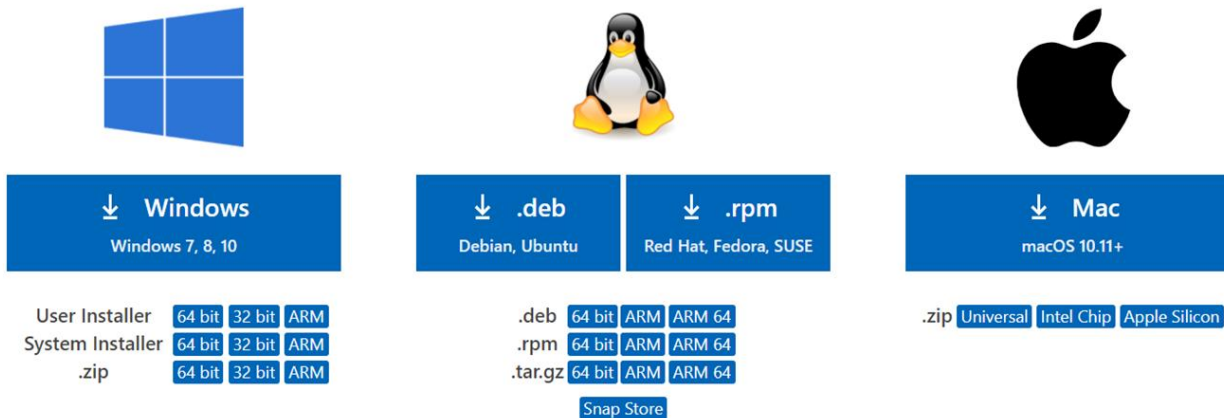# 인터넷과웹기초

Lab 01. HTML (1)

실습 개요

- 조교
  - 강정환
    - 자연대연구실험동 301호
    - jeonghwan@pusan.ac.kr

- 개요
  - 약 1시간 실습
  - ZOOM을 통한 비대면 실습
  - 실습을 검사하지 않음.
  - 매 실습 강의마다 별도의 과제 출제 예정

실습 환경 (1)

- Visual Studio Code (VSCode)
  - 실습 및 과제는 VSCode를 통해 진행함.
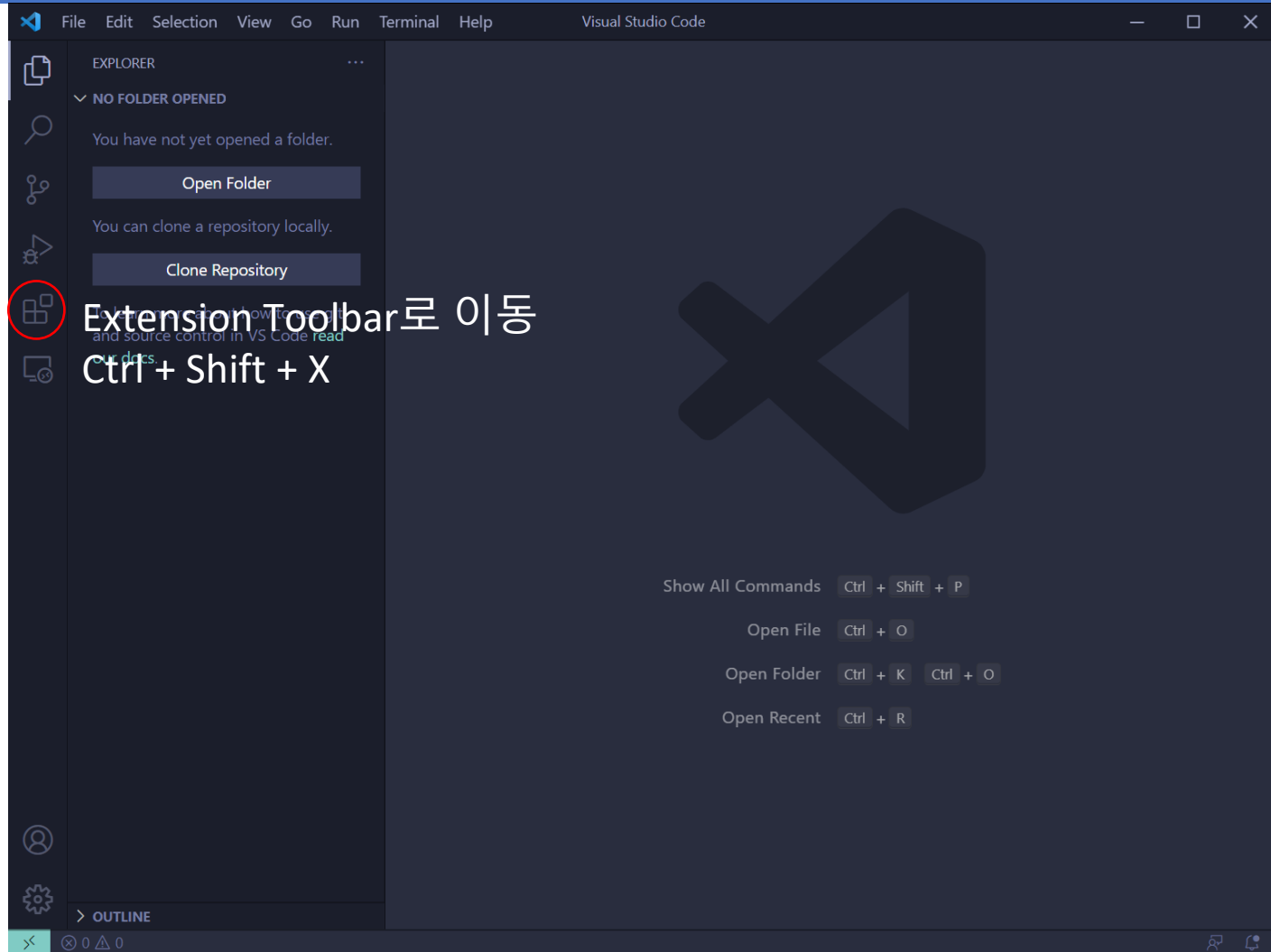 - 링크를 통해 설치 파일을 다운로드 및 설치

Download Visual Studio Code

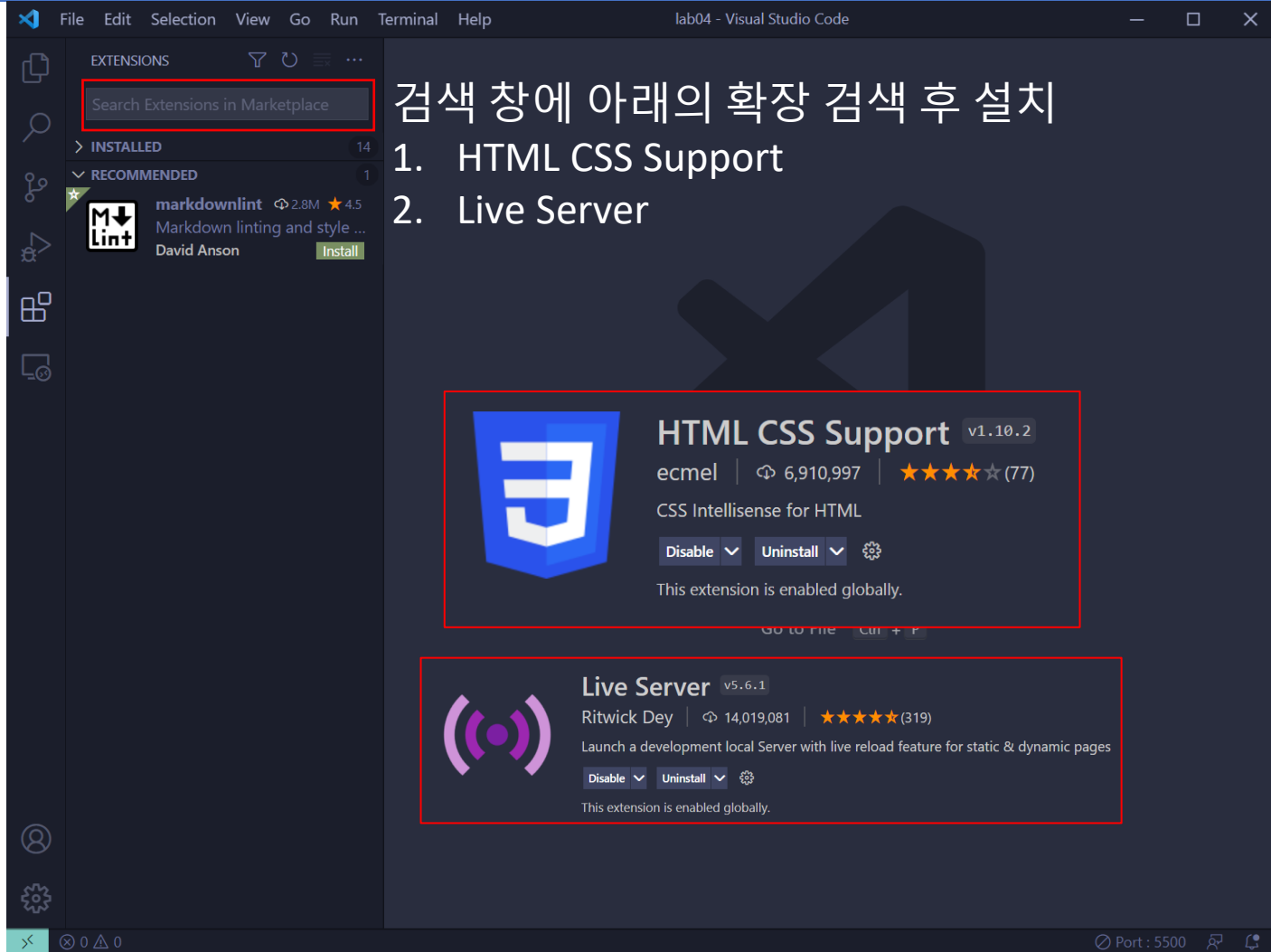Free and built on open source. Integrated Git, debugging and extensions.

실습 환경 (2)

Extension Toolbar로 이동
Ctrl + Shift + X

실습 환경 (3)

검색 창에 아래의 확장 검색 후 설치
1. HTML CSS Support
2. Live Server

Tips

- Useful websites
  - Tutorials: W3schools.com; *Link*
  - References: MDN Web Docs; *Link*

- Developer-Roadmap

  - https://github.com/kamranahmedse/developer-roadmap

Structure

- Structure of HTML5
  - \<!DOCTYPE html\>
    - HTML5 선언
  - \<html\>
    - HTML 문서의 시작과 끝
  - \<head\>
    - 웹 페이지의 정보
  - \<body\>
    - 웹 페이지의 본문

```
HTML ▾

<!DOCTYPE html>

<!-- 이 부분은 주석입니다 -->

<html>
  <head>
    문서 제목, JS 코드, CSS 스타일 정의, 메타 데이터 정의
  </head>
  <body>
    body: 문서의 본문 텍스트, 이미지, 테이블, 동영상 등
  </body>
</html>
```

Elements and Attributes

- Elements
  - The HTML element is everything from the start tag to the end tag.

  `<h1>My First Heading</h1>`

  `<p>My first paragraph.</p>`

Start tag	Element content	End tag
`<h1>`	My First Heading	`</h1>`
`<p>`	My first paragraph.	`</p>`
` `	*none*	*none*

- Attributes
  - It provides additional information about elements

  Attribute

  `<p class="editor-note">My cat is very grumpy</p>`

Elements: <title>, <h>

- <title>
  - It is required in HTML documents.
  - It defines a title in the browser toolbar.

```
<html>
  <head>
    <title>문서의 제목입니다. 북마크 및 타이틀바에 표시됩니다.</title>
  </head>
</html>
```

문서의 제목입니다. 북마크 및 타 ✕

← → C 🔒 jsbin.com/wupuyc

- <h1> ... <h6>

```
HTML ▾
<html>
  <head>
  </head>
  <body>
    <h1>1장</h1>
    <h2>1절</h2>
    <h3>1.</h3>
    <h4>1.2.</h4>
    <h5>1.2.3.</h5>
    <h6>1.2.3.4.</h6>
  </body>
</html>
```

Output

1장

1절

1.

1.2.

1.2.3.

1.2.3.4.

Elements: <meta>

- **<meta>**
  - It is used to specify the character set, page description, keywords, author of the document, and view port settngs.

```html
HTML ▾
<!DOCTYPE html>
<html>
<head>
  <meta charset="UTF-8">
  <meta name="description" content="Free Web tutorials">
  <meta name="keywords" content="HTML, CSS, JavaScript">
  <meta name="author" content="John Doe">
</head>
<body>
  <p>meta information goes inside the head section. </p>
</body>
</html>
```
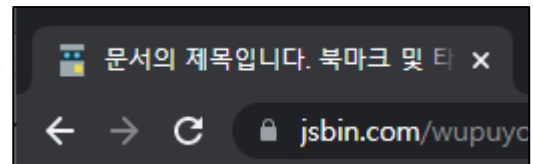
Output

meta information goes inside the head section.

Elements: <style>

- <style>
  - It is used to define style information for HTML page.

```
1   <!DOCTYPE html>
2   <html>
3   <head>
4     <title>Page Title</title>
5     <style>
6       body
7   {background-color: powderblue;}
8       h1 {color: red;}
9       p {color: blue;}
10    </style>
11  </head>
12  <body>
13
14  <h1>This is a Heading</h1>
15  <p>This is a paragraph.</p>
16
17  </body>
18  </html>
19
20
21
22
23
```

This is a Heading

This is a paragraph.

Elements: <link>

- <link>
  - It defines the relationship between the current document and an external resource.

```
1   <!DOCTYPE html>
2   <html>
3   <head>
4     <title>Page Title</title>
5     <link rel="stylesheet"
6   href="mystyle.css">
7   </head>
8   <body>
9
10  <h1>This is a Heading</h1>
11  <p>This is a paragraph.</p>
12
13  </body>
14  </html>
15
16
17
18
19
20
21
22
23
```

This is a Heading

This is a paragraph.

Elements: <script>

- <script>
  - it is used to define client-side JavaScript.

```
1   <!DOCTYPE html>
2   <html>
3   <head>
4     <title>Page Title</title>
5     <script>
6     function myFunction() {
7   document
8   .getElementById("demo").
9   innerHTML = "Hello JavaScript!";
10    }
11    </script>
12  </head>
13  <body>
14
15  <h1>My Web Page</h1>
16  <p id="demo">A Paragraph</p>
17  <button type="button"
18  onclick="myFunction()">
19  Try it
20  </button>
21
22  </body>
23  </html>
```

My Web Page

A Paragraph

Try it

My Web Page

Hello JavaScript!

Try it

Elements: <p>, <br>, <hr>

- <p>
  - Paragraph element
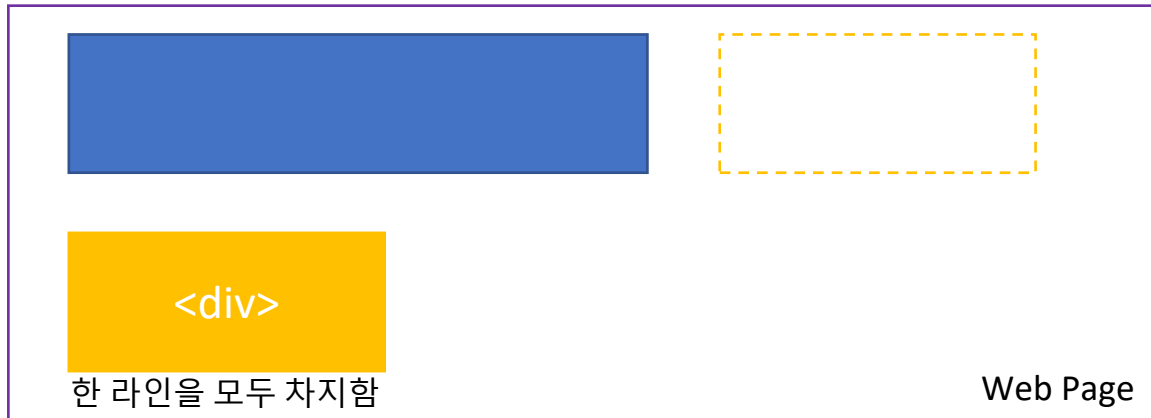-
  - Line break element
- <hr>
  - Thematic break element

Entities

- Entities
  - HTML에서 문자나 기호는 UTF-8 코드체계로 작성됨.
    - &entity; or &#number;
    - ex) 2 &lt: 3 → 2 < 3

Result	Description	Entity Name	Entity Number
	non-breaking space		
<	less than	<	<
>	greater than	>	>
&	ampersand	&	&
"	double quotation mark	"	"
'	single quotation mark (apostrophe)	'	'
¢	cent	¢	¢
£	pound	£	£
¥	yen	¥	¥
€	euro	€	€
©	copyright	©	©
®	registered trademark	®	®

Elements: Block vs. Inline

- Block tag
  - **\<div\>**, \<p\>, \<h1\>, \<ul\>, ...

한 라인을 모두 차지함

\<div\>

Web Page

- Inline tag
  - **\<span\>**, \<strong\>, \<a\>, \<img\>, ...

\<span\>

빈 공간으로 들어감

Web Page

Elements: list

- **<ol>, **
  - **중첩 리스트**
    - : ordered list
    - : unordered list

HTML ▾

```html
<html>
  <head>
  </head>
  <body>
    <h3> 중첩 리스트 만들기 </h3>
    <ul>
      <li>라면의 종류</li>
      <ul>
        <li>국물 라면</li>
        <li>비빔 라면</li>
        <li>짜장 라면</li>
      </ul>
      <p>
      <li>라면 끓이는 법</li>
      <ol>
        <li>물을 끓인다.</li>
        <li>면을 넣는다.</li>
        <li>스프를 넣는다.</li>
      </ol>
  </body>
</html>
```

Output

중첩 리스트 만들기

- 라면의 종류
  - 국물 라면
  - 비빔 라면
  - 짜장 라면

- 라면 끓이는 법
  1. 물을 끓인다.
  2. 면을 넣는다.
  3. 스프를 넣는다.

Elements: table (1)

- <table>
  - 표 전체 구성
    - 제목, 헤드, 바디, 바닥으로 구성됨.

```
<table>
  <caption>표제목</caption>
  <thead> ... </thead>
  <tbody> ... </tbody>
  <tfoot> ... </tfoot>
</table>
```

  - 행과 열 만들기; *link*
    - <tr> : 행 만들기
    - <th> : 헤드 정보를 가진 셀
    - <td> : 데이터 정보를 가진 셀

Elements: table (2)

```html
<html>
  <head>
  </head>
  <body>
    <!-- table의 속성은 CSS로 다루는 것이 바람직함 -->
    <table border="1">
      <caption> my pets </caption>
      <thead>
      <tr>
        <td> </td>
        <td>Knocky</td>
        <td>Flor</td>
      </tr>
      </thead>
      <tbody>
      <tr>
        <td>Breed</td>
        <td>Jack Russell</td>
        <td>Poodle</td>
      </tr>
      <tr>
        <td>Age</td>
        <td>16</td>
        <td>9</td>
      </tr>
      <tr>
        <td>Owner</td>
        <td>Mother-in-law</td>
        <td>Me</td>
      </tr>
      <tr>
        <td>Eating Habits</td>
        <td>Eats everyone's leftovers</td>
        <td>Nibbles at food</td>
      </tr>
      </tbody>
    </table>
  </body>
</html>
```

Output

my pets

	Knocky	Flor
Breed	Jack Russell	Poodle
Age	16	9
Owner	Mother-in-law	Me
Eating Habits	Eats everyone's leftovers	Nibbles at food

출처: MDN Web Docs

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Webform (1)

- 웹 폼
  - 로그인, 등록, 검색, 예약 등, 웹 서비스에서 사용자의 입력을 받기 위해 사용됨
  - Reference; *link*

Element	Description
<button>	The **<button>** HTML element represents a clickable button, used to submit forms or anywhere in a document for accessible, standard button functionality.
<datalist>	The **<datalist>** HTML element contains a set of `option` elements that represent the permissible or recommended options available to choose from within other controls.
<fieldset>	The **<fieldset>** HTML element is used to group several controls as well as labels (`label`) within a web form.
<form>	The **<form>** HTML element represents a document section containing interactive controls for submitting information.
<input>	The **<input>** HTML element is used to create interactive controls for web-based forms in order to accept data from the user; a wide variety of types of input data and control widgets are available, depending on the device and user agent. The `<input>` element is one of the most powerful and complex in all of HTML due to the sheer number of combinations of input types and attributes.
<label>	The **<label>** HTML element represents a caption for an item in a user interface.
<legend>	The **<legend>** HTML element represents a caption for the content of its parent `fieldset`.

Element	Description
<meter>	The **<meter>** HTML element represents either a scalar value within a known range or a fractional value.
<optgroup>	The **<optgroup>** HTML element creates a grouping of options within a `select` element.
<option>	The **<option>** HTML element is used to define an item contained in a `select`, an `optgroup`, or a `datalist` element. As such, <option> can represent menu items in popups and other lists of items in an HTML document.
<output>	The **<output>** HTML element is a container element into which a site or app can inject the results of a calculation or the outcome of a user action.
<progress>	The **<progress>** HTML element displays an indicator showing the completion progress of a task, typically displayed as a progress bar.
<select>	The **<select>** HTML element represents a control that provides a menu of options:
<textarea>	The **<textarea>** HTML element represents a multi-line plain-text editing control, useful when you want to allow users to enter a sizeable amount of free-form text, for example a comment on a review or feedback form.

Webform (2)

- 간단한 로그인 폼

```html
<html>
  <head>
    <title>로그인 폼</title>
  </head>
  <body>
    <h2> 간단한 로그인 폼 </h2>
    <hr>
    <form name="fo" method="get">
      사용자 ID : <input type="text" size="15" value=""> <br>
      비밀번호 : <input type="password" size="15" value="">
      <input type="submit" value="완료">
    </form>
  </body>
</html>
```

Output

간단한 로그인 폼

사용자 ID : [   ]
비밀번호 : [   ] [완료]

- <input>
  - 사용자로부터 입력을 받기 위한 폼
  - 가장 많이 쓰이는 웹 폼임
  - 폼 요소; *link*

Webform (3)

- <input type="text">
  - <datalist> </datalist>
  - 데이터 목록을 가진 텍스트 입력 창

Webform (4)

- <input type="checkbox">
  - 체크박스 입력
    - Checked를 속성에 입력하면, 초기상태가 선택된 상태가 됨

```html
HTML ▾
<html>
  <head>
    <title>로그인 폼</title>
  </head>
  <body>
    <h2> 체크 박스 </h2>
    <hr>
    <form>
      1학년 <input type="checkbox" value="1">
      2학년 <input type="checkbox" value="2" checked>
      3학년 <input type="checkbox" value="3">
      4학년 <input type="checkbox" value="4">
    </form>
  </body>
</html>
```

Output

체크 박스

1학년 ☐ 2학년 ☑ 3학년 ☐ 4학년 ☐

Webform (5)

- 시간 정보 입력
  - \<input type="month|week|date|time|datetime-local">

```
HTML ▾
<html>
  <head>
    <title>로그인 폼</title>
  </head>
  <body>
    <h2> 시간 정보 입력 </h2>
    <hr><br>
    original : 2021년 8월 19일 밤 9시 30분(30초 22)<br><br>

    <hr>
    <pre>
    month : <input type="month" value="2021-08"><br>
    week  : <input type="week" value="2021-W32"><br>
    date  : <input type="date" value="2021-08-19"><br>
    time  : <input type="time" value="21:30"><br>
    local : <input type="datetime-local"
                    value="2021-08-19T21:30:30.22"><br>

  </body>
</html>
```

Output 531px   Run with J

시간 정보 입력

original : 2021년 8월 19일 밤 9시 30분(30초 22)

month : 2021년 08월

week : 2021, 32번째 주

date : 2021-08-19

time : 오후 09:30

local : 2021-08-19 오후 09:30:30.220