Mongodb + Node.js

1) Create a Database called music .

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

```
ukistu07@ukipc07:~/Documents/ukiexercises/nodejs+mongo$ node create.js
Database created!
ukistu07@ukipc07:~/Documents/ukiexercises/nodejs+mongo$
```

2) Create a collection called songdetails .

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

```
ukistu07@ukipc07:~/Documents/ukiexercises/nodejs+mongo$ node collection.js
Table created!
ukistu07@ukipc07:~/Documents/ukiexercises/nodejs+mongo$
```

3) Create the above 5 song documents.

```javascript
var MongoClient = require('mongodb').MongoClient;
var url = "mongodb://localhost:27017/music";

MongoClient.connect(url, function(err, db) {
  if (err) throw err;
  var insert = [
    { songName: 'thaniye thannandhaniye', film: 'rhythm', musicDirector: 'AR Rahman', singer: 'shankar mahadhevan'},
    { songName: 'evano oruvan', film: 'alaipayudhe', musicDirector: 'AR Rahman', singer: 'swarnalatha'},
    { songName: 'Roja poondhottam', film: 'kannukkul nilavu', musicDirector: 'ilayaraja', singer: 'unni krishnan'},
    { songName: 'vennilave vennilave', film: 'minsara kanavu', musicDirector: 'AR Rahman', singer: 'Hariharan'},
    { songName: 'sollamal thottu sellum', film: 'Dheena', musicDirector: 'Yuvana shankar raja', singer: 'Hariharan'}
  ];
  db.collection("songdetails").insert(insert, function(err, res) {
    if (err) throw err;
    console.log("Number of records inserted: " + res.insertedCount);
    db.close();
  });
});
```

```
ukistu07@ukipc07:~/Documents/ukiexercises/nodejs+mongo$ node insertsong.js
Number of records inserted: 5
ukistu07@ukipc07:~/Documents/ukiexercises/nodejs+mongo$
```

4) List all documents created.

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

```
ukistu07@ukipc07:~/Documents/ukiexercises/nodejs+mongo$ node findall.js
[ { _id: 5934dc2ba3cd78107446f825,
    songName: 'thaniye thannandhaniye',
    film: 'rhythm',
    musicDirector: 'AR Rahman',
    singer: 'shankar mahadhevan' },
  { _id: 5934dc2ba3cd78107446f826,
    songName: 'evano oruvan',
    film: 'alaipayudhe',
    musicDirector: 'AR Rahman',
    singer: 'swarnalatha' },
  { _id: 5934dc2ba3cd78107446f827,
    songName: 'Roja poondhottam',
    film: 'kannukkul nilavu',
    musicDirector: 'ilayaraja',
    singer: 'unni krishnan' },
  { _id: 5934dc2ba3cd78107446f828,
    songName: 'vennilave vennilave',
    film: 'minsara kanavu',
    musicDirector: 'AR Rahman',
    singer: 'Hariharan' },
  { _id: 5934dc2ba3cd78107446f829,
    songName: 'sollamal thottu sellum',
    film: 'Dheena',
    musicDirector: 'Yuvana shankar raja',
    singer: 'Hariharan' } ]
ukistu07@ukipc07:~/Documents/ukiexercises/nodejs+mongo$
```

5) List A.R.Rahman's songs.

```
1  var http = require('http');
2  var MongoClient = require('mongodb').MongoClient;
3  var url = "mongodb://localhost:27017/music";
4
5  MongoClient.connect(url, function(err, db) {
6    if (err) throw err;
7    var query = { musicDirector: "AR Rahman" };
8    db.collection("songdetails").find(query).toArray(function(err, result) {
9      if (err) throw err;
10     console.log(result);
11     db.close();
12   });
13 });
14
```

```
ukistu07@ukipc07:~/Documents/ukiexercises/nodejs+mongo$ node song.js
[ { _id: 5934dc2ba3cd78107446f825,
    songName: 'thaniye thannandhaniye',
    film: 'rhythm',
    musicDirector: 'AR Rahman',
    singer: 'shankar mahadhevan' },
  { _id: 5934dc2ba3cd78107446f826,
    songName: 'evano oruvan',
    film: 'alaipayudhe',
    musicDirector: 'AR Rahman',
    singer: 'swarnalatha' },
  { _id: 5934dc2ba3cd78107446f828,
    songName: 'vennilave vennilave',
    film: 'minsara kanavu',
    musicDirector: 'AR Rahman',
    singer: 'Hariharan' } ]
ukistu07@ukipc07:~/Documents/ukiexercises/nodejs+mongo$
```

6) List A.R.Rahman's songs sung by Unnikrishnan.

```
1  var http = require('http');
2  var MongoClient = require('mongodb').MongoClient;
3  var url = "mongodb://localhost:27017/music";
4
5  MongoClient.connect(url, function(err, db) {
6    if (err) throw err;
7    var query = { musicDirector: "AR Rahman",singer:"unni krishnan",};
8    db.collection("songdetails").find(query).toArray(function(err, result) {
9      if (err) throw err;
10     console.log(result);
11     db.close();
12   });
13 });
14
```

```
ukistu07@ukipc07:~/Documents/ukiexercises/nodejs+mongo$ node one.js
[]
ukistu07@ukipc07:~/Documents/ukiexercises/nodejs+mongo$
```

7) Delete the song which you don't like.

```
1   var http = require('http');
2   var MongoClient = require('mongodb').MongoClient;
3   var url = "mongodb://localhost:27017/music";
4
5   MongoClient.connect(url, function(err, db) {
6     if (err) throw err;
7     var myquery = { songName: 'Roja poondhottam' };
8     db.collection("songdetails").remove(myquery, function(err, obj) {
9       if (err) throw err;
10      console.log(obj.result.n + " document(s) deleted");
11      db.close();
12    });
13  });
14
```

```
ukistu07@ukipc07:~/Documents/ukiexercises/nodejs+mongo$ node delete.js
1 document(s) deleted
ukistu07@ukipc07:~/Documents/ukiexercises/nodejs+mongo$
```

8) Add new song which is your favourite.

```
2  var MongoClient = require('mongodb').MongoClient;
3  var url = "mongodb://localhost:27017/music";
4
5  MongoClient.connect(url, function(err, db) {
6    if (err) throw err;
7    var insert = { songName: 'Oruvartha Solla', film: 'Iya', musicDirector: 'AR Rahman', singer: 'shankar mahadhevan'};
8    db.collection("songdetails").insertOne(insert, function(err, res) {
9      if (err) throw err;
10     console.log("1 record inserted");
11     db.close();
12   });
13 });
14
```

```
ukistu07@ukipc07:~/Documents/ukiexercises/nodejs+mongo$ node add.js
1 record inserted
ukistu07@ukipc07:~/Documents/ukiexercises/nodejs+mongo$ ▮
```

9) List Songs sung by Hariharan from Minsara kanavu film.

```
1  var http = require('http');
2  var MongoClient = require('mongodb').MongoClient;
3  var url = "mongodb://localhost:27017/music";
4
5  MongoClient.connect(url, function(err, db) {
6    if (err) throw err;
7    var query = { singer: "Hariharan", film: 'minsara kanavu'};
8    db.collection("songdetails").find(query).toArray(function(err, result) {
9      if (err) throw err;
10     console.log(result);
11     db.close();
12   });
13 });
14
```

```
ukistu07@ukipc07:~/Documents/ukiexercises/nodejs+mongo$ node list.js
[ { _id: 5934dc2ba3cd78107446f828,
    songName: 'vennilave vennilave',
    film: 'minsara kanavu',
    musicDirector: 'AR Rahman',
    singer: 'Hariharan' } ]
ukistu07@ukipc07:~/Documents/ukiexercises/nodejs+mongo$ ▮
```

10)List out the singers' names in your document.

Exercise 02

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
```

```
ukistu07@ukipc07:~/Documents/ukiexercises/nodejs+mongo$ node create2.js
Database created!
ukistu07@ukipc07:~/Documents/ukiexercises/nodejs+mongo$
```

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("studentmarks", function(err, res) {
7       if (err) throw err;
8       console.log("Table created!");
9       db.close();
10    });
11  });
12
```

```
ukistu07@ukipc07:~/Documents/ukiexercises/nodejs+mongo$ node collection2.js
Table created!
ukistu07@ukipc07:        Atom        ukiexercises/nodejs+mongo$
```

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 insert = [
7       { name:"mala",maths_marks:45,english_marks:53,science_marks:75},
8         { name:"venu",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("studentmarks").insert(insert, function(err, res) {
18      if (err) throw err;
19      console.log("Number of records inserted: " + res.insertedCount);
20      db.close();
21    });
22  });
23
```

```
ukistu07@ukipc07:~/Documents/ukiexercises/nodejs+mongo$ node marksinsert.js
Number of records inserted: 9
ukistu07@ukipc07:~/Documents/ukiexercises/nodejs+mongo$
```

4) Increase the maths marks of Raam 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:"Raam",maths_marks:41,english_marks:65,science_marks:88};
7    var newvalues = {$set:{ name:"Raam",maths_marks:47,english_marks:65,science_marks:88} };
8    db.collection("studentmarks").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
```

```
ukistu07@ukipc07:~/Documents/ukiexercises/nodejs+mongo$ node increase.js
1 record updated
ukistu07@ukipc07:~/Documents/ukiexercises/nodejs+mongo$
```

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("studentmarks").find({"maths_marks":{$gt:50}}).toArray(function(err, result) {
7      if (err) throw err;
8      console.log(result);
9      db.close();
10   });
11 });
12
```

```
ukistu07@ukipc07:~/Documents/ukiexercises/nodejs+mongo$ node fifty.js
[ { _id: 59269f2a6e3ecf0eeaa97f00,
    name: 'John',
    maths_marks: 92,
    science_marks: 23 },
  { _id: 593513da76f48420f62986ae, name: 'mala', maths_marks: 51 },
  { _id: 593513da76f48420f62986af,
    name: 'venu',
    maths_marks: 80,
    english_marks: 75,
    science_marks: 85 },
  { _id: 593513da76f48420f62986b1,
    name: 'Aruli',
    maths_marks: 78,
    english_marks: 85,
    science_marks: 80 },
  { _id: 593513da76f48420f62986b2,
    name: 'Sharu',
    maths_marks: 80,
    english_marks: 76,
    science_marks: 65 },
  { _id: 593513da76f48420f62986b4,
    name: 'Lucky',
    maths_marks: 66,
    english_marks: 90,
    science_marks: 45 },
  { _id: 593513da76f48420f62986b5,
    name: 'Gva',
    maths_marks: 71,
    english_marks: 75,
    science_marks: 56 } ]
ukistu07@ukipc07:~/Documents/ukiexercises/nodejs+mongo$
```

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("studentmarks").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
```

```
ukistu07@ukipc07:~/Documents/ukiexercises/nodejs+mongo$ node lucky.js
1 record updated
ukistu07@ukipc07:~/Documents/ukiexercises/nodejs+mongo$ █    Software Updater
```

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("studentmarks").find({"maths_marks":{$gt:50},"science_marks":{$gt:50},"english_marks":{$gt:50}}).toArray(function(err, result) {
7       if (err) throw err;
8       console.log(result);
9       db.close();
10    });
11  });
12
```

```
ukistu07@ukipc07:~/Documents/ukiexercises/nodejs+mongo$ node allfifty.js
[ { _id: 593513da76f48420f62986af,
    name: 'venu',
    maths_marks: 80,
    english_marks: 75,
    science_marks: 85 },
  { _id: 593513da76f48420f62986b1,
    name: 'Aruli',
    maths_marks: 78,
    english_marks: 85,
    science_marks: 80 },
  { _id: 593513da76f48420f62986b2,
    name: 'Sharu',
    maths_marks: 80,
    english_marks: 76,
    science_marks: 65 },
  { _id: 593513da76f48420f62986b4,
    name: 'Lucky',
    maths_marks: 66,
    english_marks: 90,
    science_marks: 75 },
  { _id: 593513da76f48420f62986b5,
    name: 'Gva',
    maths_marks: 71,
    english_marks: 75,
    science_marks: 56 } ]
ukistu07@ukipc07:~/Documents/ukiexercises/nodejs+mongo$
```

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("studentmarks").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
```

```
ukistu07@ukipc07:~/Documents/ukiexercises/nodejs+mongo$ node less.js
[ { _id: 593513da76f48420f62986b3,
    name: 'Kumaran',
    maths_marks: 32,
    english_marks: 73,
    science_marks: 84 },
  { _id: 593513da76f48420f62986b6,
    name: 'Raam',
    maths_marks: 47,
    english_marks: 65,
    science_marks: 88 } ]
ukistu07@ukipc07:~/Documents/ukiexercises/nodejs+mongo$
```

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("studentmarks").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
```

```
ukistu07@ukipc07:~/Documents/ukiexercises/nodejs+mongo$ node less.js
[]
ukistu07@ukipc07:~/Documents/ukiexercises/nodejs+mongo$ █
```

11) Remove Science column/field for Raam

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 = { name:"Jhone",maths_marks:87,english_marks:23,science_marks:88};
 7    db.collection("studentmarks").insertOne(myobj, function(err, res) {
 8      if (err) throw err;
 9      console.log("1 record inserted");
10      db.close();
11    });
12  });
13
```

```
ukistu07@ukipc07:~/Documents/ukiexercises/nodejs+mongo$ node jhon.js
1 record inserted
ukistu07@ukipc07:~/Documents/ukiexercises/nodejs+mongo$ █
```

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

```
qu13.js
1   var MongoClient = require('mongodb').MongoClient;
2   var url = "mongodb://127.0.0.1:27017/student";
3
4   MongoClient.connect(url, function(err, db) {
5     if (err) throw err;
6     var myquery = { name:"John" };
7     var newvalues = { name:"John",maths_marks:87,science_marks:23 };
8     db.collection("studentmarks").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
```

```
ukistu07@ukipc07:~/Documents/ukiexercises/nodejs+mongo$ node qu13.js
1 record updated
ukistu07@ukipc07:~/Documents/ukiexercises/nodejs+mongo$
```

14) Remove Kumaran's document from collection

```
qu14.js
1   var http = require('http');
2   var MongoClient = require('mongodb').MongoClient;
3   var url = "mongodb://localhost:27017/student";
4
5   MongoClient.connect(url, function(err, db) {
6     if (err) throw err;
7     var myquery = { name:"Kumaran"};
8     db.collection("studentmarks").remove(myquery, function(err, obj) {
9       if (err) throw err;
10      console.log(obj.result.n + " document(s) deleted");
11      db.close();
12    });
13  });
14
```

```
ukistu07@ukipc07:~/Documents/ukiexercises/nodejs+mongo$ node qu14.js
1 document(s) deleted
ukistu07@ukipc07:~/Documents/ukiexercises/nodejs+mongo$
```

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

```javascript
                qu15.js
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("studentmarks").find({$or:[{name:"Aruli"},{name:"Kala"}]},{name:1,maths_marks:1,science_marks:1}).toArray(function(err, result) {
7      if (err) throw err;
8      console.log(result);
9      db.close();
10   });
11 });
12
```

```
ukistu07@ukipc07:~/Documents/ukiexercises/nodejs+mongo$ node qu15.js
[ { _id: 593513da76f48420f62986b0,
    name: 'Kala',
    maths_marks: 32,
    science_marks: 53 },
  { _id: 593513da76f48420f62986b1,
    name: 'Aruli',
    maths_marks: 78,
    science_marks: 80 } ]
ukistu07@ukipc07:~/Documents/ukiexercises/nodejs+mongo$
```