1.   Create a Database called the 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_mar
ks:85,science_marks:80},{name:"Shayu",maths_marks:80,english_marks:76,science_marks:6
5},{name:"Kumaran",maths_marks:32,english_marks:73,science_marks:84},{name:"Lucky",ma
ths_marks:66,english_marks:90,science_marks:45},{name:"Gva",maths_marks:71,english_ma
rks:75,science_marks:56},{name:"Raam",maths_marks:41,english_marks:65,science_marks:8
8}])
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_mar
ks":6}})
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified"
 : 1 })
> db.studentmarks.find().pretty()
{
        "_id" : ObjectId("5d0835c828e7836c62044602"),
        "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}},{"name":1,_id:0}).pretty(
)
{ "name" : "Mala" }
{ "name" : "Vanu" }
{ "name" : "Aruli" }
{ "name" : "Shayu" }
{ "name" : "Lucky" }
{ "name" : "Gva" }
>
```

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

```
>
> db.studentmarks.aggregate({$addFields:{Average:{$avg:["$maths_marks","$english_marks","$science_marks"]}}
}).pretty()
{
        "_id" : ObjectId("5d08fb84c8492282ecbdabf4"),
        "name" : "Mala",
        "maths_marks" : 45,
        "english_marks" : 53,
        "science_marks" : 72,
        "Average" : 56.666666666666664
}
{
        "_id" : ObjectId("5d08fb84c8492282ecbdabf5"),
        "name" : "Vanu",
        "maths_marks" : 80,
        "english_marks" : 75,
        "science_marks" : 85,
        "Average" : 80
}
{
        "_id" : ObjectId("5d08fb84c8492282ecbdabf6"),
        "name" : "Kala",
        "maths_marks" : 32,
        "english_marks" : 46,
        "science_marks" : 53,
        "Average" : 43.666666666666664
```

7.   Update Marks_Science=75 to Lucky.

```
>
>
>
>
> db.studentmarks.update({science_marks:45},{$set:{name:"Lucky",maths_marks:66,englis
h_marks:90,science_marks:75}})
WriteResult({ "nMatched" : 0, "nUpserted" : 0, "nModified" : 0 })
>
>
>
>
```

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_marks:{$g
t:50}},{name:1,_id:0}).pretty()
{ "name" : "Mala" }
{ "name" : "Vanu" }
{ "name" : "Aruli" }
{ "name" : "Shayu" }
{ "name" : "Lucky" }
{ "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}},{name:1,_id:0}).pretty()
{ "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}},{n
ame:1,_id:0}).pretty()
>
>
```

11. Remove Science column/field for Raam

```
>
>
>
>
> db.studentmarks.update({_id:ObjectId("5d08b5889620f30f86b2fa7f")},{$unset:{science_
marks:1}},false,true)
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 0 })
>
>
```

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

```
>
>
>
> db.studentmarks.update({name:"John"},{$set:{"maths_marks":87,"english_marks":23}},{upsert:true})
WriteResult({
        "nMatched" : 0,
        "nUpserted" : 1,
        "nModified" : 0,
        "_id" : ObjectId("5d08cc8c7ffeffbb78712c7a")
})
>
>
```

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

```
>
> db.studentmarks.update({"_id" : ObjectId("5d08cc8c7ffeffbb78712c7a")}
,{$rename:{"english_marks":"science_marks"}})

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

14.   Remove Kumaran's document from the collection

```
>
>
>
> db.studentmarks.remove({"_id" : ObjectId("5d08b5889620f30f86b2fa7c")})
WriteResult({ "nRemoved" : 1 })
>
>
>
```

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

● db.studentmarks.find({"_id" : ObjectId(----id no----)},{"maths_marks" : 1,"science_marks" : 1}).pretty()