

1) Create a Database called student

```
use student  
switched to db student
```

2) Create a collection called studentmarks

```
db.studentmark  
student.studentmark
```

3) Create the documents listed in above table.

```
>  
db.studentmark.insert({name:"mala",maths_marks:45,english_ma  
rks:53,science_marks:75})  
WriteResult({ "nInserted" : 1 })  
>  
db.studentmark.insert({name:"vanu",maths_marks:80,english_ma  
rks:75,science_marks:85})  
WriteResult({ "nInserted" : 1 })  
>  
db.studentmark.insert({name:"shayu",maths_marks:80,english_m  
arks:76,science_marks:65})  
WriteResult({ "nInserted" : 1 })  
>  
db.studentmark.insert({name:"kumaran",maths_marks:32,english_  
marks:73,science_marks:84})  
WriteResult({ "nInserted" : 1 })  
>  
db.studentmark.insert({name:"lucky",maths_marks:66,english_ma  
rks:90,science_marks:45})  
WriteResult({ "nInserted" : 1 })  
>  
db.studentmark.insert({name:"gva",maths_marks:71,english_mark  
s:75,science_marks:56})  
WriteResult({ "nInserted" : 1 })  
>  
db.studentmark.insert({name:"raam",maths_marks:41,english_ma  
rks:65,science_marks:88})  
WriteResult({ "nInserted" : 1 })  
> db.studentmark.find().pretty()  
{  
  "_id" : ObjectId("59255504fc6238c85bf45a33"),  
  "name" : "mala",  
  "maths_marks" : 45,
```

```
    "english_marks" : 53,  
    "science_marks" : 75  
  }  
{  
  "_id" : ObjectId("5925554cfc6238c85bf45a34"),  
  "name" : "vanu",  
  "maths_marks" : 80,  
  "english_marks" : 75,  
  "science_marks" : 85  
}  
{  
  "_id" : ObjectId("59255585fc6238c85bf45a35"),  
  "name" : "shayu",  
  "maths_marks" : 80,  
  "english_marks" : 76,  
  "science_marks" : 65  
}  
{  
  "_id" : ObjectId("592555b0fc6238c85bf45a36"),  
  "name" : "kumaran",  
  "maths_marks" : 32,  
  "english_marks" : 73,  
  "science_marks" : 84  
}  
{  
  "_id" : ObjectId("592555e0fc6238c85bf45a37"),  
  "name" : "lucky",  
  "maths_marks" : 66,  
  "english_marks" : 90,  
  "science_marks" : 45  
}  
{  
  "_id" : ObjectId("5925560ffc6238c85bf45a38"),  
  "name" : "gva",  
  "maths_marks" : 71,  
  "english_marks" : 75,  
  "science_marks" : 56  
}  
{  
  "_id" : ObjectId("59255637fc6238c85bf45a39"),  
  "name" : "raam",  
  "maths_marks" : 41,  
  "english_marks" : 65,
```

```
    "science_marks" : 88
}
```

4) Increase the maths marks of Mala by 6 marks

```
> db.studentmark.update({"name":"mala"},{$set:
{"maths_marks":"51"}})
```

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

```
> db.studentmark.find({"maths_marks":{$gt:50}})
{ "_id" : ObjectId("5925554cfc6238c85bf45a34"), "name" : "vanu",
"maths_marks" : 80, "english_marks" : 75, "science_marks" : 85 }
{ "_id" : ObjectId("59255585fc6238c85bf45a35"), "name" :
"shayu", "maths_marks" : 80, "english_marks" : 76,
"science_marks" : 65 }
{ "_id" : ObjectId("592555e0fc6238c85bf45a37"), "name" :
"lucky", "maths_marks" : 66, "english_marks" : 90,
"science_marks" : 45 }
{ "_id" : ObjectId("5925560ffc6238c85bf45a38"), "name" : "gva",
"maths_marks" : 71, "english_marks" : 75, "science_marks" : 56 }
```

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

```
> db.studentmark.update({},{$set:{"average":""}},
{upsert:false,multi:true})
```

```
WriteResult({ "nMatched" : 7, "nUpserted" : 0, "nModified" : 6 })
```

7) Update Marks_Science=75 to Lucky .

```
> db.studentmark.update({"name":"lucky"},{$rename:
{"science_marks":"marks_science"}},false,true)
```

```
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
```

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

```
> db.studentmark.find({$or:[{"maths_marks":{$gt:50}},
{"science_marks":{$gt:50}},{"english_marks":{$gt:50}}]},
{name:1,_id:0}).pretty()
{ "name" : "vanu" }
{ "name" : "shayu" }
{ "name" : "kumaran" }
{ "name" : "lucky" }
{ "name" : "gva" }
{ "name" : "raam" }
{ "name" : "mala" }
```

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

```
> db.studentmark.find({$and:[{"maths_marks":{"lt:50"}}, {"english_marks":{"gt:50"}}]}, {name:1, _id:0}).pretty()
{ "name" : "kumaran" }
{ "name" : "raam" }
```

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

```
> db.studentmark.find({$and:[{"maths_marks":{"lt:40"}}, {"science_marks":{"lt:40"}}]}, {name:1, _id:0}).pretty()
```

11) Remove Science column/field for Raam

```
> db.studentmark.update({"name":"raam"}, {$unset:{"science_marks":1}}, {multi:false})
```

```
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
```

```
> db.studentmark.find()
```

```
{ "_id" : ObjectId("5925554cfc6238c85bf45a34"), "name" : "vanu",
"maths_marks" : 80, "english_marks" : 75, "science_marks" : 85, "average" :
"" }
```

```
{ "_id" : ObjectId("59255585fc6238c85bf45a35"), "name" : "shayu",
"maths_marks" : 80, "english_marks" : 76, "science_marks" : 65, "average" :
"" }
```

```
{ "_id" : ObjectId("592555b0fc6238c85bf45a36"), "name" : "kumaran",
"maths_marks" : 32, "english_marks" : 73, "science_marks" : 84, "average" :
"" }
```

```
{ "_id" : ObjectId("592555e0fc6238c85bf45a37"), "name" : "lucky",
"maths_marks" : 66, "english_marks" : 90, "average" : "", "marks_science" :
"75" }
```

```
{ "_id" : ObjectId("5925560ffc6238c85bf45a38"), "name" : "gva",
"maths_marks" : 71, "english_marks" : 75, "science_marks" : 56, "average" :
"" }
```

```
{ "_id" : ObjectId("59255f56fc6238c85bf45a3a"), "name" : "mala",
"maths_marks" : "51", "english_marks" : 53, "science_marks" : 75, "average" :
"" }
```

```
{ "_id" : ObjectId("5926a5ca8d5d66866b708f05"), "name" : "raam",
"maths_marks" : 41, "english_marks" : 65 }
```

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

```

>
db.studentmark.insert({"name":"john","maths_marks":87,"english_marks":23})
WriteResult({ "nInserted" : 1 })
> db.studentmark.find()
{ "_id" : ObjectId("5925554cfc6238c85bf45a34"), "name" : "vanu",
"maths_marks" : 80, "english_marks" : 75, "science_marks" : 85, "average" :
"" }
{ "_id" : ObjectId("59255585fc6238c85bf45a35"), "name" : "shayu",
"maths_marks" : 80, "english_marks" : 76, "science_marks" : 65, "average" :
"" }
{ "_id" : ObjectId("592555b0fc6238c85bf45a36"), "name" : "kumaran",
"maths_marks" : 32, "english_marks" : 73, "science_marks" : 84, "average" :
"" }
{ "_id" : ObjectId("592555e0fc6238c85bf45a37"), "name" : "lucky",
"maths_marks" : 66, "english_marks" : 90, "average" : "", "marks_science" :
"75" }
{ "_id" : ObjectId("5925560ffc6238c85bf45a38"), "name" : "gva",
"maths_marks" : 71, "english_marks" : 75, "science_marks" : 56, "average" :
"" }
{ "_id" : ObjectId("59255f56fc6238c85bf45a3a"), "name" : "mala",
"maths_marks" : "51", "english_marks" : 53, "science_marks" : 75, "average" :
"" }
{ "_id" : ObjectId("5926a5ca8d5d66866b708f05"), "name" : "raam",
"maths_marks" : 41, "english_marks" : 65 }
{ "_id" : ObjectId("5926a8748d5d66866b708f06"), "name" : "john",
"maths_marks" : 87, "english_marks" : 23 }
>

```

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

```

> db.studentmark.update({"_id":ObjectId("5926a8748d5d66866b708f06")},
{$rename:{"english_marks":"science_marks"}})
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })

```

14) Remove Kumaran's document from collection

```

> db.studentmark.remove({"_id":ObjectId("592555b0fc6238c85bf45a36")})
WriteResult({ "nRemoved" : 1 })

```

15) Find Kala's or Aruli's math_marks and science_marks

```

> db.studentmark.find({$or:[{"name":"shayu"}, {"name":"mala"}]}, {"maths_marks":1})
{ "_id" : ObjectId("59255585fc6238c85bf45a35"), "maths_marks" : 80 }
{ "_id" : ObjectId("59255f56fc6238c85bf45a3a"), "maths_marks" : "51" }
> db.studentmark.find({$or:[{"name":"shayu"}, {"name":"mala"}]}, {"maths_marks":1,"science_marks":1})
{ "_id" : ObjectId("59255585fc6238c85bf45a35"), "maths_marks" : 80, "science_marks" : 65 }
{ "_id" : ObjectId("59255f56fc6238c85bf45a3a"), "maths_marks" : "51", "science_marks" : 75 }
>

```