MongoDB Exercise 02

1) Create a Database called , student

```
> use students
switched to db students
> db
students
```

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})
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":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":5}})
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
```

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

```
> db.studentmarks.find({"maths_marks":{$gt:50}}).pretty(
{
        "_id" : ObjectId("5925548bf2837a4b0790490f"),
        "name" : "vanu",
        "maths_marks" : 80,
        "english_marks" : 75,
        "science_marks" : 85
}
{
        "_id" : ObjectId("592554c4f2837a4b07904911"),
        "name" : "aruli",
        "maths_marks" : 78,
        "english_marks" : 85,
        "science_marks" : 80
}
{
        "_id" : ObjectId("592554e3f2837a4b07904912"),
        "name" : "shayu",
        "maths_marks" : 80,
        "english_marks" : 76,
        "science_marks" : 65
}
{
        "_id" : ObjectId("5925553ff2837a4b07904914"),
        "name" : "lucky",
        "maths_marks" : 66,
        "english_marks" : 90,
        "science_marks" : 45
}
{
        "_id" : ObjectId("5925556af2837a4b07904915"),
        "name" : "Gva",
        "maths_marks" : 71,
        "english_marks" : 75,
        "science_marks" : 56
}
```

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

```
> db.studentmarks.update({},{$set:{"average":""}},{upsert:false,multi:true})
WriteResult({ "nMatched" : 9, "nUpserted" : 0, "nModified" : 9 })
```

7) Update Marks_Science=75 to Lucky .

```
> db.studentmarks.update({"name":"lucky"},{$rename:{"science_marks":"marks_science"}})
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}},{"english_marks":{$gt:50}},{"science_marks":{$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" }
```

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" : "Gva" }
{ "name" : "raam" }
```

11) Remove Science column/field for Raam

```
> db.studentmarks.remove({"name":"raam"},{"science_marks":88})
WriteResult({ "nRemoved" : 1 })
> db.studentmarks.find()
{ "_id" : ObjectId("59256242f2837a4b07904917"), "name" : "mala", "maths_marks" : 50, "english_marks" : 53, "science_marks" : 72, "average" : "" }
{ "_id" : ObjectId("59256247f2837a4b07904918"), "name" : "vanu", "maths_marks" : 80, "english_marks" : 75, "science_marks" : 85, "average" : "" }
{ "_id" : ObjectId("59256253f2837a4b07904919"), "name" : "kala", "maths_marks" : 32, "english_marks" : 46, "science_marks" : 53, "average" : "" }
{ "_id" : ObjectId("59256264f2837a4b0790491a"), "name" : "aruli", "maths_marks" : 78, "english_marks" : 85, "science_marks" : 80, "average" : "" }
{ "_id" : ObjectId("5925626ff2837a4b0790491b"), "name" : "shayu", "maths_marks" : 80, "english_marks" : 76, "science_marks" : 65, "average" : "" }
{ "_id" : ObjectId("59256278f2837a4b0790491c"), "name" : "kumaran", "maths_marks" : 32, "english_marks" : 73, "science_marks" : 84, "average" : "" }
{ "_id" : ObjectId("59256281f2837a4b0790491d"), "name" : "lucky", "maths_marks" : 66, "english_marks" : 90, "average" : "", "marks_science" : 45 }
{ "_id" : ObjectId("5925628af2837a4b0790491e"), "name" : "Gva", "maths_marks" : 71, "english_marks" : 75, "science_marks" : 56, "average" : "" }
```

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})
WriteResult({ "nInserted" : 1 })
```

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

```
> db.studentmarks.update({"_id":ObjectId("5926876277d2c550fa6fd8c0")},{$rename:{"english_marks":"science_marks"}})
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
```

14) Remove Kumaran’s document from collection

```
> db.studentmarks.remove({"_id":ObjectId("59256278f2837a4b0790491c")})
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 }
>
>
```