

Supplement Material

How to get start with coding assignments?

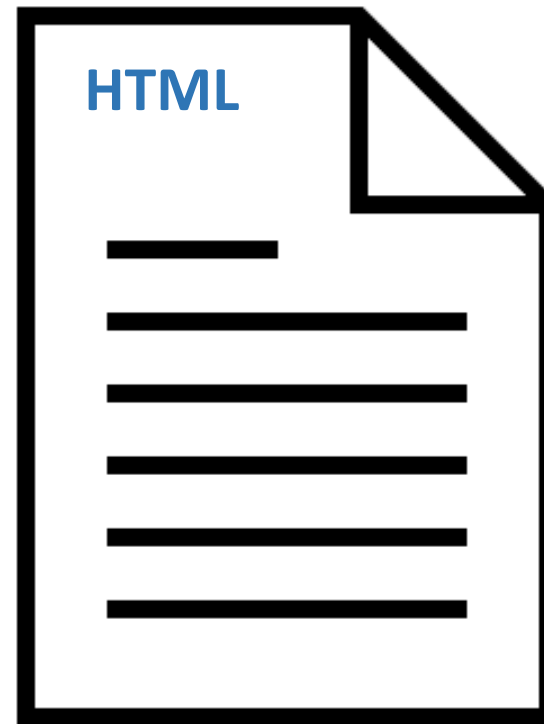
Computer Graphics

Karlheinz Reinhardt

A quick overview, to provide more context about what exactly we are doing

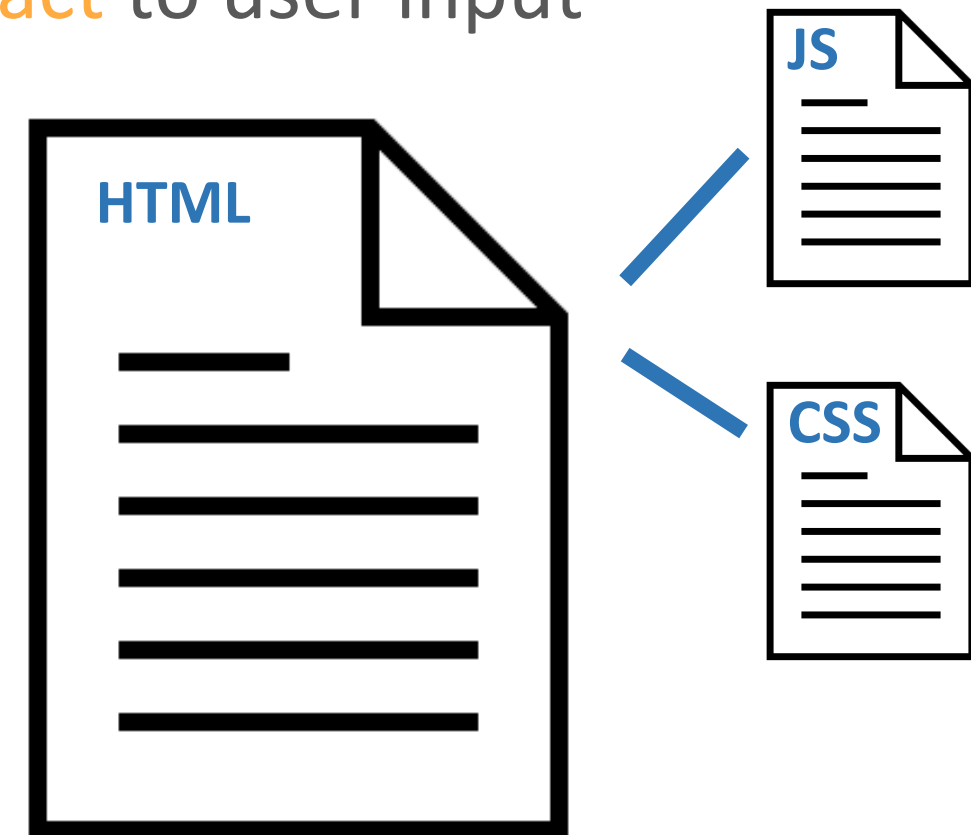
HTML

- HTML stands for **H**yper **T**ext **M**arkup **L**anguage
- Is the standard markup language for **Web Pages**
- Describes the structure of a Web Page
- A browser can view HTML Files

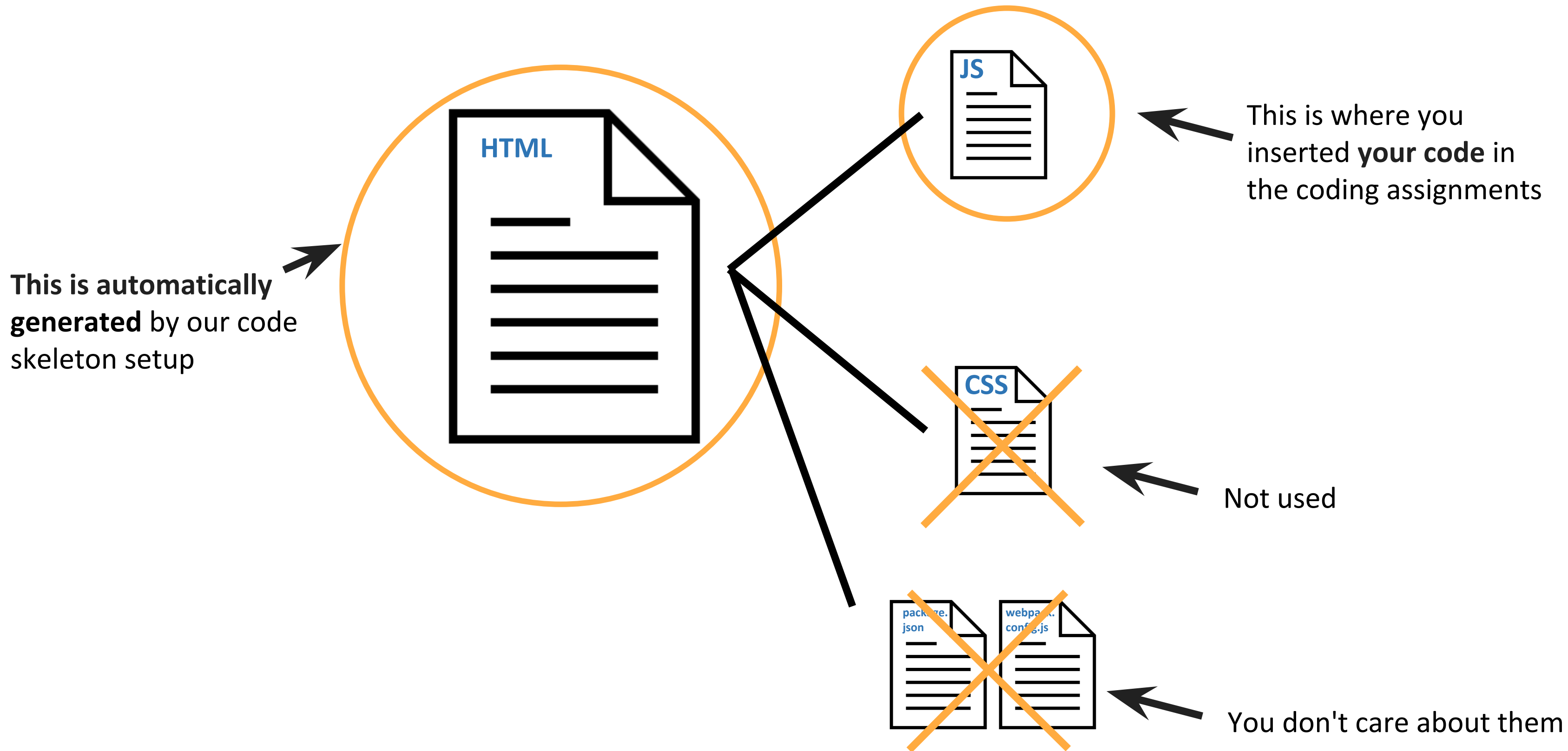


JavaScript: What, why and where?

- What
 - JavaScript (JS) is a scripting language
 - Developed in 1995 by Netscape
 - Enables to **manipulate** the website (DOM) and **react** to user input
=> websites can be dynamic
- Where
 - HTML is used together with **JS** and **CSS**
 - Code is executed inside the **browser**



What is our code skeleton doing?

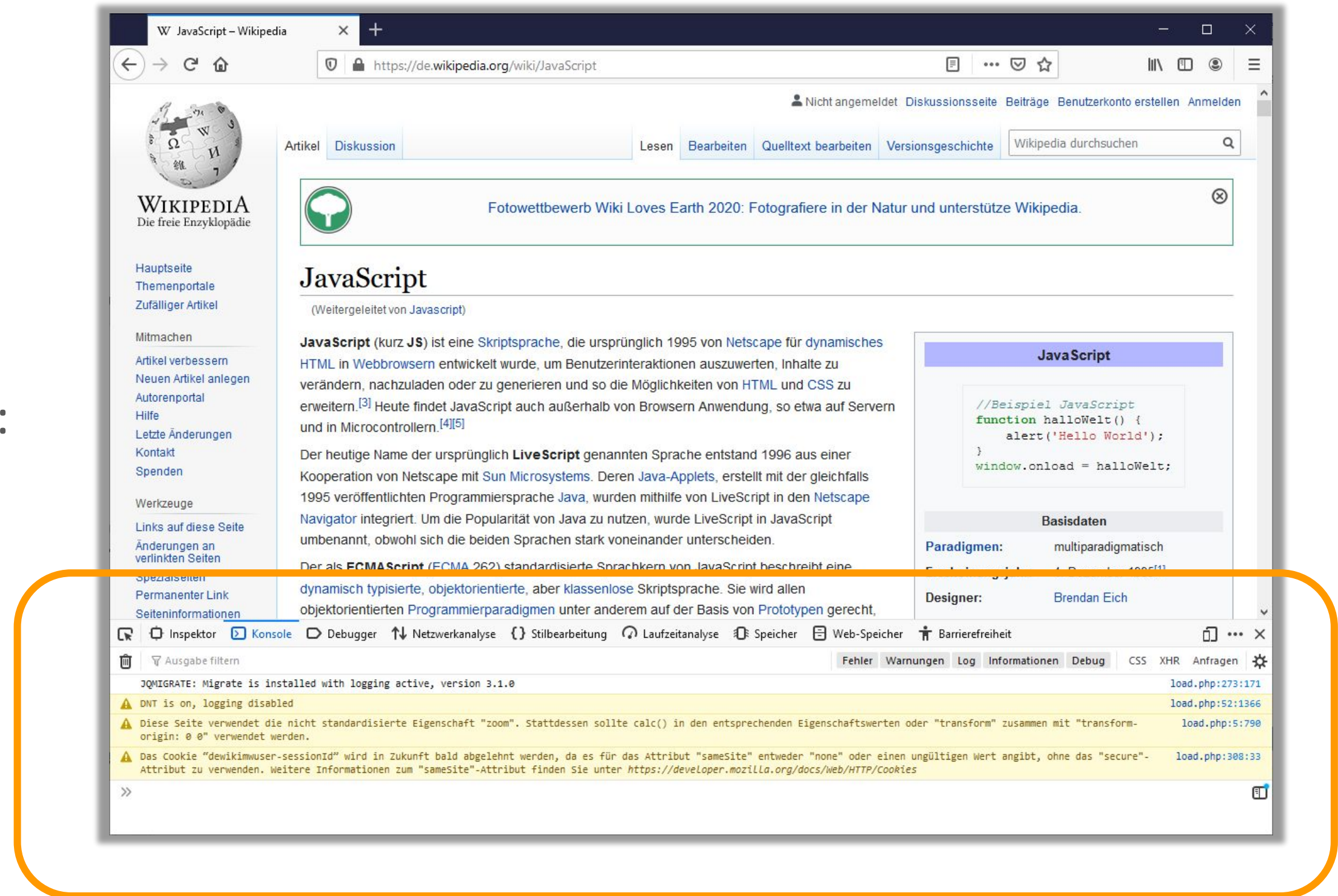


How to debug your code in a browser?

Every browser has integrated development tools:

- Chrome/Firefox:
 - strg+shift+i (linux/win)
 - cmd+option+i (mac)
- To create logs in your code:

```
console.log("test");  
console.log(variable);
```



How to setup your programming environment?

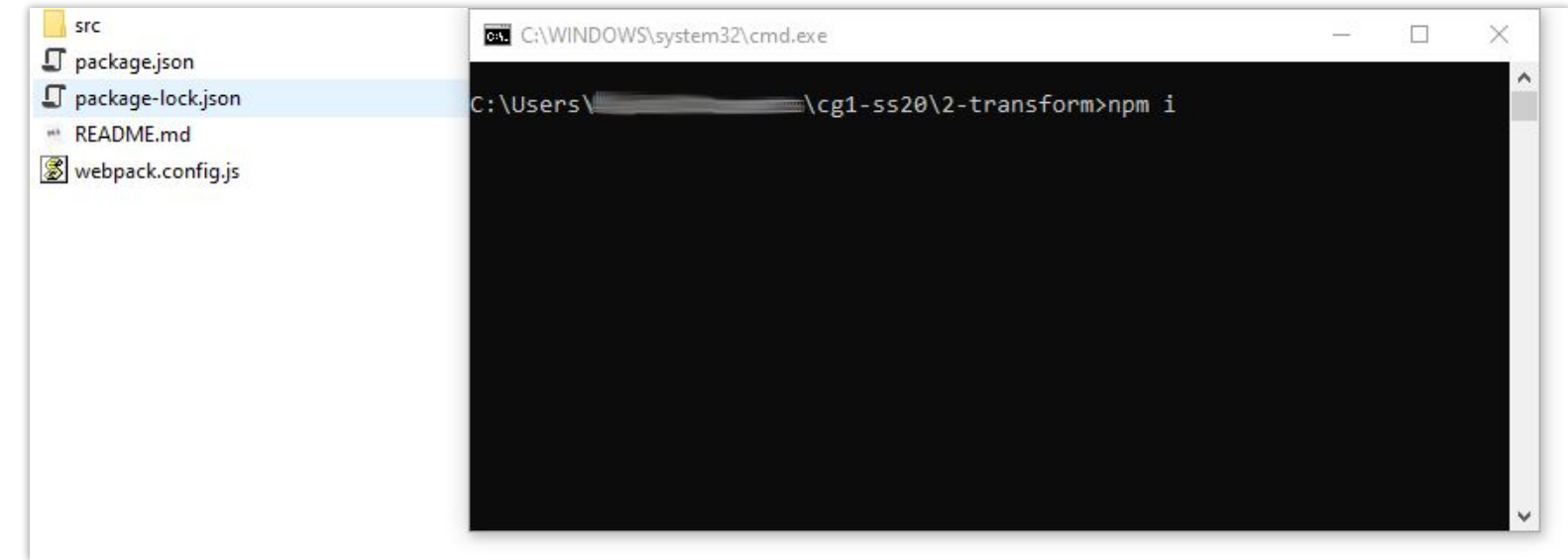
- What you need
 - Code editor: to edit your code
 - Recommended: [VSCode](#) or [WebStorm](#)
 - Alternatives: Sublime Text, Vim, ...
 - Command line tool: every OS has one – we need it to start the Node.js
 - Windows 10: PowerShell
 - macOS/Linux: Terminal

How to run the code skeleton?

- A command line tool is also called **Terminal**
- Exist in almost every OS
- Some of the code editor integrates it for convenience
 - no need for a separate window

How to run?

- Open your terminal
 - How to open and use it will depend on your OS
 - Navigate into your project folder
- This is the folder that contains the `package.json`
 - Enter the 2 commands
 - `npm i` ← Install dependencies
 - `npm start` ← Start server



In this example the project is located at
C:\Users\...\cg1-ss20\2-transform

Where to go from here *(some of many resources)*

- More about **HTML**
 - mozilla - <https://developer.mozilla.org/en-US/docs/Web/HTML>
 - selfhtml - <https://wiki.selfhtml.org/wiki/Startseite>
- More about **JS**
 - selfhtml js - <https://wiki.selfhtml.org/wiki/JavaScript/Tutorials>
 - w3schools - <https://www.w3schools.com/js/>
- **Three.js**
 - <https://threejs.org/docs/index.html#manual/en/introduction/Creating-a-scene>