a new column(field) for Average for all students.  
7) Update Marks\_Science=75 to Lucky .  
8) List the names who got more than 50 marks in all subjects.  
9) List the names who got less than 50 marks in Maths subject and more than 50 marks in English  
10) List the names who got less than 40 in both Maths and Science.  
11) Remove Science column/field for Raam  
12) Update John's Math mark as 87 and English mark as 23, if John not available upsert.  
13) Rename the english\_marks column/field for John to science\_marks  
14) Remove Kumaran's document from collection  
15) Find Kala's or Aruli's math\_marks and science\_marks

Note - Make sure all your answer screenshots are pretty.

studentmarks

#### 15) Find Kala's or Aruli's math\_marks and science\_marks

```
Command Prompt - mongo
> db.studentmarks.find({$or:[{name:"Kala"},{name:"Aruli"}]},{name:1,maths_marks:1,science_marks:1,_id:0})
{ "name" : "Kala", "maths_marks" : 32, "science_marks" : 53 }
{ "name" : "Aruli", "maths_marks" : 78, "science_marks" : 80 }
```

1) Create a Database called **student**  
2) Create a collection called **studentmarks**  
3) Create the documents listed in above table.  
4) Increase the maths marks of Mala by 6 marks  
5) List the names of students who got more than 50 marks in Maths Subject.  
6) Add a new column(field) for Average for all students.  
7) Update Marks\_Science=75 to Lucky .  
8) List the names who got more than 50 marks in all subjects.  
9) List the names who got less than 50 marks in Maths subject and more than 50 marks in English  
10) List the names who got less than 40 in both Maths and Science.  
11) Remove Science column/field for Raam  
12) Update John's Math mark as 87 and English mark as 23, if John not available upsert.  
13) Rename the english\_marks column/field for John to science\_marks  
14) Remove Kumaran's document from collection  
15) Find Kala's or Aruli's math\_marks and science\_marks

Note - Make sure all your answer screenshots are pretty.

studentmarks