

1) Create a Database called student

```
ukistu12@ukipc12: ~  
ukistu12@ukipc12: ~  
ukistu12@ukipc12: ~  
[sudo] password for ukistu12: ps://classroom.google.com/c/MTiwODAxOTkyMDNa  
MongoDB shell version v3.6.5  
connecting to: mongodb://127.0.0.1:27017  
MongoDB server version: 3.6.5  
Server has startup warnings:  
2018-07-06T10:46:13.469+0530 I STORAGE [initandlisten] ** WARNING: Using the XFS filesystem is strongly recommended with the WiredTiger storage engine  
2018-07-06T10:46:13.469+0530 I STORAGE [initandlisten] See http://dochub.mongodb.org/core/prodnotes-filesystem  
2018-07-06T10:46:16.055+0530 I CONTROL [initandlisten] ** WARNING: Access Control is not enabled for the database.  
2018-07-06T10:46:16.055+0530 I CONTROL [initandlisten] ** Read and write access to data and configuration is unrestricted.  
2018-07-06T10:46:16.055+0530 I CONTROL [initandlisten] ** WARNING: You are running this process as the root user, which is not recommended.  
2018-07-06T10:46:16.055+0530 I CONTROL [initandlisten] ** WARNING: This server is bound to localhost.  
2018-07-06T10:46:16.056+0530 I CONTROL [initandlisten] Remote systems will be unable to connect to this server.  
2018-07-06T10:46:16.056+0530 I CONTROL [initandlisten] Start the server with --bind_ip <address> to specify which IP  
2018-07-06T10:46:16.056+0530 I CONTROL [initandlisten] addresses it should serve responses from, or with --bind_ip_all to  
2018-07-06T10:46:16.056+0530 I CONTROL [initandlisten] bind to all interfaces. If this behavior is desired, start the  
2018-07-06T10:46:16.056+0530 I CONTROL [initandlisten] server with --bind_ip 127.0.0.1 to disable this warning.  
2018-07-06T10:46:16.056+0530 I CONTROL [initandlisten] ** WARNING: /sys/kernel/mm/transparent_hugepage/enabled is 'always'.  
2018-07-06T10:46:16.056+0530 I CONTROL [initandlisten] We suggest setting it to 'never'.  
2018-07-06T10:46:16.056+0530 I CONTROL [initandlisten]  
> show dbs  
admin 0.000GB  
config 0.000GB  
local 0.000GB  
marks 0.000GB  
music 0.000GB  
person 0.000GB  
uki3 0.000GB  
> use student  
switched to db student  
>  
1) Create a Database called student  
2) Create a collection called studentmarks  
3) Create the documents listed in above table
```

Name	Maths Marks	English Marks	Science Marks
Mala	45	53	73
Vanu	80	75	85
Kala	32	46	53
Aruli	78	85	80
Shayu	80	76	76
Kumaran	32	73	84
Lucky	66	90	45
Gva	71	75	56
Raam	41	65	88

2) Create a collection called studentmarks

```
> db.createCollection('studentmarks')  
{ "ok" : 1 }  
>  
9) List the names who got less than 5  
10) List the names who got less than
```

3) Create the documents listed in above table.

```
> db.studentmarks.insert([{'name':'mala','maths_marks':45,'english_marks':53,'science_marks':73},{'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':76},{'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: "maths_marks": +6 } } )
2018-07-06T12:36:31.072+0530 E QUERY [thread1] SyntaxError: missing } after property list @ (shell):1:86
> db.studentmarks.update( { "name" : "mala"}, { $inc: { maths_marks:+6, "maths_marks": +6 } } )
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
> db.studentmarks.update( { "name" : "vanu"}, { $inc: { maths_marks:+6, "maths_marks": +6 } } )
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
> db.studentmarks.update( { "name" : "kala"}, { $inc: { maths_marks:+6, "maths_marks": +6 } } )
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
> db.studentmarks.update( { "name" : "aruli"}, { $inc: { maths_marks:+6, "maths_marks": +6 } } )
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
> db.studentmarks.update( { "name" : "shayu"}, { $inc: { maths_marks:+6, "maths_marks": +6 } } )
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
> db.studentmarks.update( { "name" : "kumaran"}, { $inc: { maths_marks:+6, "maths_marks": +6 } } )
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
> db.studentmarks.update( { "name" : "lucky"}, { $inc: { maths_marks:+6, "maths_marks": +6 } } )
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
> db.studentmarks.update( { "name" : "gva"}, { $inc: { maths_marks:+6, "maths_marks": +6 } } )
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
> db.studentmarks.update( { "name" : "raam"}, { $inc: { maths_marks:+6, "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}})
{ "_id" : ObjectId("5b3f0e54acd0a35dcbefca80"), "name" : "mala", "maths_marks" : 51, "english_marks" : 53, "science_marks" : 73 }
{ "_id" : ObjectId("5b3f0e54acd0a35dcbefca81"), "name" : "vanu", "maths_marks" : 86, "english_marks" : 75, "science_marks" : 85 }
{ "_id" : ObjectId("5b3f0e54acd0a35dcbefca83"), "name" : "aruli", "maths_marks" : 84, "english_marks" : 85, "science_marks" : 80 }
{ "_id" : ObjectId("5b3f0e54acd0a35dcbefca84"), "name" : "shayu", "maths_marks" : 86, "english_marks" : 76, "science_marks" : 65 }
{ "_id" : ObjectId("5b3f0e54acd0a35dcbefca86"), "name" : "lucky", "maths_marks" : 72, "english_marks" : 90, "science_marks" : 45 }
{ "_id" : ObjectId("5b3f0e54acd0a35dcbefca87"), "name" : "gva", "maths_marks" : 77, "english_marks" : 75, "science_marks" : 56 }

```

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

```

> db.studentmarks.update({}, {$set:{'Average': null}}, {multi:true})
WriteResult({ "nMatched" : 9, "nUpserted" : 0, "nModified" : 9 })

```

7) Update Marks_Science=75 to Lucky .

```

@ (shell):1:1
> db.studentmarks.update({"name":"lucky"},{$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}})
{ "_id" : ObjectId("5b3f0e54acd0a35dcbefca80"), "name" : "mala", "maths_marks" : 51, "english_marks" : 53, "science_marks" : 73, "Average" : null }
{ "_id" : ObjectId("5b3f0e54acd0a35dcbefca81"), "name" : "vanu", "maths_marks" : 86, "english_marks" : 75, "science_marks" : 85, "Average" : null }
{ "_id" : ObjectId("5b3f0e54acd0a35dcbefca83"), "name" : "aruli", "maths_marks" : 84, "english_marks" : 85, "science_marks" : 80, "Average" : null }
{ "_id" : ObjectId("5b3f0e54acd0a35dcbefca84"), "name" : "shayu", "maths_marks" : 86, "english_marks" : 76, "science_marks" : 65, "Average" : null }
{ "_id" : ObjectId("5b3f0e54acd0a35dcbefca86"), "name" : "lucky", "maths_marks" : 72, "english_marks" : 90, "science_marks" : 75, "Average" : null }
{ "_id" : ObjectId("5b3f0e54acd0a35dcbefca87"), "name" : "gva", "maths_marks" : 77, "english_marks" : 75, "science_marks" : 56, "Average" : null }

> db.studentmarks.find({'maths_marks':{$gt:50}})
{ "_id" : ObjectId("5b3f0e54acd0a35dcbefca80"), "name" : "mala", "maths_marks" : 51, "english_marks" : 53, "science_marks" : 73, "Average" : null }
{ "_id" : ObjectId("5b3f0e54acd0a35dcbefca81"), "name" : "vanu", "maths_marks" : 86, "english_marks" : 75, "science_marks" : 85, "Average" : null }
{ "_id" : ObjectId("5b3f0e54acd0a35dcbefca83"), "name" : "aruli", "maths_marks" : 84, "english_marks" : 85, "science_marks" : 80, "Average" : null }
{ "_id" : ObjectId("5b3f0e54acd0a35dcbefca84"), "name" : "shayu", "maths_marks" : 86, "english_marks" : 76, "science_marks" : 65, "Average" : null }
{ "_id" : ObjectId("5b3f0e54acd0a35dcbefca86"), "name" : "lucky", "maths_marks" : 72, "english_marks" : 90, "science_marks" : 75, "Average" : null }
{ "_id" : ObjectId("5b3f0e54acd0a35dcbefca87"), "name" : "gva", "maths_marks" : 77, "english_marks" : 75, "science_marks" : 56, "Average" : null }

> db.studentmarks.find({'english_marks':{$gt:50}})
{ "_id" : ObjectId("5b3f0e54acd0a35dcbefca80"), "name" : "mala", "maths_marks" : 51, "english_marks" : 53, "science_marks" : 73, "Average" : null }
{ "_id" : ObjectId("5b3f0e54acd0a35dcbefca81"), "name" : "vanu", "maths_marks" : 86, "english_marks" : 75, "science_marks" : 85, "Average" : null }
{ "_id" : ObjectId("5b3f0e54acd0a35dcbefca83"), "name" : "aruli", "maths_marks" : 84, "english_marks" : 85, "science_marks" : 80, "Average" : null }
{ "_id" : ObjectId("5b3f0e54acd0a35dcbefca84"), "name" : "shayu", "maths_marks" : 86, "english_marks" : 76, "science_marks" : 65, "Average" : null }
{ "_id" : ObjectId("5b3f0e54acd0a35dcbefca85"), "name" : "kumaran", "maths_marks" : 38, "english_marks" : 73, "science_marks" : 84, "Average" : null }
{ "_id" : ObjectId("5b3f0e54acd0a35dcbefca86"), "name" : "lucky", "maths_marks" : 72, "english_marks" : 90, "science_marks" : 75, "Average" : null }
{ "_id" : ObjectId("5b3f0e54acd0a35dcbefca87"), "name" : "gva", "maths_marks" : 77, "english_marks" : 75, "science_marks" : 56, "Average" : null }
{ "_id" : ObjectId("5b3f0e54acd0a35dcbefca88"), "name" : "raam", "maths_marks" : 47, "english_marks" : 65, "science_marks" : 88, "Average" : null }

> db.studentmarks.find({'science_marks':{$gt:50}})
{ "_id" : ObjectId("5b3f0e54acd0a35dcbefca80"), "name" : "mala", "maths_marks" : 51, "english_marks" : 53, "science_marks" : 73, "Average" : null }
{ "_id" : ObjectId("5b3f0e54acd0a35dcbefca81"), "name" : "vanu", "maths_marks" : 86, "english_marks" : 75, "science_marks" : 85, "Average" : null }
{ "_id" : ObjectId("5b3f0e54acd0a35dcbefca82"), "name" : "kala", "maths_marks" : 38, "english_marks" : 46, "science_marks" : 53, "Average" : null }
{ "_id" : ObjectId("5b3f0e54acd0a35dcbefca83"), "name" : "aruli", "maths_marks" : 84, "english_marks" : 85, "science_marks" : 80, "Average" : null }
{ "_id" : ObjectId("5b3f0e54acd0a35dcbefca84"), "name" : "shayu", "maths_marks" : 86, "english_marks" : 76, "science_marks" : 65, "Average" : null }
{ "_id" : ObjectId("5b3f0e54acd0a35dcbefca85"), "name" : "kumaran", "maths_marks" : 38, "english_marks" : 73, "science_marks" : 84, "Average" : null }
{ "_id" : ObjectId("5b3f0e54acd0a35dcbefca86"), "name" : "lucky", "maths_marks" : 72, "english_marks" : 90, "science_marks" : 75, "Average" : null }
{ "_id" : ObjectId("5b3f0e54acd0a35dcbefca87"), "name" : "gva", "maths_marks" : 77, "english_marks" : 75, "science_marks" : 56, "Average" : null }
{ "_id" : ObjectId("5b3f0e54acd0a35dcbefca88"), "name" : "raam", "maths_marks" : 47, "english_marks" : 65, "science_marks" : 88, "Average" : null }

```

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

```

> db.studentmarks.find($and:[{"maths_marks":{$lt:50}},{"english_marks":{$gt:50}}])

```

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}})
Error: error: {
  "ok" : 0,
  "errmsg" : "Unsupported projection option: science_marks: { $lt: 40.0 }",
  "code" : 2,
  "codeName" : "BadValue"
}
```

11) Remove Science column/field for Raam

```
> db.studentmarks.remove({'name':'raam'})
WriteResult({ "nRemoved" : 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}])
```

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

```
> db.studentmarks.insert([{'name':'john','maths_marks':87,'english_marks':23}])
```

14) Remove Kumaran's document from collection

```
> db.studentmarks.remove({'name':'kumaran'})
WriteResult({ "nRemoved" : 1 })
>
```