Lesson 16-n introduction NodeJS

1- MySQL and other languages
2- About php and nodeJS
3- Introduction to join us app
4- Setting up cloud WAMP for node
5- About faker install
6- Introduction NPM and Faker
7- Introducing MySQL package
8- Connecting node to my SQL
9- Creating our users table
10- Selecting using node
11- Inserting using node
12- Some my SQL and node magic
13- Bulk inserting 500 users
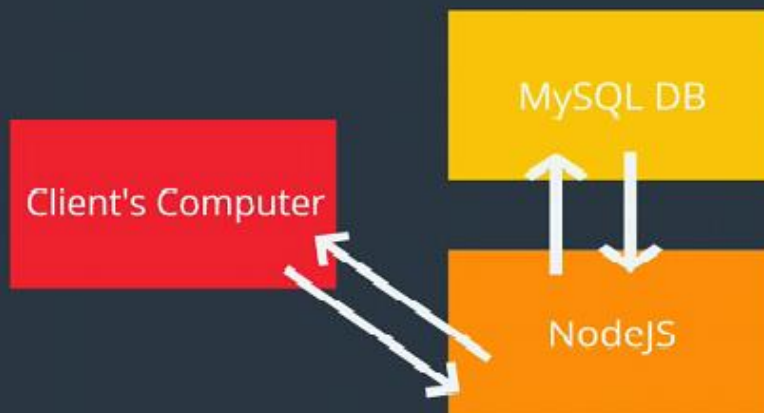14- 500 users exercise
15- 500 users exercise solution

Mysql and other languages

MySQL &

PHP   C++
Node   Java
Ruby   Python
C#   ...

How do we interact
with MySQL through
external code?

MySQL DB

Client's Computer

NodeJS

Faker and NPM

```
1  for(var i = 0; i < 500; i++) {
2      console.log("Hello World!");
3  }
4
5  for(var i = 0; i < 500; i++) {
6      // INSERT A NEW USER INTO THE DATABASE
7  }
8
9
```

```
1  // for(var i = 0; i < 500; i++) {
2  //      console.log(5 + 5 );
3  // }
4
5  // for(var i = 0; i < 500; i++) {
6  //      // INSERT A NEW USER INTO THE DATABASE
7  // }
8
9  console.log(5 + 5 );
10
```

Introducing
FAKER

```
npm install faker
```

```
faker.internet.email()
```
↓

Orie23@hotmail.com

Simone.Walsh@gmail.com

Aubree_Daugherty97@yahoo.com

```
faker.date.past()
```
↓

Tue Dec 27 2016 11:48:00 GMT+0000 (UTC)

Fri Dec 16 2016 11:13:08 GMT+0000 (UTC)

Fri Jun 24 2016 06:33:49 GMT+0000 (UTC)

```
1  var faker = require('faker');
2
3  // console.log(faker.internet.email());
4
5  // console.log(faker.date.past());
6
7  console.log(faker.address.city());
```

```
1  var faker = require('faker');
2
3  // console.log(faker.internet.email());
4
5  // console.log(faker.date.past());
6
7
8  console.log(faker.address.streetAddress());
9  console.log(faker.address.city());
10 console.log(faker.address.state());
11
```

```
7
8  console.log(faker.address.streetAddress());
9  console.log(faker.address.city());
10 console.log(faker.address.state());
11
12 console.log(faker.address.streetAddress());
13 console.log(faker.address.city());
14 console.log(faker.address.state());
15
16
```

```
9
10 function generateAddress() {
11     console.log(faker.address.streetAddress());
12     console.log(faker.address.city());
13     console.log(faker.address.state());
14 }
15
16 generateAddress();
17 generateAddress();
18 generateAddress();
19
```

Introduction to mysql package

WARNING THIS IS NOT REAL CODE

```
INSERT INTO users (email. created_at) VALUES
   (
        faker.internet.email(),
        faker.date.past()
   );
```

Do That 500 Times

Introducing
MySQL
The Node Package, That Is

Connecting to my sql databse


```
 1  var faker = require('faker');
 2
 3  function generateAddress() {
 4      console.log(faker.address.streetAddress());
 5      console.log(faker.address.city());
 6      console.log(faker.address.state());
 7  }
 8
 9  generateAddress();
10  generateAddress();
11  generateAddress();
12
13  "SELECT CURDATE()"
14  "SELECT 1+4"
```
14:13   JavaScript   Spaces: 4 ⚙

```
ERROR 1064 (4
  for the righC:\wamp>npm install mysql
mysql>        npm WARN saveError ENOENT: no such file or directory, open 'C:\wamp\package.json'
mysql>        npm WARN enoent ENOENT: no such file or directory, open 'C:\wamp\package.json'
mysql>        npm WARN wamp No description
mysql>        npm WARN wamp No repository field.
mysql>        npm WARN wamp No README data
              npm WARN wamp No license field.

              + mysql@2.15.0
              added 9 packages in 11.702s
```

```
C:\Users\Muhit>npm install -g wamp
npm WARN deprecated win-spawn@2.0.0: use [cross-spawn](https://github.com/IndigoUnited/node-cross-spawn) or [cross-spawn-async](https://github.com/IndigoUnited/node-cro
ss-spawn-async) instead.
C:\Users\Muhit\AppData\Roaming\npm\wamp -> C:\Users\Muhit\AppData\Roaming\npm\node_modules\wamp\main\cli.js

> sqlite3@3.1.13 install C:\Users\Muhit\AppData\Roaming\npm\node_modules\wamp\node_modules\sqlite3
> node-pre-gyp install --fallback-to-build

[sqlite3] Success: "C:\Users\Muhit\AppData\Roaming\npm\node_modules\wamp\node_modules\sqlite3\lib\binding\node-v57-win32-x64\node_sqlite3.node" is installed via remote

> wamp@1.0.9 postinstall C:\Users\Muhit\AppData\Roaming\npm\node_modules\wamp
> wamp install

Wamp is not running with admin privileges. Please run wamp from an elevated console.

npm WARN optional SKIPPING OPTIONAL DEPENDENCY: fsevents@1.2.0 (node_modules\wamp\node_modules\fsevents):
npm WARN notsup SKIPPING OPTIONAL DEPENDENCY: Unsupported platform for fsevents@1.2.0: wanted {"os":"darwin","arch":"any"} (current: {"os":"win32","arch":"x64"})

+ wamp@1.0.9
added 353 packages in 78.768s
```

```
C:\Users\Muhit>npm install faker
npm WARN saveError ENOENT: no such file or directory, open 'C:\Users\Muhit\package.json'
npm WARN       created a lockfile as package-lock.json. You should commit this file.
npm WARN enoent ENOENT: no such file or directory, open 'C:\Users\Muhit\package.json'
npm WARN Muhit No description
npm WARN Muhit No repository field.
npm WARN Muhit No README data
npm WARN Muhit No license field.

+ faker@4.1.0
added 1 package in 4.258s
```

```
C:\wamp>npm install -g wamp
npm WARN deprecated win-spawn@2.0.0: use [cross-spawn](https://github.com/IndigoUnited/node-cross-spawn) or [cross-spawn-async](https://github.com/IndigoUnited/node-cro
ss-spawn-async) instead.
C:\Users\Muhit\AppData\Roaming\npm\wamp -> C:\Users\Muhit\AppData\Roaming\npm\node_modules\wamp\main\cli.js

> wamp@1.0.9 postinstall C:\Users\Muhit\AppData\Roaming\npm\node_modules\wamp
> wamp install

Wamp is not running with admin privileges. Please run wamp from an elevated console.

npm WARN optional SKIPPING OPTIONAL DEPENDENCY: fsevents@1.2.0 (node_modules\wamp\node_modules\fsevents):
npm WARN notsup SKIPPING OPTIONAL DEPENDENCY: Unsupported platform for fsevents@1.2.0: wanted {"os":"darwin","arch":"any"} (current: {"os":"win32","arch":"x64"})

+ wamp@1.0.9
added 84 packages and updated 1 package in 32.267s

C:\wamp>npm install faker
npm WARN saveError ENOENT: no such file or directory, open 'C:\wamp\package.json'
npm WARN       created a lockfile as package-lock.json. You should commit this file.
npm WARN enoent ENOENT: no such file or directory, open 'C:\wamp\package.json'
npm WARN wamp No description
npm WARN wamp No repository field.
npm WARN wamp No README data
npm WARN wamp No license field.

+ faker@4.1.0
added 1 package in 4.895s
```

```javascript
 1  var faker = require('faker');
 2  var mysql = require('mysql');
 3
 4  var connection = mysql.createConnection({
 5    host     : 'localhost',
 6    user     : 'some_username',
 7    database : 'some_database'
 8  });
 9
10  // "SELECT CURDATE()"
11  // "SELECT 1+4"
12  // learnwithcolt
```

```javascript
 7    database : 'join_us'
 8  });
 9
10  // var q = 'SELECT CURDATE()';
11
12  connection.query('SELECT 1 + 5 AS answer', function (error, results, fields) {
13    if (error) throw error;
14    console.log(results[0]);
15  });
16
17  connection.end();
18
19  // "SELECT CURDATE()"
20  // "SELECT 1+4"
```
16:1 JavaScript Spaces: 4

```javascript
 8  });
 9
10  // var q = 'SELECT CURDATE()';
11
12  var q = 'SELECT CURTIME() as time, CURDATE() as date, NOW() as now'
13
14  connection.query(q, function (error, results, fields) {
15    if (error) throw error;
16    console.log(results[0].time);
17    console.log(results[0].date);
18    console.log(results[0].now);
19  });
20
21  connection.end();
```
15:26 JavaScript Spaces: 4

Creating database and tables

Step 1: Connect To MySQL

```javascript
var mysql    = require('mysql')

var connection = mysql.createConnection({
  host     : 'localhost',
  user     : 'some_username',
  database : 'some_database'
});
```

Nice And Simple

```sql
CREATE TABLE users (
    email VARCHAR(255) PRIMARY KEY,
    created_at TIMESTAMP DEFAULT NOW()
);
```

```javascript
 8
 9  var q = 'SELECT * FROM users';
10
11  connection.query(q, function (error, results, fields) {
12    if (error) throw error;
13    console.log(results);
14  });
```
2:1   JavaScript   Spaces: 4

```javascript
 8
 9  var q = 'SELECT * FROM users';
10
11  connection.query(q, function (error, results, fields) {
12    if (error) throw error;
13    console.log(results[1]);
14  });
15
16  connection.end();
17
```

```javascript
 8
 9  var q = 'SELECT * FROM users';
10
11  connection.query(q, function (error, results, fields) {
12    if (error) throw error;
13    console.log(results[1].email);
14  });
15
16  connection.end();
17
```

```javascript
 8
 9  var q = 'SELECT * FROM users';
10
11  connection.query(q, function (error, results, fields) {
12    if (error) throw error;
13    console.log(results.length);
14  });
15
16  connection.end();
17
```

```javascript
 8
 9  var q = 'SELECT COUNT(*) FROM users';
10
11  connection.query(q, function (error, results, fields) {
12    if (error) throw error;
13    console.log(results);
14  });
15
16  connection.end();
17
```

```javascript
 8
 9  var q = 'SELECT COUNT(*) AS total FROM users ';
10
11  connection.query(q, function (error, results, fields) {
12    if (error) throw error;
13    console.log(results);
14  });
15
16  connection.end();
17
```

```javascript
 8
 9  var q = 'SELECT COUNT(*) AS total FROM users ';
10
11  connection.query(q, function (error, results, fields) {
12    if (error) throw error;
13    console.log(results[0].total);
14  });
15
16  connection.end();
17
```

Select c:\wamp\bin\mysql\mysql5.5.24\bin\mysql.exe

```
at corresponds to your MySQL server version for the right syntax to use near
'mydb' at line 1
mysql> select mydb;
ERROR 1054 (42S22): Unknown column 'mydb' in 'field list'
mysql> select mydb();
ERROR 1305 (42000): FUNCTION mydb does not exist
mysql> use mydb;
Database changed
mysql> create table user (
    -> ;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual th
at corresponds to your MySQL server version for the right syntax to use near
'' at line 1
mysql> create table users (
    -> email varchar(255) primary key,
    -> created_at timestamp default now()
    -> );
Query OK, 0 rows affected (0.23 sec)

mysql> select database mydb();
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual th
at corresponds to your MySQL server version for the right syntax to use near
'mydb()' at line 1
mysql> show tables ();
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual th
at corresponds to your MySQL server version for the right syntax to use near
'()' at line 1
mysql> show tables;
+-----------------+
| Tables_in_mydb  |
+-----------------+
| users           |
+-----------------+
1 row in set (0.00 sec)

mysql> describe users;
+------------+--------------+------+-----+---------+-------+
| Field      | Type         | Null | Key | Default | Extra |
+------------+--------------+------+-----+---------+-------+
| email      | varchar(255) | NO   | PRI | NULL    |       |
```

Node.js command prompt - node app7.js

```
Your environment has been set up for using Node.js 8.11.1 (x64) and npm.

C:\Users\Muhit>node app7.js
[ RowDataPacket {
    email: 'katie34@yahoo.com',
    created_at: 2018-04-25T19:06:55.000Z },
  RowDataPacket {
    email: 'tunda@gmail.com',
    created_at: 2018-04-25T19:06:55.000Z } ]
```


Select c:\wamp\bin\mysql\mysql5.5.24\bin\mysql.exe

```
mysql> show tables;
+-----------------+
| Tables_in_mydb  |
+-----------------+
| users           |
+-----------------+
1 row in set (0.00 sec)

mysql> describe users;
+------------+--------------+------+-----+-------------------+-------+
| Field      | Type         | Null | Key | Default           | Extra |
+------------+--------------+------+-----+-------------------+-------+
| email      | varchar(255) | NO   | PRI | NULL              |       |
| created_at | timestamp    | NO   |     | CURRENT_TIMESTAMP |       |
+------------+--------------+------+-----+-------------------+-------+
2 rows in set (0.02 sec)

mysql> select * from users;
Empty set (0.00 sec)

mysql> insert into users (email) values
    -> ('katie34@yahoo.com'), ('tunda@gmail.com');
Query OK, 2 rows affected (0.14 sec)
Records: 2  Duplicates: 0  Warnings: 0

mysql> describe users;
+------------+--------------+------+-----+-------------------+-------+
| Field      | Type         | Null | Key | Default           | Extra |
+------------+--------------+------+-----+-------------------+-------+
| email      | varchar(255) | NO   | PRI | NULL              |       |
| created_at | timestamp    | NO   |     | CURRENT_TIMESTAMP |       |
+------------+--------------+------+-----+-------------------+-------+
2 rows in set (0.01 sec)

mysql> select * from users;
+-------------------+---------------------+
| email             | created_at          |
+-------------------+---------------------+
| katie34@yahoo.com | 2018-04-26 01:06:55 |
| tunda@gmail.com   | 2018-04-26 01:06:55 |
```

Node.js command prompt - node app7.js

```
Your environment has been set up for using Node.js 8.11.1 (x64) and npm.

C:\Users\Muhit>node app7.js
[ RowDataPacket {
    email: 'katie34@yahoo.com',
    created_at: 2018-04-25T19:06:55.000Z },
  RowDataPacket {
    email: 'tunda@gmail.com',
    created_at: 2018-04-25T19:06:55.000Z } ]
```
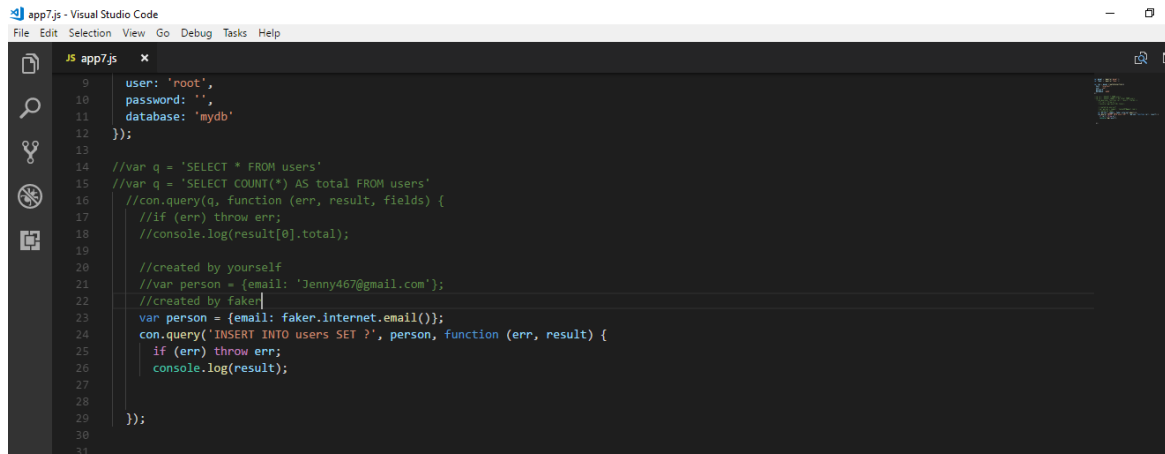


```javascript
var mysql = require('mysql');

var con = mysql.createConnection({
    host: 'localhost',
    user: 'root',
    password: '',
    database: 'mydb'
});

//var q = 'SELECT * FROM users'
var q = 'SELECT COUNT(*) AS total FROM users'
con.query(q, function (err, result, fields) {
    if (err) throw err;
    console.log(result[0].total);

});
```
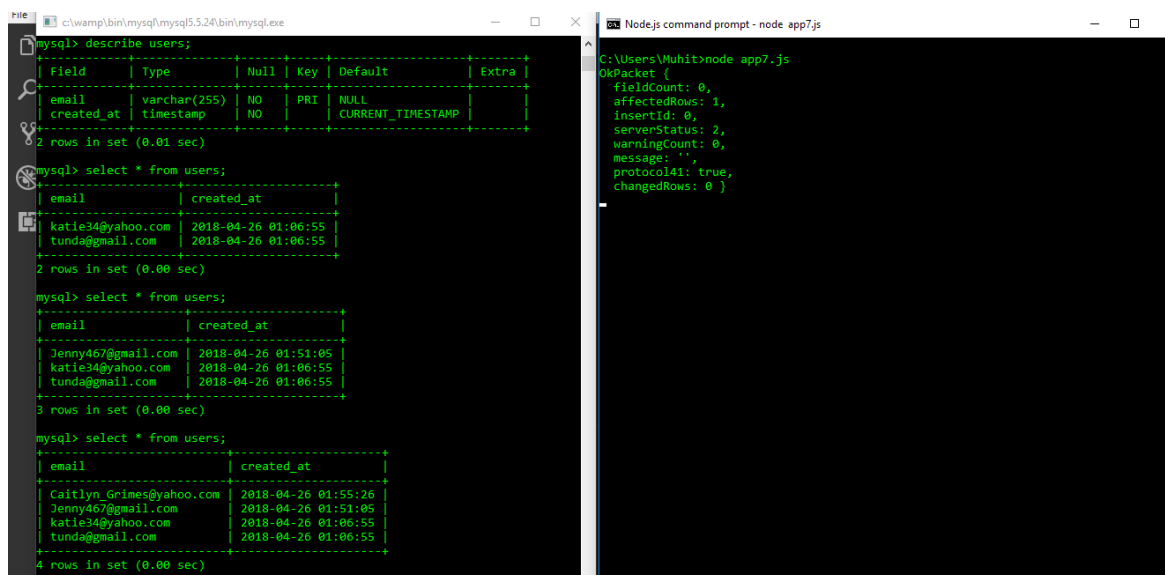
Inserting from npm node.js

To INSERT a user

```js
var person = {email: 'Jenny467@gmail.com'};
connection.query('INSERT INTO users SET ?', person, function(err, result) {
  if (error) throw error;
  console.log(result);
});
```

app7.js - Visual Studio Code

File Edit Selection View Go Debug Tasks Help

JS app7.js

```js
    user: 'root',
    password: '',
    database: 'mydb'
});

//var q = 'SELECT * FROM users'
//var q = 'SELECT COUNT(*) AS total FROM users'
//con.query(q, function (err, result, fields) {
    //if (err) throw err;
    //console.log(result[0].total);

    //created by yourself
    //var person = {email: 'Jenny467@gmail.com'};
    //created by faker
    var person = {email: faker.internet.email()};
    con.query('INSERT INTO users SET ?', person, function (err, result) {
        if (err) throw err;
        console.log(result);

});
```

c:\wamp\bin\mysql\mysql5.5.24\bin\mysql.exe

```
mysql> describe users;
+------------+--------------+------+-----+-------------------+-------+
| Field      | Type         | Null | Key | Default           | Extra |
+------------+--------------+------+-----+-------------------+-------+
| email      | varchar(255) | NO   | PRI | NULL              |       |
| created_at | timestamp    | NO   |     | CURRENT_TIMESTAMP |       |
+------------+--------------+------+-----+-------------------+-------+
2 rows in set (0.01 sec)

mysql> select * from users;
+-------------------+---------------------+
| email             | created_at          |
+-------------------+---------------------+
| katie34@yahoo.com | 2018-04-26 01:06:55 |
| tunda@gmail.com   | 2018-04-26 01:06:55 |
+-------------------+---------------------+
2 rows in set (0.00 sec)

mysql> select * from users;
+---------------------+---------------------+
| email               | created_at          |
+---------------------+---------------------+
| Jenny467@gmail.com  | 2018-04-26 01:51:05 |
| katie34@yahoo.com   | 2018-04-26 01:06:55 |
| tunda@gmail.com     | 2018-04-26 01:06:55 |
+---------------------+---------------------+
3 rows in set (0.00 sec)

mysql> select * from users;
+--------------------------+---------------------+
| email                    | created_at          |
+--------------------------+---------------------+
| Caitlyn_Grimes@yahoo.com | 2018-04-26 01:55:26 |
| Jenny467@gmail.com       | 2018-04-26 01:51:05 |
| katie34@yahoo.com        | 2018-04-26 01:06:55 |
| tunda@gmail.com          | 2018-04-26 01:06:55 |
+--------------------------+---------------------+
4 rows in set (0.00 sec)
```

Node.js command prompt - node app7.js

```
C:\Users\Muhit>node app7.js
OkPacket {
  fieldCount: 0,
  affectedRows: 1,
  insertId: 0,
  serverStatus: 2,
  warningCount: 0,
  message: '',
  protocol41: true,
  changedRows: 0 }
```

Magic date stuff

```sql
CREATE TABLE users (
    email VARCHAR(255) PRIMARY KEY,
    created_at TIMESTAMP DEFAULT NOW()
);

INSERT INTO users (email) VALUES
('Katie34@yahoo.com'), ('Tunde@gmail.com');


INSERT INTO users(email, created_at) VALUES
('dusty@gmail.com', 'Mon Apr 24 2017 17:10:07 GMT+0000 (UTC)');
```

```
25
26  // INSERTING DATA TAKE 2
27  var person = {
28      email: faker.internet.email(),
29      created_at: faker.date.past()
30  };
31
32  connection.query('INSERT INTO users SET ?', person, function(err, result) {
33    if (err) throw err;
34    console.log(result);
35  });
36
```

```
mysql> show * from users;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual th
at corresponds to your MySQL server version for the right syntax to use near
'* from users' at line 1
mysql> select * from users;
+-------------------------+---------------------+
| email                   | created_at          |
+-------------------------+---------------------+
| Caitlyn_Grimes@yahoo.com| 2018-04-26 01:55:26 |
| dusty@gmail.com         | 0000-00-00 00:00:00 |
| Jenny467@gmail.com      | 2018-04-26 01:51:05 |
| katie34@yahoo.com       | 2018-04-26 01:06:55 |
| tunda@gmail.com         | 2018-04-26 01:06:55 |
+-------------------------+---------------------+
5 rows in set (0.00 sec)

mysql> select * from users;
+-------------------------+---------------------+
| email                   | created_at          |
+-------------------------+---------------------+
| Caitlyn_Grimes@yahoo.com| 2018-04-26 01:55:26 |
| Destini63@gmail.com     | 2018-02-23 14:48:31 |
| dusty@gmail.com         | 0000-00-00 00:00:00 |
| Jenny467@gmail.com      | 2018-04-26 01:51:05 |
| katie34@yahoo.com       | 2018-04-26 01:06:55 |
| tunda@gmail.com         | 2018-04-26 01:06:55 |
+-------------------------+---------------------+
6 rows in set (0.00 sec)

mysql> select * from users order by created_at desc limit 1;
+-------------------------+---------------------+
| email                   | created_at          |
+-------------------------+---------------------+
| Caitlyn_Grimes@yahoo.com| 2018-04-26 01:55:26 |
+-------------------------+---------------------+
1 row in set (0.00 sec)

mysql>
```

```
C:\Users\Muhit>node app7.js
OkPacket {
  fieldCount: 0,
  affectedRows: 1,
  insertId: 0,
  serverStatus: 2,
  warningCount: 0,
  message: '',
  protocol41: true,
  changedRows: 0 }
^C
C:\Users\Muhit>node app8.js
2018-02-09T21:50:08.589Z

C:\Users\Muhit>

C:\Users\Muhit>node app8.js
2017-12-25T01:36:27.900Z

C:\Users\Muhit>node app8.js
OkPacket {
  fieldCount: 0,
  affectedRows: 1,
  insertId: 0,
  serverStatus: 2,
  warningCount: 0,
  message: '',
  protocol41: true,
  changedRows: 0 }
```

```
31
32  console.log(person);
33
34  var end_result = connection.query('INSERT INTO users SET ?', person, function(err,
35    if (err) throw err;
36    console.log(result);
37  });
38
39  console.log(end_result.sql);
40
```

Inserting 500 users

```
25
26  // INSERTING DATA TAKE 2
27  var person = {
28      email: faker.internet.email(),
29      created_at: faker.date.past()
30  };
31
32  var end_result = connection.query('INSERT INTO users SET ?', person,
33    if (err) throw err;
34    console.log(result);
35  });
36
```

```sql
1  CREATE TABLE users (
2      email VARCHAR(255) PRIMARY KEY,
3      created_at TIMESTAMP DEFAULT NOW()
4  );
5
6  INSERT INTO users (email) VALUES
7  ('Katie34@yahoo.com'), ('Tunde@gmail.com');
8
9
10 INSERT INTO users(email, created_at) VALUES
11 ('dusty@gmail.com', 'Mon Apr 24 2017 17:10:07 GMT+0000 (UTC)');
12
13
```

INSERTING multiple users

```javascript
var data = [
    ['blah@gmail.com', '2017-05-01 03:51:37'],
    ['ugh@gmail.com',  '2017-05-01 03:51:37'],
    ['meh@gmail.com',  '2017-05-01 03:51:37']
];

var q = 'INSERT INTO users (email, created_at) VALUES ?';

connection.query(q, [data], function(err, result) {
  console.log(err);
  console.log(result);
});
```

```javascript
45
46 var data = [
47     ['blah@gmail.com', '2017-05-01 03:51:37'],
48     ['ugh@gmail.com',  '2017-05-01 03:51:37'],
49     ['meh@gmail.com',  '2017-05-01 03:51:37']
50 ];
51
52 var q = 'INSERT INTO users (email, created_at) VALUES ?';
53
54 connection.query(q, [data], function(err, result) {
55   console.log(err);
56   console.log(result);
57 });
```

```javascript
var mysql = require('mysql');
var faker = require('faker');

var con = mysql.createConnection({
    host: 'localhost',
    user: 'root',
    password: '',
    database: 'mydb'
});


con.connect(function(err) {
  if (err) throw err;
  console.log("Connected!");
  var sql = "INSERT INTO users (email) VALUES ?";
  var values = [
    ['muhit@gmail.com'],
    ['polokash@gmail.com']
  ];
  con.query(sql, [values], function (err, result) {
    if (err) throw err;
    console.log("Number of records inserted: " + result.affectedRows);
  });
});
```

```
| mysql              |
| performance_schema |
| test               |
+--------------------+
6 rows in set (0.01 sec)

mysql> select email fromusers;
ERROR 1054 (42S22): Unknown column 'email' in 'field list'
mysql> select email from users;
ERROR 1046 (3D000): No database selected
mysql> use mydb;
Database changed
mysql> select email from users;
+--------------------------+
| email                    |
+--------------------------+
| Caitlyn_Grimes@yahoo.com |
| Destini63@gmail.com      |
| dusty@gmail.com          |
| Eve_Dickens@gmail.com    |
| Jamal7@yahoo.com         |
| Jenny467@gmail.com       |
| katie34@yahoo.com        |
| muhit@gmail.com          |
| polokash@gmail.com       |
| tunda@gmail.com          |
+--------------------------+
10 rows in set (0.00 sec)

mysql>
```

```
    at Parser.w
    at Protocol
    at Socket.<
    at emitOne

C:\Users\Muhit>
Connected!
Number of recor
^C
C:\Users\Muhit>
```

```
27         });
28
```

```javascript
45
46  var data = [];
47  data.push([
48      faker.internet.email(),
49      faker.date.past()
50  ]);
51  data.push([
52      faker.internet.email(),
53      faker.date.past()
54  ]);
55  data.push([
56      faker.internet.email(),
57      faker.date.past()
58  ]);
```

```
43
44  // INSERTING LOTS OF DATA!!!!===============================
45
46  var data = [];
47  for(var i = 0; i < 500; i++){
48      data.push([
49      faker.internet.email(),
50      faker.date.past()
51      ]);
52  }        push(newelt) : number
53
```

```
 4
 5
 6     var mysql = require('mysql');
 7     var faker = require('faker');
 8
 9     var con = mysql.createConnection({
10        host: 'localhost',
11        user: 'root',
12        password: '',
13        database: 'mydb'
14     });
15
16      var sql = "INSERT INTO users (email, created_at) VALUES ?";
17        var data = [];
18        for (var i = 0; i < 500; i++){
19            data.push ([
20                faker.internet.email(),
21                faker.date.past()
22            ]);
23        }
24
25       con.query(sql, [data], function (err, result) {
26           if (err) throw err;
27           console.log("Number of records inserted: " + result.affectedRows);
28       });
29
30       console.log(data);
31
32
```

```
  ... 400 more items ]

C:\Users\Muhit>node app10.js
C:\Users\Muhit\app10.js:25
    con.query(sql, [values], function (err, result) {
                    ^

ReferenceError: values is not defined
    at Object.<anonymous> (C:\Users\Muhit\app10.js:25:21)
    at Module._compile (module.js:652:30)
    at Object.Module._extensions..js (module.js:663:10)
    at Module.load (module.js:565:32)
    at tryModuleLoad (module.js:505:12)
    at Function.Module._load (module.js:497:3)
    at Function.Module.runMain (module.js:693:10)
    at startup (bootstrap_node.js:188:16)
    at bootstrap_node.js:609:3

C:\Users\Muhit>node app10.js
[ [ 'Lindsay65@yahoo.com', 2018-04-28T03:22:44.908Z ],
  [ 'Hermann_Graham@gmail.com', 2017-05-31T00:42:01.464Z ],
  [ 'Eunice_Jenkins@gmail.com', 2017-05-31T11:00:31.254Z ],
  [ 'Demond.Kovacek@yahoo.com', 2018-03-10T04:57:52.746Z ],
  [ 'Antoinette97@yahoo.com', 2017-06-01T12:19:56.163Z ],
  [ 'Gardner_Shanahan@yahoo.com', 2018-02-20T09:30:24.606Z ],
  [ 'Audrey.Bradtke21@gmail.com', 2018-04-16T12:44:12.269Z ],
  [ 'Russel89@gmail.com', 2017-06-17T04:37:10.366Z ],
  [ 'Arnulfo_Doyle@gmail.com', 2017-10-30T14:31:02.394Z ],
  [ 'Skyla.Hamill37@hotmail.com', 2018-02-26T20:36:29.646Z ],
  [ 'Israel_Tillman2@hotmail.com', 2018-04-25T20:54:08.394Z ]
  [ 'Meghan.Kunde45@gmail.com', 2018-01-19T05:47:38.079Z ],
  [ 'Annabel_Quigley@hotmail.com', 2017-07-27T07:12:33.613Z ],
  [ 'Emilio_Goyette@yahoo.com', 2017-06-06T22:00:43.969Z ],
  [ 'Rhoda.Muller92@gmail.com', 2018-02-05T22:01:59.577Z ],
  [ 'Eve46@gmail.com', 2018-01-01T00:03:03.303Z ],
  [ 'Pete_Denesik@gmail.com', 2017-12-20T14:14:55.666Z ],
  [ 'Erik36@yahoo.com', 2017-08-31T00:03:32.890Z ],
  [ 'Katelynn_Stiedemann47@gmail.com', 2017-08-19T19:20:33.923Z ],
  [ 'Dariana_Jaskolski30@gmail.com', 2018-02-22T00:53:25.649Z ],
  [ 'Olin97@hotmail.com', 2017-10-17T19:48:23.063Z ],
  [ 'Dominique22@hotmail.com', 2018-03-12T05:53:07.311Z ]
```

```
| Caitlyn_Grimes@yahoo.com
| Destini63@gmail.com
| dusty@gmail.com
| Eve_Dickens@gmail.com
| Jamal7@yahoo.com
| Jenny467@gmail.com
| katie34@yahoo.com
| muhit@gmail.com
| polokash@gmail.com
| tunda@gmail.com
+------------------------
10 rows in set (0.00 sec)

mysql> select * from users
+------------------------
| email
+------------------------
| Abbey.Cole@yahoo.com
| Abel.Bahringer26@gmail.c
| Ada.Ledner34@yahoo.com
| Adan43@hotmail.com
| Adeline_Bayer77@hotmail.
| Adelle_Roob91@yahoo.com
| Adolf_Lueilwitz91@yahoo.
| Adrian26@yahoo.com
| Adrianna62@gmail.com
| Adriel_Runolfsson@gmail.
| Afton.Emard92@gmail.com
| Aileen_Wehner38@hotmail.
| Aimee_Thompson@gmail.com
```

```javascript
var mysql = require('mysql');
var faker = require('faker');

var con = mysql.createConnection({
    host: 'localhost',
    user: 'root',
    password: '',
    database: 'mydb'
});

var sql = "INSERT INTO users (email, created_at) VALUES ?";
    var data = [];
    for (var i = 0; i < 50; i++){
        data.push ([
            faker.internet.email(),
            faker.date.past()
        ]);
    }

    con.query(sql, [data], function (err, result) {
        if (err) throw err;
        console.log("Number of records inserted: " + result.affectedRo
    });

    //console.log(data);
```

```
Node.js command prompt - node app10.js

[ 'Tad35@hotmail.com', 2017-09-26T17:35:09.748Z ],
[ 'Magali_Weimann@gmail.com', 2017-12-24T06:43:15.910Z ],
[ 'Mitchell_Gaylord@yahoo.com', 2017-08-21T01:00:38.949Z ],
[ 'Casper37@yahoo.com', 2017-11-03T00:56:34.490Z ],
[ 'Pinkie_Kessler@yahoo.com', 2017-07-06T00:59:30.382Z ],
[ 'Andrew12@hotmail.com', 2017-10-20T19:10:37.446Z ],
[ 'Tabitha.Conn20@gmail.com', 2017-10-02T18:33:42.736Z ],
[ 'Joelle.Bernier@yahoo.com', 2017-11-19T23:22:04.031Z ],
[ 'Elise97@hotmail.com', 2018-02-19T20:58:32.365Z ],
[ 'Glenna_Towne@hotmail.com', 2017-06-26T20:32:24.529Z ],
[ 'Christ61@hotmail.com', 2017-10-22T22:30:37.516Z ],
[ 'Emil.Yundt@yahoo.com', 2017-11-13T14:57:03.076Z ],
[ 'Katlynn_Mertz81@yahoo.com', 2017-06-25T15:53:51.622Z ],
[ 'Cathy44@hotmail.com', 2018-01-09T09:13:34.100Z ],
[ 'Felicita_Morissette40@yahoo.com', 2017-05-02T06:56:07.334
[ 'Makenzie.Zieme84@yahoo.com', 2018-02-27T07:48:10.030Z ],
[ 'Kristoffer86@hotmail.com', 2017-08-15T13:01:58.713Z ],
  ... 400 more items ]
Number of records inserted: 500
^C
C:\Users\Muhit>node app10.js
Number of records inserted: 500
^C
C:\Users\Muhit>node app10.js
Number of records inserted: 50
```

```
c:\wamp\bin\mysql\mysql5.5.24\

510 rows in set (0.00 sec)

mysql> select * from users
Empty set (0.00 sec)

mysql> desc users;
+-----------+-------------
| Field     | Type
+-----------+-------------
| email     | varchar(255
| created_at | timestamp
+-----------+-------------
2 rows in set (0.01 sec)

mysql> select * from users
+------------------------
| email
+------------------------
| Alf.Smitham@hotmail.com
| Alva79@yahoo.com
| Annabelle_Waters@gmail.c
| Braden.Carroll65@gmail.c
| Braeden65@yahoo.com
| Brittany_Conroy77@hotmai
| Brittany_Schmidt77@yahoo
| Brycen95@yahoo.com
| Carley.Grimes@hotmail.co
| Christian_Lindgren@yahoo
| Dalton.Ondricka92@yahoo.
| Danial_Von65@gmail.com
```

Exercise

Find Earliest Date A User Joined

```
+-------------------+
| earliest_date     |
+-------------------+
| May 2nd 2016      |
+-------------------+
```

```
1  SELECT
2      DATE_FORMAT(MIN(created_at), "%M %D %Y") as earliest_date
3  FROM users;
```

Find Email Of The First (Earliest)User

```
+--------------------------------------+------------------------
| email                                | created_at
+--------------------------------------+------------------------
| Friedrich_Kulas@hotmail.com          | 2016-05-02 20:28:18
+--------------------------------------+------------------------
```

HINT: SUBQUERY

```
5
6  -- Challenge 2
7  SELECT *
8  FROM users WHERE created_at = (SELECT MIN(created_at) FROM users);
9
10
```

Users According To The Month They Joined

month	count
November	51
January	49
May	48
December	47
July	46
June	43
April	41
October	41
September	40
March	40
August	40
February	32

```
 9
10 SELECT
11     MONTHNAME(created_at) as month,
12     COUNT(*) as count
13 FROM users GROUP BY month
14 ORDER BY count DESC;
```
(112 Bytes)

Count Number of Users With Yahoo Emails

yahoo_users
166

```
18
19 SELECT COUNT(*) as yahoo_users FROM users
20 WHERE email LIKE '%@yahoo.com';
21
```

Calculate Total Number of Users for Each Email Host

```
+-----------------+----------------------+
|    provider     |     total_users      |
+-----------------+----------------------+
|    gmail        |                  190 |
|    yahoo        |                  166 |
|    hotmail      |                  159 |
|    other        |                    3 |
+-----------------+----------------------+
```

```
23 SELECT
24      CASE
25          WHEN email LIKE '%@gmail.com' THEN 'gmail'
26          WHEN email LIKE '%@yahoo.com' THEN 'yahoo'
27          WHEN email LIKE '%@hotmail.com' THEN 'hotmail'
28          ELSE 'other'
29      END AS provider,
30      COUNT(*) AS total_users
31 FROM users
32 GROUP BY provider
33 ORDER BY total_users DESC;
```