

# Node.js Practical Lab Assignment

1. Write a nodeJS program that execute a connection to server and return success message like "Success, i'm listening from port: 3000"

Hint: You need npm module - http

Reference: <https://www.guru99.com/node-js-create-server-get-data.html>

Ans:-

```
var http = require('http');

var server = http.createServer(function(req, res) {
  console.log('request was made: ' + req.url);
  res.writeHead(200, {'Content-Type': 'text/plain'});
  res.end('Hey Products');
});

server.listen(3000, '127.0.0.1');
console.log("Success, i'm listening from port: 3000");
```

> node "c:\Users\ASUS\Desktop\npm\Apps\Server.js"

Success, i'm listening from port: 3000

## **2. Show Content**

Write a node program that read a file (passed as parameter) in local machine and shows in the console the content of it.

node app.js test.txt

Hint: You need npm module – fs

Ans:-

```
var http = require('http');
var fs = require('fs')

var myReadStream = fs.createReadStream(__dirname + '/test.txt', 'utf8');

myReadStream.on('data', function(chunk) {
  console.log('new chunk received:');
  console.log(chunk);
});
```

> node "c:\Users\ASUS\Desktop\npm\Apps\Contents.js"

new chunk received:

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### 3. File List

Write a node.JS program that list the content of the current directory indicating if is a directory or a file

For eg:

> node ex4.js

FILE:ex1.js

FILE:ex2.js

FILE:ex3.js

FILE:ex4.js

FILE:getLinksNode.js

FILE:link.txt

DIR :node\_modules

FILE:recursiveContentsDir.js

FILE:results.txt

FILE:test.txt

Ans:-

```
const directory = '../npm/';
const path = require('path');
const fs = require('fs');

fs.readdirSync(directory).forEach(file => {
  if (fs.lstatSync(path.resolve(directory, file)).isDirectory()) {
    console.log('Directory: ' + file);
  } else {
    console.log('File: ' + file);
  }
});
```

> node "c:\Users\ASUS\Desktop\npm\Apps\File List.js"

Directory: .vscode

Directory: Apps

Directory: node\_modules

File: package-lock.json

File: package.json

File: writeME.txt

4. Write a node.JS program that creates a txt file with the text passed as a parameter.

> node ex5.js "hey ho! let's go"

The file was saved!

When you open the file the text should be displayed hey ho! Let's go

Ans:-

```
const fs = require('fs');

fs.writeFile('writeME.txt', "hey ho! lets go", function(err){
  if(err) {
    console.log(err);
  }
  console.log('The file was saved!');
});
```

```
> node "c:\Users\ASUS\Desktop\npm\Apps\Text Parm.js"
```

The file was saved!

## 5. Compare Values

Write a node.JS program that search information in .txt file and returns you how much coincidences find. If you search about "John", and in your txt files are 2 John, should return 2

Hint: You can try save all data in one array and compare with search.

Ans:-

```
const fs = require("fs");

var file = fs.readFileSync("readME.txt", "utf8");
var arr = file.split('\n');

var count = 0;

for (var i = 0; i < arr.length; i++) {
  if (arr[i].includes("John")) {
    count += 1;
  }
}

console.log(count);
```

Hello, This is John Travolta.

I am here to get you rich.

My name is John mumbasa.

```
> node "c:\Users\ASUS\Desktop\npm\Apps\tempCodeRunnerFile.js"
```

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## 6. Calculator

### Calculator Node.

Create a app.js that require another file called calculator.js When we call node app.js we should show in the console the following: The sum of 3 & 7 is: 10 The multiplication of 3 & 7 is: 21 app.js should only show in the console the result of calling the functions sum & multiplication These methods should be defined (and exported) in calculator.js

### Phase 2

Create a folder called operations and create in every folder a file exporting every operation needed in the main app.js file app.js operations/sum.js multiplication.js subtraction.js division.js

### Phase 3

Install the module moment and use it to show the current time in this way. Today is: Monday, October 31st 2016, 10:08:34 am The sum of 3 & 7 is: 10 The multiplication of 3 & 7 is: 21

Ans:-

```
const addition = require('./Operations/sum.js');
const subtraction = require('./Operations/subtraction.js');
const multiplication = require('./Operations/multiplication.js');
const division = require('./Operations/division.js');
const calculator = require('./calculator')
```

```
const moment = require('moment')

console.log(`Today is: ${moment().format('LLLL')}`);

let a = 3, b = 7;

console.log(`The sum of ${a} & ${b} is: ${calculator.sum(a, b)}`);
console.log(`The multiplication of ${a} & ${b} is: ${calculator.mul(a, b)}`);

a = 10, b = 5;
console.log(`The addition of ${a} and ${b} is: ${addition.add(a, b)}`);
console.log(`The subtraction of ${a} and ${b} is: ${subtraction.sub(a, b)}`);
console.log(`The multiplication of ${a} and ${b} is: ${multiplication.mul(a, b)}`);
console.log(`The division of ${a} and ${b} is: ${division.div(a, b)}`);
```

> node "c:\Users\ASUS\Desktop\npm\Apps\app.js"

Today is: Wednesday, June 9, 2021 9:41 PM

The sum of 3 & 7 is: 10

The multiplication of 3 & 7 is: 21

The addition of 10 and 5 is: 15

The subtraction of 10 and 5 is: 5

The multiplication of 10 and 5 is: 50

The division of 10 and 5 is: 2

## 7. Show hour

Write a node.JS program that shows you the local hour of server.

Hint: You need npm module -> strftime

Ans:-

```
var moment = require('moment-strftime')

console.log(moment().format('HH:mm'));

> node "c:\Users\ASUS\Desktop\npm\Apps\Show Hour.js"
11:10
```

## 8. sum of integers

Write a node.JS program that sum all integers saved in other txt file.

Ans:-

```
const fs = require('fs')

var arr = [];

var file = fs.readFileSync("numbers.txt", "utf8");
var arr = file.split(' ');

arr = arr.map(x => parseInt(x));

console.log(`Numbers: ${arr}`);
console.log(arr.reduce((a, b) => a + b));
```

Numbers: 0,1,1,2,3,5,8,13,21,34,56,67,89,NaN

## 9. Processing values

Write a node program that process local txt and return values as a Array.

Hint: You need npm module-> concat-stream

Ans:-

```
var fs = require('fs')
var concat = require('concat-stream')

console.log('Reading the file test.txt...');
fs.readFile('Concat.txt', 'utf8', function(err, data) {
  if (err) throw err;
  console.log('Returning the values of the file as an Array:');
  var data = data.split(' ');
  console.log(data);
});
```

> node "c:\Users\ASUS\Desktop\npm\Apps\Processing values.js"

Reading the file test.txt...

Returning the values of the file as an Array:

```
[
  'Hey',    'I',
  'am',     'Bhushan',
  'Bire\r\n Do', 'you',
  'have',   'any',
  'Idea',   'that',
  'i',      'working',
  'on',     'a',
  'serious', 'Project.'
]
```

## 10. Writing on txt

Write a node.JS program that creates a txt file with the text passed as a parameter

\$ node ex5.js "hey ho! let's go"

The file was saved!

\$ cat myText.txt hey ho! let's go

Hint: You need fs.writeFile

Extra:

Improve the previous exercise to user the first parameter as the name of the destination file

More Extra:

Improve the previous exercise to also read and shows in the console the content of the file

\$ node ex5.js mySuperText.txt "it's a long way

The file was saved!

it's a long way to the top...

S cat mySuperText.txt

it's a long way to the top...

Ans:-

```

var fs = require ('fs');

fs.writeFile('WritingOn.txt', "hey ho! let's go", function(err) {
  if (err) throw err;
  console.log('The file has been saved!');
});

fs.appendFile('WritingOn.txt', "\nit's a long way to the top...", function(err) {
  if (err) throw err;
  console.log('The file has been updated!');
});

fs.readFile('WritingOn.txt', 'utf8', function(err, data) {
  if (err) throw err;
  console.log(data);
});

```

node "c:\Users\ASUS\Desktop\npm\Apps\Writing on text.js"

The file has been saved!

The file has been updated!

hey ho! let's go

it's a long way to the top...

11. Make a file containing some content. Write a program which can read the file from the current directory and output it to console.

Ans:-

```

var fs = require('fs');

console.log('Reading the file from Current Directory...');
fs.readFile('test.txt', 'utf8', function(err, data) {
  if (err) throw err;
  console.log(data);
});

```

> node "c:\Users\ASUS\Desktop\npm\Apps\CurrentDir.js"

Reading the file from Current Directory...

Hey I am Bhushan, Solving Node JS Assignemnts !!!

12. Write a program in Node.js to display current date and time. to the top..."

Ans:-

```

let date_ob = new Date();
console.log(date_ob);

```

> node "c:\Users\ASUS\Desktop\npm\Apps\Current Date&Time.js"

2021-06-09T11:27:05.078Z

13. Write a program that takes a name as a command line argument, and says hello to that name.

Output: node hello2.js Jerry Hello, Jerry!

\$node hello2.js Arnav Hello, Arnav!

Reference: <https://nodejs.org/docs/latest/api/process.html#process-process-argv>

Ans:-

```
const readline = require('readline').createInterface({
  input: process.stdin,
  output: process.stdout
})

readline.question(`What's your name? `, name => {
  console.log(`${name} Hello, ${name}!\n`)
  readline.close()
})
```

> node "c:\Users\ASUS\Desktop\npm\Apps\CommandLine.js"

What's your name? Bhushan

Bhushan Hello, Bhushan!