

## CS571 Node.js programming: student info

Name: Hartina Vonyee Cleon

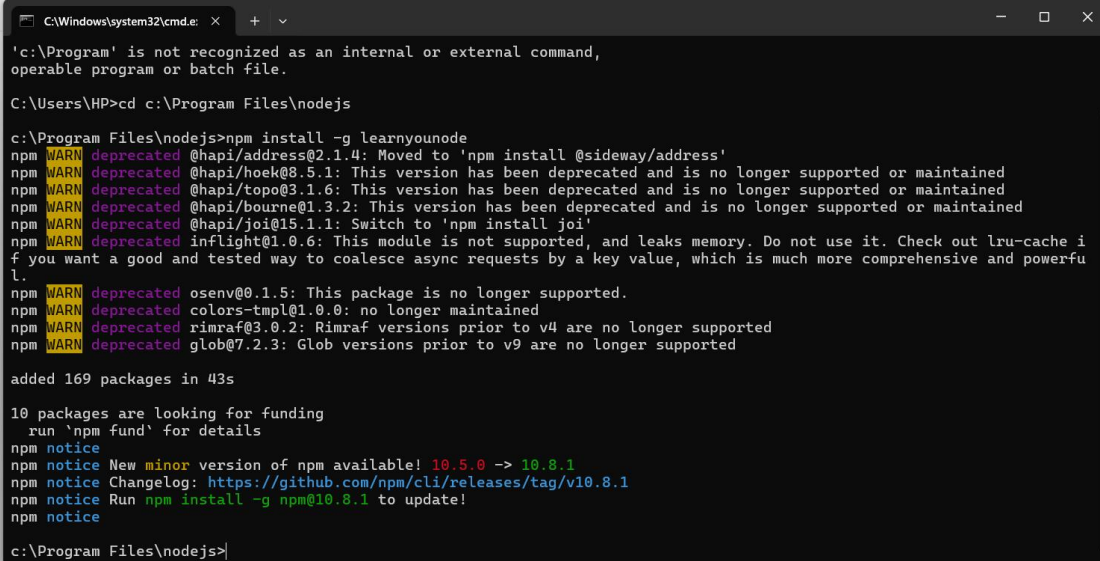
ID: 20145

### PART1

## Exercises for Learnyounode

### 1. Install learnyounode

`npm install -g learnyounode`



```
C:\Windows\system32\cmd.exe
'c:\Program' is not recognized as an internal or external command,
operable program or batch file.

C:\Users\HP>cd c:\Program Files\nodejs

c:\Program Files\nodejs>npm install -g learnyounode
npm WARN deprecated @hapi/address@2.1.4: Moved to 'npm install @sideway/address'
npm WARN deprecated @hapi/hoek@8.5.1: This version has been deprecated and is no longer supported or maintained
npm WARN deprecated @hapi/topo@3.1.6: This version has been deprecated and is no longer supported or maintained
npm WARN deprecated @hapi/bourne@1.3.2: This version has been deprecated and is no longer supported or maintained
npm WARN deprecated @hapi/joi@15.1.1: Switch to 'npm install joi'
npm WARN deprecated inflight@1.0.6: This module is not supported, and leaks memory. Do not use it. Check out lru-cache if
you want a good and tested way to coalesce async requests by a key value, which is much more comprehensive and powerfu
l.
npm WARN deprecated osenv@0.1.5: This package is no longer supported.
npm WARN deprecated colors-tmpl@1.0.0: no longer maintained
npm WARN deprecated rimraf@3.0.2: Rimraf versions prior to v4 are no longer supported
npm WARN deprecated glob@7.2.3: Glob versions prior to v9 are no longer supported

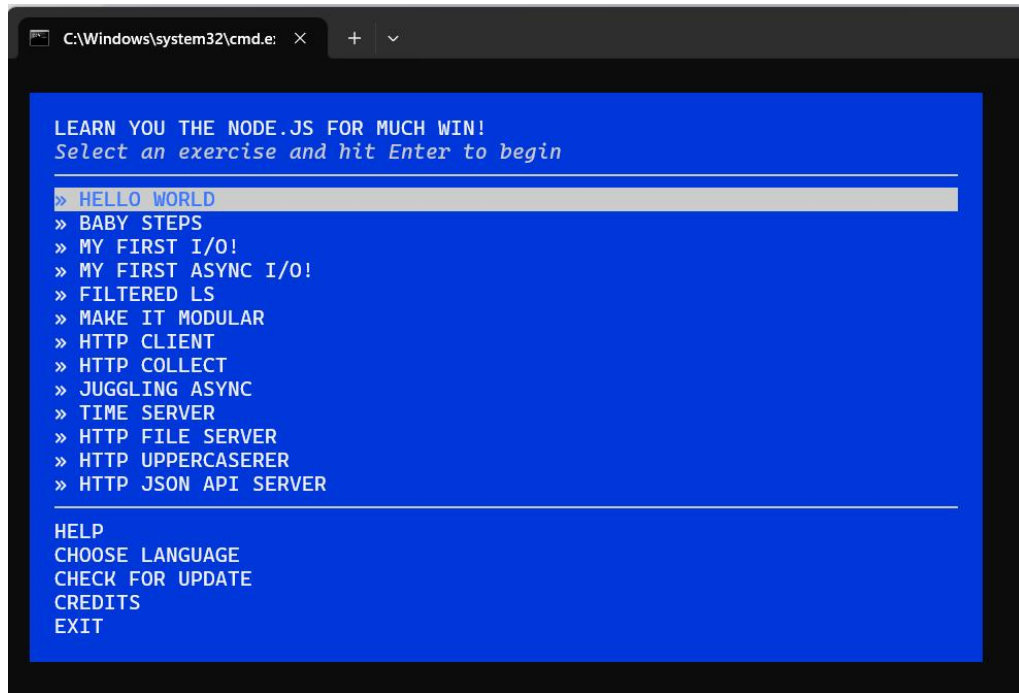
added 169 packages in 43s

10 packages are looking for funding
  run 'npm fund' for details

npm notice
npm notice New minor version of npm available! 10.5.0 -> 10.8.1
npm notice Changelog: https://github.com/npm/cli/releases/tag/v10.8.1
npm notice Run npm install -g npm@10.8.1 to update!
npm notice

c:\Program Files\nodejs>
```

### 2. Start up learnyounode in your terminal by running the command `learnyounode`



```
C:\Windows\system32\cmd.e: x + v

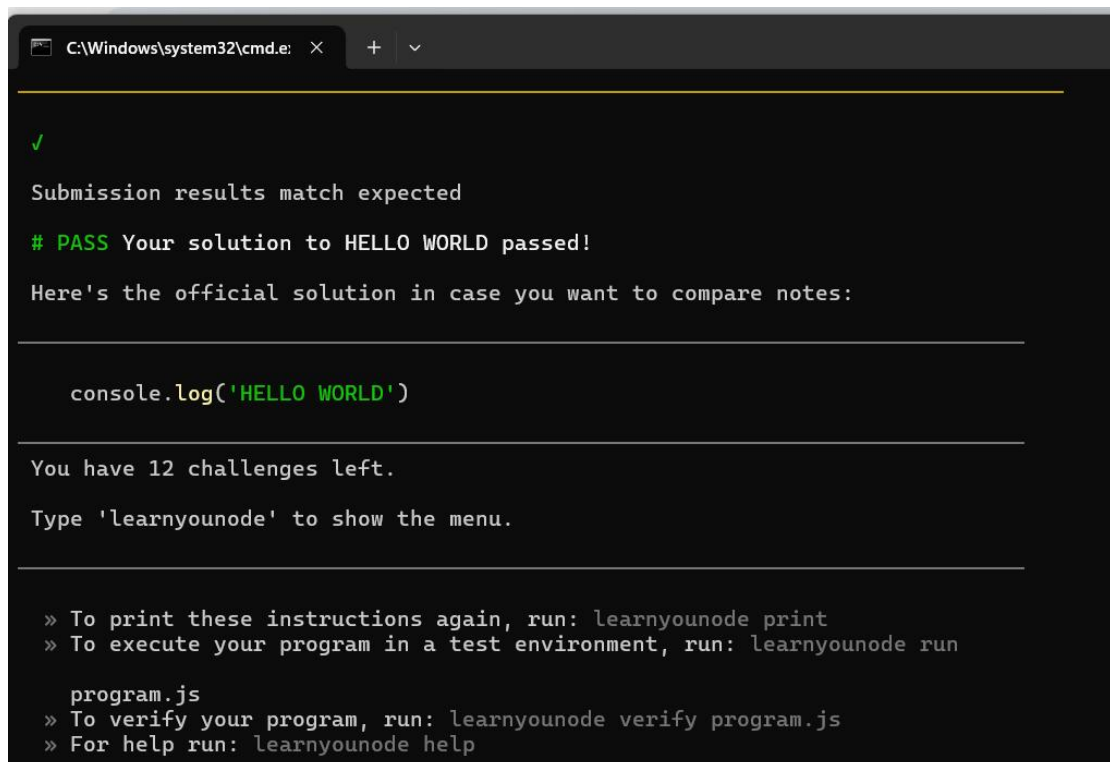
LEARN YOU THE NODE.JS FOR MUCH WIN!
Select an exercise and hit Enter to begin

» HELLO WORLD
» BABY STEPS
» MY FIRST I/O!
» MY FIRST ASYNC I/O!
» FILTERED LS
» MAKE IT MODULAR
» HTTP CLIENT
» HTTP COLLECT
» JUGGLING ASYNC
» TIME SERVER
» HTTP FILE SERVER
» HTTP UPPERCASERER
» HTTP JSON API SERVER

HELP
CHOOSE LANGUAGE
CHECK FOR UPDATE
CREDITS
EXIT
```

### 3. Start a learnyounode exercise

Create your solution for the exercise by creating a new script file named "program.js"



```
C:\Windows\system32\cmd.e: x + v

✓

Submission results match expected

# PASS Your solution to HELLO WORLD passed!

Here's the official solution in case you want to compare notes:

console.log('HELLO WORLD')

You have 12 challenges left.

Type 'learnyounode' to show the menu.

» To print these instructions again, run: learnyounode print
» To execute your program in a test environment, run: learnyounode run

program.js
» To verify your program, run: learnyounode verify program.js
» For help run: learnyounode help
```

### 4. Run the server

node program.js

```
C:\Program Files\nodejs>node program.js  
HELLO WORLD
```

## PART2

### Sending JSON data from node.js server: student info

#### 1. Create a Node.js server named studentInfo

```
> Program Files > nodejs > first-servers > JS studentInfo.js > ...  
1  const http = require("http");  
2  const url = require("url");  
3  
4  const host = 'localhost';  
5  const port = 8000;  
6  
7  // Define student data  
8  const studentData = {  
9      11111: { student_id: '11111', student_name: 'Bruce Lee', score: 84 },  
10     22222: { student_id: '22222', student_name: 'Jackie Chen', score: 93 },  
11     33333: { student_id: '33333', student_name: 'Jet Li', score: 88 }  
12 };  
13  
14 const requestListener = function (req, res) {  
15     res.setHeader("Content-Type", "application/json");  
16  
17     // Parse the URL and extract the query parameters  
18     const parsedUrl = url.parse(req.url, true);  
19     const studentId = parsedUrl.query.student_id;  
20  
21     // Check if studentId is provided and if it exists in the studentData  
22     if (studentId && studentData[studentId]) {  
23         res.writeHead(200);  
24         res.end(JSON.stringify(studentData[studentId]));  
25     } else {  
26         res.writeHead(404);  
27         res.end(JSON.stringify({ error: "Resource not found" }));  
28     }  
29 };  
30  
31 const server = http.createServer(requestListener);  
32 server.listen(port, host, () => {  
33     console.log(`Server is running on http://${host}:${port}`);  
34 });  
35
```

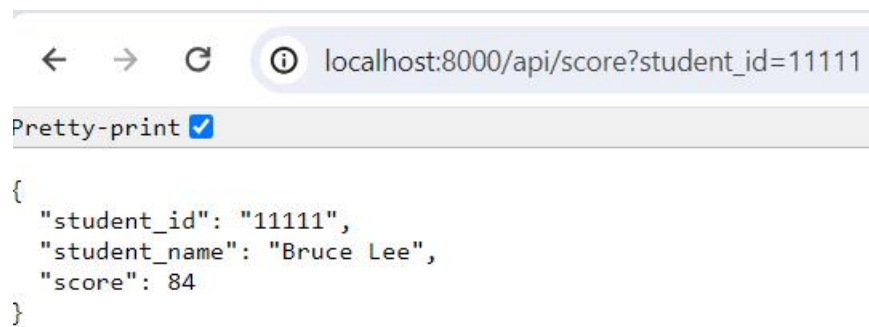
2. Run the server by executing the following command in the terminal, and it listens for HTTP requests on a port 8000

```
node studentInfo.js
```

```
C:\Program Files\nodejs\first-servers>node studentInfo.js  
Server is running on http://localhost:8000
```

3. Open a web browser and launch the url:

```
http://localhost:8000/api/score?student_id=11111
```



```
{
  "student_id": "11111",
  "student_name": "Bruce Lee",
  "score": 84
}
```

It sends back JSON data containing student information when queried with a student ID.

Student ID	Student Name	Score
11111	Bruce Lee	84
22222	Jackie Chen	93
33333	Jet Li	88

Github Link:

<https://github.com/hcleon4849/Javascript/blob/main/Project/Sending%20JSON%20data%20from%20node.js.pdf>