MongoDB Exercise 2

1) Create a Database called student

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

2) Create a collection called studentmarks

```
> db.studentmarks
student.studentmarks
>
```

3) Create the documents listed in above table.

```
> db.studentmarks
student.studentmarks
> db.studentmarks.insert({name:"mala",maths_marks:"45",english_marks:"53",science_marks:"72"})
WriteResult({ "nInserted" : 1 })
> db.studentmarks.insert({name:"vanu",maths_marks:"80",english_marks:"75",science_marks:"85"})
WriteResult({ "nInserted" : 1 })
> db.studentmarks.insert({name:"kala",maths_marks:"32",english_marks:"46",science_marks:"53"})
WriteResult({ "nInserted" : 1 })
> db.studentmarks.insert({name:"Aruli",maths_marks:"78",english_marks:"85",science_marks:"80"})
WriteResult({ "nInserted" : 1 })
> db.studentmarks.insert({name:"shayu",maths_marks:"80",english_marks:"76",science_marks:"65"})
WriteResult({ "nInserted" : 1 })
> db.studentmarks.insert({name:"Kumaran",maths_marks:"32",english_marks:"73",science_marks:"45"})
WriteResult({ "nInserted" : 1 })
> db.studentmarks.insert({name:"Kumaran",maths_marks:"32",english_marks:"73",science_marks:"84"})
WriteResult({ "nInserted" : 1 })
> db.studentmarks.insert({name:"Lucky",maths_marks:"66",english_marks:"90",science_marks:"45"})
WriteResult({ "nInserted" : 1 })
> db.studentmarks.insert({name:"Gva",maths_marks:"71",english_marks:"75",science_marks:"56"})
WriteResult({ "nInserted" : 1 })
> db.studentmarks.insert({name:"Raam",maths_marks:"41",english_marks:"65",science_marks:"88"})
WriteResult({ "nInserted" : 1 })
```

4) Increase the maths marks of Mala by 6 marks

```
> db.studentmarks.update({name:"mala"},{$inc:{maths_marks:6}})
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
> db.studentmarks.find().pretty()
{
        "_id" : ObjectId("59269bf75ad029d99caff9c1"),
        "name" : "mala",
        "maths_marks" : 51,
        "english_marks" : 53,
        "science_marks" : 72
}
```

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

```
> db.studentmarks.find({maths_marks:{$gt:50}})
{ "_id" : ObjectId("59269bf75ad029d99caff9c1"), "name" : "mala", "maths_marks" : 51, "english_marks" : 53, "science_marks" : 72 }
{ "_id" : ObjectId("59269c4b5ad029d99caff9c2"), "name" : "vanu", "maths_marks" : 80, "english_marks" : 75, "science_marks" : 85 }
{ "_id" : ObjectId("59269c885ad029d99caff9c4"), "name" : "aruli", "maths_marks" : 78, "english_marks" : 85, "science_marks" : 80 }
{ "_id" : ObjectId("59269cd55ad029d99caff9c5"), "name" : "shayu", "maths_marks" : 80, "english_marks" : 76, "science_marks" : 65 }
{ "_id" : ObjectId("59269d275ad029d99caff9c7"), "name" : "lucky", "maths_marks" : 66, "english_marks" : 90, "science_marks" : 45 }
{ "_id" : ObjectId("59269d3f5ad029d99caff9c8"), "name" : "gva", "maths_marks" : 71, "english_marks" : 75, "science_marks" : 56 }
>
```

6)Add a new column(field) for Average for all students.
7) Update Marks_Science=75 to Lucky .

```
> db.studentmarks.update({"name":"lucky"},{$set:{"science_mark":75}})
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
>
```

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

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

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

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

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

```
> db.studentmarks.find({$or:[{"maths_marks":{$lt:40}},{"science_marks":{$gt:40}}]},{"name":1,_id:0}).pretty()
{ "name" : "mala" }
{ "name" : "vanu" }
{ "name" : "kala" }
{ "name" : "aruli" }
{ "name" : "shayu" }
{ "name" : "kumaran" }
{ "name" : "lucky" }
{ "name" : "gva" }
{ "name" : "raam" }
>
```

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

```
> db.studentmarks.remove({"name":"kumaran"})
WriteResult({ "nRemoved" : 1 })
>
```

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

```
> db.studentmarks.find({$or:[{name:"kala"},{name:"aruli"}]},{maths_marks:1,science_marks:1,_id:0,name:1})
{ "name" : "kala", "maths_marks" : 32, "science_marks" : 53 }
{ "name" : "aruli", "maths_marks" : 78, "science_marks" : 80 }
>
```