

INCLASS EXERCISE 02 NODE JS - MONGODB

1) Create a Database called student

```
1 var MongoClient = require('mongodb').MongoClient;
2 var url = "mongodb://localhost:27017/student";
3
4 MongoClient.connect(url, function(err, db) {
5   if (err) throw err;
6   console.log("Database created!");
7   db.close();
8 });
9
```

```
ukistu08@ukipc08:~/Documents/Uki-exercise/mongodp.js/inclass_02$ node 1.js
Database created!
```

2) Create a collection called studentmarks

```
1 var MongoClient = require('mongodb').MongoClient;
2 var url = "mongodb://localhost:27017/student";
3
4 MongoClient.connect(url, function(err, db) {
5   if (err) throw err;
6   db.createCollection("students", function(err, res) {
7     if (err) throw err;
8     console.log("Table created!");
9     db.close();
10  });
11 });
12
```

```
ukistu08@ukipc08:~/Documents/Uki-exercise/mongodp.js/inclass_02$ node 2.js
Table created!
```

3) Create the documents listed in above table.

```
1 var MongoClient = require('mongodb').MongoClient;
2 var url = "mongodb://localhost:27017/student";
3
4 MongoClient.connect(url, function(err, db) {
5   if (err) throw err;
6   var marks = [
7     { name: 'mala', maths_marks: '45', english_marks:'53', science_marks:'75'},
8     { name: 'vanu', maths_marks: '80', english_marks:'75', science_marks:'85'},
9     { name: 'kala', maths_marks: '32', english_marks:'46', science_marks:'53'},
10    { name: 'aruli', maths_marks: '78', english_marks:'85', science_marks:'80'},
11    { name: 'sharu', maths_marks: '80', english_marks:'76', science_marks:'65'},
12    { name: 'kumaran', maths_marks: '32', english_marks:'73', science_marks:'84'},
13    { name: 'lucky', maths_marks: '66', english_marks:'90', science_marks:'45'},
14    { name: 'gva', maths_marks: '71', english_marks:'75', science_marks:'56'},
15    { name: 'raam', maths_marks: '41', english_marks:'65', science_marks:'88'}
16  ];
17  db.collection("students").insert(marks, function(err, res) {
18    if (err) throw err;
19    console.log("Number of records inserted: " + res.insertedCount);
20    db.close();
21  });
22 });
23
```

```
ukistu08@ukipc08:~/Documents/Uki-exercise/mongodp.js/inclass_02$ node 3.js
Number of records inserted: 9
```

4) Increase the maths marks of Mala by 6 marks

```
1 var MongoClient = require('mongodb').MongoClient;
2 var url = "mongodb://localhost:27017/student";
3
4 MongoClient.connect(url, function(err, db) {
5   if (err) throw err;
6   var myquery = { name: 'mala', maths_marks: '45', english_marks:'53', science_marks:'75'};
7   var newvalues = {$set: { name: 'mala', maths_marks: '51', english_marks:'53', science_marks:'75'} };
8   db.collection("students").update(myquery, newvalues, function(err, res) {
9     if (err) throw err;
10    console.log(res.result.nModified + " record updated");
11    db.close();
12  });
13 });
14
```

```
ukistu08@ukipc08:~/Documents/Uki-exercise/mongodp.js/inclass_02$ node 4.js
1 record updated
```

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

```
1 var MongoClient = require('mongodb').MongoClient;
2 var url = "mongodb://localhost:27017/student";
3
4 MongoClient.connect(url, function(err, db) {
5   if (err) throw err;
6   db.collection("students").find({"maths_marks":{"$gt":"50"}}).toArray(function(err, result) {
7     if (err) throw err;
8     console.log(result);
9     db.close();
10  });
11 });
12
```

```
ukistu08@ukipc08:~/Documents/Uki-exercise/mongodp.js/inclass_02$ node 5.js
[ { _id: 5936349ce8de070cccef6c9c,
  name: 'mala',
  maths_marks: '51',
  englsh_marks: '53',
  science_marks: '75' },
  { _id: 5936349ce8de070cccef6c9d,
  name: 'vanu',
  maths_marks: '80',
  englsh_marks: '75',
  science_marks: '85' },
  { _id: 5936349ce8de070cccef6c9f,
  name: 'aruli',
  maths_marks: '78',
  englsh_marks: '85',
  science_marks: '80' },
  { _id: 5936349ce8de070cccef6ca0,
  name: 'sharu',
  maths_marks: '80',
  englsh_marks: '76',
  science_marks: '65' },
  { _id: 5936349ce8de070cccef6ca2,
  name: 'lucky',
  maths_marks: '66',
  englsh_marks: '90',
  science_marks: '75' },
  { _id: 5936349ce8de070cccef6ca3,
  name: 'gva',
  maths_marks: '71',
  englsh_marks: '75',
  science_marks: '56' },
  { _id: 5937e8f41073cd1b3e4076b5,
  name: 'mala',
  maths_marks: '51',
  englsh_marks: '53',
  science_marks: '75' },
  { _id: 5937e8f41073cd1b3e4076b6,
  name: 'vanu',
```

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

7) Update Marks_Science=75 to Lucky .

```
1 var MongoClient = require('mongodb').MongoClient;
2 var url = "mongodb://localhost:27017/student";
3
4 MongoClient.connect(url, function(err, db) {
5   if (err) throw err;
6   var myquery = { name: 'lucky', maths_marks: '66', english_marks: '90', science_marks: '45'};
7   var newvalues = {$set: { name: 'lucky', maths_marks: '66', english_marks: '90', science_marks: '75'} };
8   db.collection("students").update(myquery, newvalues, function(err, res) {
9     if (err) throw err;
10    console.log(res.result.nModified + " record updated");
11    db.close();
12  });
13 });
14
```

```
ukistu08@ukipc08:~/Documents/Uki-exercise/mongodp.js/inclass_02$ node 7.js
1 record updated
```

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

```
1 var MongoClient = require('mongodb').MongoClient;
2 var url = "mongodb://localhost:27017/student";
3
4 MongoClient.connect(url, function(err, db) {
5   if (err) throw err;
6   db.collection("students").find({"maths_marks":{$gt:'50'}, "science_marks":{$gt:'50'}, "english_marks":{$gt:'50'}}).t
7   if (err) throw err;
8 }
```

```
ukistu08@ukipc08:~/Documents/Uki-exercise/mongodp.js/inclass_02$ node 8.js
```

```
[ { _id: 5936349ce8de070cccef6c9c,
  name: 'mala',
  maths_marks: '51',
  english_marks: '53',
  science_marks: '75' },
  { _id: 5936349ce8de070cccef6c9d,
  name: 'vanu',
  maths_marks: '80',
  english_marks: '75',
  science_marks: '85' },
  { _id: 5936349ce8de070cccef6c9f,
  name: 'aruli',
  maths_marks: '78',
  english_marks: '85',
  science_marks: '80' },
  { _id: 5936349ce8de070cccef6ca0,
  name: 'sharu',
  maths_marks: '80',
  english_marks: '76',
  science_marks: '65' },
  { _id: 5936349ce8de070cccef6ca2,
  name: 'lucky',
  maths_marks: '66',
  english_marks: '90',
  science_marks: '75' },
  { _id: 5936349ce8de070cccef6ca3,
  name: 'gva',
  maths_marks: '71',
  english_marks: '75',
  science_marks: '56' },
  { _id: 5937e8f41073cd1b3e4076b5,
  name: 'mala',
  maths_marks: '51',
  english_marks: '53',
  science_marks: '75' },
```

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


```

1 var MongoClient = require('mongodb').MongoClient;
2 var url = "mongodb://localhost:27017/student";
3
4 MongoClient.connect(url, function(err, db) {
5   if (err) throw err;
6   db.collection("students").find({maths_marks:{$lt:'50'},english_marks:{$gt:'50'}}).toArray(function(err, result) {
7     if (err) throw err;
8     console.log(result);
9     db.close()
10  });
11 });|
12

```

```

ukistu08@ukipc08:~/Documents/Uki-exercise/mongodp.js/inclass_02$ node 9.js
[ { _id: 5936349ce8de070cccef6ca4,
  name: 'raam',
  maths_marks: '41',
  english_marks: '65' },
  { _id: 5937e8f41073cd1b3e4076bd,
  name: 'raam',
  maths_marks: '41',
  english_marks: '65',
  science_marks: '88' },
  { _id: 5938fddd2a7a790ce0ba0116,
  name: 'kumaran',
  maths_marks: '32',
  english_marks: '73',
  science_marks: '84' },
  { _id: 5938fddd2a7a790ce0ba0119,
  name: 'raam',
  maths_marks: '41',
  english_marks: '65',
  science_marks: '88' } ]

```

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

```

1 var MongoClient = require('mongodb').MongoClient;
2 var url = "mongodb://localhost:27017/student";
3
4 MongoClient.connect(url, function(err, db) {
5   if (err) throw err;
6   db.collection("students").find({maths_marks:{$lt:'40'},science_marks:{$lt:'40'}}).toArray(function(err, result) {
7     if (err) throw err;
8     console.log(result);
9     db.close()
10  });
11 });
12

```

```
ukistu08@ukipc08:~/Documents/Uki-exercise/mongodp.js/inclass_02$ node 10.js  
[]
```

11) Remove Science column/field for Raam

```

1 var MongoClient = require('mongodb').MongoClient;
2 var url = "mongodb://localhost:27017/student";
3
4 MongoClient.connect(url, function(err, db) {
5   if (err) throw err;
6   var myquery = {name:"raam",maths_marks:'41',english_marks:'65',science_marks:'88'};
7   var newvalues = {name:"raam",maths_marks:'41',english_marks:'65'};
8   db.collection("students").update(myquery, newvalues, function(err, res) {
9     if (err) throw err;
10    console.log(res.result.nModified + " record updated");
11    db.close();
12  });
13 });
14 |

```

```

ukistu08@ukipc08:~/Documents/Uki-exercise/mongodp.js/inclass_02$ node 11.js
1 record updated

```

12) Update John's Math mark as 87 and English mark as 23, if john not available upsert.

```

1 var MongoClient = require('mongodb').MongoClient;
2 var url = "mongodb://localhost:27017/student";
3
4 MongoClient.connect(url, function(err, db) {
5   if (err) throw err;
6   var myobj = [
7     {name:"john",maths_marks:'87',english_marks:'23'}
8   ];
9   db.collection("students").insert(myobj, function(err, res) {
10    if (err) throw err;
11    console.log("Number of records inserted: " + res.insertedCount);
12    db.close();
13  });
14 });
15 |

```

```

ukistu08@ukipc08:~/Documents/Uki-exercise/mongodp.js/inclass_02$ node 12.js
Number of records inserted: 1

```

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


```

1  var MongoClient = require('mongodb').MongoClient;
2  var url = "mongodb://localhost:27017/student";
3
4  MongoClient.connect(url, function(err, db) {
5    if (err) throw err;
6    var myquery = {name:"john",maths_marks:'87',english_marks:'23'};
7    var newvalues = {name:"john",maths_marks:'87',science_marks:'23'};
8    db.collection("students").update(myquery, newvalues, function(err, res) {
9      if (err) throw err;
10     console.log(res.result.nModified + " record updated");
11     db.close();
12   });
13 });
14 |

```

14) Remove Kumaran's document from collection

```

1  var MongoClient = require('mongodb').MongoClient;
2  var url = "mongodb://localhost:27017/student";
3
4  MongoClient.connect(url, function(err, db) {
5    if (err) throw err;
6    var myquery = {name:"kumaran" };
7    db.collection("students").remove(myquery, function(err, obj) {
8      if (err) throw err;
9      console.log(obj.result.n + " document(s) deleted");
10     db.close();
11   });
12 });
13

```

```

ukistu08@ukipc08:~/Documents/Uki-exercise/mongodp.js/inclass_02$ node 14.js
1 document(s) deleted

```

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

```
1 var MongoClient = require('mongodb').MongoClient;
2 var url = "mongodb://localhost:27017/student";
3
4 MongoClient.connect(url, function(err, db) {
5   if (err) throw err;
6   db.collection("students").find({$or:[{name:"kala"},{name:"aruli"}]}, {maths_marks:1, science_marks:1, Name:1, _id:0})
7   if (err) throw err;
8   console.log(result);
9   db.close();
10 });
11 });
12
```

```
ukistu08@ukipc08:~/Documents/Uki-exercise/mongodp.js/inclass_02$ node 15.js
[ { maths_marks: '32', science_marks: '53' },
  { maths_marks: '78', science_marks: '80' },
  { maths_marks: '32', science_marks: '53' },
  { maths_marks: '78', science_marks: '80' },
  { maths_marks: '32', science_marks: '53' },
  { maths_marks: '78', science_marks: '80' } ]
```