



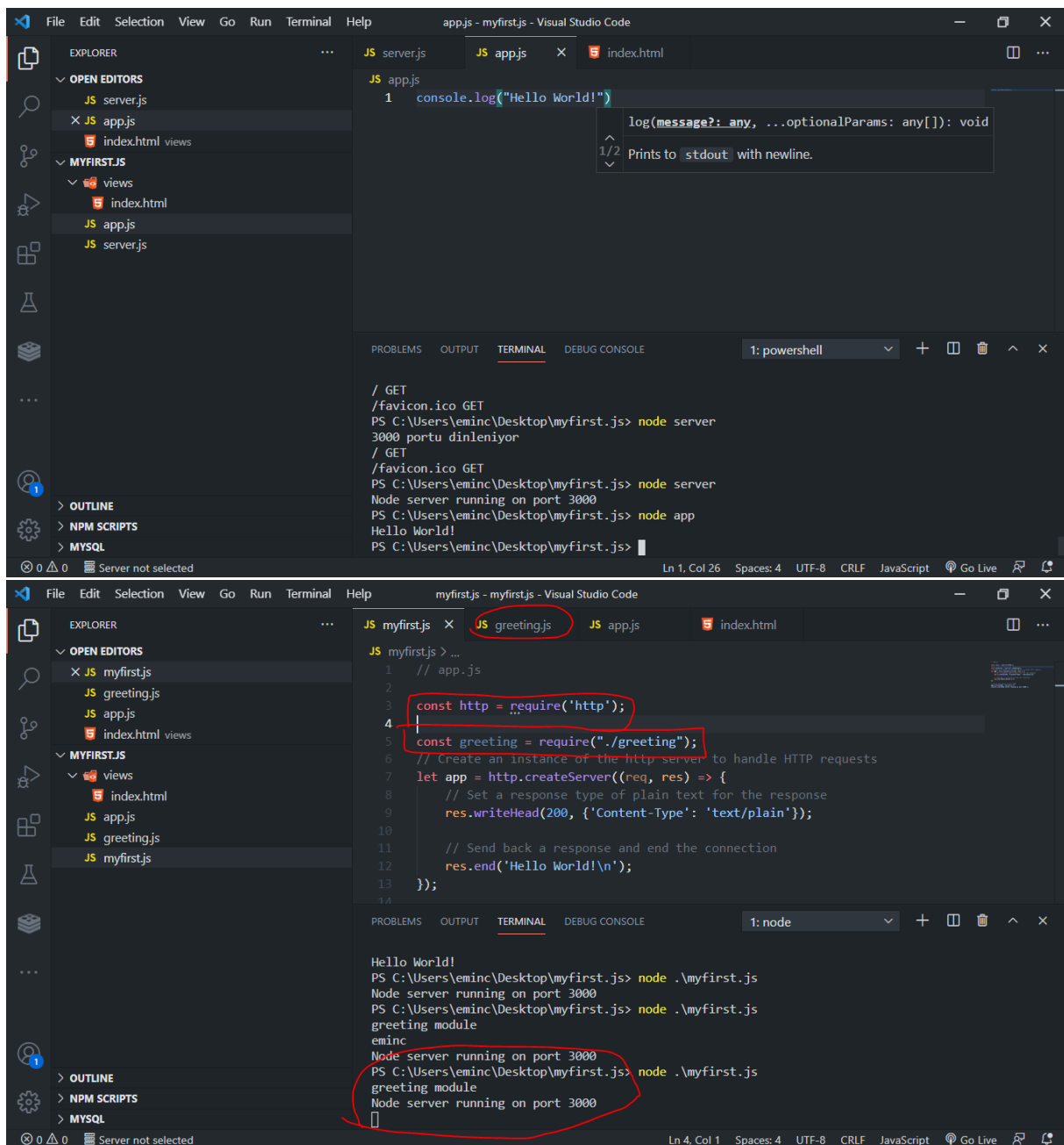
**NATIONAL TECHNICAL UNIVERSITY OF UKRAINE "IGOR SIKORSKY KYIV
POLYTECHNIC INSTITUTE"**

**Faculty of Informatics and Computer Engineering Department of Computer
Engineering**

**“Laboratory work 4”
“Node.js. Installation of modules. Node.js as a File Server”**

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groups of IP-98
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Kyiv 2021



myfirst.js - myfirst.js - Visual Studio Code

EXPLORER

- OPEN EDITORS
 - JS myfirst.js
 - JS greeting.js
 - JS app.js
 - index.html views
- MYFIRST.JS
 - views
 - index.html
 - app.js
 - greeting.js
 - myfirst.js

JS myfirst.js > ...

```
1 const os = require("os");
2 const greeting = require("./greeting");
3
4 let userName = os.userInfo().username;
5
6
7 console.log(`Request Date; ${greeting.date}`);
8 console.log(greeting.getMessage(userName));
```

PROBLEMS OUTPUT TERMINAL DEBUG CONSOLE 1: powershell

```
PS C:\Users\eminc\Desktop\myfirst.js> node .\myfirst.js
greeting module
eminc
Node server running on port 3000
PS C:\Users\eminc\Desktop\myfirst.js> node .\myfirst.js
greeting module
Node server running on port 3000
PS C:\Users\eminc\Desktop\myfirst.js> node .\myfirst.js
Request Date; Tue Feb 16 2021 18:44:40 GMT+0300 (GMT+03:00)
Good Evening, eminc
PS C:\Users\eminc\Desktop\myfirst.js>
```

Ln 8, Col 44 Spaces: 4 UTF-8 CRLF JavaScript Go Live

myfirst.js - myfirst.js - Visual Studio Code

EXPLORER

- OPEN EDITORS
 - JS greeting.js
 - JS myfirst.js
 - JS user.js
- MYFIRST.JS
 - app.js
 - greeting.js
 - myfirst.js
 - user.js

JS myfirst.js > ...

```
4 let userName = os.userInfo().username;
5
6
7 console.log(`Request Date; ${greeting.date}`);
8 console.log(greeting.getMessage(userName));
9
10 const User = require("./user.js");
11 let student = new User("Cem", "KPI");
12 student.sayHi();
```

PROBLEMS OUTPUT TERMINAL ... 1: powershell

```
72:12)
at internal/main/run_main_module.js:17:47
PS C:\Users\eminc\Desktop\myfirst.js> node .\myfirst.js
Request Date; Tue Feb 16 2021 18:56:18 GMT+0300 (GMT+03:00)
Good Evening, eminc
Hello, my name is Cem. I work at KPI
PS C:\Users\eminc\Desktop\myfirst.js>
```

Ln 10, Col 8 Spaces: 4 UTF-8 CRLF JavaScript Go Live

```
File Edit Selection View Go Run Terminal Help
greeting.js - myfirst.js - Visual Studio Code

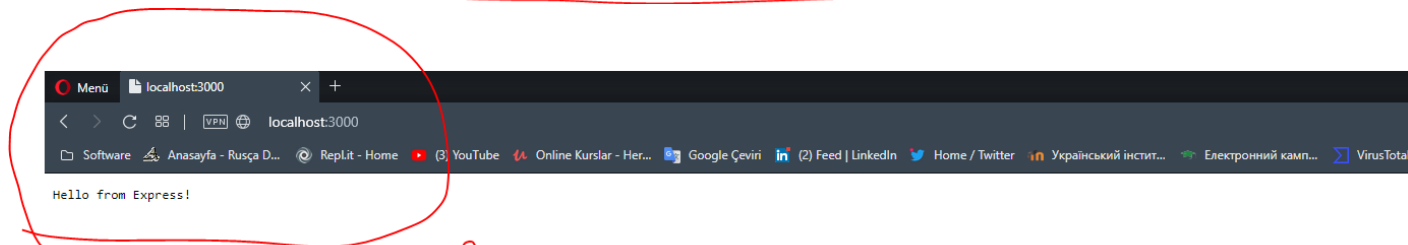
EXPLORER
OPEN EDITORS
X JS greeting.js
JS myfirst.js
X JS appparam.js
JS user.js
MYFIRSTJS
views
index.html
JS app.js
JS appparam.js
JS greeting.js
JS myfirst.js
JS user.js

OUTLINE
NPM SCRIPTS
MYSQL

Server not selected

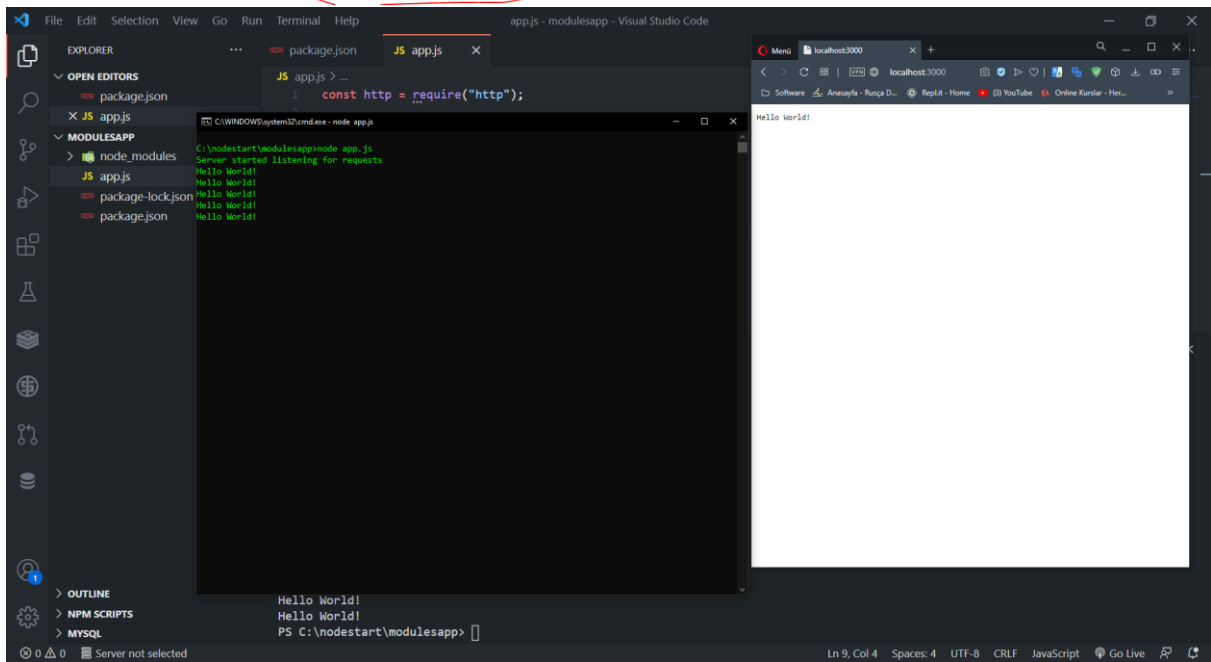
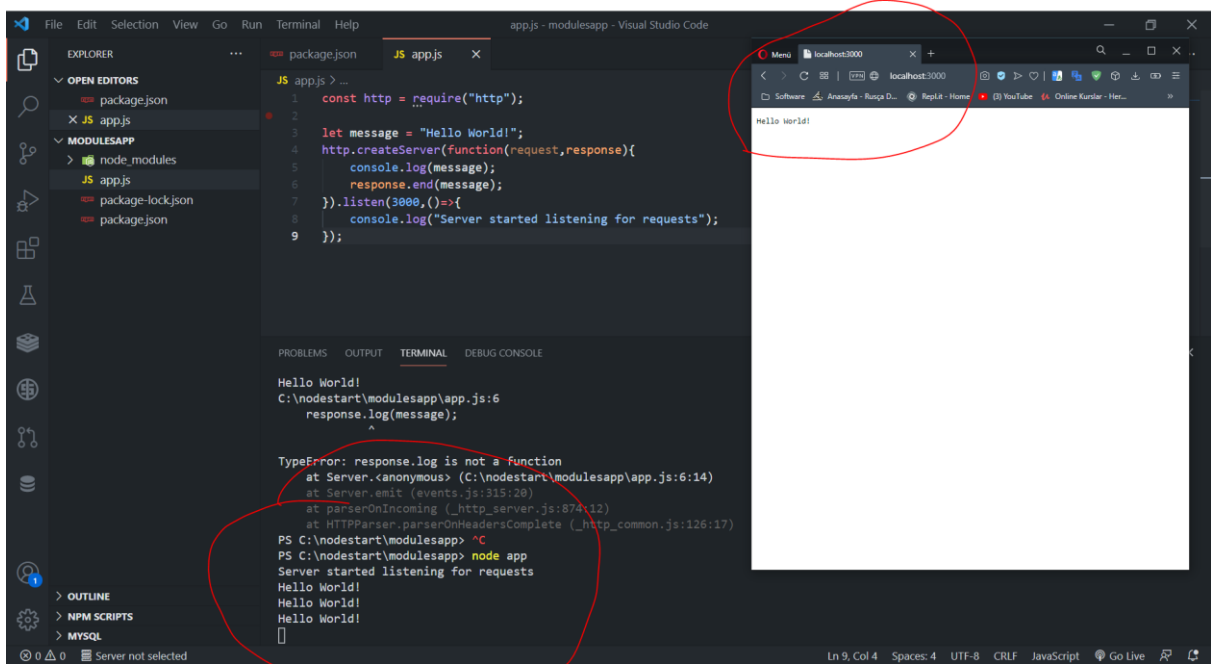
JS greeting.js X JS myfirst.js JS appparam.js JS user.js
greeting.js > getMessage > getMessage
4
5 module.exports.date = currentDate;
6
7 module.exports.getMessage = function(name){
8     let hour = currentDate.getHours();
9     if(hour>16)
10         return "Good Evening, " + global.name;
11     else if(hour > 10)
12         return "Good afternoon, " + name;
13     else
14         return "good morning, " + name;
15 }

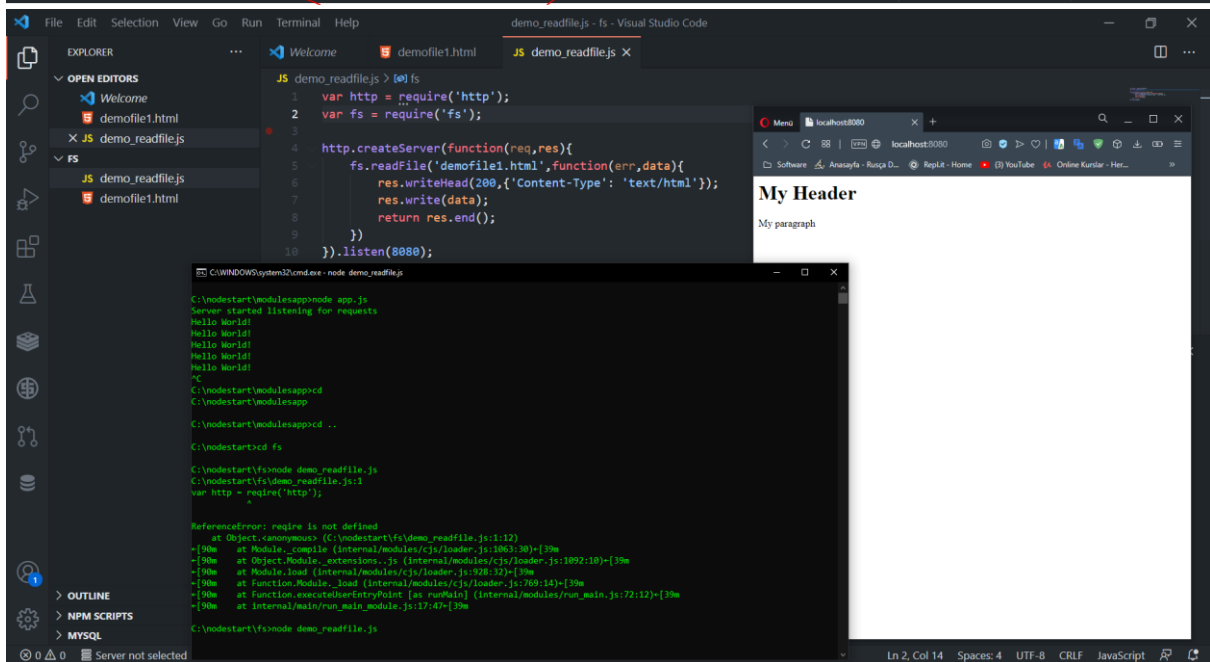
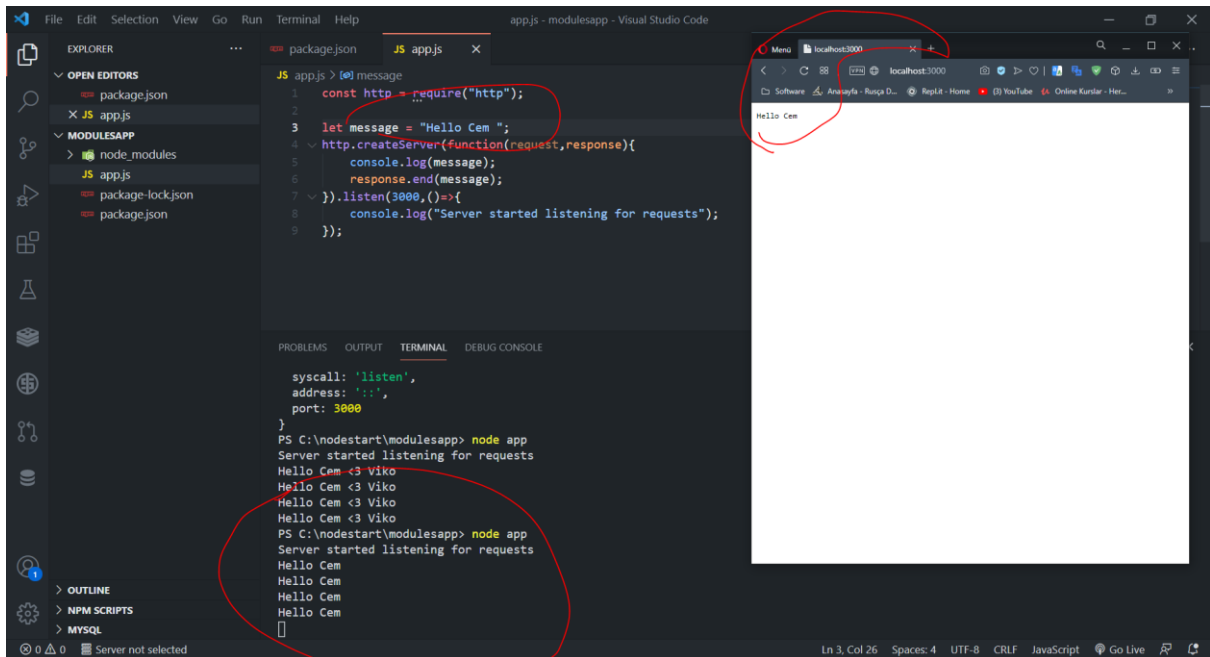
PROBLEMS OUTPUT TERMINAL ... 1: powershell
PS C:\Users\eminc\Desktop\myfirst.js> node .\myfirst.js
2021-02-16T16:13:23.899Z
Good Evening, Cem
Request Date; Tue Feb 16 2021 19:13:23 GMT+0300 (GMT+03:00)
Good Evening, Cem
Hello, my name is Cem. I work at KPI
PS C:\Users\eminc\Desktop\myfirst.js>
```



C.K







The screenshot shows the Visual Studio Code interface with the Explorer, Search, and Run and Debug views on the left. The Explorer view shows a project named 'myfirst.js' with files 'greeting.js', 'myfirst.js', 'appparam.js', and 'user.js'. The Search view shows 'views' and 'index.html'. The Run and Debug view shows 'app.js', 'appparam.js', 'greeting.js', 'myfirst.js', and 'user.js'. The main editor displays the code for 'appparam.js' in 'JS' mode. The code is as follows:

```
1 let nodePath = process.argv[0];
2 let appPath = process.argv[1];
3 let name = process.argv[2];
4 let age = process.argv[3];
5
6 console.log("nodePath: " + nodePath);
7 console.log("appPath: " + appPath);
8 console.log();
9 console.log("name: " + name);
10 console.log("age: " + age);
```

The terminal output shows the command 'node appparam Tom 23' being executed, resulting in the following output:

```
nodePath: C:\Program Files\nodejs\node.exe
appPath: C:\Users\eminc\Desktop\myfirst.js\appparam

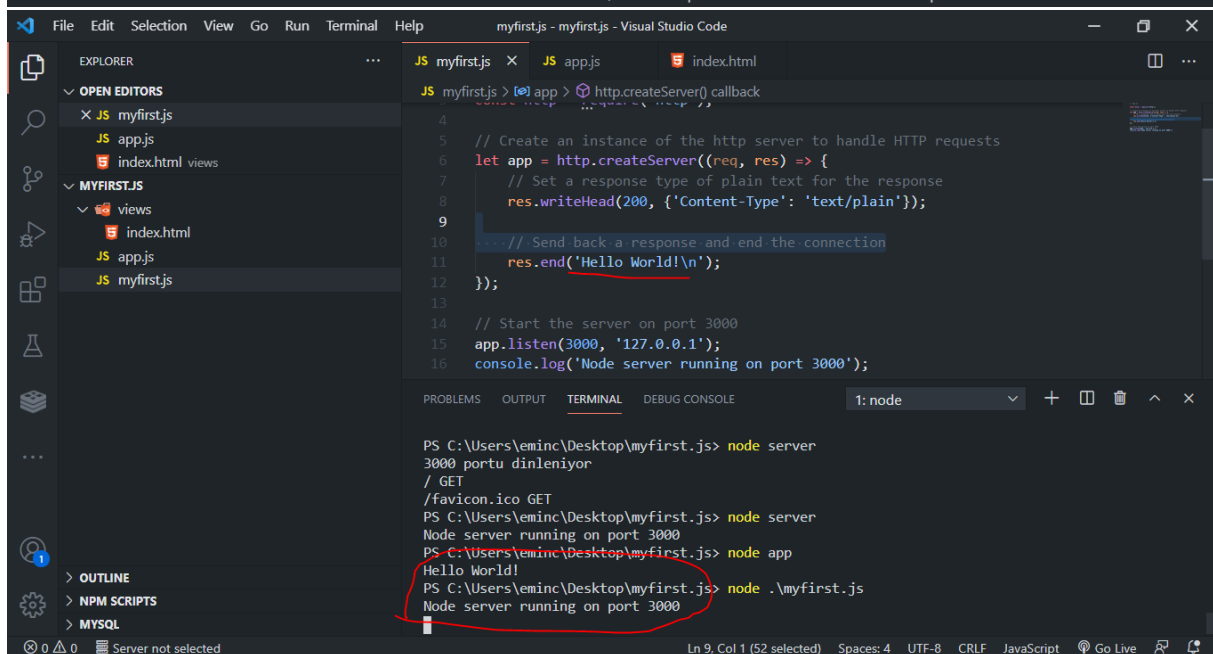
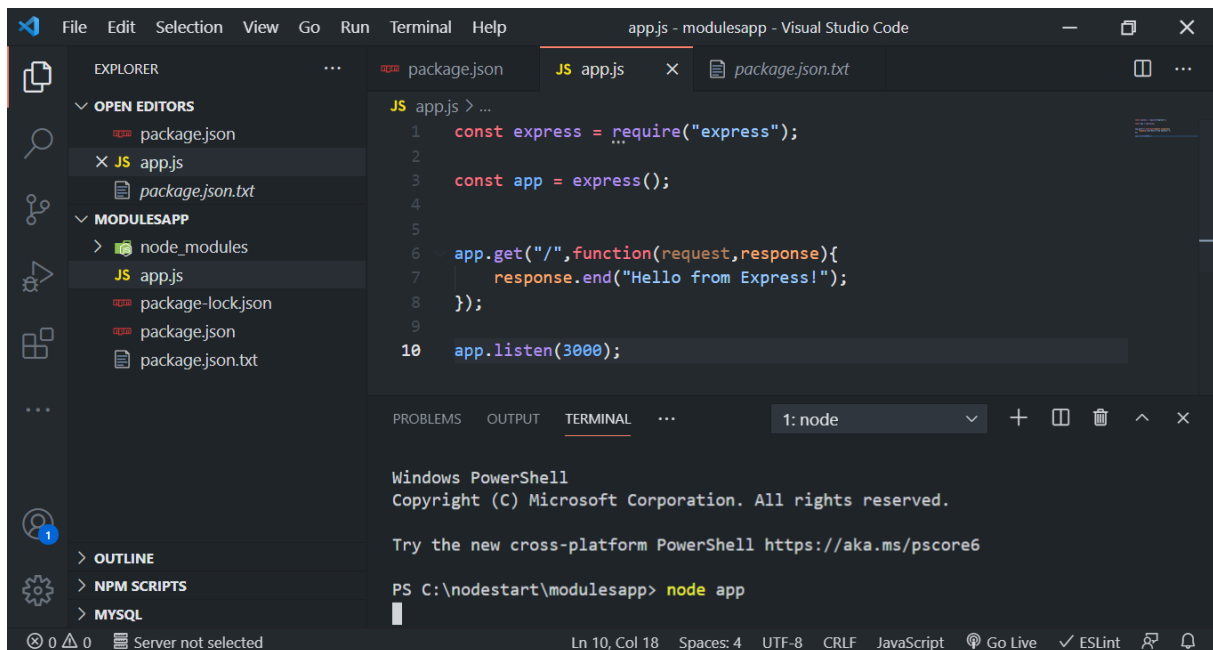
name: Tom
age: 23
PS C:\Users\eminc\Desktop\myfirst.js>
```

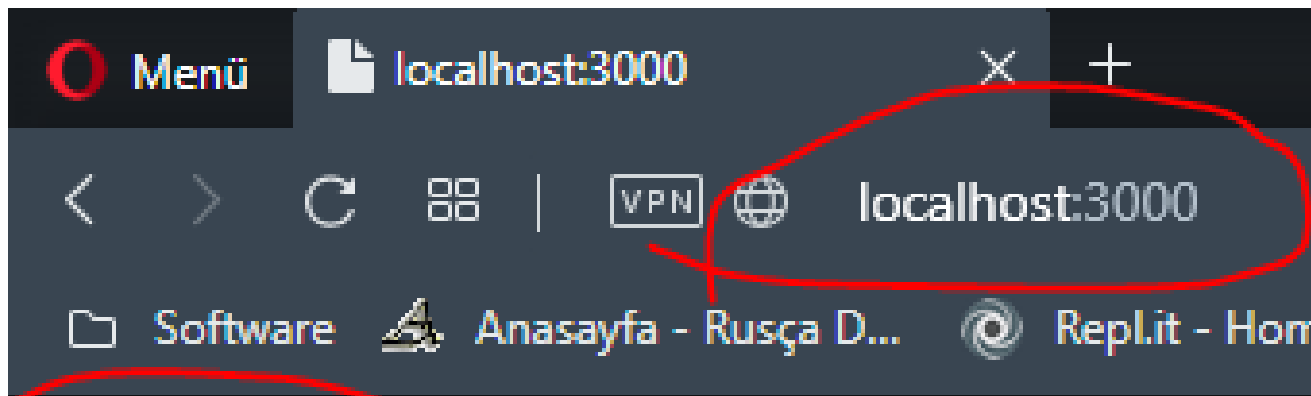
The screenshot shows a Windows command prompt window with the following commands and output:

```
C:\Users\eminc>npm install npm@latest -g
C:\Users\eminc\AppData\Roaming\npm\npx -> C:\Users\eminc\AppData\Roaming\npm\node_modules\npm\bin\npx-cli.js
C:\Users\eminc\AppData\Roaming\npm\npm -> C:\Users\eminc\AppData\Roaming\npm\node_modules\npm\bin\npm-cli.js
+ npm@7.5.4
added 253 packages from 889 contributors in 12.943s

C:\Users\eminc>npm -v
7.5.4

C:\Users\eminc>
```





Hello World!

==ANSWERS==

What is Node.js?

Node.js is an open-source, cross-platform, back-end JavaScript runtime environment that runs on the Chrome V8 engine and executes JavaScript code outside a web browser

What is the difference between Node.js request processing and PHP or ASP?

PHP has long been readily straightforward to install and use on the server-side, and is powered by the Zend engine. **Node.js** is a runtime environment for JavaScript on the server side, powered by Google's V8 JavaScript engine.

What is REPL?

A read-eval-print loop, also termed an interactive toplevel or language shell, is a simple interactive computer programming environment that takes single user inputs, executes them, and returns the result to the user; a program written in a REPL environment is executed piecewise

What is the module for Node.js?

Module in **Node.js** is a simple or complex functionality organized in single or multiple **JavaScript** files which can be reused throughout the **Node.js** application.

What is NPM?

npm is a package manager for the JavaScript programming language. npm, Inc. is a subsidiary of GitHub, that provides hosting for software development and version control with the usage of Git. npm is the default package manager for the JavaScript runtime environment Node.js.

What is Express?

Express.js, or simply Express, is a back end web application framework for Node.js, released as free and open-source software under the MIT License. It is designed for building web applications and APIs. It has been called the de facto standard server framework for Node.js.

What is package.json file used for?

All npm packages contain a **file**, usually in the project root, called **package.json** - this **file** holds various metadata relevant to the project. This **file** is **used** to give information to npm that allows it to identify the project as well as handle the project's dependencies

What is Nodemon used for?

nodemon is a tool that helps develop node. js based applications by automatically restarting the node application when file changes in the directory are detected. **nodemon** does not require any additional changes to your code or method of development.

What is a localhost and what is it used for?

In computer networking, **localhost** is a hostname that refers to the current computer **used to** access it. It is **used to** access the network services that are running on the host via the loopback network interface. Using the loopback interface bypasses any local network interface hardware.

What Node.js modules for the file system do you know?

Module in **Node. js** is a simple or complex functionality organized in single or multiple JavaScript files which can be reused throughout the **Node. ... js** implements CommonJS **modules** standard. CommonJS is a group of volunteers who define JavaScript standards for web server, desktop, and console application.

How to read a file from the server and display the contents to the user?

1. Rename missingmen. txt to missingmen. **html** .
2. Add a single line to the top of missingmen.**html** : <link href="txtstyle.css" rel="stylesheet" type="**text/css**" />
3. Create a **file** called txtstyle.css , and add to it a line like this: **html**, body {font-family:Helvetica, Arial, sans-serif}

What module is used to upload files to the server by the user?

The commonly way to **upload** data to **the server** is using FTP client. FTP (**File** Transfer Protocol) is used to transfer data from one computer (your personal computer) to another computer (webserver). FTP client looks like **File** Manager and you can copy (**upload**, download) **files** here from one computer to another computer.