

1) Create a Database called student

```
ukistu12@UKIPC12: ~  
ukistu12@UKIPC12: ~  
S filesystem is strongly recommended with the WiredTiger storage engine  
2019-01-16T08:37:46.333+0530 I STORAGE [initandlisten] ** See http://d  
ochub.mongodb.org/core/prodnotes-filesystem  
2019-01-16T08:37:50.479+0530 I CONTROL [initandlisten]  
2019-01-16T08:37:50.479+0530 I CONTROL [initandlisten] ** WARNING: Access contr  
ol is not enabled for the database.  
2019-01-16T08:37:50.479+0530 I CONTROL [initandlisten] ** Read and wri  
te access to data and configuration is unrestricted.  
2019-01-16T08:37:50.479+0530 I CONTROL [initandlisten] ** WARNING: You are runn  
ing this process as the root user, which is not recommended.  
2019-01-16T08:37:50.479+0530 I CONTROL [initandlisten]  
2019-01-16T08:37:50.479+0530 I CONTROL [initandlisten] ** WARNING: This server  
is bound to localhost.  
2019-01-16T08:37:50.480+0530 I CONTROL [initandlisten] ** Remote syste  
ms will be unable to connect to this server.  
2019-01-16T08:37:50.480+0530 I CONTROL [initandlisten] ** Start the se  
rver with --bind_ip <address> to specify which IP  
2019-01-16T08:37:50.480+0530 I CONTROL [initandlisten] ** addresses it  
should serve responses from, or with --bind_ip_all to  
2019-01-16T08:37:50.480+0530 I CONTROL [initandlisten] ** bind to all  
interfaces. If this behavior is desired, start the  
2019-01-16T08:37:50.480+0530 I CONTROL [initandlisten] ** server with  
--bind_ip 127.0.0.1 to disable this warning.  
2019-01-16T08:37:50.480+0530 I CONTROL [initandlisten]  
2019-01-16T08:37:50.480+0530 I CONTROL [initandlisten]  
2019-01-16T08:37:50.480+0530 I CONTROL [initandlisten] ** WARNING: /sys/kernel/  
mm/transparent_hugepage/enabled is 'always'.  
2019-01-16T08:37:50.480+0530 I CONTROL [initandlisten] ** We suggest set  
ting it to 'never'  
2019-01-16T08:37:50.480+0530 I CONTROL [initandlisten]  
> use student  
switched to db student  
> █
```

2) Create a collection called studentmarks

```
ukistu12@UKIPC12: ~  
ukistu12@UKIPC12: ~  
S filesystem is strongly recommended with the WiredTiger storage engine  
2019-01-16T08:37:46.333+0530 I STORAGE [initandlisten] ** See http://d  
ochub.mongodb.org/core/prodnotes-filesystem  
2019-01-16T08:37:50.479+0530 I CONTROL [initandlisten]  
2019-01-16T08:37:50.479+0530 I CONTROL [initandlisten] ** WARNING: Access contr  
ol is not enabled for the database.  
2019-01-16T08:37:50.479+0530 I CONTROL [initandlisten] ** Read and wri  
te access to data and configuration is unrestricted.  
2019-01-16T08:37:50.479+0530 I CONTROL [initandlisten] ** WARNING: You are runn  
ing this process as the root user, which is not recommended.  
2019-01-16T08:37:50.479+0530 I CONTROL [initandlisten]  
2019-01-16T08:37:50.479+0530 I CONTROL [initandlisten] ** WARNING: This server  
is bound to localhost.  
2019-01-16T08:37:50.480+0530 I CONTROL [initandlisten] ** Remote syste  
ms will be unable to connect to this server.  
2019-01-16T08:37:50.480+0530 I CONTROL [initandlisten] ** Start the se  
rver with --bind_ip <address> to specify which IP  
2019-01-16T08:37:50.480+0530 I CONTROL [initandlisten] ** addresses it  
should serve responses from, or with --bind_ip_all to  
2019-01-16T08:37:50.480+0530 I CONTROL [initandlisten] ** bind to all  
interfaces. If this behavior is desired, start the  
2019-01-16T08:37:50.480+0530 I CONTROL [initandlisten] ** server with  
--bind_ip 127.0.0.1 to disable this warning.  
2019-01-16T08:37:50.480+0530 I CONTROL [initandlisten]  
2019-01-16T08:37:50.480+0530 I CONTROL [initandlisten]  
2019-01-16T08:37:50.480+0530 I CONTROL [initandlisten] ** WARNING: /sys/kernel/  
mm/transparent_hugepage/enabled is 'always'.  
2019-01-16T08:37:50.480+0530 I CONTROL [initandlisten] ** We suggest set  
ting it to 'never'  
2019-01-16T08:37:50.480+0530 I CONTROL [initandlisten]  
> use student  
switched to db student  
> db.createCollection("studentmarks")
```

3) Create the documents listed in above table.


```
ukistu12@UKIPC12: ~  
ukistu12@UKIPC12: ~ x ukistu12@UKIPC12: ~ x +  
> use student  
switched to db student  
> db.studentmarks.find().pretty()  
{  
  "_id" : ObjectId("5c3c56d44242041f69edc625"),  
  "name" : "Mala",  
  "maths_marks" : 45,  
  "english_marks" : 53,  
  "science_marks" : 72  
}  
{  
  "_id" : ObjectId("5c3c6129160ab0a172e2caa5"),  
  "name" : "Vanu",  
  "maths_marks" : 80,  
  "english_marks" : 75,  
  "sciene_marks" : 85  
}  
{  
  "_id" : ObjectId("5c3c6159160ab0a172e2caa6"),  
  "name" : "Kala",  
  "maths_marks" : 32,  
  "english_marks" : 46,  
  "sciene_marks" : 53  
}  
{  
  "_id" : ObjectId("5c3c6182160ab0a172e2caa7"),  
  "name" : "Aruli",  
  "maths_marks" : 78,  
  "english_marks" : 85,  
  "sciene_marks" : 80  
}  
{  
  "_id" : ObjectId("5c3c61ab160ab0a172e2caa8"),  
  "name" : "Shayu",  
  "maths_marks" : 80,  
  "english_marks" : 76,  
  "sciene_marks" : 65  
}  
{  
  "_id" : ObjectId("5c3c61dc160ab0a172e2caa9"),  
  "name" : "Kumaran",  
  "maths_marks" : 32,  
  "english_marks" : 73,  
  "sciene_marks" : 84  
}
```

4) Increase the maths marks of Mala by 6 marks

```
ukistu12@UKIPC12: ~  
ukistu12@UKIPC12: ~ x ukistu12@UKIPC12: ~ x + v  
  
  "_id" : ObjectId("5c3c6182160ab0a172e2caa7"),  
  "name" : "Aruli",  
  "maths_marks" : 78,  
  "english_marks" : 85,  
  "sciene_marks" : 80  
  
  "_id" : ObjectId("5c3c61ab160ab0a172e2caa8"),  
  "name" : "Shayu",  
  "maths_marks" : 80,  
  "english_marks" : 76,  
  "sciene_marks" : 65  
  
  "_id" : ObjectId("5c3c61dc160ab0a172e2caa9"),  
  "name" : "Kumaran",  
  "maths_marks" : 32,  
  "english_marks" : 73,  
  "sciene_marks" : 84  
  
  "_id" : ObjectId("5c3c620a160ab0a172e2caaa"),  
  "name" : "Lucky",  
  "maths_marks" : 66,  
  "english_marks" : 90,  
  "sciene_marks" : 45  
  
  "_id" : ObjectId("5c3c6229160ab0a172e2caab"),  
  "name" : "Gva",  
  "maths_marks" : 71,  
  "english_marks" : 75,  
  "sciene_marks" : 56  
  
  "_id" : ObjectId("5c3c625f160ab0a172e2caac"),  
  "name" : "Raam",  
  "maths_marks" : 41,  
  "english_marks" : 65,  
  "sciene_marks" : 88  
}  
> db.studentmarks.update({"maths_marks":45},{ $set:{"maths_marks":51}})  
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })  
> |
```

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

```
ukistu12@UKIPC12: ~  
ukistu12@UKIPC12: ~  
ukistu12@UKIPC12: ~  
  "english_marks" : 85,  
  "sciene_marks" : 80  
}  
{  
  "_id" : ObjectId("5c3c61ab160ab0a172e2caa8"),  
  "name" : "Shayu",  
  "maths_marks" : 80,  
  "english_marks" : 76,  
  "sciene_marks" : 65  
}  
{  
  "_id" : ObjectId("5c3c61dc160ab0a172e2caa9"),  
  "name" : "Kumaran",  
  "maths_marks" : 32,  
  "english_marks" : 73,  
  "sciene_marks" : 84  
}  
{  
  "_id" : ObjectId("5c3c620a160ab0a172e2caaa"),  
  "name" : "Lucky",  
  "maths_marks" : 66,  
  "english_marks" : 90,  
  "sciene_marks" : 45  
}  
{  
  "_id" : ObjectId("5c3c6229160ab0a172e2caab"),  
  "name" : "Gva",  
  "maths_marks" : 71,  
  "english_marks" : 75,  
  "sciene_marks" : 56  
}  
{  
  "_id" : ObjectId("5c3c625f160ab0a172e2caac"),  
  "name" : "Raam",  
  "maths_marks" : 41,  
  "english_marks" : 65,  
  "sciene_marks" : 88  
}  
> 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.

```
ukistu12@UKIPC12: ~  
ukistu12@UKIPC12: ~ x ukistu12@UKIPC12: ~ x +  
"sciene_marks" : 65  
}  
{  
  "_id" : ObjectId("5c3c61dc160ab0a172e2caa9"),  
  "name" : "Kumaran",  
  "maths_marks" : 32,  
  "english_marks" : 73,  
  "sciene_marks" : 84  
}  
{  
  "_id" : ObjectId("5c3c620a160ab0a172e2caaa"),  
  "name" : "Lucky",  
  "maths_marks" : 66,  
  "english_marks" : 90,  
  "sciene_marks" : 45  
}  
{  
  "_id" : ObjectId("5c3c6229160ab0a172e2caab"),  
  "name" : "Gva",  
  "maths_marks" : 71,  
  "english_marks" : 75,  
  "sciene_marks" : 56  
}  
{  
  "_id" : ObjectId("5c3c625f160ab0a172e2caac"),  
  "name" : "Raam",  
  "maths_marks" : 41,  
  "english_marks" : 65,  
  "sciene_marks" : 88  
}  
> db.studentmarks.find({"maths_marks":{"$gt:50}},{"name":1,_id:0}).pretty()  
{ "name" : "Mala" }  
{ "name" : "Vanu" }  
{ "name" : "Aruli" }  
{ "name" : "Shayu" }  
{ "name" : "Lucky" }  
{ "name" : "Gva" }  
> db.studentmarks.update({},{$set:{"Average":"null"}},{multi:true})  
2019-01-16T10:30:53.024+0530 E QUERY [thread1] SyntaxError: expected expressi  
on, got ')' @ (shell):1:24  
> db.studentmarks.update({},{$set:{"Average":"null"}},{multi:true})  
2019-01-16T10:31:05.563+0530 E QUERY [thread1] SyntaxError: missing name afte  
r . operator @ (shell):1:64  
> db.studentmarks.update({},{$set:{"Average":"null"}},{multi:true})  
WriteResult({ "nMatched" : 9, "nUpserted" : 0, "nModified" : 9 })  
>
```

7) Update Marks_Science=75 to Lucky .


```
ukist u12@UKIPC12: ~
ukistu12@UKIPC12: ~
{
  "_id" : ObjectId("5c3c61dc160ab0a172e2caa9"),
  "name" : "Kumaran",
  "maths_marks" : 32,
  "english_marks" : 73,
  "sciene_marks" : 84
}
{
  "_id" : ObjectId("5c3c620a160ab0a172e2caaa"),
  "name" : "Lucky",
  "maths_marks" : 66,
  "english_marks" : 90,
  "sciene_marks" : 45
}
{
  "_id" : ObjectId("5c3c6229160ab0a172e2caab"),
  "name" : "Gva",
  "maths_marks" : 71,
  "english_marks" : 75,
  "sciene_marks" : 56
}
{
  "_id" : ObjectId("5c3c625f160ab0a172e2caac"),
  "name" : "Raam",
  "maths_marks" : 41,
  "english_marks" : 65,
  "sciene_marks" : 88
}
> db.studentmarks.find({"maths_marks":{$gt:50}},{"name":1,_id:0}).pretty()
{ "name" : "Mala" }
{ "name" : "Vanu" }
{ "name" : "Aruli" }
{ "name" : "Shayu" }
{ "name" : "Lucky" }
{ "name" : "Gva" }
> db.studentmarks.update({},{$set:{"Average":"null"}},{multi:true.})
2019-01-16T10:30:53.024+0530 E QUERY [thread1] SyntaxError: expected expressi
on, got ')' @(shell):1:24
> db.studentmarks.update({},{$set:{"Average":"null"}},{multi:true.})
2019-01-16T10:31:05.563+0530 E QUERY [thread1] SyntaxError: missing name afte
r . operator @(shell):1:64
> db.studentmarks.update({},{$set:{"Average":"null"}},{multi:true})
WriteResult({ "nMatched" : 9, "nUpserted" : 0, "nModified" : 9 })
> 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.

```
ukistu12@UKIPC12: ~
"english_marks" : 90,
"science_marks" : 45
}
{
  "_id" : ObjectId("5c3c6229160ab0a172e2caab"),
  "name" : "Gva",
  "maths_marks" : 71,
  "english_marks" : 75,
  "science_marks" : 56
}
{
  "_id" : ObjectId("5c3c625f160ab0a172e2caac"),
  "name" : "Raam",
  "maths_marks" : 41,
  "english_marks" : 65,
  "science_marks" : 88
}
}
> db.studentmarks.find({"maths_marks":{$gt:50}},{"name":1,_id:0}).pretty()
{ "name" : "Mala" }
{ "name" : "Vanu" }
{ "name" : "Aruli" }
{ "name" : "Shayu" }
{ "name" : "Lucky" }
{ "name" : "Gva" }
> db.studentmarks.update({},{$set:{"Average":"null"}},{multi:true})
2019-01-16T10:30:53.024+0530 E QUERY [thread1] SyntaxError: expected expression, got ')' @(<shell>):1:24
> db.studentmarks.update({},{$set:{"Average":"null"}},{multi:true})
2019-01-16T10:31:05.563+0530 E QUERY [thread1] SyntaxError: missing name after . operator @(<shell>):1:64
> db.studentmarks.update({},{$set:{"Average":"null"}},{multi:true})
WriteResult({ "nMatched" : 9, "nUpserted" : 0, "nModified" : 9 })
> db.studentmarks.update({"name":"Lucky"},{$set:{"science_marks":75}})
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
>
> db.studentmarks.find($and: [{"maths_marks":{$gt:50}}, {"english_marks":{$gt:50}}, {"science_marks":{$gt:50}}], {"name":1,_id:0})
2019-01-16T14:00:45.609+0530 E QUERY [thread1] SyntaxError: invalid property id @(<shell>):1:107
> db.studentmarks.find($and: [{"maths_marks":{$gt:50}}, {"english_marks":{$gt:50}}, {"science_marks":{$gt:50}}], {"name":1,_id:0})
2019-01-16T14:04:06.051+0530 E QUERY [thread1] SyntaxError: invalid property id @(<shell>):1:107
> db.studentmarks.find($and: [{"maths_marks":{$gt:50}}, {"english_marks":{$gt:50}}, {"science_marks":{$gt:50}}], {"name":1,_id:0})
2019-01-16T14:09:54.167+0530 E QUERY [thread1] SyntaxError: missing ) after argument list @(<shell>):1:25
> db.studentmarks.find($and: [{"maths_marks":{$gt:50}}, {"english_marks":{$gt:50}}, {"science_marks":{$gt:50}}], {"name":1,_id:0})
> db.studentmarks.find($and: [{"maths_marks":{$gt:50}}, {"english_marks":{$gt:50}}, {"science_marks":{$gt:50}}], {"name":1,_id:0})
> db.studentmarks.find($and: [{"maths_marks":{$gt:50}}, {"english_marks":{$gt:50}}, {"science_marks":{$gt:50}}], {"name":1,_id:0})
{ "name" : "Vanu" }
{ "name" : "Aruli" }
{ "name" : "Shayu" }
{ "name" : "Gva" }
>
|
```

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

```
ukistu12@UKIPC12: ~
{
  "_id" : ObjectId("5c3c6229160ab0a172e2caab"),
  "name" : "Gva",
  "maths_marks" : 71,
  "english_marks" : 75,
  "science_marks" : 56
}
{
  "_id" : ObjectId("5c3c625f160ab0a172e2caac"),
  "name" : "Raam",
  "maths_marks" : 41,
  "english_marks" : 65,
  "science_marks" : 88
}
}
> db.studentmarks.find({"maths_marks":{$gt:50}},{"name":1,_id:0}).pretty()
{ "name" : "Mala" }
{ "name" : "Vanu" }
{ "name" : "Aruli" }
{ "name" : "Shayu" }
{ "name" : "Lucky" }
{ "name" : "Gva" }
> db.studentmarks.update({},{$set:{"Average":"null"}},{multi:true})
2019-01-16T10:30:53.024+0530 E QUERY [thread1] SyntaxError: expected expression, got ')' @(<shell>):1:24
> db.studentmarks.update({},{$set:{"Average":"null"}},{multi:true})
2019-01-16T10:31:05.563+0530 E QUERY [thread1] SyntaxError: missing name after . operator @(<shell>):1:64
> db.studentmarks.update({},{$set:{"Average":"null"}},{multi:true})
WriteResult({ "nMatched" : 9, "nUpserted" : 0, "nModified" : 9 })
> db.studentmarks.update({"name":"Lucky"},{$set:{"science_marks":75}})
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
>
> db.studentmarks.find($and: [{"maths_marks":{$gt:50}}, {"english_marks":{$gt:50}}, {"science_marks":{$gt:50}}], {"name":1,_id:0})
2019-01-16T14:00:45.609+0530 E QUERY [thread1] SyntaxError: invalid property id @(<shell>):1:107
> db.studentmarks.find($and: [{"maths_marks":{$gt:50}}, {"english_marks":{$gt:50}}, {"science_marks":{$gt:50}}], {"name":1,_id:0})
2019-01-16T14:04:06.051+0530 E QUERY [thread1] SyntaxError: invalid property id @(<shell>):1:107
> db.studentmarks.find($and: [{"maths_marks":{$gt:50}}, {"english_marks":{$gt:50}}, {"science_marks":{$gt:50}}], {"name":1,_id:0})
2019-01-16T14:09:54.167+0530 E QUERY [thread1] SyntaxError: missing ) after argument list @(<shell>):1:25
> db.studentmarks.find($and: [{"maths_marks":{$gt:50}}, {"english_marks":{$gt:50}}, {"science_marks":{$gt:50}}], {"name":1,_id:0})
> db.studentmarks.find($and: [{"maths_marks":{$gt:50}}, {"english_marks":{$gt:50}}, {"science_marks":{$gt:50}}], {"name":1,_id:0})
> db.studentmarks.find($and: [{"maths_marks":{$gt:50}}, {"english_marks":{$gt:50}}, {"science_marks":{$gt:50}}], {"name":1,_id:0})
{ "name" : "Vanu" }
{ "name" : "Aruli" }
{ "name" : "Shayu" }
{ "name" : "Gva" }
> db.studentmarks.find($and: [{"maths_marks":{$lt:50}}, {"english_marks":{$gt:50}}], {"name":1,_id:0})
{ "name" : "Kumaran" }
{ "name" : "Raam" }
>
|
```


10) List the names who got less than 40 in both Maths and Science.

```
ukistu12@UKIPC12: ~
{
  "maths_marks" : 71,
  "english_marks" : 75,
  "science_marks" : 56
}
{
  "_id" : ObjectId("5c3c625f160ab0a172e2caac"),
  "name" : "Raam",
  "maths_marks" : 41,
  "english_marks" : 65,
  "science_marks" : 88
}
> db.studentmarks.find({"maths_marks":{$gt:50}},{"name":1,_id:0}).pretty()
{ "name" : "Mala" }
{ "name" : "Vanu" }
{ "name" : "Aruli" }
{ "name" : "Shayu" }
{ "name" : "Lucky" }
{ "name" : "Gva" }
> db.studentmarks.update({},{$set:{"Average":"null"}},{multi:true})
2019-01-16T10:30:53.024+0530 E QUERY [thread1] SyntaxError: expected expression, got ')' @(<shell>):1:24
> db.studentmarks.update({},{$set:{"Average":"null"}},{multi:true})
2019-01-16T10:31:05.563+0530 E QUERY [thread1] SyntaxError: missing name after . operator @(<shell>):1:64
> db.studentmarks.update({},{$set:{"Average":"null"}},{multi:true})
  TextEditor { "nMatched" : 9, "nUpserted" : 0, "nModified" : 9 }
> db.studentmarks.update({"name":"Lucky"},{$set:{"science_marks":75}})
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
>
> db.studentmarks.find({$and:[{"maths_marks":{$gt:50}},{"english_marks":{$gt:50}},{"science_marks":{$gt:50}}],{"name":1,_id:0})
2019-01-16T14:00:45.609+0530 E QUERY [thread1] SyntaxError: invalid property id @(<shell>):1:107
> db.studentmarks.find({$and:[{"maths_marks":{$gt:50}},{"english_marks":{$gt:50}},{"science_marks":{$gt:50}}],{"name":1,_id:0})
2019-01-16T14:04:06.051+0530 E QUERY [thread1] SyntaxError: invalid property id @(<shell>):1:107
> db.studentmarks.find({$and:[{"maths_marks":{$gt:50}},{"english_marks":{$gt:50}},{"science_marks":{$gt:50}}],{"name":1,_id:0})
2019-01-16T14:09:54.167+0530 E QUERY [thread1] SyntaxError: missing ) after argument list @(<shell>):1:25
> db.studentmarks.find({$and:[{"maths_marks":{$gt:50}},{"english_marks":{$gt:50}},{"science_marks":{$gt:50}}],{"name":1,_id:0})
> db.studentmarks.find({$and:[{"maths_marks":{$gt:50}},{"english_marks":{$gt:50}},{"science_marks":{$gt:50}}],{"name":1,_id:0})
> db.studentmarks.find({$and:[{"maths_marks":{$gt:50}},{"english_marks":{$gt:50}},{"science_marks":{$gt:50}}],{"name":1,_id:0})
{ "name" : "Vanu" }
{ "name" : "Aruli" }
{ "name" : "Shayu" }
{ "name" : "Gva" }
> db.studentmarks.find({$and:[{"maths_marks":{$lt:50}},{"english_marks":{$gt:50}}],{"name":1,_id:0})
{ "name" : "Kunaran" }
{ "name" : "Raam" }
> db.studentmarks.find({$and:[{"maths_marks":{$lt:40}},{"english_marks":{$lt:50}}],{"name":1,_id:0})
{ "name" : "Kala" }
> db.studentmarks.find({$and:[{"maths_marks":{$lt:40}},{"english_marks":{$lt:40}}],{"name":1,_id:0})
{ }
```

11) Remove Science column/field for Raam

```
ukistu12@UKIPC12: ~
2019-01-16T14:09:54.167+0530 E QUERY [thread1] SyntaxError: missing ) after argument list @(<shell>):1:25
> db.studentmarks.find({$and:[{"maths_marks":{$gt:50}},{"english_marks":{$gt:50}},{"science_marks":{$gt:50}}],{"name":1,_id:0})
> db.studentmarks.find({$and:[{"maths_marks":{$gt:50}},{"english_marks":{$gt:50}},{"science_marks":{$gt:50}}],{"name":1,_id:0})
> db.studentmarks.find({$and:[{"maths_marks":{$gt:50}},{"english_marks":{$gt:50}},{"science_marks":{$gt:50}}],{"name":1,_id:0})
{ "name" : "Vanu" }
{ "name" : "Aruli" }
{ "name" : "Shayu" }
{ "name" : "Gva" }
> db.studentmarks.find({$and:[{"maths_marks":{$lt:50}},{"english_marks":{$gt:50}}],{"name":1,_id:0})
{ "name" : "Kunaran" }
{ "name" : "Raam" }
> db.studentmarks.find({$and:[{"maths_marks":{$lt:40}},{"english_marks":{$lt:50}}],{"name":1,_id:0})
{ "name" : "Kala" }
> db.studentmarks.find({$and:[{"maths_marks":{$lt:40}},{"english_marks":{$lt:40}}],{"name":1,_id:0})
> db.studentmarks.update({"name":"Raam"},{$unset:{"science_marks":88}})
2019-01-16T14:34:47.909+0530 E QUERY [thread1] SyntaxError: missing : after property id @(<shell>):1:46
> db.studentmarks.update({"name":"Raam"},{$unset:{"science_marks":88}})
2019-01-16T14:36:04.729+0530 E QUERY [thread1] SyntaxError: missing : after property id @(<shell>):1:46
> db.studentmarks.update({"name":"Raam"},{$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.

```
ukistu12@UKIPC12: ~  
ukistu12@UKIPC12: ~  
"name" : "Gva" }  
db.studentmarks.find({$and:[{"maths_marks":{$lt:50}},{"english_marks":{$gt:50}}},{"name":1,_id:0})  
"name" : "Kumaran" }  
"name" : "Raam" }  
db.studentmarks.find({$and:[{"maths_marks":{$lt:40}},{"english_marks":{$lt:50}}},{"name":1,_id:0})  
"name" : "Kala" }  
db.studentmarks.find({$and:[{"maths_marks":{$lt:40}},{"english_marks":{$lt:40}}},{"name":1,_id:0})  
db.studentmarks.update({"name":"Raam"},{$unset:["scienc_marks":80]})  
019-01-16T14:34:47.909+0530 E QUERY [thread1] SyntaxError: missing : after property id @(shell):1:46  
db.studentmarks.update({"name":"Raam"},{$unset:["scienc_marks":88]})  
019-01-16T14:36:04.729+0530 E QUERY [thread1] SyntaxError: missing : after property id @(shell):1:46  
db.studentmarks.update({"name":"Raam"},{$unset:["scienc_marks":88]})  
writeResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })  
db.studentmarks.update({"name":"John"},{"name":"John","maths_marks":87,"english_marks":23},{upsert:true})  
writeResult({  
  "nMatched" : 0,  
  "nUpserted" : 1,  
  "nModified" : 0,  
  "_id" : ObjectId("5c3ef82891872c5b7d7521a5")  
})  
>
```

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

```
ukistu12@UKIPC12: ~  
ukistu12@UKIPC12: ~  
"name" : "Shayu",  
"maths_marks" : 80,  
"english_marks" : 76,  
"scienc_marks" : 65,  
"Average" : "null"  
}  
{  
  "_id" : ObjectId("5c3c61dc160ab0a172e2caa9"),  
  "name" : "Kumaran",  
  "maths_marks" : 32,  
  "english_marks" : 73,  
  "scienc_marks" : 84,  
  "Average" : "null"  
}  
{  
  "_id" : ObjectId("5c3c620a160ab0a172e2caaa"),  
  "name" : "Lucky",  
  "maths_marks" : 66,  
  "english_marks" : 90,  
  "scienc_marks" : 45,  
  "Average" : "null",  
  "science_marks" : 75  
}  
{  
  "_id" : ObjectId("5c3c6229160ab0a172e2caab"),  
  "name" : "Gva",  
  "maths_marks" : 71,  
  "english_marks" : 75,  
  "scienc_marks" : 56,  
  "Average" : "null"  
}  
{  
  "_id" : ObjectId("5c3c625f160ab0a172e2caac"),  
  "name" : "Raam",  
  "maths_marks" : 41,  
  "english_marks" : 65,  
  "Average" : "null"  
}  
{  
  "_id" : ObjectId("5c3ef82891872c5b7d7521a5"),  
  "name" : "John",  
  "maths_marks" : 87,  
  "english_marks" : 23  
}  
> db.studentmarks.update({"_id" : ObjectId("5c3ef82891872c5b7d7521a5")},{$rename:["english_marks":"scienc_marks"]})  
writeResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })  
>
```

14) Remove Kumaran's document from collection

```
ukistu12@UKIPC12: ~
"english_marks" : 76,
"science_marks" : 65,
"Average" : "null"
}
{
  "_id" : ObjectId("5c3c61dc160ab0a172e2caa9"),
  "name" : "Kumaran",
  "maths_marks" : 32,
  "english_marks" : 73,
  "science_marks" : 84,
  "Average" : "null"
}
{
  "_id" : ObjectId("5c3c620a160ab0a172e2caaa"),
  "name" : "Lucky",
  "maths_marks" : 66,
  "english_marks" : 90,
  "science_marks" : 45,
  "Average" : "null",
  "science_marks" : 75
}
{
  "_id" : ObjectId("5c3c6229160ab0a172e2caab"),
  "name" : "Gva",
  "maths_marks" : 71,
  "english_marks" : 75,
  "science_marks" : 56,
  "Average" : "null"
}
{
  "_id" : ObjectId("5c3c625f160ab0a172e2caac"),
  "name" : "Raam",
  "maths_marks" : 41,
  "english_marks" : 65,
  "Average" : "null"
}
{
  "_id" : ObjectId("5c3ef82891872c5b7d7521a5"),
  "name" : "John",
  "maths_marks" : 87,
  "english_marks" : 23
}
}
> db.studentmarks.update({"_id" : ObjectId("5c3ef82891872c5b7d7521a5")},{$rename:["english_marks":"science_marks"]})
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
> db.studentmarks.remove({"name":"Kumaran"},{})
WriteResult({ "nRemoved" : 1 })
>
```

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

```
ukistu12@UKIPC12: ~
ukistu12@UKIPC12: ~
ukistu12@UKIPC12: ~
> db.studentmarks.find({$and:[{"maths_marks":{$lt:40}},{"english_marks":{$lt:50}}],{"name":1,_id:0})
{ "name" : "Kala" }
> db.studentmarks.find({$and:[{"maths_marks":{$lt:40}},{"english_marks":{$lt:40}}],{"name":1,_id:0})
> db.studentmarks.update({"name":"Raam"},{$set:["science_marks":80]})
2019-01-16T14:34:47.909+0530 E QUERY [thread1] SyntaxError: missing : after property id @(shell):1:46
> db.studentmarks.update({"name":"Raam"},{$set:["science_marks":80]})
2019-01-16T14:36:04.729+0530 E QUERY [thread1] SyntaxError: missing : after property id @(shell):1:46
> db.studentmarks.update({"name":"Raam"},{$set:["science_marks":80]})
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
> db.studentmarks.update({"name":"John"},{"name":"John","maths_marks":87,"english_marks":23},{upsert:true})
WriteResult({
  "nMatched" : 0,
  "nUpserted" : 1,
  "nModified" : 0,
  "_id" : ObjectId("5c3ef82891872c5b7d7521a5")
})
> db.studentmarks.find({$or:[{"name":"kala"},{"name":"Aruli"}]},{"maths_marks":1,"science_marks":1,_id:0})
{ "maths_marks" : 78, "science_marks" : 80 }
> db.studentmarks.find({$or:[{"name":"kala"},{"name":"Aruli"}]},{"maths_marks":1,"science_marks":1,_id:0}).pretty()
{ "maths_marks" : 78, "science_marks" : 80 }
```