Prerequisite

ALERT! DO NOT USE THIS SEARCHING ANYTHING BUT FOR SITE TEST ONLY

step1. Create a folder at any location.

step2. Create a shortcut of chrome at the folder.

step3. Right click shortcut -> content -> target -> 【"C:\Program Files (x86)\Google\Chrome\Application\chrome.exe" --disable-web-security --user-data-dir=\_\_folder location\_\_】

step4. After this, you can just click this shortcut to launch Dev Mode Chrome.

Reference:

[Enable Chrome Dev Tool](https://blog.gtwang.org/web-development/chrome-configuration-for-access-control-allow-origin/)

Exercise 1: Initial Dev Environment

step1. Create a new HTML file in IDE. (In this case I use VSC, Visual Studio Code)

step2. Open browser and open the HTML file with opening the DEV Tools.(F12)

step3. With the offer of the exercise, create a small sheet (form) with an input and a button.

step4. Use <script> tag in HTML (As exercise ask). And use onclick() property to trigger console.log() (This is the API in console).

Note:

1. <button> tag will auto refresh the page so that the console.log will be flushed. Add type=”button” as attribute in it to avoid that.
2. Console.log is an API function of browser.
3. Click the “line number” in the Source page of DEV Tools to make a break point. A break point will stop the code from continuing until the “next hint” is clicked.
4. It is not supported that the document.getElementById().onclick being assigned a defined function. E.g. document.getElementById().onclick = hello(); is invalid. Must be document.getElementById().onclick = function(){ … } and application as function(){ hello() }

Asking

Reference:

[consoleAPI](https://developer.mozilla.org/en-US/docs/Web/API/Console_API)

[關於button在form表單內的自動重整](https://www.itread01.com/content/1541286193.html)

Exercise 2: HTML property manipulation

step1. Assign id and name attribute to each tag that we would like to manipulate.

step2. Use document.getElementById(“\_Id\_”) to locate the element(or tag) that we would like to manipulate. In this case we bind the button with id “btn\_submit”

step3. Use .innerHTML to change the content of specific tag. In this we use it to change the color of the text and change time.

step4. Use alert() to get an alert screen and use onclick() to bind them together. In this case I use onclick() in the time area.

Note:

1. No matter what the .value get. It will return a String so we need to use parseInt() to transform it to integer if we need to compute it.
2. Most tag has onclick property even it is not a button.
3. setTimeout with one second combined with Date() could make dynamic showTime of current time.
4. There are three types alert: alert() with only “OK”, confirm() with “Yes” and “No”, prompt() with a text input.

Reference:

[W3school](https://www.w3schools.com/tags/tag_style.asp)

[ParseInt()](https://developer.mozilla.org/zh-TW/docs/Web/JavaScript/Reference/Global_Objects/parseInt)

[innerHTML and innerText](https://www.wibibi.com/info.php?tid=402)

Exercise 3: HTML styling css style

step1. Follow the rule to create three different types css expression.

Note:

Inline CSS is fast develop but no flexible.

Tag CSS is intuitive and id easy-mapped but no reusable

External CSS is standalone, reusable, high readable and maintainable but time-cost during developing.

Reference:

[Understanding external, internal and inline CSS](https://www.hostpapa.ca/knowledgebase/understanding-external-internal-inline-css-styles/)

Exercise 4: Declaration of javascript variable

step1. Declare three variables like string, array and object.

Note:

The difference of dot (.) and bracket ([]) is not too much but more limitation on dot that it could only start with alphabet, underline and dollar sign which is already a key inside the object (Not inside will cause assignment). Using bracket could use variable, key or even index to access the value.

Dot will receive an identifier (Technically called “IdentifierNames” in ECMAScript) and bracket will receive a string included symbol like “!”.

Hoisting is an action that pre-declare variable or function. It’s a compile-action instead of an interpreter-action. It is useless for variable because variable should be declare in the head of code but useful for function. Because if function were declared in front of use, it will reduce the readable of source code.

And more important idea about hoisting is that it’s a declaration action instead of an initialization action. Any initial action will be stay at original line. So if you do some operation such as add before initialization. It won’t be functional with output NaN or undefined.

Reference:

[Dot v.s. Branket](https://codeburst.io/javascript-quickie-dot-notation-vs-bracket-notation-333641c0f781)

[js\_Hoisting](https://www.w3schools.com/js/js_hoisting.asp)

[I know you know hoisting, but how much?](https://blog.techbridge.cc/2018/11/10/javascript-hoisting/)

Exercise5: Javascript text file format transfer

step1. Declare String of Object like ‘{“hi” : “HelloWorld”}’.

step2. Use JSON.parse() to invert object into JSON form.

step3. Use JSON.stringify() to invert JSON form into object form.

Note:

Reference:

[JSON.parse()](https://developer.mozilla.org/zh-TW/docs/Web/JavaScript/Reference/Global_Objects/JSON/parse)

[JSON.stringify()](https://developer.mozilla.org/zh-TW/docs/Web/JavaScript/Reference/Global_Objects/JSON/stringify)

Exercise6: External js file script

step1. Cut all js code and paste into another js file.

step2. Use <script> tag with src attribute to include js file.

step3. In order to ensure the DOM was loaded fully before the js file is executed. Use original JS window.loaded() or JQuery $(document).ready() function.

Note:

window.loaded() is actually slower than JQuery $(document).ready() function because loaded() function load not only DOM but all other elements like image, CSS, video and others. And .ready() function will execute just after the DOM is loaded.

Reference

[DOM解析](https://ithelp.ithome.com.tw/articles/10202689)

[loaded and ready](https://matthung0807.blogspot.com/2018/02/javascript-windowonload-jquery.html)

[JQ CDN](https://www.w3schools.com/jquery/jquery_get_started.asp)

[Can’t set property](https://blog.csdn.net/wls666/article/details/89281458)