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:"Venu",maths_marks:80,english_marks:75,s
cience_marks:85},{name:"Kala",maths_marks:32,english_marks:46,science_marks:53},{name:"Aruli",maths_marks:78,english_marks:85,science_m
arks: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 })
>
```

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})
{ "name" : "Mala" }
{ "name" : "Venu" }
{ "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("5d08bb4df9945af6553bc3a3"),
        "name" : "Mala",
        "maths_marks" : 51,
        "english_marks" : 53,
        "science_marks" : 72,
        "Average" : 58.666666666666664
}
{
        "_id" : ObjectId("5d08bb4df9945af6553bc3a4"),
        "name" : "Venu",
        "maths_marks" : 80,
        "english_marks" : 75,
        "science_marks" : 85,
        "Average" : 80
```

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_marks:{$gt:50}},{name:1,_id:0}).pretty()
{ "name" : "Mala" }
{ "name" : "Venu" }
{ "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}},{name:1,_id:0}).pretty()
>
>
```

11) Remove Science column/field for Raam

```
>
> db.studentmarks.update({"_id" : ObjectId("5d08bb4df9945af6553bc3ab")},{$unset:{science_marks:88}})
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})
WriteResult({ "nInserted" : 1 })
>
```

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

```
>
> db.studentmarks.update({"name":"John"},{$rename:{"english_marks":"science_marks"}})
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
>
```

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({"_id" : ObjectId("5d08bb4df9945af6553bc3a6")},{name:1,maths_marks:1,science_marks:1,_id:0}).pretty()
{ "name" : "Aruli", "maths_marks" : 78, "science_marks" : 80 }
>
```