

Recap Week 1

Node.js, npm, http

We learned (1)

- What is node.js
- What is npm and how to use it
- npm commands (npm init, npm install)
- How to run a node app.
- What is package.json

We learned (2)

- What is Read-Eval-Print-Loop (REPL)
- Importing/exporting modules `module.exports` & `require`
- What is `http`
- What are the `http` methods (GET, POST)
- Talked about the `npm http` package
- We made an HTTP server using the built-in `http` module

Brief revision

Http request methods (verbs)

- **GET:** The GET method requests a representation of a specified resource. Requests using GET should only retrieve data.
- **POST:** The POST method is used to submit an entity to the specified resource, often causing a change in state or side effects on the server.
- Other methods: HEAD, PUT, DELETE, CONNECT, OPTIONS, TRACE, PATCH

More info: <https://developer.mozilla.org/en-US/docs/Web/HTTP/Methods>

Server responses

- HTTP response status codes indicate whether a specific HTTP request has been successfully completed
- Five classes of responses:
 - Information responses (100 group)
 - Successful responses (200 group)
 - Redirection messages (300 group)
 - Client error responses (400 group)
 - Server error responses (500 group)

More info: <https://developer.mozilla.org/en-US/docs/Web/HTTP/Status>

Common server responses status codes

- **200 OK:** The request has succeeded.
- **400 Bad Request:** Server could not understand the request due to invalid syntax.
- **401 Unauthorized:** The client must authenticate itself to get the requested response.
- **404 Not Found:** The server can not find requested resource
- **500 Internal Server Error**
- **502 Bad Gateway:** The server, while working as a gateway to get a response needed to

MIME types

- Is a standardized way to indicate the nature and format of a document
- The MIME type is included inside http responses header in order for the client to know the format of the incoming data.

e.g. text/plain, text/html, image/jpeg, image/png

https://developer.mozilla.org/en-US/docs/Web/HTTP/Basics_of_HTTP/MIME_types

npm http package

- It is a low level library (usually we use other simpler packages like express)
- It is included in node - we don't have to add the package from npm
- To include it: `var http = require('http');`
- To create a server use : `var server = http.createServer(<handle request function>);`
- To make the server listen: `server.listen(<port>, <server ip (optional) default:localhost>, <callback function>)`

handle request function

- It is executed when a request happens
- Takes two arguments (request, response)
- **response.end()** is used inside to stop browser from loading (response end can have an argument to display on page as well).
- **response.write()** is used inside to return content to the page. - We can write plain text or html content inside.
- **response.writeHead(<response status code>, { 'Content-Type': '<content-MIME-type>' }):** is used to write to the head of the http response,

handle request function (2)

- **request.headers:** Contains the headers of the request
- **response.headers:** Constains the headers of the response.
- **request.url:** Contains the exact url of the page for the routing

Assignment

- <https://github.com/SocialHackersCodeSchool/Node.js/blob/master/week1/homework/README.md>