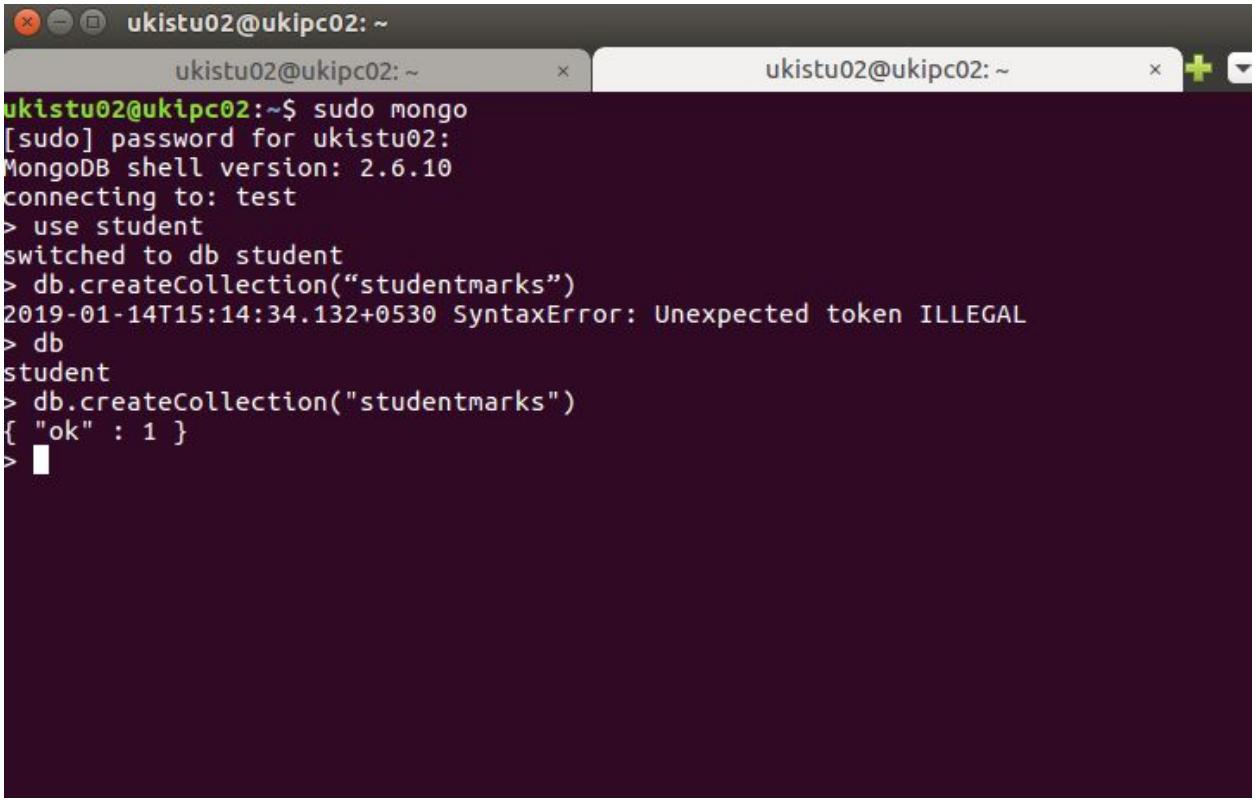
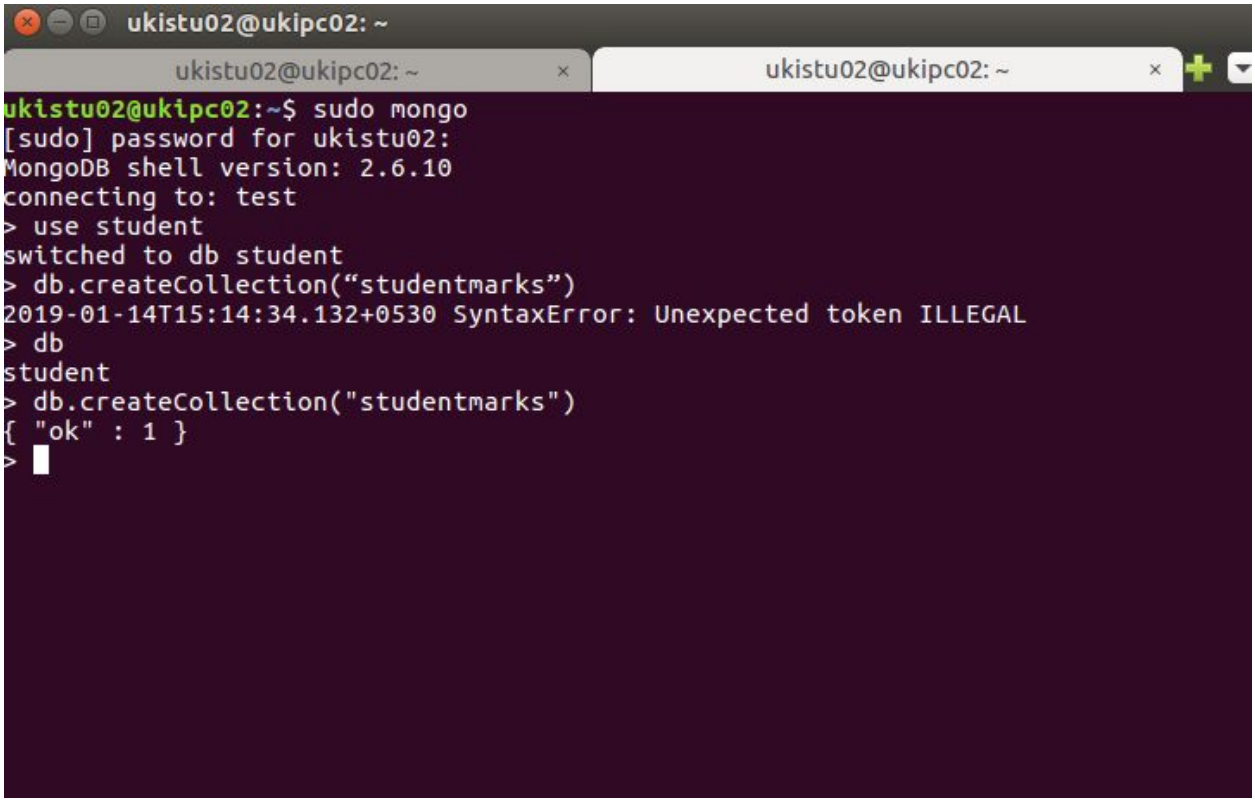
1. Create a Database called student?
   ANS: >use student

Screen shot :



2. Create a collection called studentmarks?
   ANS: >db.createCollection(“studentmarks”)

Screen shot:



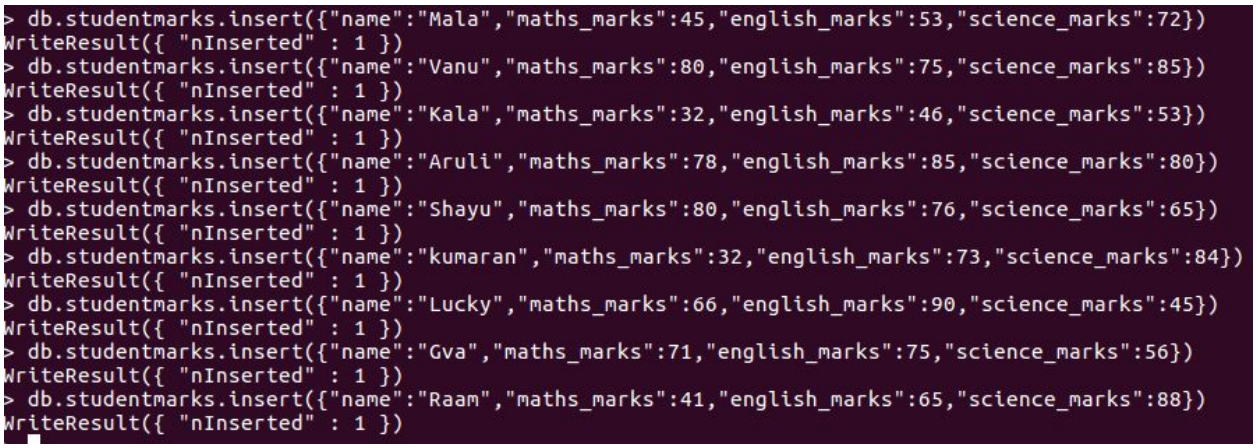
3. Create the documents listed in above table.?

ANS:

>db.studentmarks.insert({"name":"Mala","maths_marks":45,"english_marks":53,"science_marks":72})
WriteResult({ "nInserted" : 1 })
>
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 })

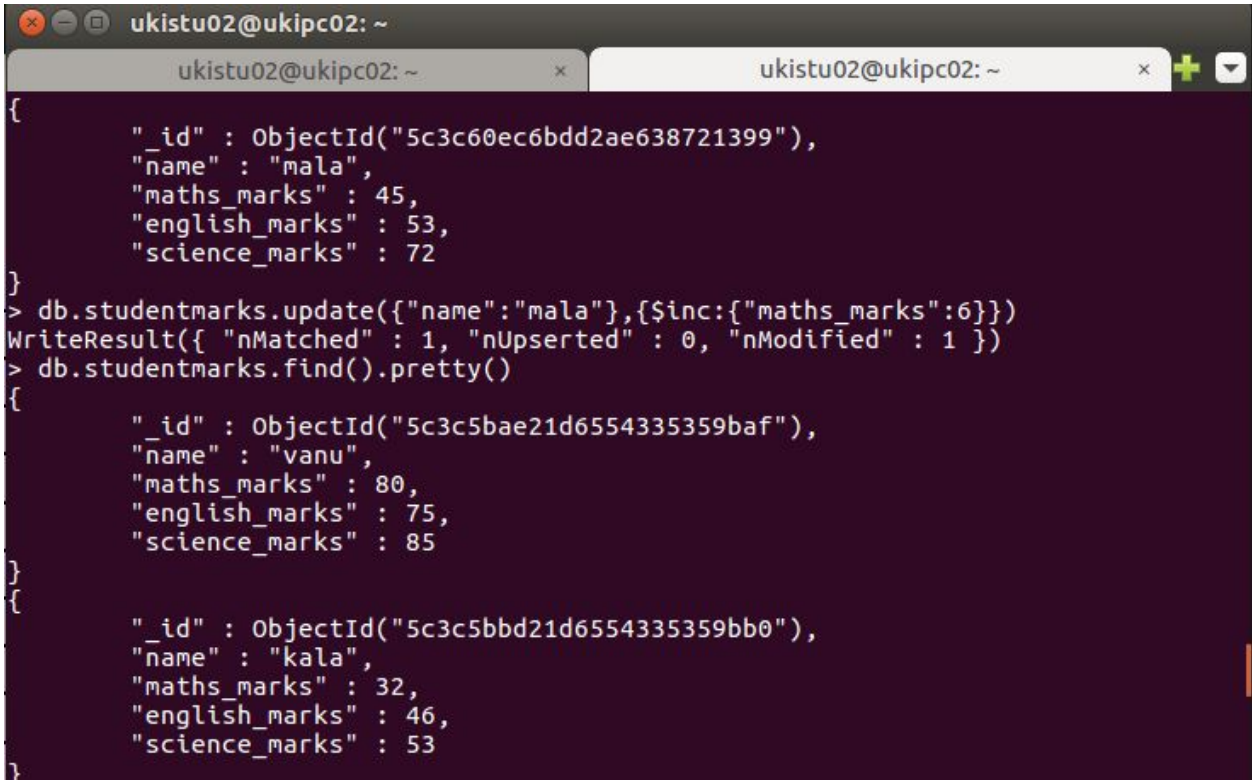
>
db.studentmarks.insert({"name":"kumaran","maths_marks":32,"english_marks":73,"science_marks":84})
WriteResult({ "nInserted" : 1 })
>
db.studentmarks.insert({"name":"Lucky","maths_marks":66,"english_marks":90,"science_marks":45})
WriteResult({ "nInserted" : 1 })
>
db.studentmarks.insert({"name":"Gva","maths_marks":71,"english_marks":75,"science_marks":56})
WriteResult({ "nInserted" : 1 })
>
db.studentmarks.insert({"name":"Raam","maths_marks":41,"english_marks":65,"science_marks":88})
WriteResult({ "nInserted" : 1 })

Screen shot:



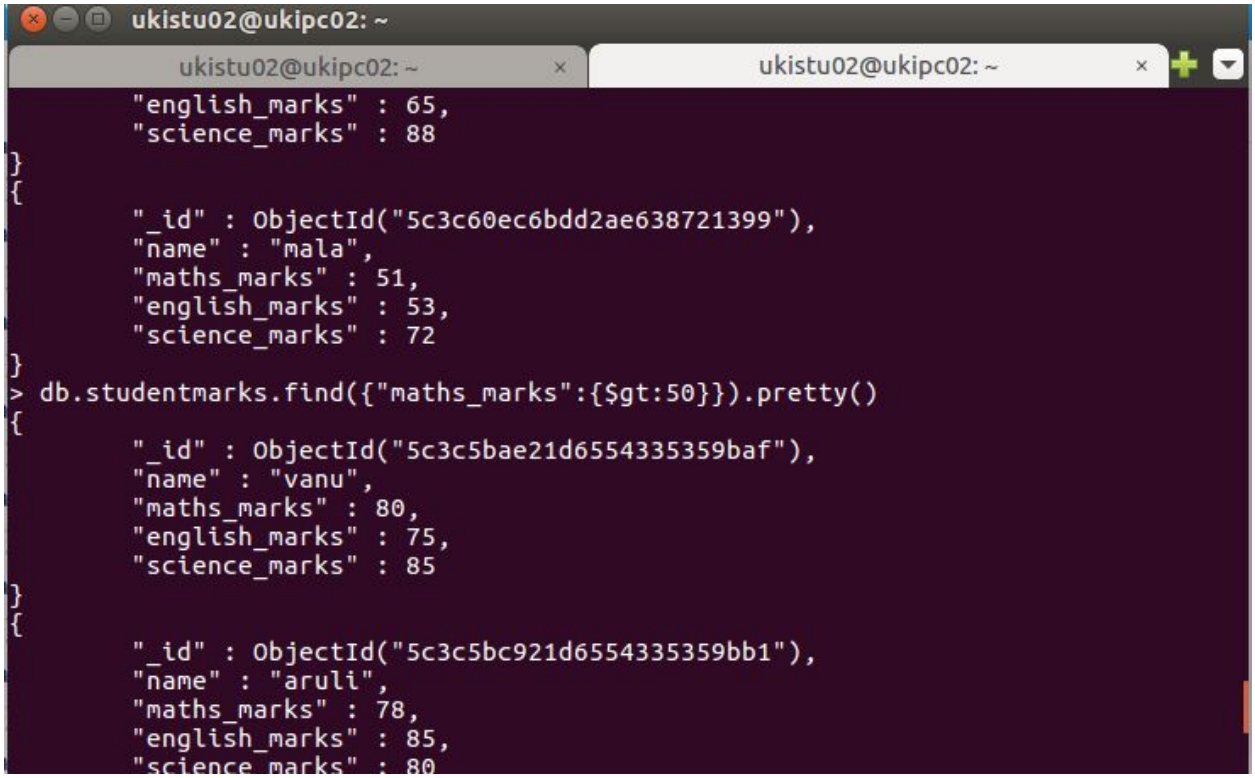
4. Increase the maths marks of Mala by 6 marks?
ANS: > db.studentmarks.update({"name":"Mala"},{$inc:{"maths_marks":6}})
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })

Screen shot:



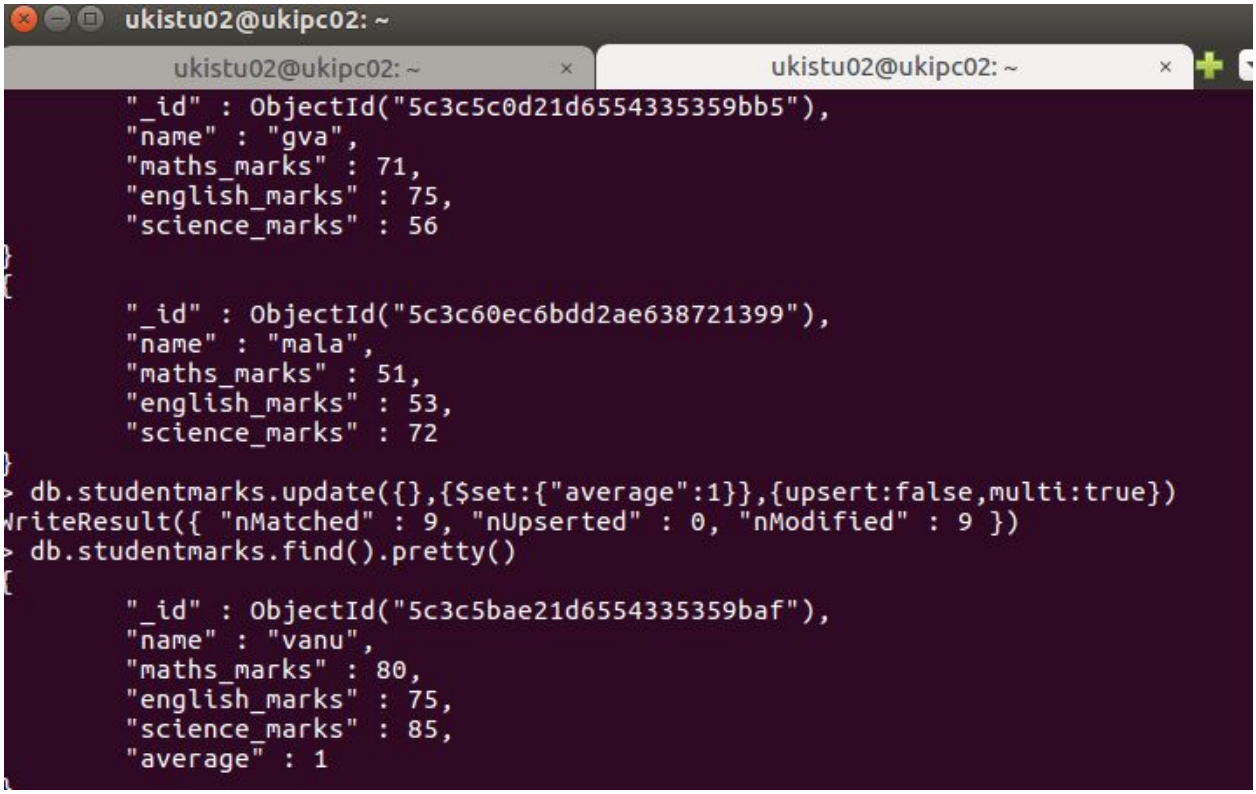
5. List the names of students who got more than 50 marks in Maths Subject.?
   ANS: >db.studentmarks.find({"maths_marks":{$gt:50}}).pretty()

Screen shot:



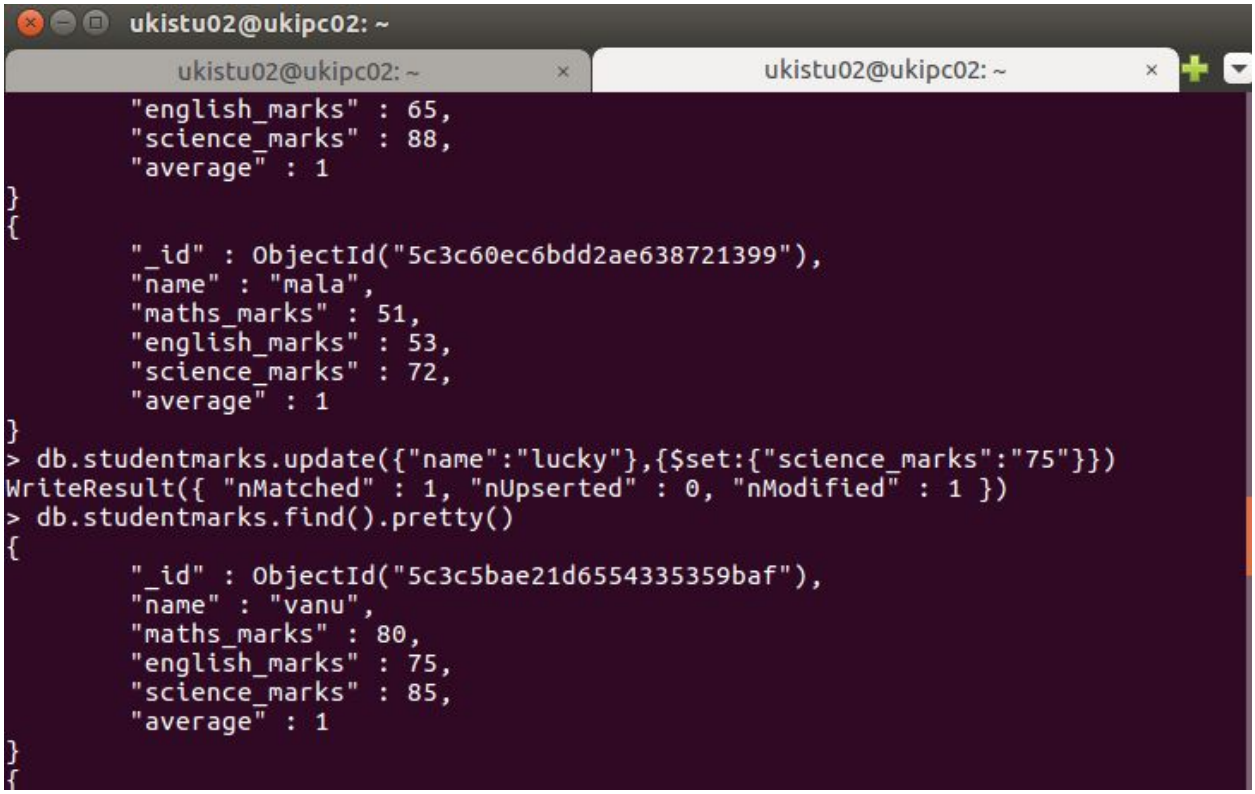
6. Add a new column(field) for Average for all students.?
   ANS: >db.studentmarks.update({},{$set:{"average":1}},{upsert:false,multi:true})

Screen shot:



7. Update Marks_Science=75 to Lucky .?
   ANS: >db.studentmarks.update({"name":"lucky"},{$set:{"science_marks":"75"}})

Screen shot:

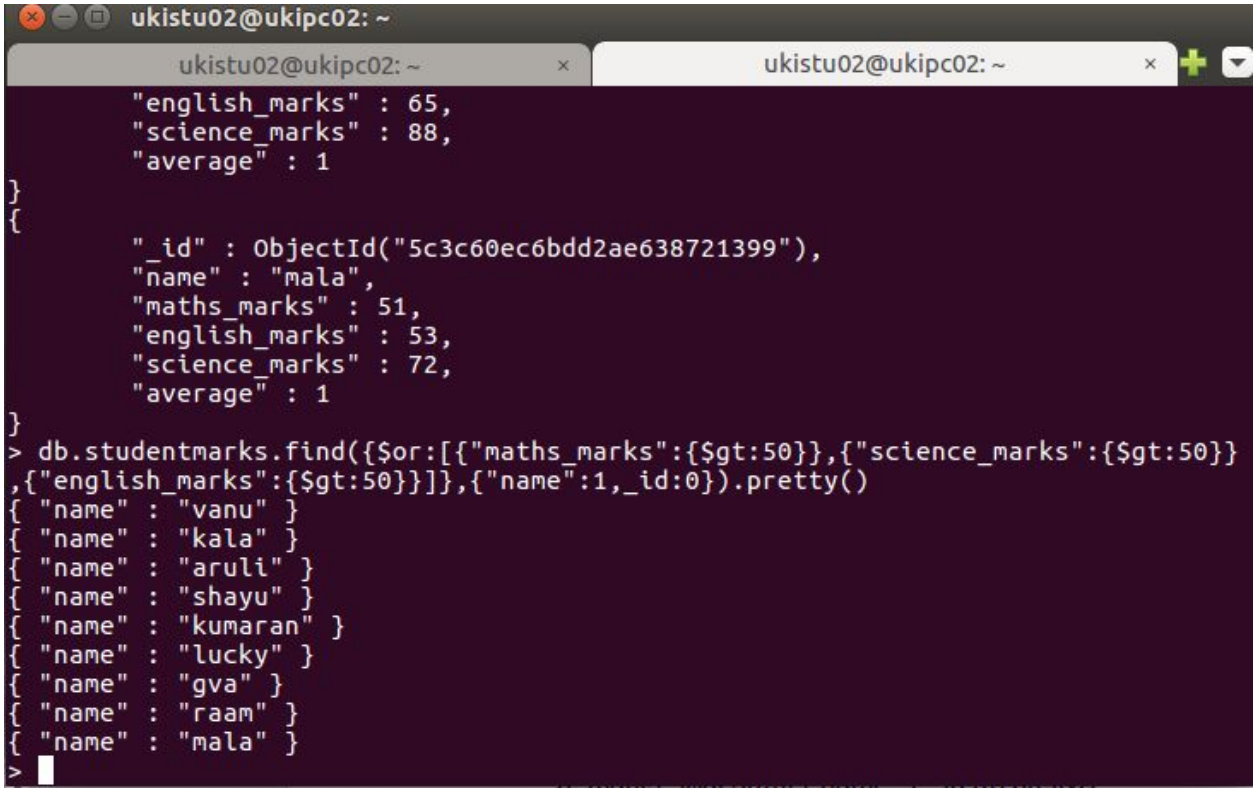


8. List the names who got more than 50 marks in all subjects.?

   ANS:

   >db.studentmarks.find({$or:[{"maths_marks":{$gt:50}},{"science_marks":{$gt:50}},{"english_marks":{$gt:50}}]},{"name":1,_id:0}).pretty()

Screen shot:

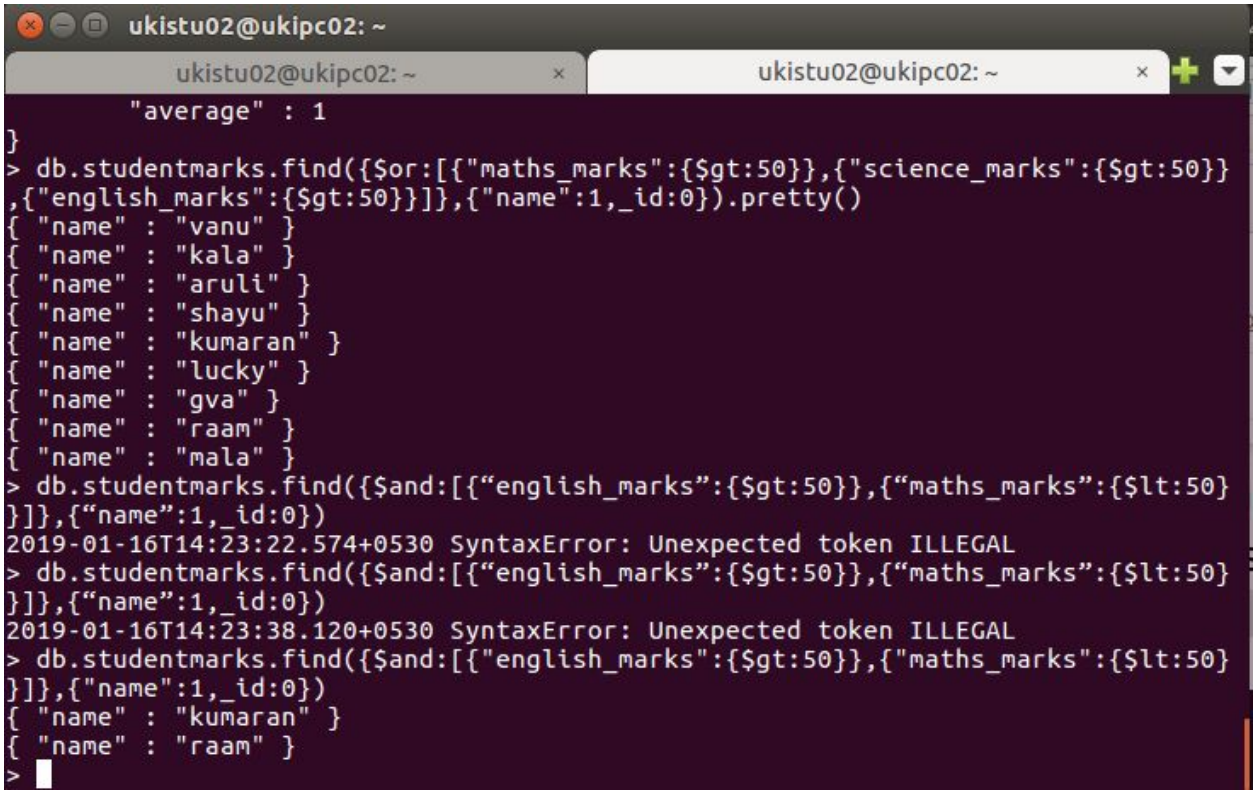


9. List the names who got less than 50 marks in Maths subject and more than 50 marks in English?

ANS:

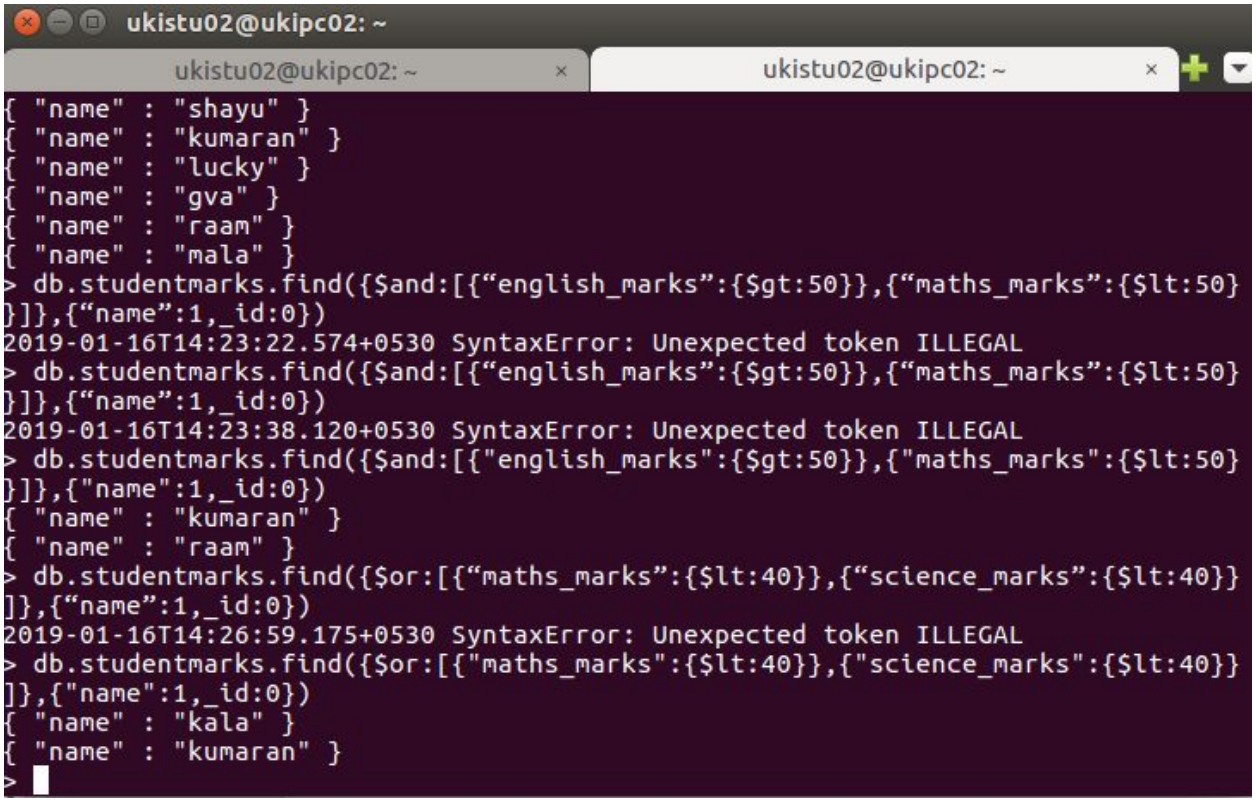
>db.studentmarks.find({$and:[{“english_marks”:{$gt:50}},{“maths_marks”:{$lt:50}}]},{“name”:1,_id:0})

Screen shot:



10. List the names who got less than 40 in both Maths and Science.?
    ANS:
    >db.studentmarks.find({$or:[{"maths_marks":{$lt:40}},{"science_marks":{$lt:40}}]},{"name
    ":1,_id:0})

Screen shot:

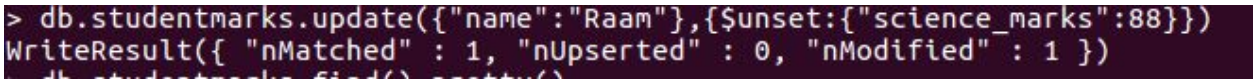


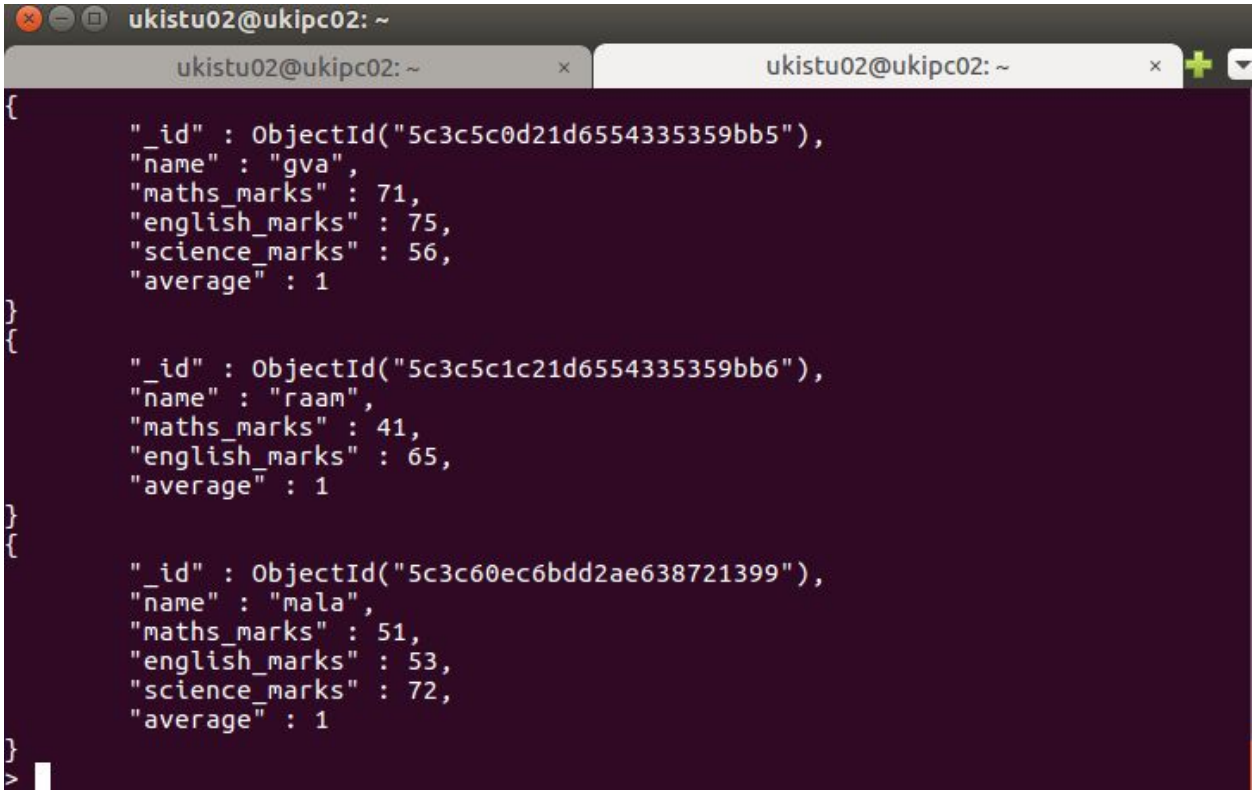
11. Remove Science column/field for Raam?

ANS:

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

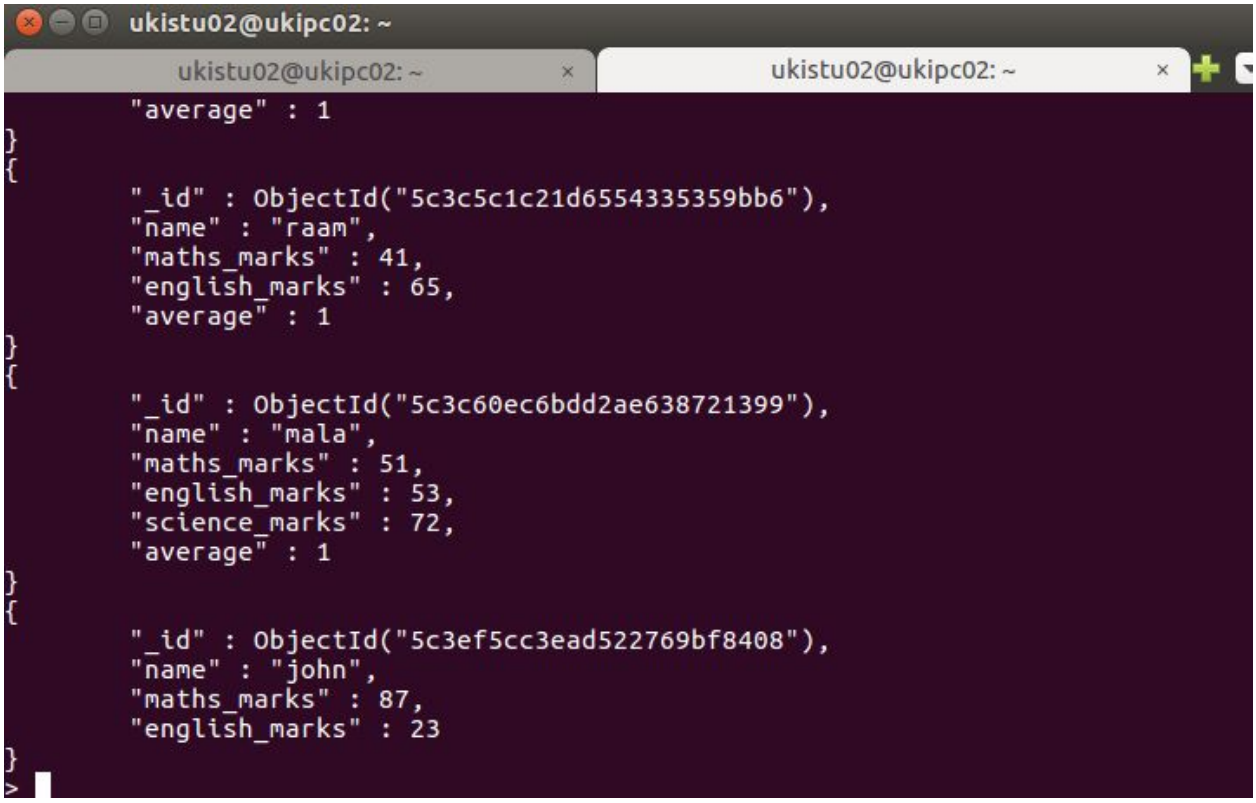
Screen shot:





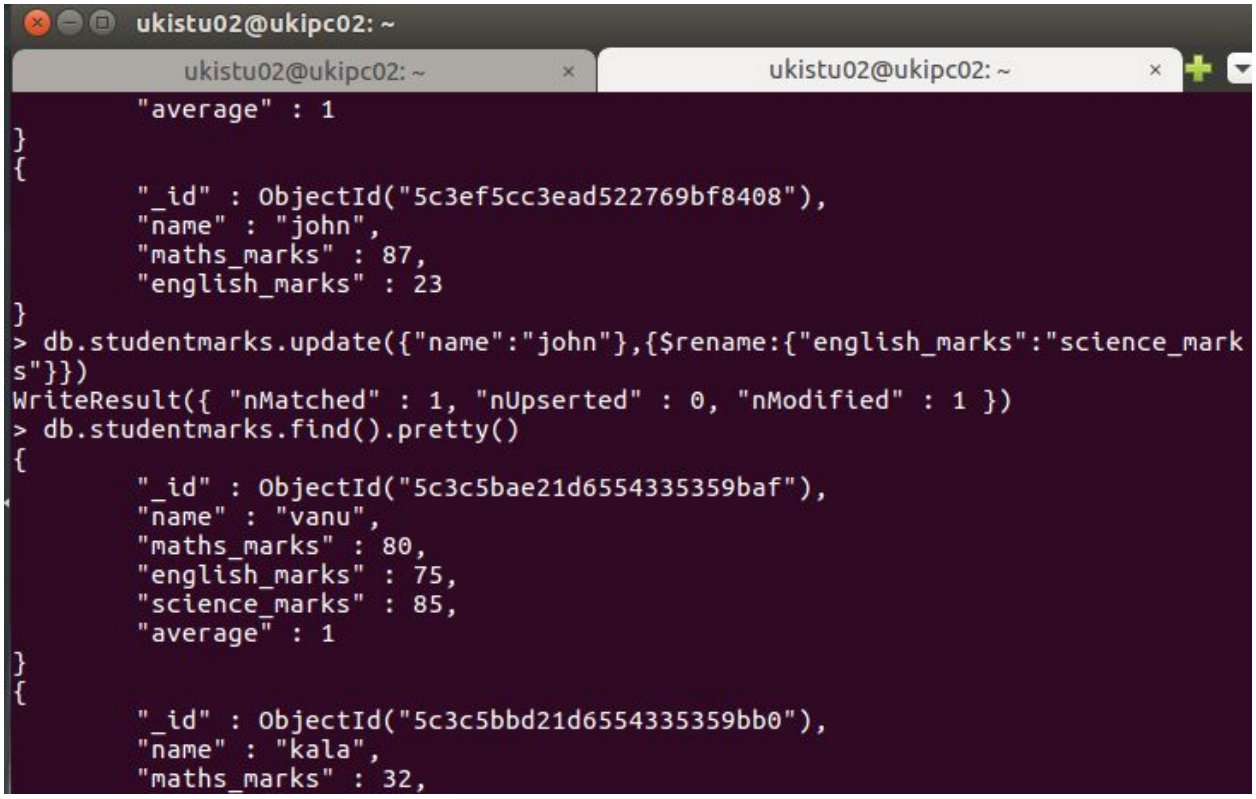
12. Update John's Math mark as 87 and English mark as 23, if john not available upsert.?
    ANS:
    >db.studentmarks.insert({"name":"john","maths_marks":87,"english_marks":23})

Screen shot:



13. Rename the english_marks column/field for John to science_marks?
    ANS:
    >db.studentmarks.update({"name":"john"},{$rename:{"english_marks":"science_marks"}})

Screen shot:

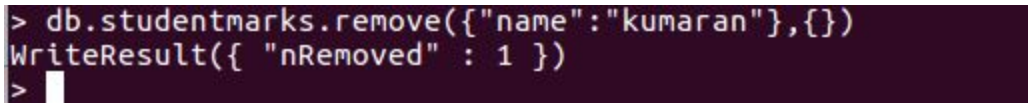


14. Remove Kumaran's document from collection?

ANS:

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

Screen shot:



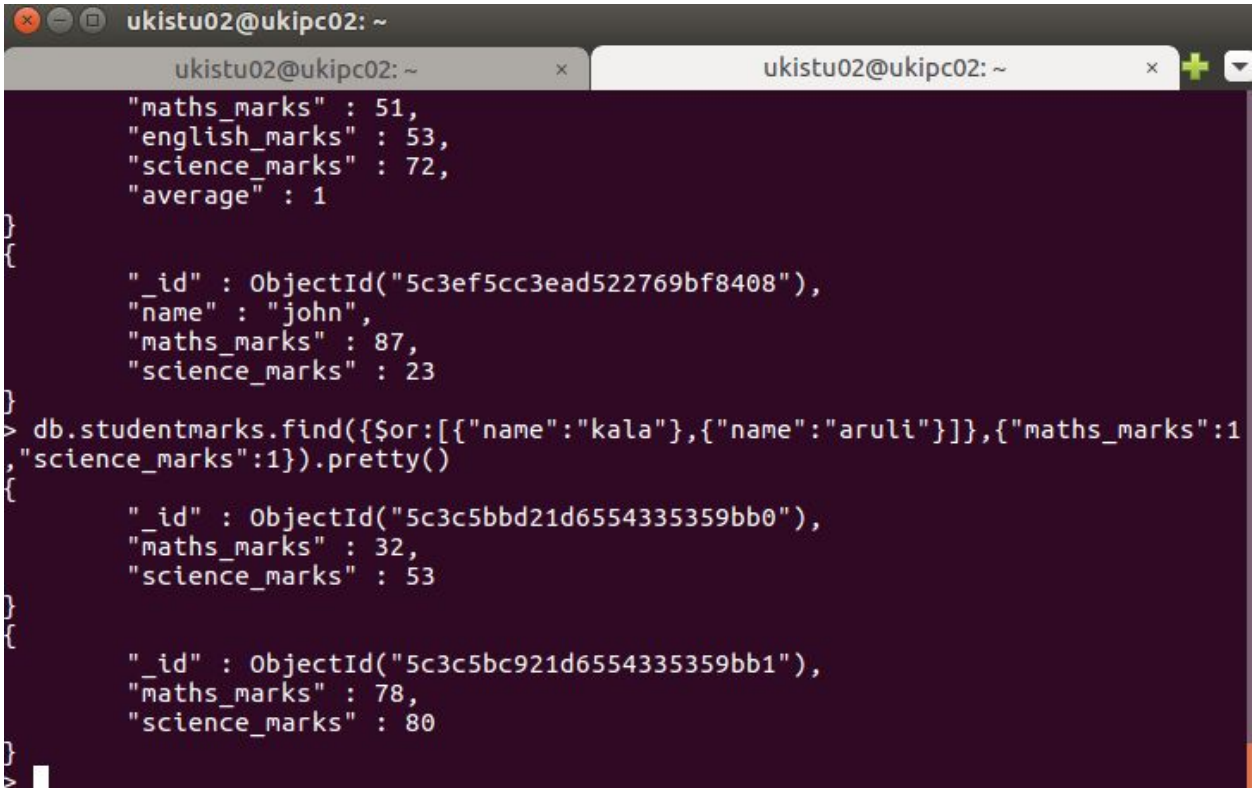
15. Find Kala's or Aruli's math_marks and science_marks?

ANS:

>db.studentmarks.find({$or:[{"name":"kala"},{"name":"aruli"}]},{"maths_marks":1,"science
_marks":1}).pretty()

```
{
        "_id" : ObjectId("5c3c5ab0a04eedf995dba9ee"),
        "maths_marks" : 32,
        "science_marks" : 53
}
{
        "_id" : ObjectId("5c3c5b4fa04eedf995dba9ef"),
        "maths_marks" : 78,
        "science_marks" : 80
}
```

Screen shot:


ukistu02@ukipc02: ~
ukistu02@ukipc02: ~
ukistu02@ukipc02: ~
"maths_marks" : 51,
"english_marks" : 53,
"science_marks" : 72,
"average" : 1
}
{
"_id" : ObjectId("5c3ef5cc3ead522769bf8408"),
"name" : "john",
"maths_marks" : 87,
"science_marks" : 23
}
> db.studentmarks.find({$or:[{"name":"kala"},{"name":"aruli"}]},{"maths_marks":1
,"science_marks":1}).pretty()
{
"_id" : ObjectId("5c3c5bbd21d6554335359bb0"),
"maths_marks" : 32,
"science_marks" : 53
}
{
"_id" : ObjectId("5c3c5bc921d6554335359bb1"),
"maths_marks" : 78,
"science_marks" : 80
}