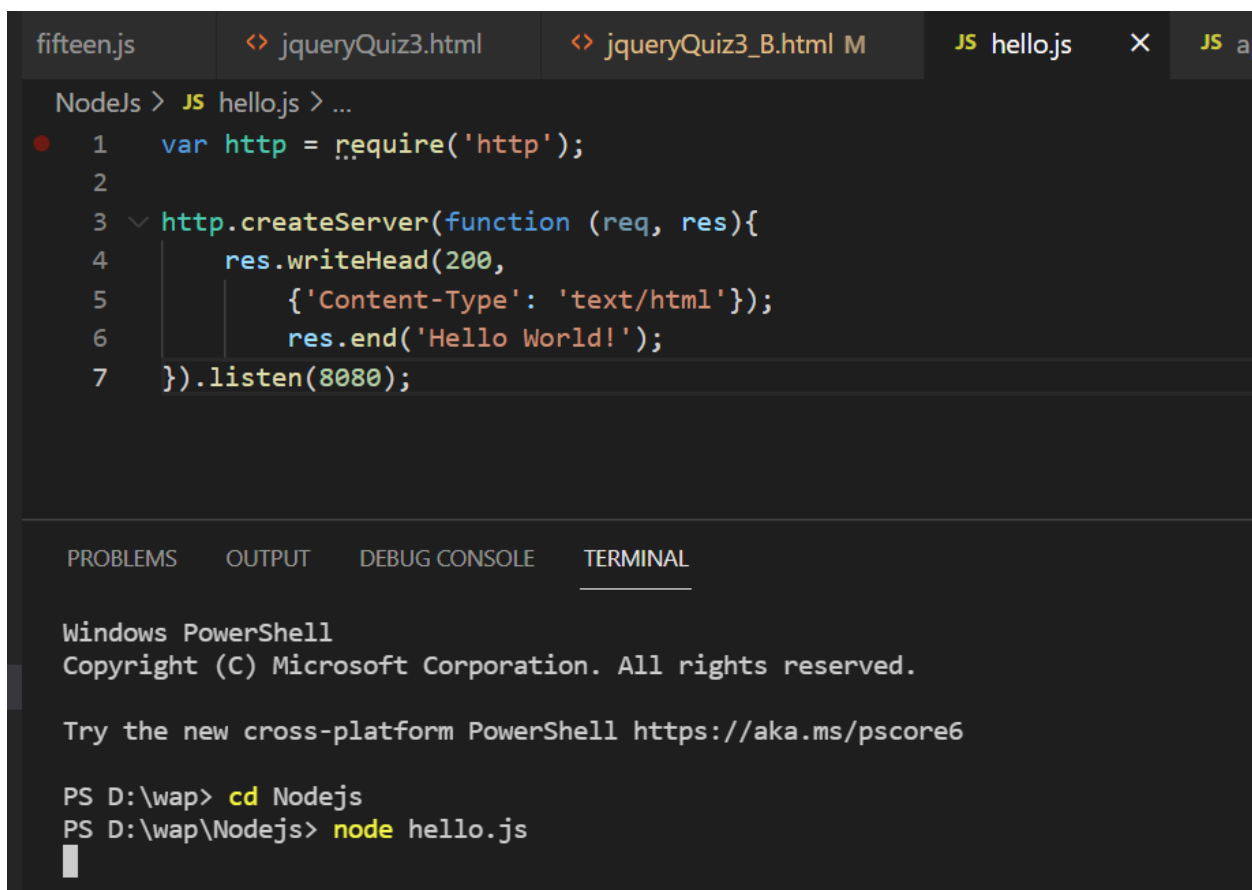


Exercise N1

- Download Node.js from the official Node.js website and install it: <https://nodejs.org>.
- Create a folder for your Node.js files (**NodeFolder**).
- Save the Hello World program in a file using VS Code:

Ans.



The screenshot shows the Visual Studio Code editor with a file named `hello.js` open. The code is as follows:

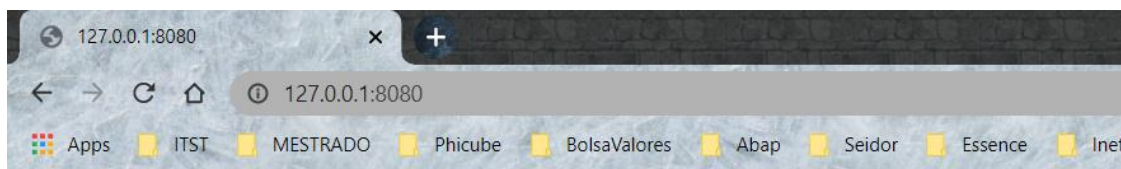
```
NodeJs > JS hello.js > ...
1  var http = require('http');
2
3  http.createServer(function (req, res){
4      res.writeHead(200,
5          {'Content-Type': 'text/html'});
6      res.end('Hello World!');
7  }).listen(8080);
```

Below the editor, the **TERMINAL** panel is active, showing a Windows PowerShell session:

```
Windows PowerShell
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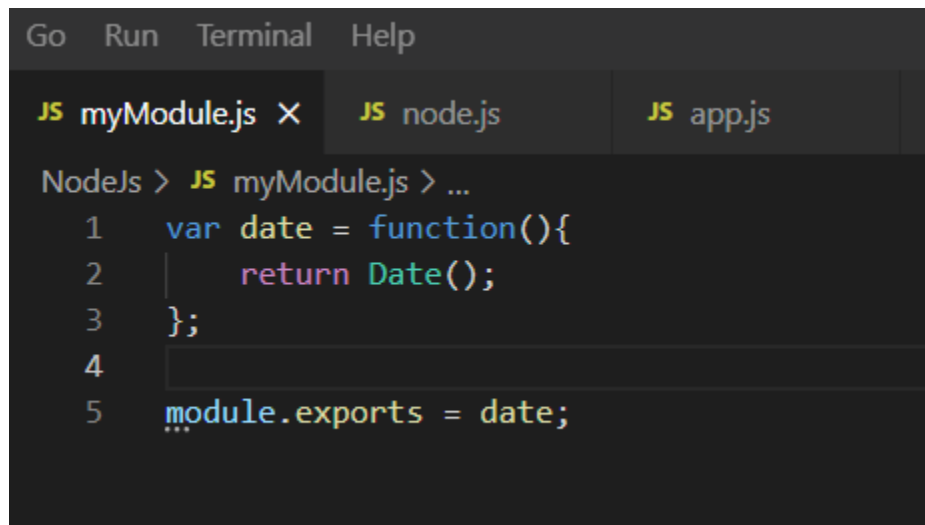
PS D:\wap> cd Nodejs
PS D:\wap\Nodejs> node hello.js
```



Hello World!

Creating New Modules (Exercise N2)

Ans.



The screenshot shows a code editor with a dark theme. At the top, there are tabs for 'Go', 'Run', 'Terminal', and 'Help'. Below these, there are three file tabs: 'JS myModule.js X', 'JS node.js', and 'JS app.js'. The 'myModule.js' tab is active, showing the following code:

```
NodeJs > JS myModule.js > ...  
1  var date = function(){  
2    return Date();  
3  };  
4  
5  module.exports = date;
```

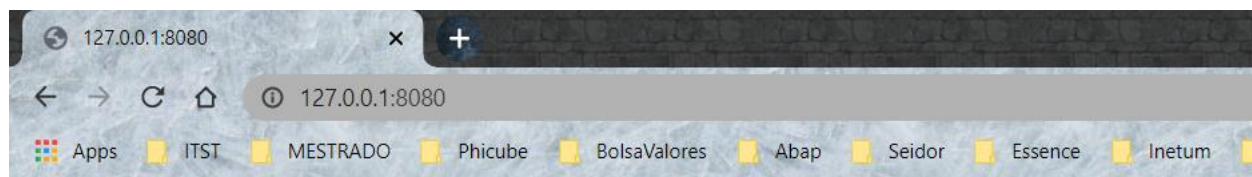
```
JS myModule.js JS node.js X JS app.js JS multi.js <> jqueryQuiz3_C.html <>
NodeJs > JS node.js > http.createServer() callback
1 var http = require('http');
2 var date = require('./myModule');
3
4 http.createServer(function(req, res){
5     res.writeHead(200,
6         {'Content-Type': 'text/html'});
7     res.write("The date and time are currently : " + date());
8     res.end();
9 }).listen(8080);
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

Windows PowerShell
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PS D:\wap> cd Nodejs
PS D:\wap\Nodejs> node node.js
█



The date and time are currently : Thu Jan 27 2022 23:49:18 GMT-0600 (Central Standard Time)

Exercise N3

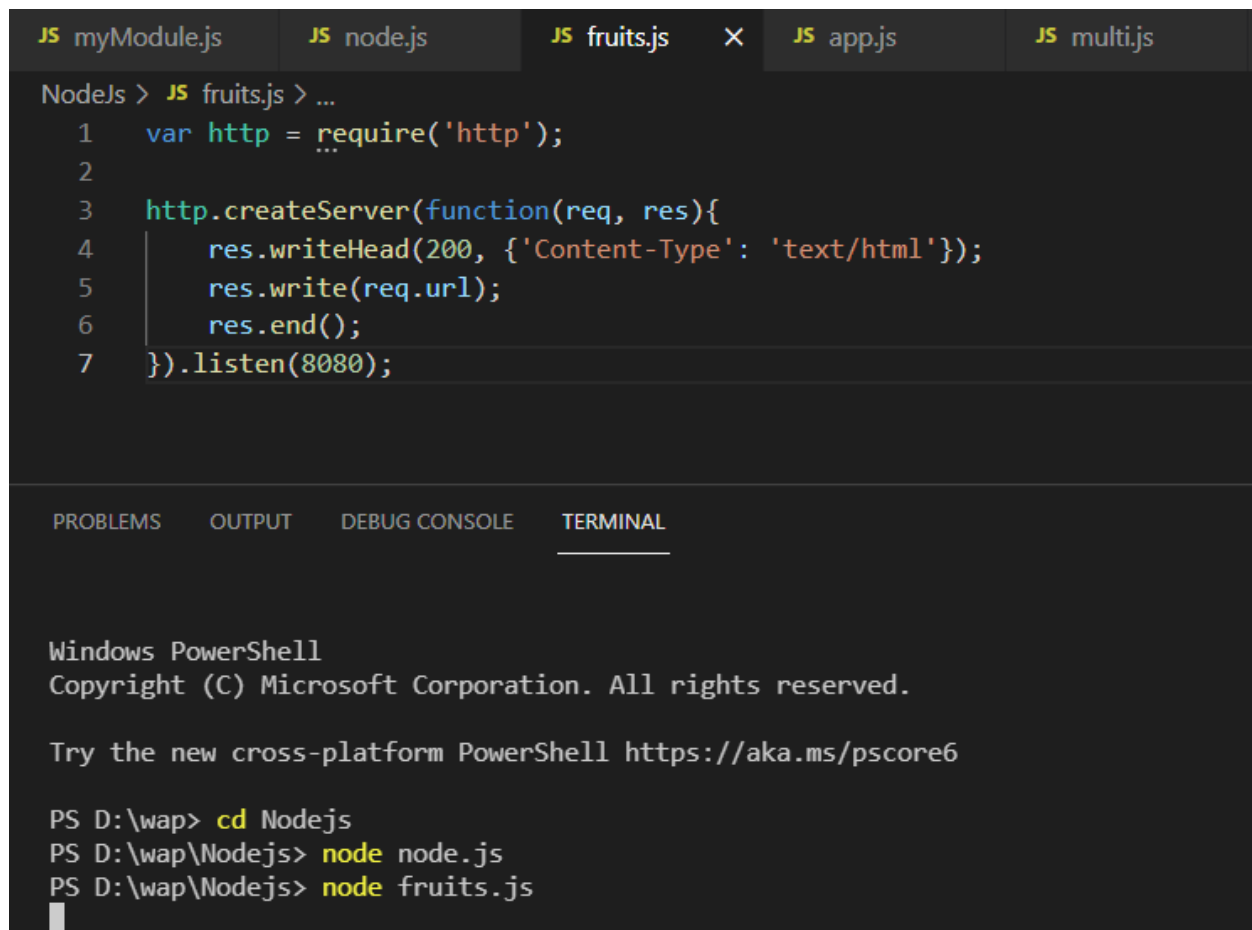
Run the code shown below and then enter the following in your Browser:

`http://localhost:8080/apples`

`http://localhost:8080/pears`

`http://localhost:8080/strawberries`

Ans.



The screenshot shows a Visual Studio Code editor with several tabs: `JS myModule.js`, `JS node.js`, `JS fruits.js` (active), `JS app.js`, and `JS multi.js`. The `fruits.js` file contains the following code:

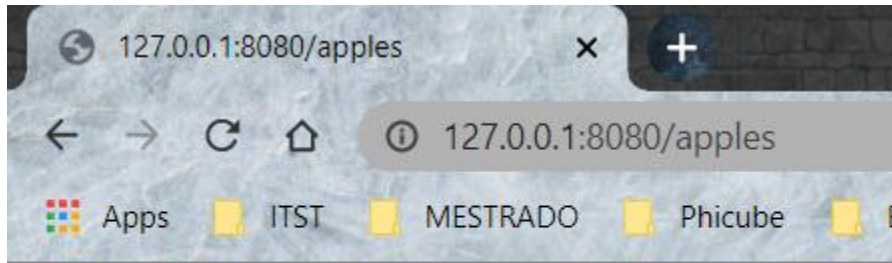
```
NodeJs > JS fruits.js > ...
1  var http = require('http');
2
3  http.createServer(function(req, res){
4      res.writeHead(200, {'Content-Type': 'text/html'});
5      res.write(req.url);
6      res.end();
7  }).listen(8080);
```

Below the editor, the **TERMINAL** tab is active, showing a Windows PowerShell session:

```
Windows PowerShell
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Try the new cross-platform PowerShell https://aka.ms/pscore6

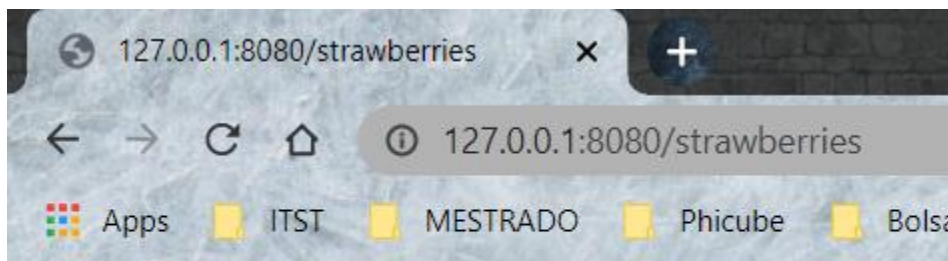
PS D:\wap> cd Nodejs
PS D:\wap\Nodejs> node node.js
PS D:\wap\Nodejs> node fruits.js
```



/apples



/pears



/strawberries

Exercise N4: Simple Adder

```
JS myModule.js JS node.js JS fruits.js <> SimpleAdder.html X JS addmod
NodeJs > <> SimpleAdder.html > html
1 <!doctype html>
2 <html lang="en">
3
4 <head>
5   <meta charset="utf-8">
6   <title>Calculator</title>
7 </head>
8
9 <body>
10
11 <form action =
12   "http://localhost:8080/add.js">
13   <div>Enter two numbers
14   <input type = "text" name="first"/><br/>
15   <input type = "text" name="second"/><br/>
16   <input type="submit" value="Click"/>
17 </div>
18 </form>
19 </body>
20 </html>
```

```
JS myModule.js JS node.js JS fruits.js <> SimpleAdder.html JS addmod.js X
NodeJs > JS addmod.js > ...
1 exports.add = function (req, res, vals) {
2   var sum = parseInt(vals.first) + parseInt(vals.second);
3   res.writeHead(200, { 'Content-Type': 'text/html' });
4   res.write("<!DOCTYPE html>");
5   res.write("<html>");
6   res.write("<head><meta charset=\"utf-8\"/>");
7   res.write("<title>Calculator Web Site</title>");
8   res.write("</head>");
9   res.write("<body>");
10  res.write("<p>The sum is: ");
11  res.write(String(sum));
12  res.write("</p>");
13  res.write("</body>");
14  res.write("</html>");
15  return res.end();
16 }
```

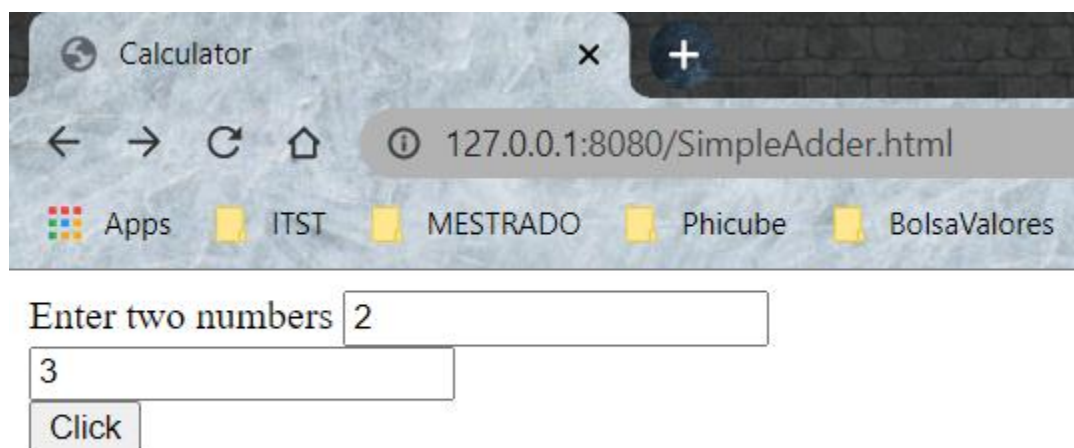
```
JS myModule.js JS node.js JS fruits.js SimpleAdder.html JS addmod.js JS AdderWebServer.js X
NodeJs > JS AdderWebServer.js > ...
1  var http = require('http');
2  var url = require('url');
3  var fs = require('fs');
4  var addmod = require('./addmod.js');
5  http.createServer(function (req, res) {
6      var q = url.parse(req.url, true);
7      var filename = "." + q.pathname;
8      if (q.pathname == "/add.js")
9          addmod.add(req, res, q.query)
10     else
11         fs.readFile(filename, function (err, data) {
12             if (err) {
13                 res.writeHead(404, { 'Content-Type': 'text/html' });
14                 return res.end("404 Not Found");
15             }
16             res.writeHead(200); // Content-Type not included
17             res.write(data);
18             return res.end();
19         });
20     }).listen(8080);
21
```

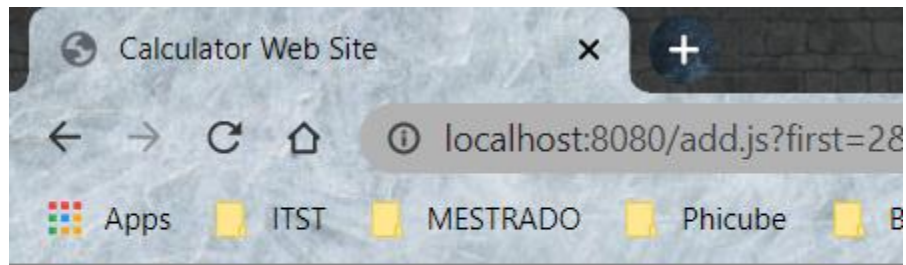
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

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```
PS D:\wap> cd Nodejs
PS D:\wap\Nodejs> node node.js
PS D:\wap\Nodejs> node fruits.js
PS D:\wap\Nodejs> node AdderWebServer.js
PS D:\wap\Nodejs> node AdderWebServer.js
[]
```





The sum is: 5