Ukistu02 - MongoDB Ex2

1. Create a Database called **student**?

   >show dbs
   >use student

   ```
   > show dbs
   admin    0.000GB
   config   0.000GB
   local    0.000GB
   music    0.000GB
   > use student
   switched to db student
   ```

2. Create a collection called **studentmarks**?

   >db.createCollection("studentmarks")

   ```
   > db.createCollection("studentmarks")
   { "ok" : 1 }
   > show dbs
   ```

3. Create the documents listed in above table?

   ```
   >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 })
   ```

```
> 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 })
```

```
> db.studentmarks.find()
{ "_id" : ObjectId("6291d6ecadbeb34cdec76d95"), "name" : "Mala", "maths_marks" : 45, "english_marks" : 53, "scie
nce_marks" : 72 }
{ "_id" : ObjectId("6291d74badbeb34cdec76d96"), "name" : "Vanu", "maths_marks" : 80, "english_marks" : 75, "scie
nce_marks" : 85 }
{ "_id" : ObjectId("6291d797adbeb34cdec76d97"), "name" : "Kala", "maths_marks" : 32, "english_marks" : 46, "scie
nce_marks" : 53 }
{ "_id" : ObjectId("6291d7c9adbeb34cdec76d98"), "name" : "Aruli", "maths_marks" : 78, "english_marks" : 85, "sci
ence_marks" : 80 }
{ "_id" : ObjectId("6291d7f6adbeb34cdec76d99"), "name" : "Shayu", "maths_marks" : 80, "english_marks" : 76, "sci
ence_marks" : 65 }
{ "_id" : ObjectId("6291d81aadbeb34cdec76d9a"), "name" : "Kumaran", "maths_marks" : 32, "english_marks" : 73, "s
cience_marks" : 84 }
{ "_id" : ObjectId("6291db64adbeb34cdec76d9b"), "name" : "Lucky", "maths_marks" : 66, "english_marks" : 90, "sci
ence_marks" : 45 }
{ "_id" : ObjectId("6291db83adbeb34cdec76d9c"), "name" : "Gva", "maths_marks" : 71, "english_marks" : 75, "scien
ce_marks" : 56 }
{ "_id" : ObjectId("6291db9badbeb34cdec76d9d"), "name" : "Raam", "maths_marks" : 41, "english_marks" : 65, "scie
nce_marks" : 88 }
```

4. Increase the maths marks of Mala by 6 mark?

>db.studentmarks.update({"_id":ObjectId("6291d6ecadbeb34cdec76d95")},{$inc:{"maths_marks":6}})

 WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })

```
> db.studentmarks.update({"_id":ObjectId("6291d6ecadbeb34cdec76d95")},{$inc:{"maths_marks":6}})
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
>
```

```
{ "_id" : ObjectId("6291d6ecadbeb34cdec76d95"), "name" : "Mala", "maths_marks" : 51, "english_marks" : 53, "scie
nce_marks" : 72 }
```

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

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

```
> 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?

> db.studentmarks.update({},{$set:{"average":1}},{upsert:false,multi:true})

 WriteResult({ "nMatched" : 9, "nUpserted" : 0, "nModified" : 9 })

```
> db.studentmarks.update({},{$set:{"average":""}},{upsert:false,multi:true})
WriteResult({ "nMatched" : 9, "nUpserted" : 0, "nModified" : 9 })
```

7. Update Marks_Science=75 to Lucky?

>db.studentmarks.update({"name":"Lucky"},{$rename:{"science_marks":"marks_sci
ence"}})

WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })

> db.studentmarks.update({"name":"Lucky"},{$set:{"marks_science":75}})

WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 0 })

```
> db.studentmarks.update({"name":"Lucky"},{$rename:{"science_marks":"marks_science"}})
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
> db.studentmarks.update({"name":"Lucky"},{$set:{"marks_science":75}})
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 0 })
```

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

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

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

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

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

db.studentmarks.find({$and:[{"maths_marks":{$lt:40}},{"science_marks":{$lt:40}}]},{
"name":1,_id:0})

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

11. Remove Science column/field for Raam?

> db.studentmarks.remove({"name":"Raam","science_marks":88})
WriteResult({ "nRemoved" : 1 })

```
> db.studentmarks.remove({"name":"Raam","science_marks":88})
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})
WriteResult({ "nInserted" : 1 })

```
> 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 })

```
> 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({"_id":ObjectId("6291d81aadbeb34cdec76d9a")})
WriteResult({ "nRemoved" : 1 })

```
> db.studentmarks.remove({"_id":ObjectId("6291d81aadbeb34cdec76d9a")})
WriteResult({ "nRemoved" : 1 })
```

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

>db.studentmarks.find({$or:[{"name":"Kala"},{"name":"Aruli"}]},{"maths_marks":1,"science_marks":1,_id:0})

```
> db.studentmarks.find({$or:[{"name":"Kala"},{"name":"Aruli"}]},{"maths_marks":1,"science_marks":1,_id:0})
{ "maths_marks" : 32, "science_marks" : 53 }
{ "maths_marks" : 78, "science_marks" : 80 }
>
```