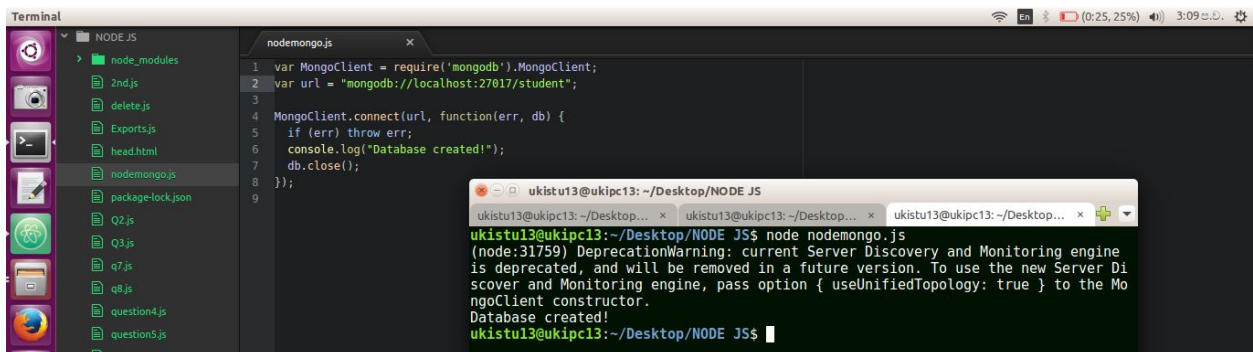


1) Create a Database called student

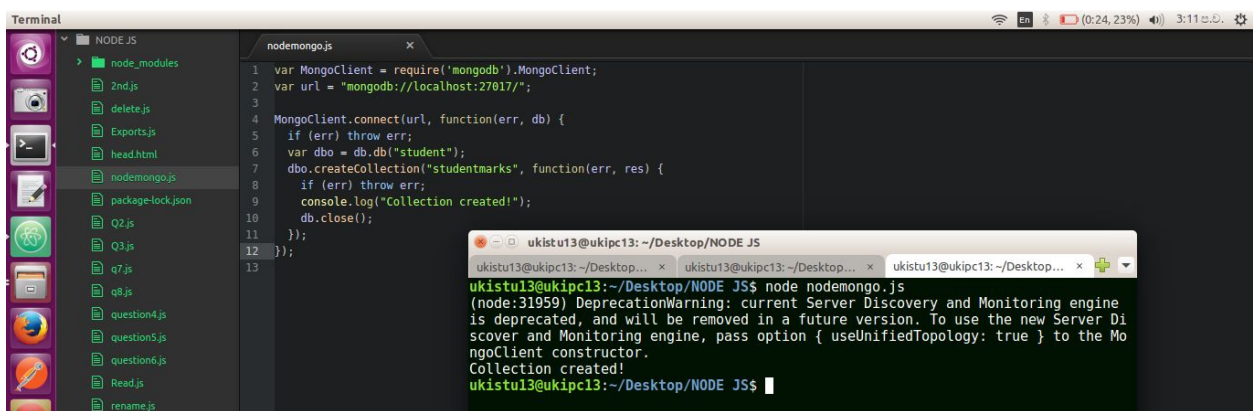


```
Terminal
NODE.JS
node_modules
2nd.js
delete.js
Exports.js
head.html
nodemongo.js
package-lock.json
Q2.js
Q3.js
q7.js
q8.js
question4.js
question5.js

nodemongo.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   console.log("Database created!");
7   db.close();
8 });
9

ukistul3@ukipc13: ~/Desktop/NODE JS
ukistul3@ukipc13:~/Desktop/NODE JS$ node nodemongo.js
(node:31759) DeprecationWarning: current Server Discovery and Monitoring engine
is deprecated, and will be removed in a future version. To use the new Server Di
scover and Monitoring engine, pass option { useUnifiedTopology: true } to the Mo
ngoClient constructor.
Database created!
ukistul3@ukipc13:~/Desktop/NODE JS$
```

2) Create a collection called studentmarks

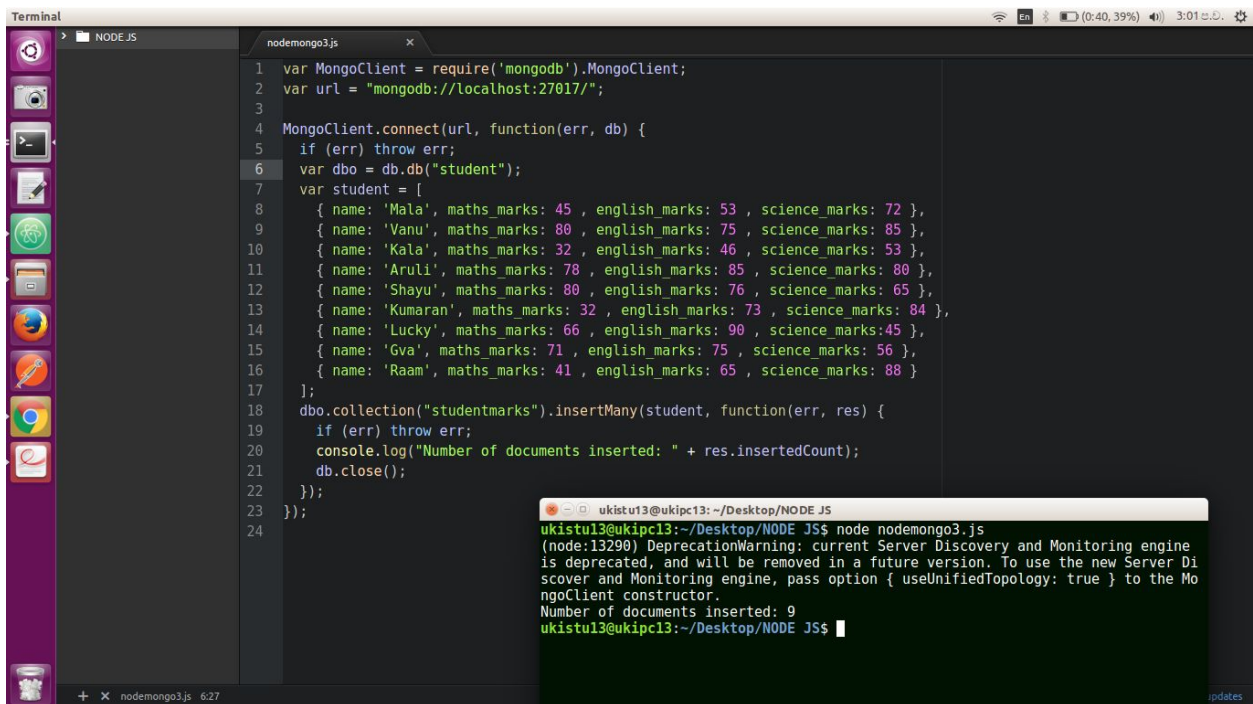


```
Terminal
NODE.JS
node_modules
2nd.js
delete.js
Exports.js
head.html
nodemongo.js
package-lock.json
Q2.js
Q3.js
q7.js
q8.js
question4.js
question5.js
Read.js
rename.js

nodemongo.js
1 var MongoClient = require('mongodb').MongoClient;
2 var url = "mongodb://localhost:27017/";
3
4 MongoClient.connect(url, function(err, db) {
5   if (err) throw err;
6   var dbo = db.db("student");
7   dbo.createCollection("studentmarks", function(err, res) {
8     if (err) throw err;
9     console.log("Collection created!");
10    db.close();
11  });
12 });
13

ukistul3@ukipc13: ~/Desktop/NODE JS
ukistul3@ukipc13:~/Desktop/NODE JS$ node nodemongo.js
(node:31959) DeprecationWarning: current Server Discovery and Monitoring engine
is deprecated, and will be removed in a future version. To use the new Server Di
scover and Monitoring engine, pass option { useUnifiedTopology: true } to the Mo
ngoClient constructor.
Collection created!
ukistul3@ukipc13:~/Desktop/NODE JS$
```

3) Create the documents listed in above table.

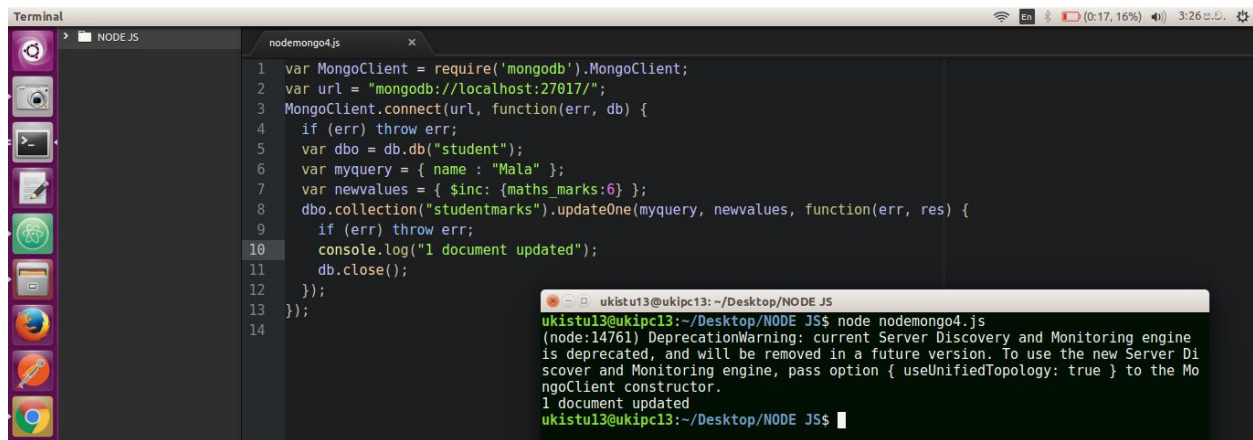


```
Terminal
NODE.JS
node_modules
2nd.js
delete.js
Exports.js
head.html
nodemongo.js
package-lock.json
Q2.js
Q3.js
q7.js
q8.js
question4.js
question5.js
Read.js
rename.js

nodemongo3.js
1 var MongoClient = require('mongodb').MongoClient;
2 var url = "mongodb://localhost:27017/";
3
4 MongoClient.connect(url, function(err, db) {
5   if (err) throw err;
6   var dbo = db.db("student");
7   var student = [
8     { name: 'Mala', maths_marks: 45 , english_marks: 53 , science_marks: 72 },
9     { name: 'Vanu', maths_marks: 80 , english_marks: 75 , science_marks: 85 },
10    { name: 'Kala', maths_marks: 32 , english_marks: 46 , science_marks: 53 },
11    { name: 'Aruli', maths_marks: 78 , english_marks: 85 , science_marks: 80 },
12    { name: 'Shayu', maths_marks: 80 , english_marks: 76 , science_marks: 65 },
13    { name: 'Kumaran', maths_marks: 32 , english_marks: 73 , science_marks: 84 },
14    { name: 'Lucky', maths_marks: 66 , english_marks: 90 , science_marks: 45 },
15    { name: 'Gva', maths_marks: 71 , english_marks: 75 , science_marks: 56 },
16    { name: 'Raam', maths_marks: 41 , english_marks: 65 , science_marks: 88 }
17  ];
18  dbo.collection("studentmarks").insertMany(student, function(err, res) {
19    if (err) throw err;
20    console.log("Number of documents inserted: " + res.insertedCount);
21    db.close();
22  });
23 });
24

ukistul3@ukipc13: ~/Desktop/NODE JS
ukistul3@ukipc13:~/Desktop/NODE JS$ node nodemongo3.js
(node:13290) DeprecationWarning: current Server Discovery and Monitoring engine
is deprecated, and will be removed in a future version. To use the new Server Di
scover and Monitoring engine, pass option { useUnifiedTopology: true } to the Mo
ngoClient constructor.
Number of documents inserted: 9
ukistul3@ukipc13:~/Desktop/NODE JS$
```

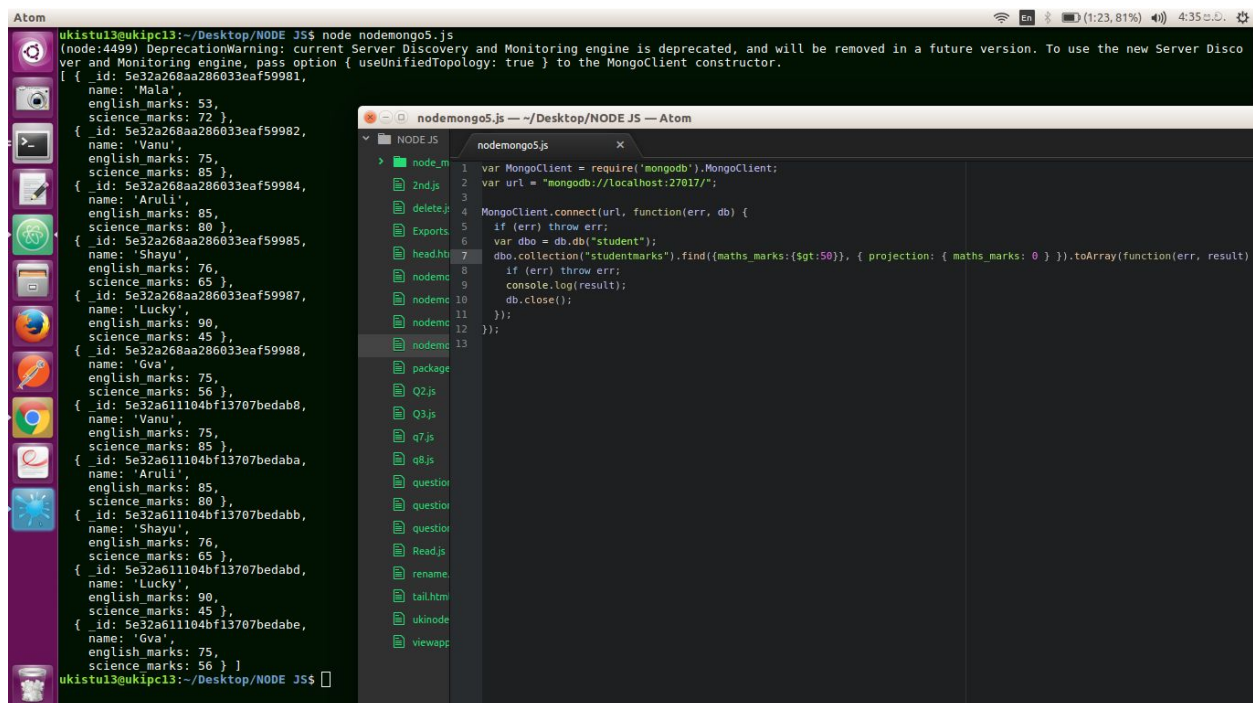
4) Increase the maths marks of Mala by 6 marks



```
Terminal
NODE.JS
nodemongo4.js
1 var MongoClient = require('mongodb').MongoClient;
2 var url = "mongodb://localhost:27017/";
3 MongoClient.connect(url, function(err, db) {
4   if (err) throw err;
5   var dbo = db.db("student");
6   var myquery = { name : "Mala" };
7   var newvalues = { $inc: { maths_marks:6 } };
8   dbo.collection("studentmarks").updateOne(myquery, newvalues, function(err, res) {
9     if (err) throw err;
10    console.log("1 document updated");
11    db.close();
12  });
13 });
14

ukistul3@ukipc13: ~/Desktop/NODE JS
ukistul3@ukipc13:~/Desktop/NODE JS$ node nodemongo4.js
(node:14761) DeprecationWarning: current Server Discovery and Monitoring engine is deprecated, and will be removed in a future version. To use the new Server Discovery and Monitoring engine, pass option { useUnifiedTopology: true } to the MongoClient constructor.
1 document updated
ukistul3@ukipc13:~/Desktop/NODE JS$
```

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



```
Atom
ukistul3@ukipc13:~/Desktop/NODE JS$ node nodemongo5.js
(node:4499) DeprecationWarning: current Server Discovery and Monitoring engine is deprecated, and will be removed in a future version. To use the new Server Discovery and Monitoring engine, pass option { useUnifiedTopology: true } to the MongoClient constructor.
[ { _id: 5e32a268aa286033eaf59981,
  name: 'Mala',
  english_marks: 53,
  science_marks: 72 },
  { _id: 5e32a268aa286033eaf59982,
  name: 'Vanu',
  english_marks: 75,
  science_marks: 85 },
  { _id: 5e32a268aa286033eaf59984,
  name: 'Aruli',
  english_marks: 85,
  science_marks: 80 },
  { _id: 5e32a268aa286033eaf59985,
  name: 'Shayu',
  english_marks: 76,
  science_marks: 65 },
  { _id: 5e32a268aa286033eaf59987,
  name: 'Lucky',
  english_marks: 90,
  science_marks: 45 },
  { _id: 5e32a268aa286033eaf59988,
  name: 'Gva',
  english_marks: 75,
  science_marks: 56 },
  { _id: 5e32a611104bf13707bedab8,
  name: 'Vanu',
  english_marks: 75,
  science_marks: 85 },
  { _id: 5e32a611104bf13707bedaba,
  name: 'Aruli',
  english_marks: 85,
  science_marks: 80 },
  { _id: 5e32a611104bf13707bedabb,
  name: 'Shayu',
  english_marks: 76,
  science_marks: 65 },
  { _id: 5e32a611104bf13707bedabd,
  name: 'Lucky',
  english_marks: 90,
  science_marks: 45 },
  { _id: 5e32a611104bf13707bedabe,
  name: 'Gva',
  english_marks: 75,
  science_marks: 56 } ]
ukistul3@ukipc13:~/Desktop/NODE JS$

nodemongo5.js
1 var MongoClient = require('mongodb').MongoClient;
2 var url = "mongodb://localhost:27017/";
3
4 MongoClient.connect(url, function(err, db) {
5   if (err) throw err;
6   var dbo = db.db("student");
7   dbo.collection("studentmarks").find({ maths_marks: { $gt: 50 } }, { projection: { maths_marks: 0 } }).toArray(function(err, result) {
8     if (err) throw err;
9     console.log(result);
10    db.close();
11  });
12 });
13
```

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://127.0.0.1:27017/";
3
4 MongoClient.connect(url, function(err, db) {
5   if (err) throw err;
6   var dbo = db.db("student");
7   var myquery = { science_marks: "45" };
8   var newvalues = { $set: { name: "Lucky", science_marks: "75" } };
9   dbo.collection("studentmarks").updateOne(myquery, newvalues, function(err, res) {
10     if (err) throw err;
11     console.log("1 document updated");
12     db.close();
13   });
14 });
15

```

ukistul3@ukipc13: ~/Desktop/NODE JS
(node:4912) DeprecationWarning: current Server Discovery and Monitoring engine is deprecated, and will be removed in a future version. To use the new Server Discovery and Monitoring engine, pass option { useUnifiedTopology: true } to the MongoClient constructor.
1 document updated
ukistul3@ukipc13:~/Desktop/NODE JS\$

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/";
3
4 MongoClient.connect(url, function(err, db) {
5   if (err) throw err;
6   var dbo = db.db("student");
7   dbo.collection("studentmarks").find({$and:[{maths_marks:{$gt:50}},
8     {science_marks:{$gt:50}},
9     {english_marks:{$gt:50}}]}).toArray(function(err, result) {
10     if (err) throw err;
11     console.log(result);
12     db.close();
13   });
14 });
15

```

ukistul3@ukipc13:~/Desktop/NODE JS\$ node nodemongo8.js
(node:5208) DeprecationWarning: current Server Discovery and Monitoring engine is deprecated, and will be removed in a future version. To use the new Server Discovery and Monitoring engine, pass option { useUnifiedTopology: true } to the MongoClient constructor.
[{ _id: '5e32a268aa286033eaf59981',
 name: 'Mala',
 maths_marks: 57,
 english_marks: 53,
 science_marks: 72 },
 { _id: '5e32a268aa286033eaf59982',
 name: 'Vanu',
 maths_marks: 80,
 english_marks: 75,
 science_marks: 85 },
 { _id: '5e32a268aa286033eaf59984',
 name: 'Aruli',
 maths_marks: 78,
 english_marks: 85,
 science_marks: 80 },
 { _id: '5e32a268aa286033eaf59985',
 name: 'Shayyu',
 maths_marks: 80,
 english_marks: 76,
 science_marks: 65 },
 { _id: '5e32a268aa286033eaf59988',
 name: 'Gva',
 maths_marks: 71,
 english_marks: 75,
 science_marks: 56 },
 { _id: '5e32a611104bf13707bedab8',
 name: 'Vanu',
 maths_marks: 80,
 english_marks: 75,
 science_marks: 85 },
 { _id: '5e32a611104bf13707bedaba',
 name: 'Aruli',
 maths_marks: 78,
 english_marks: 85,
 science_marks: 80 },
 { _id: '5e32a611104bf13707bedabb',
 name: 'Shayyu',
 maths_marks: 80,
 english_marks: 76,
 science_marks: 65 },
 { _id: '5e32a611104bf13707bedabe',
 name: 'Gva',
 maths_marks: 71,
 english_marks: 75,
 science_marks: 56 }]
ukistul3@ukipc13:~/Desktop/NODE JS\$

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

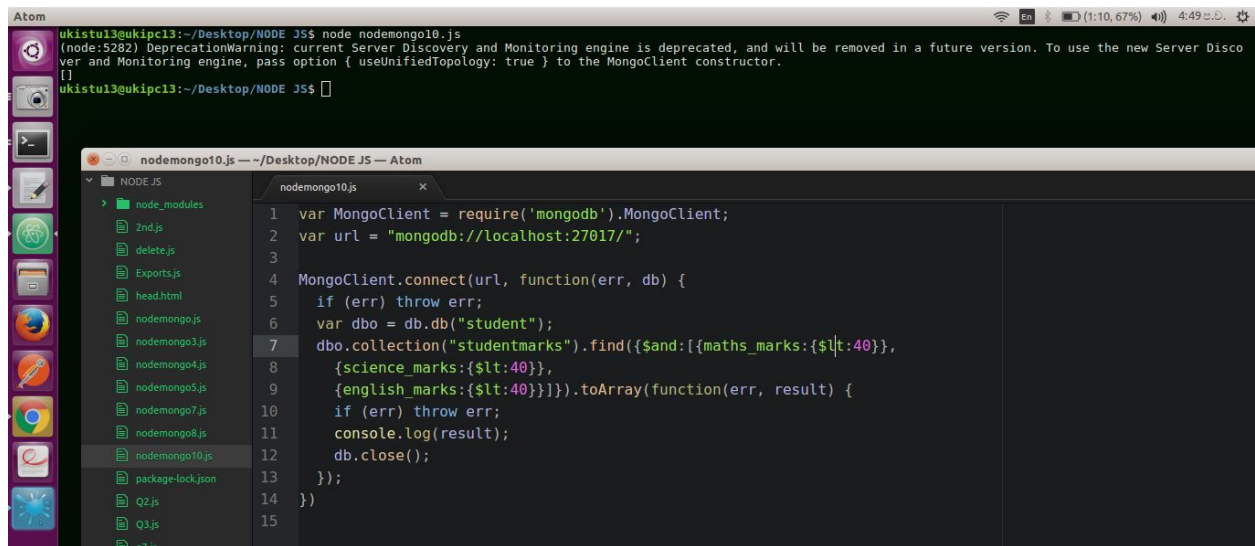
```

1 var MongoClient = require('mongodb').MongoClient;
2 var url = "mongodb://localhost:27017/";
3
4 MongoClient.connect(url, function(err, db) {
5   if (err) throw err;
6   var dbo = db.db("student");
7   dbo.collection("studentmarks").find({$and:[{"maths_marks":{$lt:50}},{"english_marks":{$gt:50}}]},{projection:
8     if (err) throw err;
9     console.log(result);
10    db.close();
11  });
12 });
13

```

ukistul3@ukipc13:~/Desktop/NODE JS
(node:9197) DeprecationWarning: current Server Discovery and Monitoring engine is deprecated, and will be removed in a future version. To use the new Server Discovery and Monitoring engine, pass option { useUnifiedTopology: true } to the MongoClient constructor.
[{ name: 'Kumaran' },
 { name: 'Raam' },
 { name: 'Mala' },
 { name: 'Kumaran' },
 { name: 'Raam' }]
ukistul3@ukipc13:~/Desktop/NODE JS\$

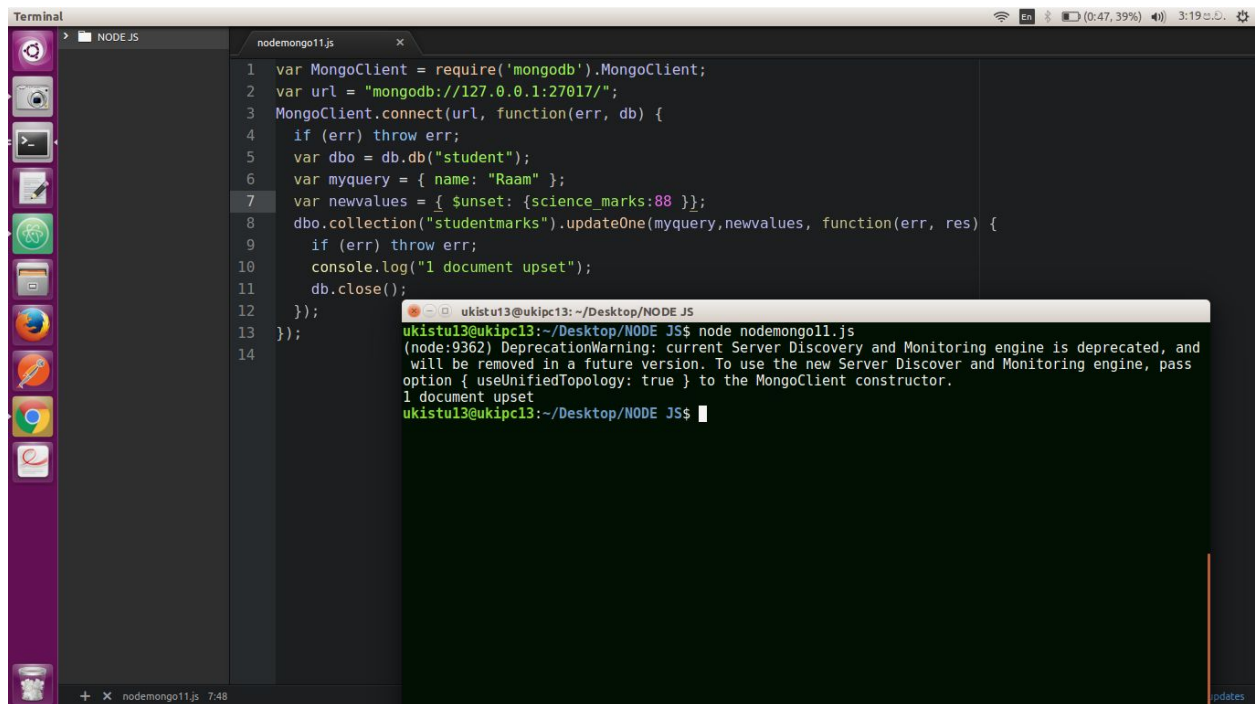
10) List the names who got less than 40 in both Maths and Science.



```
ukistul3@ukipc13:~/Desktop/NODE JS$ node nodemongo10.js
(node:5282) DeprecationWarning: current Server Discovery and Monitoring engine is deprecated, and will be removed in a future version. To use the new Server Discovery and Monitoring engine, pass option { useUnifiedTopology: true } to the MongoClient constructor.
[]
ukistul3@ukipc13:~/Desktop/NODE JS$
```

```
1 var MongoClient = require('mongodb').MongoClient;
2 var url = "mongodb://localhost:27017/";
3
4 MongoClient.connect(url, function(err, db) {
5   if (err) throw err;
6   var dbo = db.db("student");
7   dbo.collection("studentmarks").find({$and:[{maths_marks:{$lt:40}},
8     {science_marks:{$lt:40}},
9     {english_marks:{$lt:40}}]}).toArray(function(err, result) {
10    if (err) throw err;
11    console.log(result);
12    db.close();
13  });
14 })
```

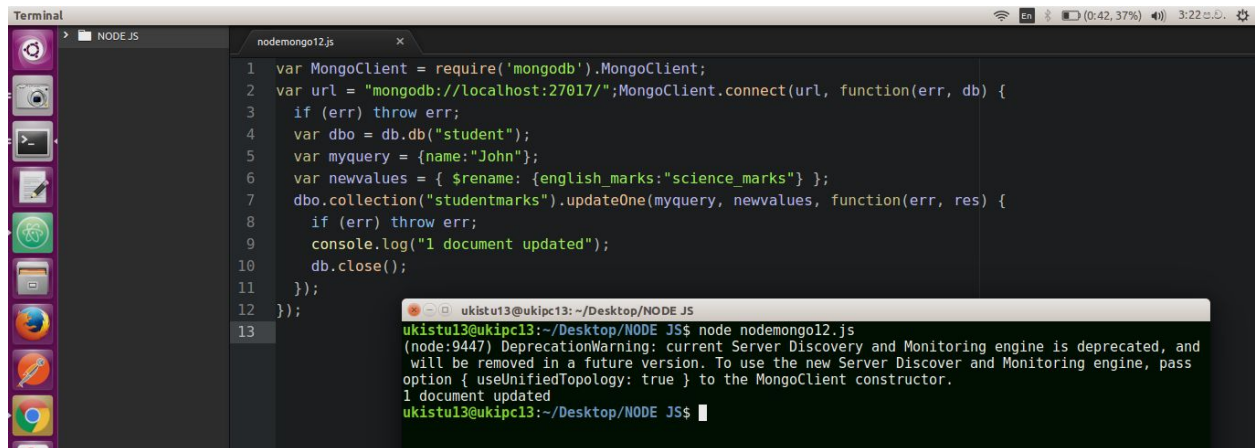
11) Remove Science column/field for Raam



```
1 var MongoClient = require('mongodb').MongoClient;
2 var url = "mongodb://127.0.0.1:27017/";
3 MongoClient.connect(url, function(err, db) {
4   if (err) throw err;
5   var dbo = db.db("student");
6   var myquery = { name: "Raam" };
7   var newvalues = { $unset: {science_marks:88} };
8   dbo.collection("studentmarks").updateOne(myquery,newvalues, function(err, res) {
9     if (err) throw err;
10    console.log("1 document upsert");
11    db.close();
12  });
13 });
14
```

```
ukistul3@ukipc13:~/Desktop/NODE JS$ node nodemongo11.js
(node:9362) DeprecationWarning: current Server Discovery and Monitoring engine is deprecated, and will be removed in a future version. To use the new Server Discovery and Monitoring engine, pass option { useUnifiedTopology: true } to the MongoClient constructor.
1 document upsert
ukistul3@ukipc13:~/Desktop/NODE JS$
```

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

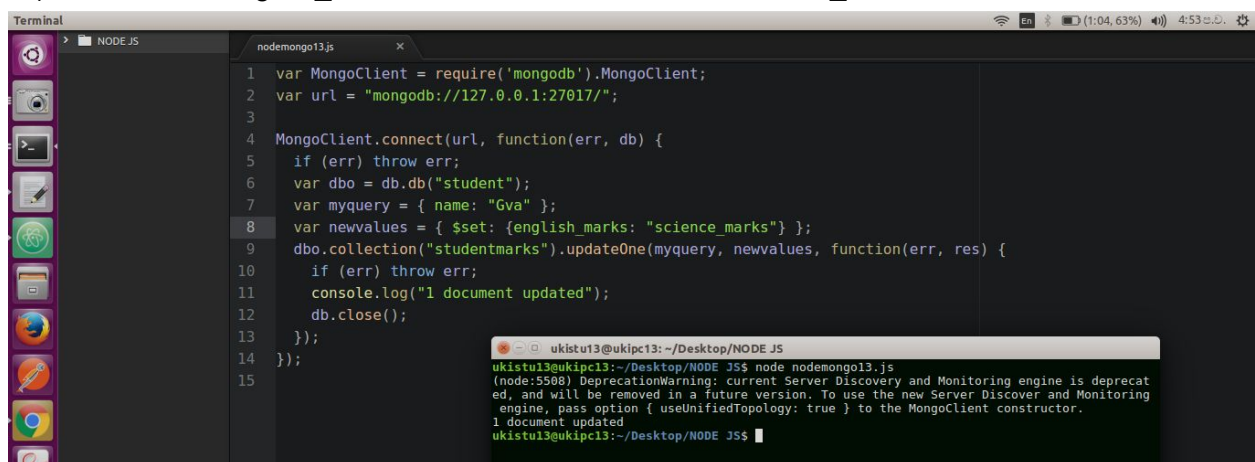


The terminal window displays a Node.js script named `nodemongo12.js`. The script connects to a MongoDB instance at `localhost:27017`, accesses the `student` database, and updates the `english_marks` field of a document with `name: "John"` to `science_marks`. The output shows a deprecation warning and a confirmation that 1 document was updated.

```
1 var MongoClient = require('mongodb').MongoClient;
2 var url = "mongodb://localhost:27017/"; MongoClient.connect(url, function(err, db) {
3   if (err) throw err;
4   var dbo = db.db("student");
5   var myquery = {name:"John"};
6   var newvalues = { $rename: {english_marks:"science_marks"} };
7   dbo.collection("studentmarks").updateOne(myquery, newvalues, function(err, res) {
8     if (err) throw err;
9     console.log("1 document updated");
10    db.close();
11  });
12 });
13
```

ukistu13@ukipc13: ~/Desktop/NODE JS
ukistu13@ukipc13:~/Desktop/NODE JS\$ node nodemongo12.js
(node:9447) DeprecationWarning: current Server Discovery and Monitoring engine is deprecated, and will be removed in a future version. To use the new Server Discover and Monitoring engine, pass option { useUnifiedTopology: true } to the MongoClient constructor.
1 document updated
ukistu13@ukipc13:~/Desktop/NODE JS\$

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

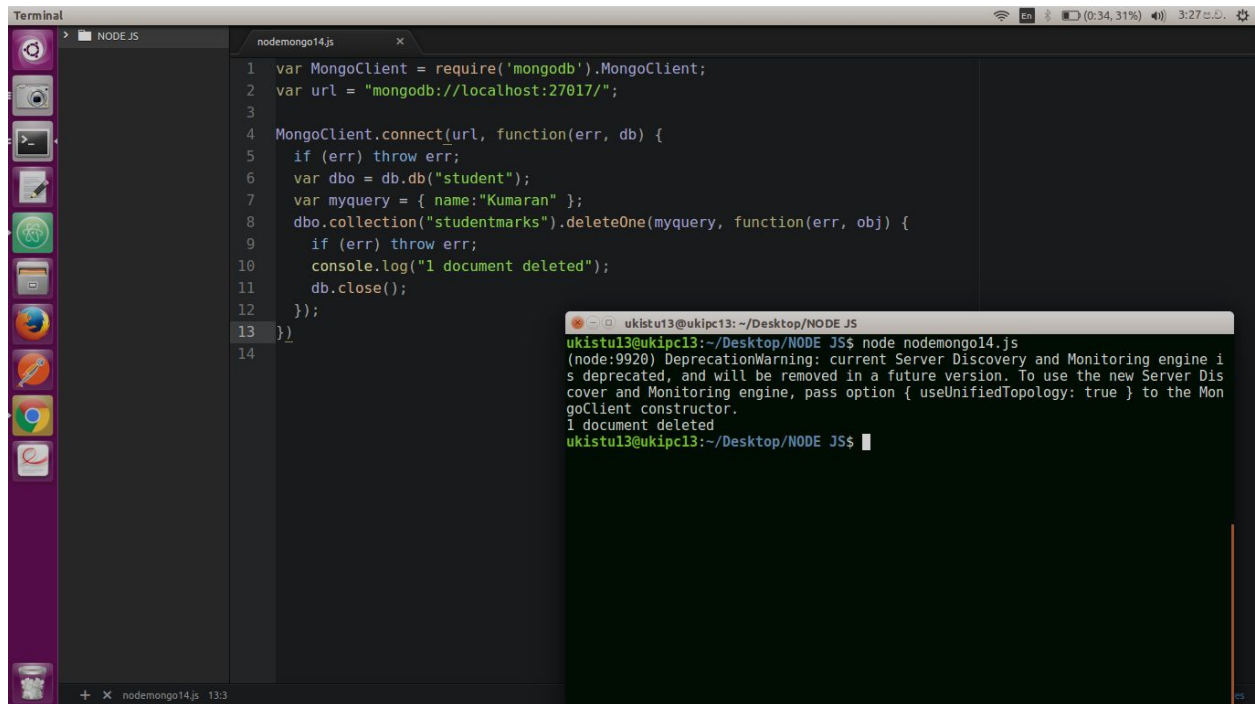


The terminal window displays a Node.js script named `nodemongo13.js`. The script connects to a MongoDB instance at `127.0.0.1:27017`, accesses the `student` database, and updates the `english_marks` field of a document with `name: "Gva"` to `science_marks`. The output shows a deprecation warning and a confirmation that 1 document was updated.

```
1 var MongoClient = require('mongodb').MongoClient;
2 var url = "mongodb://127.0.0.1:27017/";
3
4 MongoClient.connect(url, function(err, db) {
5   if (err) throw err;
6   var dbo = db.db("student");
7   var myquery = { name: "Gva" };
8   var newvalues = { $set: {english_marks: "science_marks"} };
9   dbo.collection("studentmarks").updateOne(myquery, newvalues, function(err, res) {
10     if (err) throw err;
11     console.log("1 document updated");
12    db.close();
13  });
14 });
15
```

ukistu13@ukipc13: ~/Desktop/NODE JS
ukistu13@ukipc13:~/Desktop/NODE JS\$ node nodemongo13.js
(node:5508) DeprecationWarning: current Server Discovery and Monitoring engine is deprecated, and will be removed in a future version. To use the new Server Discover and Monitoring engine, pass option { useUnifiedTopology: true } to the MongoClient constructor.
1 document updated
ukistu13@ukipc13:~/Desktop/NODE JS\$

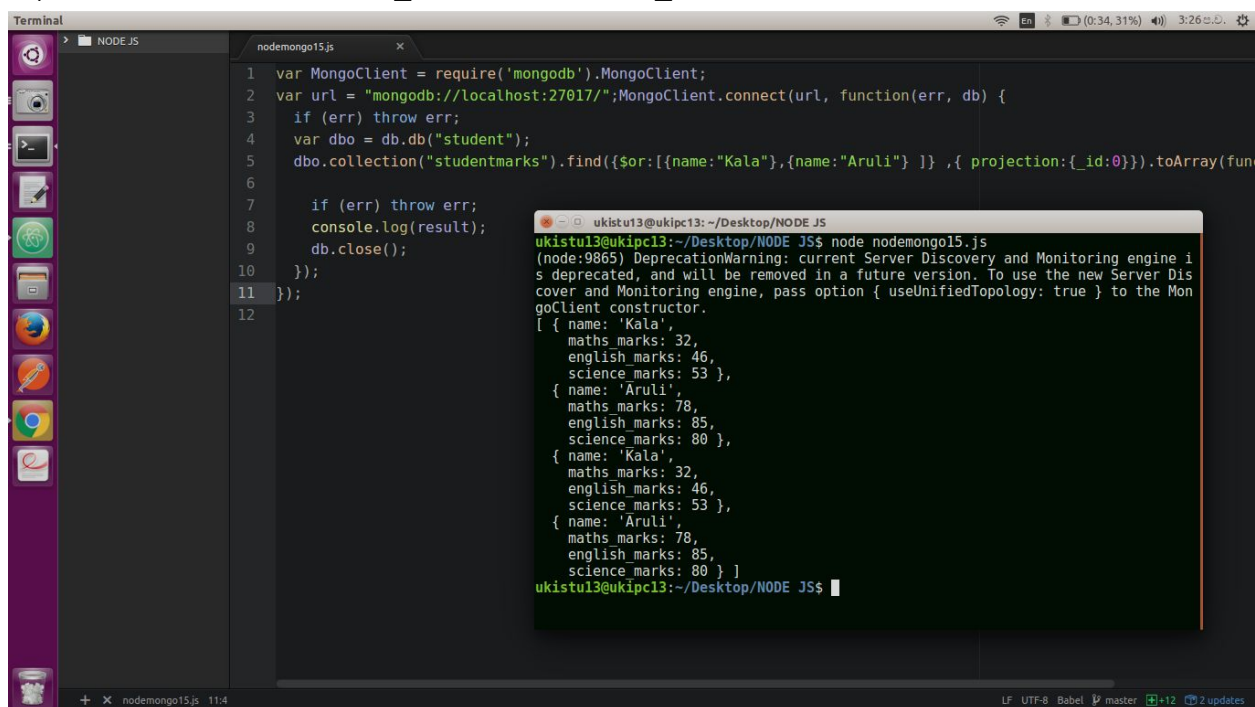
14) Remove Kumaran's document from collection



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

ukistul3@ukipc13: ~/Desktop/NODE JS
ukistul3@ukipc13:~/Desktop/NODE JS\$ node nodemongo14.js
(node:9920) DeprecationWarning: current Server Discovery and Monitoring engine is deprecated, and will be removed in a future version. To use the new Server Discovery and Monitoring engine, pass option { useUnifiedTopology: true } to the MongoClient constructor.
1 document deleted
ukistul3@ukipc13:~/Desktop/NODE JS\$

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



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

ukistul3@ukipc13: ~/Desktop/NODE JS
ukistul3@ukipc13:~/Desktop/NODE JS\$ node nodemongo15.js
(node:9865) DeprecationWarning: current Server Discovery and Monitoring engine is deprecated, and will be removed in a future version. To use the new Server Discovery and Monitoring engine, pass option { useUnifiedTopology: true } to the MongoClient constructor.
[{ name: 'Kala',
 maths marks: 32,
 english marks: 46,
 science marks: 53 },
 { name: 'Aruli',
 maths marks: 78,
 english marks: 85,
 science marks: 80 },
 { name: 'Kala',
 maths marks: 32,
 english marks: 46,
 science marks: 53 },
 { name: 'Aruli',
 maths marks: 78,
 english marks: 85,
 science marks: 80 }]
ukistul3@ukipc13:~/Desktop/NODE JS\$