MongoDB Exercise2

1) Create a Database called student

```
> use Student
switched to db Student
```

2) Create a collection called studentmarks

```
> db.createCollection("Studentmarks")
{ "ok" : 1 }
```

3) Create the documents listed in above table.

```
> 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" : [ ]
})
```

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("5d144cbcb16a30856e2d1980"),
        "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":0,"name":1}).pretty()
{ "name" : "Vanu" }
{ "name" : "Aruli" }
{ "name" : "Shayu" }
{ "name" : "Lucky" }
{ "name" : "Gva" }
```

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

```
> db.getCollection('Studentmarks').update({},{$set:{Average:""}},false,true)
WriteResult({ "nMatched" : 9, "nUpserted" : 0, "nModified" : 9 })
```

7) Update Marks_Science=75 to Lucky

```
> db.Studentmarks.update({"science_marks":45},{$set:{"science_marks":75}})
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
```

.

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

```
> db.Studentmarks.find({maths_marks:{$gt:50},english_marks:{$gt:50},science_mark
s:{$gt:50}},{"_id":0,"name":1}).pretty()
{ "name" : "Vanu" }
{ "name" : "Aruli" }
{ "name" : "Shayu" }
{ "name" : "Gva" }
```

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

```
> db.Studentmarks.find({maths_marks:{$lt:50},english_marks:{$gt:50}},{"_id":0,"n
ame":1}).pretty()
{ "name" : "Mala" }
{ "name" : "Kumaran" }
{ "name" : "Raam" }
>
```

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

```
> db.Studentmarks.find({maths_marks:{$lt:40},science_marks:{$lt:40}},{"_id":0,"n
ame":1}).pretty()
>
```

11) Remove Science column/field for Raam

```
> db.Studentmarks.update({"name":"Raam"},{$unset:{"science_marks":75}})
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
```

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

```
> db.Studentmarks.insert({"name":"john","maths_marks":87,"english_marks":23},{up
sert:true})
WriteResult({ "nInserted" : 1 })
>
```

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

```
> db.Studentmarks.update( { _id: ObjectId("5d14867b305e9ea5b604df4c") }, { $rename: {  "english_marks": "science_marks" } } )
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
> db.Studentmarks.find().pretty()
```

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.insert({"maths_marks":87,"english_marks":23},{upsert:true})
WriteResult({ "nInserted" : 1 })
> db.Studentmarks.find({$or:[{"name":"Aruli"},{"name":"Kala"}]},{"_id":0,"name":
1,"maths_marks":1,"science_marks":1}).pretty()
{ "name" : "Kala", "maths_marks" : 32, "science_marks" : 53 }
{ "name" : "Aruli", "maths_marks" : 78, "science_marks" : 80 }
>
```