MongoDB Exercise 2

1) Create a Database called student

2) Create a collection called studentmarks

3) Create the documents listed in above table

```
db.studentmarks.insert({"name":"Mala","maths_marks":45,"english_marks":43,"science_marks":72})
db.studentmarks.insert({"name":"Vanu","maths_marks":80",english_marks":75,"science_marks":85})
db.studentmarks.insert({"name":"Kala","maths_marks":32,"english_marks":46,"science_marks":53})
db.studentmarks.insert({"name":"Aruli","maths_marks":78,"english_marks":85,"science_marks":80})
db.studentmarks.insert({"name":"Shayu","maths_marks":80,"english_marks":76,"science_marks":65})
db.studentmarks.insert({"name":"Kumaran","maths_marks":32,"english_marks":73,"science_marks":84})
db.studentmarks.insert({"name":"Luck","maths_marks":66,"english_marks":90,"science_marks":45})
db.studentmarks.insert({"name":"Gva","maths_marks":71,"english_marks":75,"science_marks":56})
db.studentmarks.insert({"name":"Raam","maths_marks":41,"english_marks":65,"science_marks":88})
```

```
2019-01-14T14:56:05.698+0530 I CONTROL  [initandlisten] ** WARNING: /sys/kernel/mm/transparent_hugepage/enabled is 'always'.
2019-01-14T14:56:05.699+0530 I CONTROL  [initandlisten] **        We suggest setting it to 'never'
2019-01-14T14:56:05.699+0530 I CONTROL  [initandlisten]
> use student
switched to db student
> db.studentmarks.insert({"name":"Vanu","maths_marks":80",english_marks":75,"science_marks":85})
2019-01-14T15:21:48.462+0530 E QUERY    [thread1] SyntaxError: missing } after property list @(shell):1:54
> db.studentmarks.insert({"name":"Vanu","maths_marks":80","english_marks":75,"science_marks":85})
2019-01-14T15:22:01.043+0530 E QUERY    [thread1] SyntaxError: missing } after property list @(shell):1:54
> 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":"Luck","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 })
> db.studentsmarks.find()
> show collection
2019-01-14T15:26:37.580+0530 E QUERY    [thread1] Error: don't know how to show [collection] :
shellHelper.show@src/mongo/shell/utils.js:950:11
shellHelper@src/mongo/shell/utils.js:703:15
@(shellhelp2):1:1
> show collections
studentmarks
students
> db.studentmarks.find().pretty()
{
        "_id" : ObjectId("5c3c5aa55f8a68231e071584"),
```

4) Increase the maths marks of Mala by 6 marks

> db.studentmarks.update({"name":"Mala"},{$inc:{"maths_marks":+6}})

```
}
> db.studentmarks.update({"name":"Mala"},{$inc:{"maths_marks":+6}})
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
> db.studentmarks.find().pretty()
```

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

>db.studentmarks.find({"maths_marks":{$gt:50}}).pretty()

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

>db.studentmarks.aggregate({$addFields:{"Average":""}}).pretty()

7) Update Marks_Science=75 to Lucky .

>db.studentsmarks.update({"name":"lucky"},{$set:{"science_marks":75}})

```
   "science_marks" : 88
}
> db.studentsmarks.update({"name":"lucky"},{$set:{"science_marks":"75}})
2019-01-16T10:47:45.877+0530 E QUERY    [thread1] SyntaxError: illegal character @(shell):1:25
> db.studentsmarks.update({"name":"lucky"},{$set:{"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({$and:[{"english_marks":{$gt:50}},{"science_marks":{$gt:50}},{"maths_marks":{$gt:50}}]},{"name":1,_id:0}).pretty()

```
> db.studentmarks.find({$or:[{"english_marks":{$gt:50}},{"science_marks":{$gt:50}},{"maths_marks":{$gt:50}}]},{"name":1,_id:0}).pretty()
{ "name" : "Mala" }
{ "name" : "Vanu" }
{ "name" : "Kala" }
{ "name" : "Aruli" }
{ "name" : "Shayu" }
{ "name" : "Kumaran" }
{ "name" : "Luck" }
{ "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.studentsmarks.find({$and:[{"english_marks":{$gt:50}},{"maths_marks":{$lt:50}}]},{"name":1,_id:0})

```
> db.studentmarks.find({$and:[{"english_marks":{$gt:50}},{"maths_marks":{$lt:50}}]},{"name":1,_id:0})
{ "name" : "Kumaran" }
{ "name" : "Raam" }
> db.studentmarks.find({$and:[{"english_marks":{$gt:50}},{"maths_marks":{$lt: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({$or:[{"maths_marks":{$lt:40}},{"science_marks":{$lt:40}}]},{"name":1,_id:0})

```
> db.studentmarks.find({$or:[{"maths_marks":{$lt:40}},{"science_marks":{$lt:40}}]},{"name":1,_id:0}).pretty()
{ "name" : "Kala" }
{ "name" : "Kumaran" }
>
```

11) Remove Science column/field for Raam

>db.studentmarks.update({"name":"Raam"},{$unset:{"science_marks":88}})

```
> db.studentmarks.update({"name":"Raam"},{$unset:{"science_marks":88}})
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
```

```
"_id" : ObjectId("5c3c5c8a73b16de4096e19f1"),
"name" : "Raam",
"maths_marks" : 41,
"english_marks" : 65
```

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})

```
}
> 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"}})

```
> 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"})

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

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

>db.studentmarks.find({"name":"Kala"},{"maths_marks":1,"science_marks":1}).pretty()

```
> db.studentmarks.find({"name":"Kala"},{"maths_marks":1,"science_marks":1}).pretty()
{
        "_id" : ObjectId("5c3c5bdb73b16de4096e19eb"),
        "maths_marks" : 32,
        "science_marks" : 53
}
```