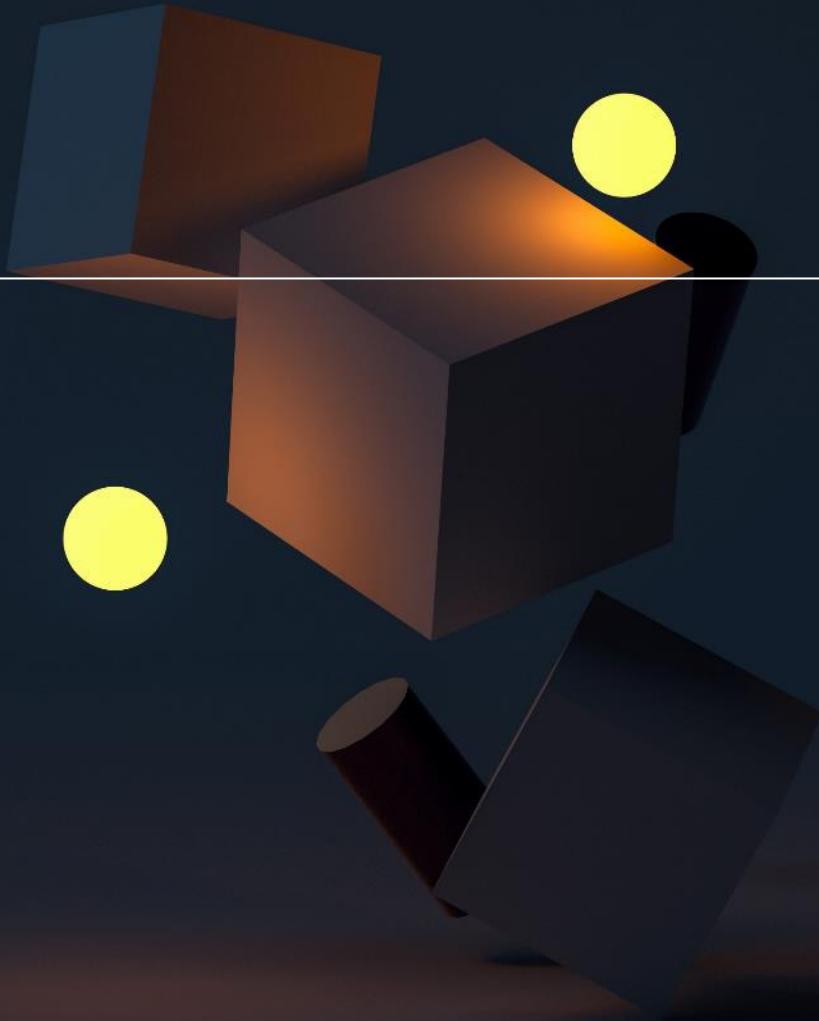
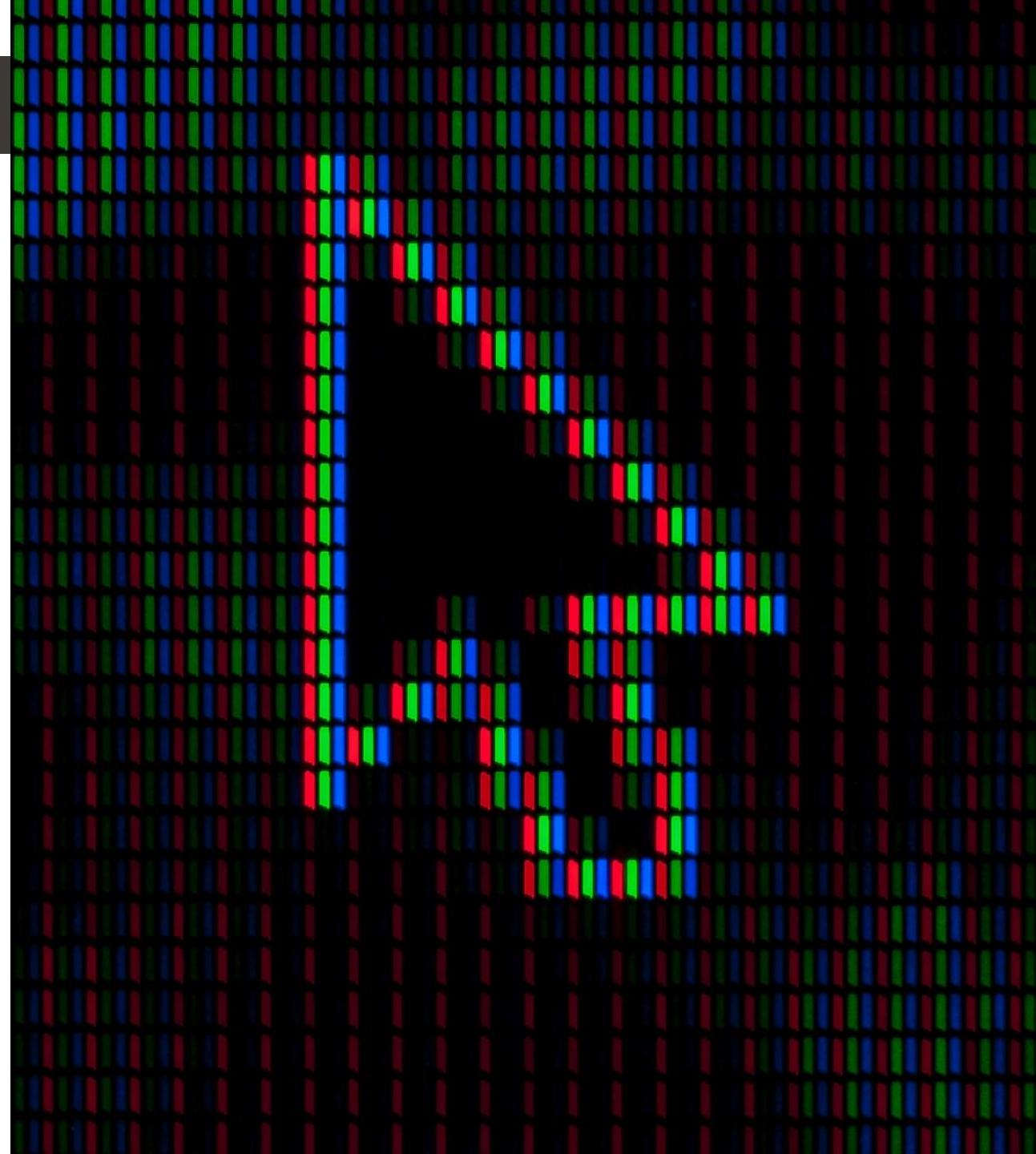

CSS3



목차

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- 2 CSS3 심화

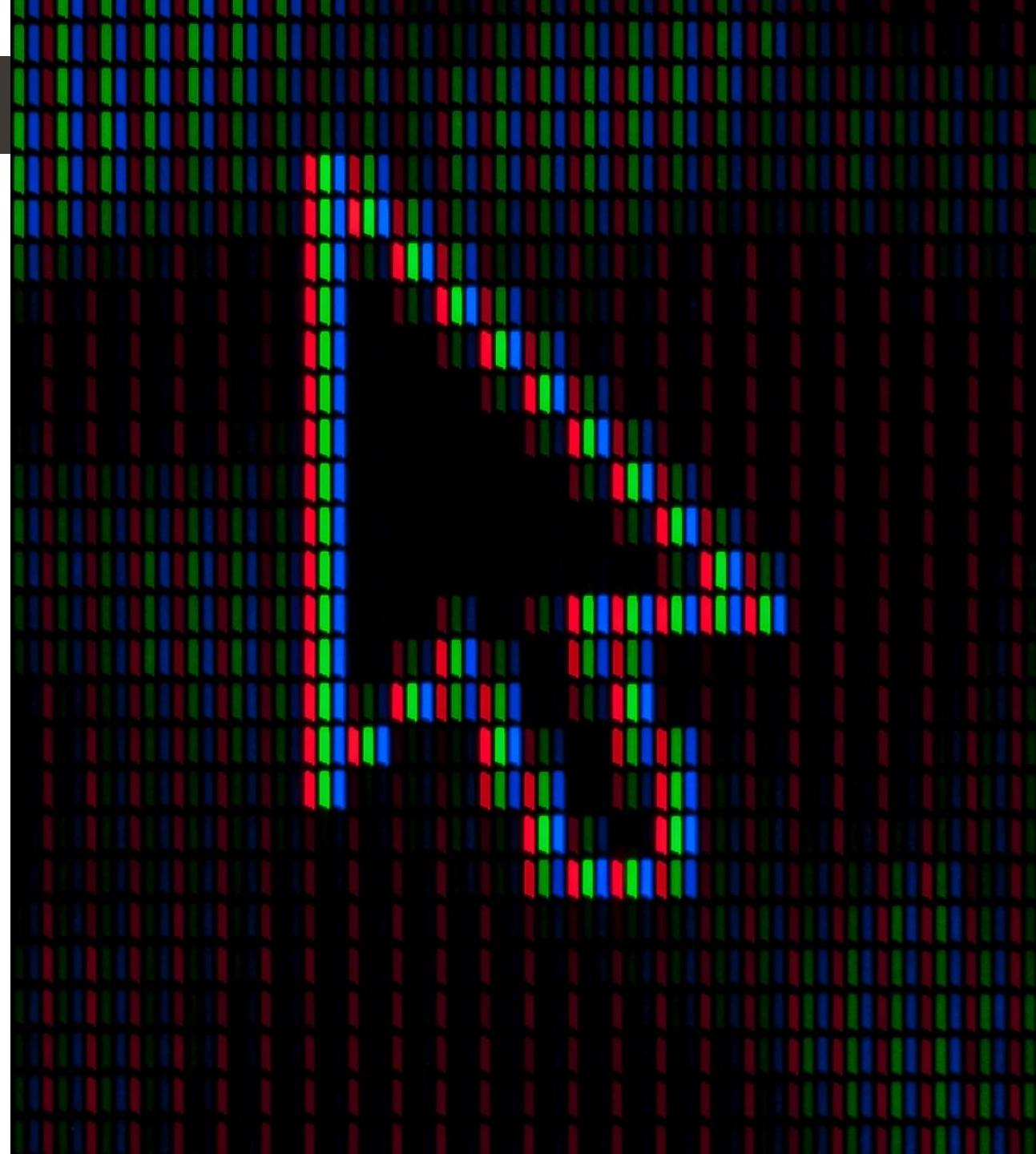


1

CSS3 기본

2

CSS3 심화



A close-up photograph of a person's hands holding a white smartphone. The person is wearing a white button-down shirt. The background is blurred.

선택자 기본

- CSS 블록

```
h1 { color: red; }
```

선택자 스타일 속성 스타일 값

The screenshot shows a browser window with developer tools open. On the left, the HTML structure of 'HTMLPage.html' is displayed:

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS3 Selector Basic</title>
    <style>
        h1 {
            color: red;
            background-color: orange;
        }
    </style>
</head>
<body>
    <h1>CSS3 Selector Basic</h1>
</body>
</html>
```

On the right, the browser preview shows a large red header with the text 'CSS3 Selector Basic'. The browser address bar shows the URL `http://127.0.0.1:3000/HTMLPage.html`.

- CSS 선택자

선택자 종류	선택자 종류
전체 선택자	동위 선택자
태그 선택자	구조 선택자
아이디 선택자	반응 선택자
클래스 선택자	상태 선택자
후손 선택자	링크 선택자
자손 선택자	문자 선택자
속성 선택자	부정 선택자

선택자 형태

*

설명

HTML 페이지 내부의 모든 태그를 선택

The screenshot shows a development environment with two panes. On the left is a code editor for 'HTMLPage.html' with the following content:

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS3 Selector Basic Page</title>
    <style>
        /* 모든 태그의 color 속성에 red 키워드를 적용합니다. */
        * { color: red; }
    </style>
</head>
<body>
    <h1>Lorem ipsum</h1>
    <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit. Suspendisse posuere, dolor non tempor ullamcorper, nisl elit facilisis erat, nec lacinia augue erat id lacus. Curabitur mollis, justo nec lobortis hendrerit, libero nunc aliquam lacus, ut tristique sem nunc eu metus. Quisque varius orci eu felis sollicitudin malesuada. Vivamus pretium ligula velit, eget facilisis enim imperdier ac.</p>
</body>
</html>
```

On the right is a browser window titled 'CSS3 Selector Basic Page' showing the rendered HTML. The entire page, including the title and all text content, is displayed in red.

Part 1

전체 선택자

The screenshot shows a browser window with two tabs. The left tab is titled 'HTMLPage.html' and contains the following HTML and JavaScript code:

```
2  <html>
3  <head>
6    <script>
8      $(document).ready(function () {
9        /* 모든 태그의 border 속성에 5px solid black을 적용합니다. */
10       $('*').css('border', '5px solid black');
11     });
12   </script>
13 </head>
14 <body>
15   <h1>Lorem ipsum</h1>
16   <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit. Suspendisse posuere, dolor non tempor ullamcorper, nisl elit facilisis erat, nec lacinia augue erat id lacus. Curabitur mollis, justo nec lobortis hendrerit, libero nunc aliquam lacus, ut tristique sem nunc eu metus. Quisque varius orci eu felis sollicitudin malesuada. Vivamus pretium ligula velit, eget facilisis enim imperdiet ac.
17 </body>
18 </html>
```

The right tab is titled 'CSS3 Selector Basic Page' and shows the rendered content. The entire page has a black border. The heading 'Lorem ipsum' and the paragraph below it are also enclosed in a black border.

The screenshot shows a browser window with the title 'CSS3 Selector Basic Page' and the URL '127.0.0.1:3000/HTMLPage.html'. The page content is identical to the one in the previous screenshot. To the right, the browser's developer tools are open, specifically the element inspector. The 'body' element is selected, and its style is shown in the properties panel:

```
<!DOCTYPE html>
<html style="border: 5px solid black;">
  <head style="border: 5px solid black;"></head>
  <body style="border: 5px solid black;">
    <h1 style="border: 5px solid black;">Lorem ipsum</h1>
    ... <p style="border: 5px solid black;"> = $0
      "Lorem ipsum dolor sit amet, consectetur adipiscing elit. Suspendisse sed nisi velit. Phasellus suscipit pellentesque leo, vel efficitur mi placerat sed. Fusce vel condimentum leo, at iaculis ante. Suspendisse posuere, dolor non tempor ullamcorper, nisl elit facilisis erat, nec lacinia augue erat id lacus. Curabitur mollis, justo nec lobortis hendrerit, libero nunc aliquam lacus, ut tristique sem nunc eu metus. Quisque varius orci eu felis sollicitudin malesuada. Vivamus pretium ligula velit, eget facilisis enim imperdiet ac."
    </p>
  </body>
</html>
```

The bottom of the developer tools interface shows various tabs like '스타일' (Style), '계산될' (Calculated), '레이아웃' (Layout), etc., and a search bar with the placeholder ':hover .cls + □'.

선택자 형태

설명

태그

특정한 태그를 선택

The screenshot illustrates the application of CSS selectors to specific tags. In the left panel, the browser's developer tools sidebar shows the HTML code:

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS3 Selector Basic Page</title>
    <style>
        /* h1 태그의 color 속성에 red 키워드를 적용합니다. */
        h1 { color: red; }

        /* p 태그의 color 속성에 blue 키워드를 적용합니다. */
        p { color: blue; }
    </style>
</head>
<body>
    <h1>Lorem ipsum dolor sit amet</h1>
    <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit. Suspendisse sed nisi velit. Phasellus suscipit pellentesque leo, vel efficitur mi placerat sed. Fusce vel condimentum leo, at iaculis ante. Suspendisse posuere, dolor non tempor ullamcorper, nisl elit facilisis erat, nec lacinia augue erat id lacus. Curabitur mollis, justo nec lobortis hendrerit, libero nunc aliquam lacus, ut tristique sem nunc eu metus. Quisque varius orci eu felis sollicitudin malesuada. Vivamus pretium ligula velit, eget facilisis enim imperdiet ac.

Nam enim sem, pulvinar sed nibh non, vestibulum suscipit dui. Vestibulum vitae sodales velit. Nam cursus, velit id semper malesuada, sem mauris iaculis diam, sit amet auctor ligula lectus in eros. Aliquam tincidunt semper odio, sit amet ornare neque tristique ut. Suspendisse placerat consequat lectus ut varius. Aliquam in ligula non massa auctor porta. Proin auctor mattis elit sit amet tincidunt. Cras auctor mauris augue, et volutpat diam iaculis vitae.


```

Part 1

아이디 선택자

선택자 형태

#아이디

설명

아이디 속성을 가지고 있는 태그를 선택

The screenshot shows a browser window with the URL <http://127.0.0.1:3000/HTMLPage.html>. The page content is:

```
<html>
  <head>
    <title>CSS3 Selector Basic Page</title>
    <style>
      /* id 속성값으로 header를 가지는 태그의 스타일을 지정합니다. */
      #header {
        width: 800px; margin: 0 auto;
        background: red;
      }

      /* id 속성값으로 wrap을 가지는 태그의 스타일을 지정합니다. */
      #wrap {
        width: 800px; margin: 0 auto;
        overflow: hidden;
      }

      /* id 속성값으로 aside를 가지는 태그의 스타일을 지정합니다. */
      #aside {
        width: 200px; float: left;
        background: blue;
      }

      /* id 속성값으로 content를 가지는 태그의 스타일을 지정합니다. */
      #content {
        width: 600px; float: left;
        background: green;
      }
    </style>
  </head>
  <body>
    <div id="header">
      <h1>Header</h1>
    </div>
    <div id="wrap">
      <div id="aside">
        <h1>Aside</h1>
      </div>
      <div id="content">
        <h1>Content</h1>
      </div>
    </div>
  </body>
</html>
```

The browser's developer tools are open, showing the source code of the page. The code is identical to the one shown above, with line numbers 1 through 44.

The screenshot shows a browser window with developer tools open. On the left, the 'source' tab displays the HTML code for 'HTMLPage.html'. The code includes a title, a style block with a comment explaining the use of the ID selector '#rint' to set the color of three elements to red, and three corresponding h1, h2, and h3 headings. On the right, the 'CSS3 Selector Basic Page' tab shows the rendered HTML with all three headings colored red. The browser's address bar indicates the page is at `http://127.0.0.1:3000/HTMLPage.html`.

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS3 Selector Basic Page</title>
    <style>
        /* id 속성값으로 rint를 가지는 태그의 color 속성에 red 키워드를 적용합니다. */
        #rint { color: red; }
    </style>
</head>
<body>
    <h1 id="rint">CSS3 Selector Basic</h1>
    <h2 id="rint">CSS3 Selector Basic</h2>
    <h3 id="rint">CSS3 Selector Basic</h3>
</body>
</html>
```

선택자 형태

.클래스

설명

특정한 클래스를 가지고 있는 태그를 선택

The screenshot shows a browser window with developer tools open. On the left, the HTML structure of 'HTMLPage.html' is displayed, showing an

 element with several - items. One item has the class 'select' applied to it. On the right, the resulting page 'CSS3 Selector Basic' is shown, where all - items are red, indicating they match the '.select' selector.

```
<!DOCTYPE html>
<html>
<head>
<title>CSS3 Selector Basic</title>
<style>
    /* class 속성값으로 select를 가지는 태그의 color 속성에 red 키워드를 적용합니다. */
    .select { color: red; }
</style>
</head>
<body>
<ul>
    <li class="select">Lorem ipsum</li>
    <li>Lorem ipsum</li>
    <li class="select">Lorem ipsum</li>
    <li>Lorem ipsum</li>
</ul>
</body>
</html>
```

source

HTTP://127.0.0.1:3000/HTMLPage.htm

- Lorem ipsum
- Lorem ipsum
- Lorem ipsum
- Lorem ipsum

포트: 3000

The screenshot shows a browser developer tools window with two panes. The left pane displays the source code of an HTML file named 'HTMLPage.html'. The right pane shows the rendered output of the CSS styles applied to the HTML elements.

HTML Source:

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS3 Selector Basic</title>
    <style>
        /* class 속성값으로 item을 가지는 태그의 color 속성을 red 키워드로 적용합니다. */
        .item { color: red; }

        /* class 속성값으로 header를 가지는 태그의
           background-color 속성에 blue 키워드를 적용합니다. */
        .header { background-color: blue; }
    </style>
</head>
<body>
    <h1 class="item header">Lorem ipsum</h1>
</body>
</html>
```

Rendered Output:

The rendered output shows a single

element with the class "item header". The text "Lorem ipsum" is displayed in red, and the entire element has a blue background color.

Header bar: source, CSS3 Selector Basic, http://127.0.0.1:3000/HTMLPage.html

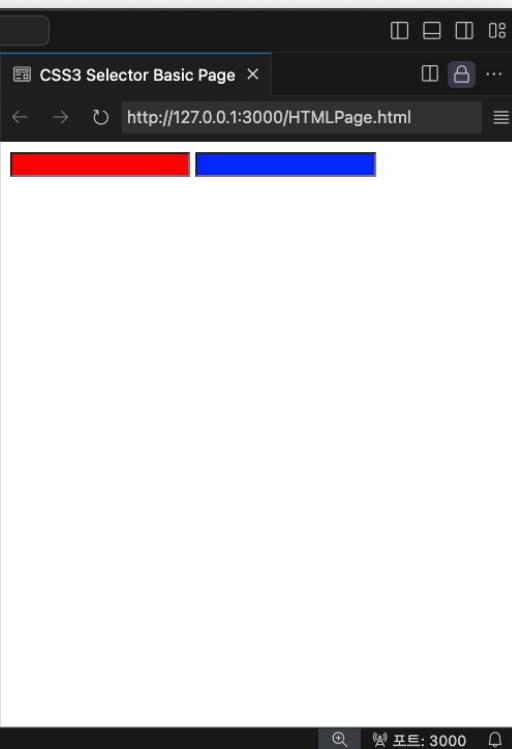
The screenshot shows a browser developer tools window with the following details:

- Left Panel (HTML Tree):** Shows the structure of the HTML document. The root node is `HTMLPage.html`. It contains an `html` element, which has a `head` and a `body`. The `head` contains a `title` and a `style` block. The `style` block contains CSS rules for the `select` class.
- Source Editor:** Displays the `HTMLPage.html` file with numbered lines. The relevant code is:

```
1  <!DOCTYPE html>
2  <html>
3  <head>
4      <title>CSS3 Selector Basic</title>
5      <style>
6          /* li 태그 중 class 속성값으로 select를 가지는 태그의
7             color 속성을 red 키워드를 적용합니다. */
8          li.select { color: red; }
9      </style>
10 </head>
11 <body>
12     <h1 class="select">Lorem ipsum</h1>
13     <ul>
14         <li class="select">Lorem ipsum</li>
15         <li>Lorem ipsum</li>
16         <li>Lorem ipsum</li>
17         <li>Lorem ipsum</li>
18     </ul>
19 </body>
20 </html>
```
- Right Panel (Preview):** Shows the rendered HTML page with the title "CSS3 Selector Basic". The `h1` tag is black. The `ul` list items are all red, as they all have the `select` class applied via the CSS selector in the `style` block.
- Bottom Status Bar:** Shows the file path `HTMLPage.html`, the date `2023. 7. 8`, character encoding `UTF-8`, line endings `CRLF`, and the port number `3000`.

속성 선택자 > 기본 속성 선택자

선택자 형태	설명
선택자[속성]	특정한 속성이 있는 태그를 선택
선택자[속성=값][속성=값]	특정한 속성 안의 값이 특정 값과 같은 문서 객체를 선택



The screenshot shows a browser window titled "CSS3 Selector Basic Page" displaying the content of "HTMLPage.html". The page contains a title and a style block. The style block uses attribute selectors to set the background color of input fields based on their type attribute. It sets the background of text input fields to red and the background of password input fields to blue.

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS3 Selector Basic Page</title>
    <style>
        /* input 태그 중에서 type 속성값을 text로 가지는 태그의
           background 속성에 red 키워드를 적용합니다. */
        input[type=text] { background: red; }
        /* input 태그 중에서 type 속성값을 password로 가지는 태그의
           background 속성에 blue 키워드를 적용합니다. */
        input[type=password] { background: blue; }
    </style>
</head>
<body>
    <form>
        <input type="text" />
        <input type="password" />
    </form>
</body>
</html>
```

The screenshot shows a browser developer tools window with two panes. The left pane displays the source code of an HTML file named 'HTMLPage.html'. The code includes a title, a style block with a CSS selector 'input[type=text]', and a form containing two input fields. The right pane shows the rendered HTML page with a blue background color applied to the second input field.

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS3 Selector Basic Page</title>
    <style>
        /* input 태그 중에서 type 속성값을 text로 가지는 태그의
           background 속성에 blue 키워드를 적용합니다. */
        input[type=text] { background: blue; }
    </style>
</head>
<body>
    <form>
        <input />
        <input type="text" />
    </form>
</body>
</html>
```

속성 선택자 > 문자열 속성 선택자

선택자 형태	설명
선택자[속성~=값]	속성 안의 값이 특정 값을 단어로 포함하는 태그를 선택
선택자[속성 =값]	속성 안의 값이 특정 값을 단어로 포함하는 태그를 선택
선택자[속성^=값]	속성 안의 값이 특정 값으로 시작하는 태그를 선택
선택자[속성\$=값]	속성 안의 값이 특정 값으로 끝나는 태그를 선택
선택자[속성*=값]	속성 안의 값이 특정 값을 포함하는 태그를 선택

Part 1

속성 선택자 > 문자열 속성 선택자

The screenshot shows a browser window with developer tools open. On the left, the 'source' tab displays the HTML code for 'HTMLPage.html'. The code includes a title, a style block with CSS3 selectors for 'img' tags based on their 'src' attribute values ('png', 'jpg', 'gif'), and a body containing three 'img' tags with specified widths and heights. On the right, the 'CSS3 Selector Basic' tab shows the rendered HTML with three book covers. The first book cover for 'JavaScript + jQuery' is highlighted with a red border, demonstrating the effect of the selector `img[src$=png]`.

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS3 Selector Basic</title>
    <style>
        /* img 태그 중에서 src 속성값이 png로 끝나는 태그의
           border 속성에 3px solid red를 적용합니다. */
        img[src$=png] { border: 3px solid red; }
        /* img 태그 중에서 src 속성값이 jpg로 끝나는 태그의
           border 속성에 3px solid green을 적용합니다. */
        img[src$=jpg] { border: 3px solid green; }
        /* img 태그 중에서 src 속성값이 gif로 끝나는 태그의
           border 속성에 3px solid blue를 적용합니다. */
        img[src$=gif] { border: 3px solid blue; }
    </style>
</head>
<body>
    
    
    
</body>
</html>
```

Part 1

후손 선택자와 자손 선택자

```
1 <!DOCTYPE html>
2 <html>
3 <head>
4   <title>CSS3 Selector Basic</title>
5   <style>
6     ...
7   </style>
8 </head>
9 <body>
10  <div>
11    <h1>CSS3 Selector Basic</h1>
12    <h2>Lorem ipsum</h2>
13    <ul>
14      <li>universal selector</li>
15      <li>type selector</li>
16      <li>id & class selector</li>
17    </ul>
18  </div>
19 </body>
20 </html>
```

Diagram illustrating CSS3 Selector Basic:

- The **div** element is the parent node.
- The **h1**, **h2**, and **ul** elements are its **children**.
- The **ul** element has three **children**: **li**, **li**, and **li**.
- The **li** elements under the **ul** are labeled **자손** (children).
- The **li** elements themselves are labeled **후손** (descendants).

선택자 형태

선택자A 선택자B

설명

선택자A의 후손에 위치하는 선택자B를 선택

The screenshot shows a browser window with developer tools open. On the left, the HTML and CSS code for 'HTMLPage.html' is displayed. The CSS contains two rules:

```
/* id 속성값으로 header를 가지는 태그의 후손 위치에 있는 h1 태그의
   color 속성에 red 키워드를 적용합니다. */
#header h1 { color: red; }

/* id 속성값으로 section을 가지는 태그의 후손 위치에 있는 h1 태그의
   color 속성에 orange 키워드를 적용합니다. */
#section h1 { color: orange; }
```

On the right, the rendered HTML output is shown. It consists of three main sections: a header with a red title, a navigation section with an orange title, and a content section with an orange title. The content section also contains a paragraph of placeholder text.

HTML code (HTMLPage.html):

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS3 Selector Basic</title>
    <style>
        /* id 속성값으로 header를 가지는 태그의 후손 위치에 있는 h1 태그의
           color 속성에 red 키워드를 적용합니다. */
        #header h1 { color: red; }

        /* id 속성값으로 section을 가지는 태그의 후손 위치에 있는 h1 태그의
           color 속성에 orange 키워드를 적용합니다. */
        #section h1 { color: orange; }
    </style>
</head>
<body>
    <div id="header">
        <h1 class="title">Lorem ipsum</h1>
        <div id="nav">
            <h1>Navigation</h1>
        </div>
    </div>
    <div id="section">
        <h1 class="title">Lorem ipsum</h1>
        <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit. Suspendisse sed nunc eu metus. Quisque varius orci eu felis sollicitudin malesuada. Vivamus pretium ligula velit, eget facilisis enim imperdiet ac.</p>
    </div>
</body>
</html>
```

CSS3 Selector Basic (Rendered Output):

Lore ipsum

Navigation

Lore ipsum

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Suspendisse sed nisi velit. Phasellus suscipit pellentesque leo, vel efficitur mi placerat sed. Fusce vel condimentum leo, at iaculis ante. Suspendisse posuere, dolor non tempor ullamcorper, nisi elit facilisis erat, nec lacinia augue erat id lacus. Curabitur mollis, justo nec lobortis hendrerit, libero nunc aliquam lacus, ut tristique sem nunc eu metus. Quisque varius orci eu felis sollicitudin malesuada. Vivamus pretium ligula velit, eget facilisis enim imperdiet ac.

선택자 형태

선택자A > 선택자B

설명

선택자A의 자손에 위치하는 선택자B를 선택

The screenshot shows a browser window with developer tools open. On the left, the 'source' tab displays the HTML and CSS code for 'HTMLPage.html'. The CSS contains two rules using the child selector (>):

```
/* id 속성값으로 header를 가지는 태그의 자손 위치에 있는 h1 태그의
   color 속성에 red 키워드를 적용합니다. */
#header > h1 { color: red; }

/* id 속성값으로 section을 가지는 태그의 자손 위치에 있는 h1 태그의
   color 속성에 orange 키워드를 적용합니다. */
#section > h1 { color: orange; }
```

On the right, the 'CSS3 Selector Basic' tab shows the rendered HTML output. It features three

elements:

- An

element under the element is colored red.
- An

element under the element is colored orange.
- A third

element under the element is colored red.

The rendered text content includes "Lorem ipsum" repeated in red and orange, and a long paragraph of placeholder text in black.

Part 1

자손 선택자

The screenshot shows a browser developer tools window with two main panes. The left pane displays the HTML code of a file named 'HTMLPage.html'. The right pane shows the rendered HTML and the corresponding DOM tree.

HTML Code:

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS3 Selector Basic</title>
    <style>
        /* table 태그 아래의 tr 태그 아래 th 태그의 color 속성에 red 키워드를 적용합니다. */
        table > tr > th {
            color: red;
        }
    </style>
</head>
<body>
    <table border="1">
        <tr>
            <th>Name</th>
            <th>Region</th>
        </tr>
        <tr>
            <td>윤인성</td>
            <td>서울특별시 강서구 내발산동</td>
        </tr>
    </table>
</body>
</html>
```

Rendered HTML:

Name	Region
윤인성	서울특별시 강서구 내발산동

DOM Tree:

```
<table border="1">
  <tbody> == $0
    <tr>
      <th>Name</th>
      <th>Region</th>
    </tr>
    ▶ <tr> ... </tr>
  </tbody>
</table>
```

선택자 형태	설명
선택자A + 선택자B	선택자A 바로 뒤에 위치하는 선택자B를 선택
선택자A ~ 선택자B	선택자A 뒤에 위치하는 선택자B를 선택

The screenshot shows a browser window with developer tools open. On the left, the element inspector displays an HTML tree structure. At the top level is the body element, which contains an ul element. The ul element contains three li elements. To the right of the element inspector is the source code of the HTML file:

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS3 Selector Basic</title>
    <style>
        ul {
            list-style-type: none;
        }
        li {
            background-color: #f0f0f0;
            padding: 5px;
        }
    </style>
</head>
<body>
    <ul>
        <li>CSS3 Selector Basic</li>
        <li>CSS3 Selector Basic</li>
        <li>CSS3 Selector Basic</li>
    </ul>
</body>
</html>
```

The source code includes CSS rules for the ul and li elements. The browser's status bar at the bottom shows the port number 3000.

The screenshot shows a browser developer tools window with two tabs: 'HTMLPage.html' and 'CSS3 Selector Basic'.

HTMLPage.html:

```
1 <!DOCTYPE html>
2 <html>
3 <head>
4     <title>CSS3 Selector Basic</title>
5     <style>
6         /* h1 태그 바로 뒤에 위치하는 h2 태그의 color 속성에 red 키워드를 적용합니다. */
7         h1 + h2 { color: red; }
8
9         /* h1 태그 뒤에 위치하는 h2 태그의
10            background-color 속성에 orange 키워드를 적용합니다. */
11         h1 ~ h2 { background-color: orange; }
12     </style>
13 </head>
14 <body>
15     <h1>Header - 1</h1>
16     <h2>Header - 2</h2>
17     <h2>Header - 2</h2>
18     <h2>Header - 2</h2>
19     <h2>Header - 2</h2>
20 </body>
21 </html>
```

CSS3 Selector Basic:

Header - 1

Header - 2

Header - 2

Header - 2

Header - 2

선택자 형태	설명
:active	사용자가 마우스로 클릭한 태그를 선택
:hover	사용자가 마우스를 올린 태그를 선택

The screenshot shows a browser window with developer tools open. On the left, the HTML code of 'HTMLPage.html' is displayed:

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS3 Selector Basic</title>
    <style>
        /* h1 태그에 마우스를 올릴 경우에
           color 속성에 red 키워드를 적용합니다. */
        h1:hover { color: red; }

        /* h1 태그를 마우스로 클릭할 때
           color 속성에 blue 키워드를 적용합니다. */
        h1:active { color: blue; }
    </style>
</head>
<body>
    <h1>User Action Selector</h1>
</body>
</html>
```

On the right, the browser window displays the page with three 'User Action Selector' headings. The first heading is red, the second is blue, and the third is black. Red callout boxes with the text '커서 올리기' (Move cursor) point to the second heading. A blue callout box with the text '클릭' (Click) points to the third heading.

선택자 형태	설명
:checked	체크 상태의 input 태그를 선택
:focus	초점이 맞추어진 input 태그를 선택
:enabled	사용 가능한 input 태그를 선택
:disabled	사용 불가능한 input 태그를 선택

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS3 Selector Basic</title>
    <style>
        input[value="disabled"] {
            color: gray;
        }
    </style>
</head>
<body>
    <input value="enabled">
    <input value="disabled" disabled="disabled" />
</body>
</html>
```

Part 1

상태 선택자

The screenshot shows a browser developer tools window with two panes. The left pane displays the source code of an HTML file named 'HTMLPage.html'. The right pane shows the rendered output of the CSS3 state selectors applied to input elements.

Source Code (HTMLPage.html):

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS3 Selector Basic</title>
    <style>
        /* input 태그가 사용 가능할 경우에
           background-color 속성에 white 키워드를 적용합니다. */
        input:enabled { background-color: white; }

        /* input 태그가 사용 불가능할 경우에
           background-color 속성에 gray 키워드를 적용합니다. */
        input:disabled { background-color: gray; }

        /* input 태그에 초점이 맞춰진 경우에
           background-color 속성에 orange 키워드를 적용합니다. */
        input:focus { background-color: orange; }
    </style>
</head>
<body>
    <h2>Enabled</h2>
    <input />
    <h2>Disabled</h2>
    <input disabled="disabled" />
</body>
</html>
```

Rendered Output:

The rendered output shows two sections: 'Enabled' and 'Disabled'. The 'Enabled' section contains a single input field with a white background color. The 'Disabled' section contains a single input field with a gray background color.

Part 1

상태 선택자

The screenshot shows a browser window with developer tools open. On the left, the HTML code is displayed:

```
1  <!DOCTYPE html>
2  <html>
3  <head>
4      <title>CSS3 Selector Basic</title>
5      <style>
6          /* input 태그의 type 속성값이 checkbox인 태그가 체크되었을 때
   바로 뒤에 위치하는 div 태그의 height 속성에 0픽셀을 적용합니다. */
7          input[type=checkbox]:checked + div {
8              height: 0px;
9          }
10         div {
11             overflow: hidden;
12             width: 650px; height: 300px;
13             /* 변화 효과를 적용합니다. */
14             -ms-transition-duration: 1s;
15             -webkit-transition-duration: 1s;
16             -moz-transition-duration: 1s;
17             transition-duration: 1s;
18         }
19     </style>
20 </head>
21 <body>
22     <input type="checkbox" />
23     <div>
24         <h1>Lorem ipsum</h1>
25         <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit. Suspendisse s
26     </div>
27 </body>
28 </html>
```

The right side shows the browser preview and the developer tools panel. The preview shows the word "Lorem ipsum" in bold. Below it, a smaller box contains a checked checkbox with a blue checkmark and the text "Iorem incum". The developer tools panel title is "CSS3 Selector Basic X". The URL in the address bar is "http://127.0.0.1:3000/HTMLPage.html".

선택자 형태	설명
:first-child	형제 관계 중에서 첫 번째에 위치하는 태그를 선택
:last-child	형제 관계 중에서 마지막에 위치하는 태그를 선택
:nth-child(수열)	형제 관계 중에서 앞에서 수열 번째에 태그를 선택
:nth-last-child(수열)	형제 관계 중에서 뒤에서 수열 번째에 태그를 선택

Part 1

구조 선택자 > 일반 구조 선택자

The screenshot shows a browser developer tools window with two main panes. The left pane displays the source code of `HTMLPage.html`, and the right pane shows the rendered HTML output.

Source Code (HTMLPage.html):

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS3 Selector Basic</title>
    <style>
        ul { overflow: hidden; }
        li {
            list-style: none;
            float: left; padding: 15px;
        }
        li:first-child { border-radius: 10px 0 0 10px; }
        li:last-child { border-radius: 0 10px 10px 0; }
        li:nth-child(2n) { background-color: #FF0003; }
        li:nth-child(2n+1) { background-color: #800000; }
    </style>
</head>
<body>
    <ul>
        <li>First</li>
        <li>Second</li>
        <li>Third</li>
        <li>Fourth</li>
        <li>Fifth</li>
        <li>Sixth</li>
        <li>Seventh</li>
    </ul>
</body>
</html>
```

Renders:

The rendered output shows a horizontal list of seven items: First, Second, Third, Fourth, Fifth, Sixth, and Seventh. The items alternate in background color: dark red for odd-numbered items (First, Third, Fifth, Seventh) and bright red for even-numbered items (Second, Fourth, Sixth). The first item has rounded corners on its top-left and bottom-right edges, while the last item has rounded corners on its top-right and bottom-left edges.

Part 1

구조 선택자 > 일반 구조 선택자

The screenshot shows a browser window with two tabs. The left tab is titled "HTMLPage.html" and contains the following HTML and CSS code:

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS3 Selector Basic Page</title>
    <style>
        li > a:first-child { color: red; }
    </style>
</head>
<body>
    <ul>
        <li><a href="#">Condrasa</a></li>
        <li><a href="#">Condrasa</a></li>
        <li><a href="#">Condrasa</a></li>
        <li><a href="#">Condrasa</a></li>
        <li><a href="#">Condrasa</a></li>
    </ul>
</body>
</html>
```

The right tab is titled "CSS3 Selector Basic Page" and shows the rendered output of the page at <http://127.0.0.1:3000/HTMLPage.html>. It displays a list of five items, each containing the text "Condrasa" in red.

This screenshot is identical to the one above, showing the same HTML code in the left tab and the rendered list of "Condrasa" items in red in the right tab. The browser interface includes status bars at the bottom indicating file counts (줄 18, 열 8), carriage returns (공백: 4), and encoding (UTF-8).

구조 선택자 > 형태 구조 선택자

선택자 형태	설명
:first-of-type	형제 관계 중에서 첫 번째로 등장하는 특정 태그를 선택
:last-of-type	형제 관계 중에서 마지막으로 등장하는 특정 태그를 선택
:nth-of-type(수열)	형제 관계 중에서 앞에서 수열 번째로 등장하는 특정 태그를 선택
:nth-last-of-type(수열)	형제 관계 중에서 뒤에서 수열 번째로 등장하는 특정 태그를 선택

Part 1

구조 선택자 > 형태 구조 선택자

The screenshot shows a code editor on the left and a browser window on the right. The code editor displays the following HTML and CSS:

```
<!DOCTYPE html>
<html>
  <head>
    <title>CSS3 Selector Basic Page</title>
    <style>
      h1:first-of-type { color: red; }
      h2:first-of-type { color: red; }
      h3:first-of-type { color: red; }
    </style>
  </head>
  <body>
    <h1>Header - 1</h1>
    <h2>Header - 2</h2>
    <h3>Header - 3</h3>
    <h3>Header - 3</h3>
    <h2>Header - 2</h2>
    <h1>Header - 1</h1>
  </body>
</html>
```

The browser window shows the rendered page with the following headers:

- Header - 1 (red)
- Header - 2 (red)
- Header - 3 (red)
- Header - 3 (black)
- Header - 2 (black)
- Header - 1 (black)

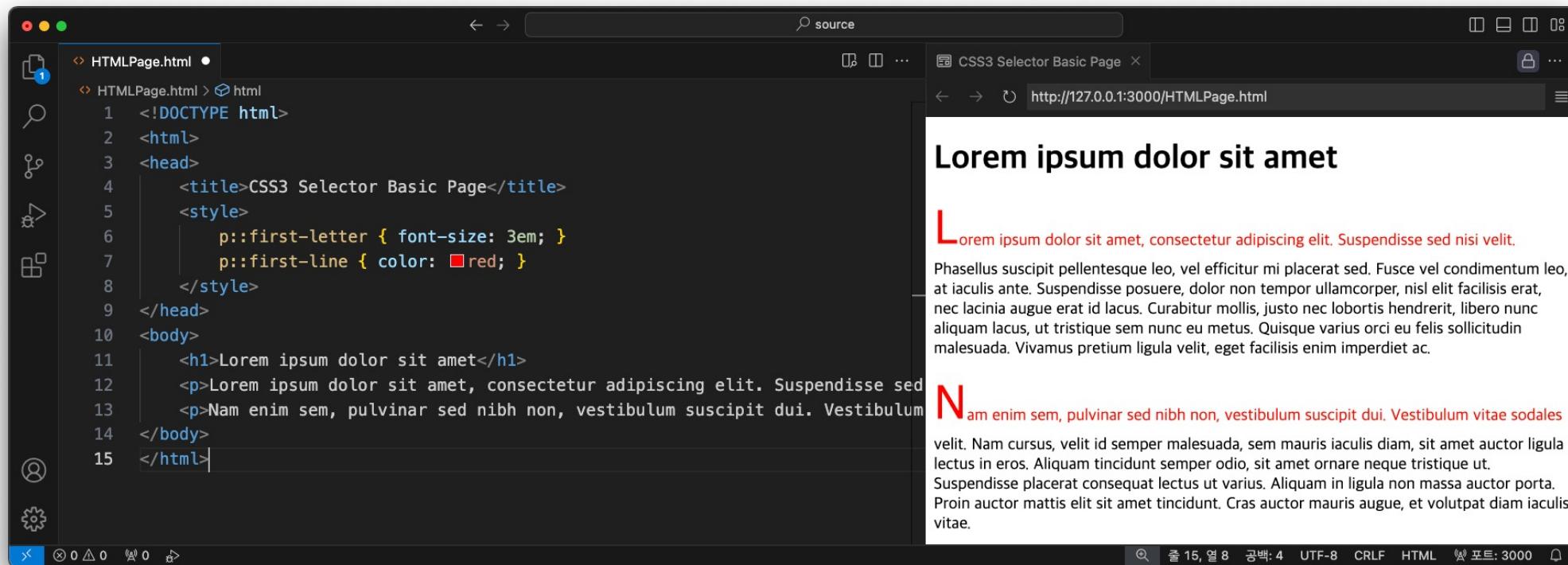
The screenshot shows a code editor on the left and a browser window on the right. The code editor displays the following HTML and CSS:

```
<!DOCTYPE html>
<html>
  <head>
    <title>CSS3 Selector Basic Page</title>
    <style>
      body > *:first-of-type { color: red; }
    </style>
  </head>
  <body>
    <h1>Header - 1</h1>
    <h2>Header - 2</h2>
    <h3>Header - 3</h3>
    <h4>Header - 4</h4>
    <h5>Header - 5</h5>
    <h6>Header - 6</h6>
  </body>
</html>
```

The browser window shows the rendered page with the following headers:

- Header - 1 (red)
- Header - 2 (red)
- Header - 3 (red)
- Header - 4 (red)
- Header - 5 (red)
- Header - 6 (red)

선택자 형태	설명
:first-letter	첫 번째 글자를 선택
:first-line	첫 번째 줄을 선택



The screenshot shows a browser window with developer tools open. On the left, the 'source' tab displays the HTML and CSS code. The CSS includes rules for `p::first-letter` (font-size: 3em) and `p::first-line` (color: red). The right side shows the rendered page with the text "Lorem ipsum dolor sit amet". The first letter 'L' is large and black, while the rest of the first line is red.

```

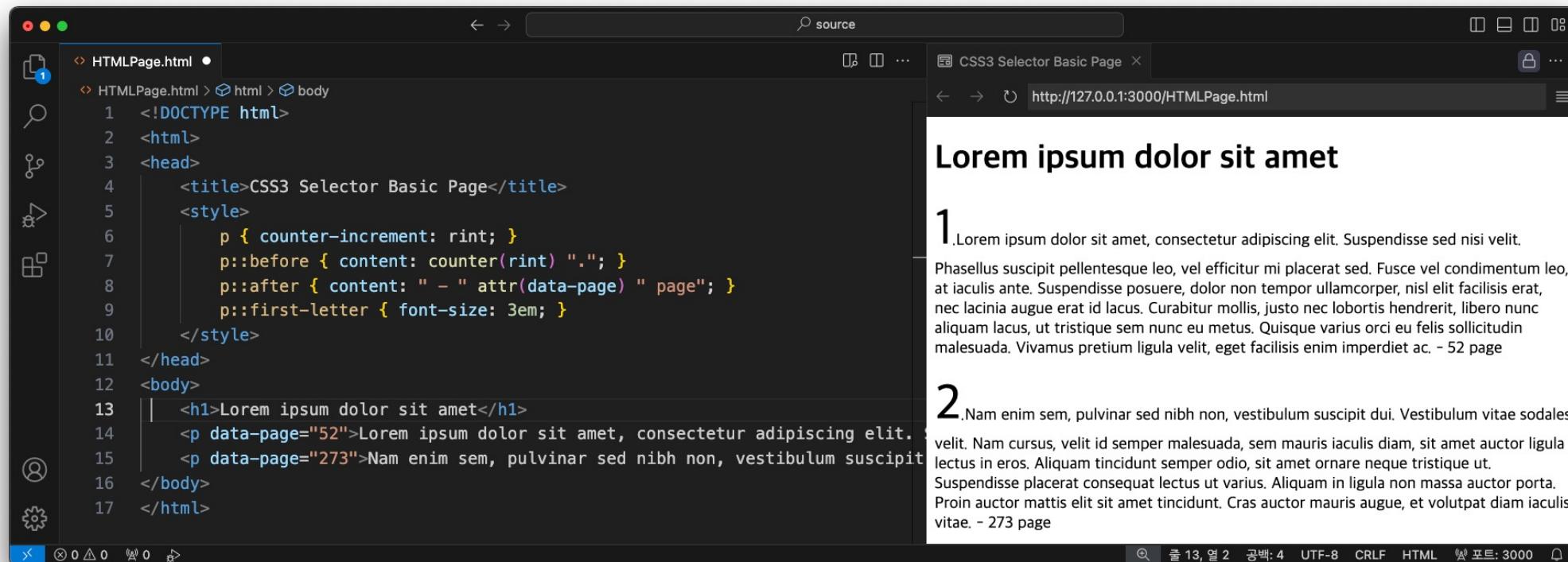
<!DOCTYPE html>
<html>
<head>
    <title>CSS3 Selector Basic Page</title>
    <style>
        p::first-letter { font-size: 3em; }
        p::first-line { color: red; }
    </style>
</head>
<body>
    <h1>Lorem ipsum dolor sit amet</h1>
    <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit. Suspendisse sed
        <p>Nam enim sem, pulvinar sed nibh non, vestibulum suscipit dui. Vestibulum
    </body>
</html>

```

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Suspendisse sed nisi velit. Phasellus suscipit pellentesque leo, vel efficitur mi placerat sed. Fusce vel condimentum leo, at iaculis ante. Suspendisse posuere, dolor non tempor ullamcorper, nisl elit facilisis erat, nec lacinia augue erat id lacus. Curabitur mollis, justo nec lobortis hendrerit, libero nunc aliquam lacus, ut tristique sem nunc eu metus. Quisque varius orci eu felis sollicitudin malesuada. Vivamus pretium ligula velit, eget facilisis enim imperdiet ac.

Nam enim sem, pulvinar sed nibh non, vestibulum suscipit dui. Vestibulum vitae sodales velit. Nam cursus, velit id semper malesuada, sem mauris iaculis diam, sit amet auctor ligula lectus in eros. Aliquam tincidunt semper odio, sit amet ornare neque tristique ut. Suspendisse placerat consequat lectus ut varius. Aliquam in ligula non massa auctor porta. Proin auctor mattis elit sit amet tincidunt. Cras auctor mauris augue, et volutpat diam iaculis vitae.

선택자 형태	설명
:after	태그 뒤에 위치하는 공간을 선택
:before	태그 앞에 위치하는 공간을 선택



The screenshot shows a browser window with developer tools open. On the left, the 'source' tab displays the HTML and CSS code. The CSS includes rules for `p`, `p::before`, `p::after`, and `p::first-letter`. On the right, the 'CSS3 Selector Basic Page' tab shows the rendered HTML with numbered list items. The first item contains text from the `p` element and its `::before` pseudo-element. The second item contains text from the `p` element and its `::after` pseudo-element.

```

<!DOCTYPE html>
<html>
<head>
    <title>CSS3 Selector Basic Page</title>
    <style>
        p { counter-increment: rint; }
        p::before { content: counter(rint) "."; }
        p::after { content: " - " attr(data-page) " page"; }
        p::first-letter { font-size: 3em; }
    </style>
</head>
<body>
    <h1>Lorem ipsum dolor sit amet</h1>
    <p data-page="52">Lorem ipsum dolor sit amet, consectetur adipiscing elit.
    <p data-page="273">Nam enim sem, pulvinar sed nibh non, vestibulum suscipit
    </body>
</html>

```

1. Lorem ipsum dolor sit amet, consectetur adipiscing elit. Suspendisse sed nisi velit. Phasellus suscipit pellentesque leo, vel efficitur mi placerat sed. Fusce vel condimentum leo, at iaculis ante. Suspendisse posuere, dolor non tempor ullamcorper, nisl elit facilisis erat, nec lacinia augue erat id iacus. Curabitur mollis, justo nec lobortis hendrerit, libero nunc aliquam lacus, ut tristique sem nunc eu metus. Quisque varius orci eu felis sollicitudin malesuada. Vivamus pretium ligula velit, eget facilisis enim imperdiet ac. - 52 page

2. Nam enim sem, pulvinar sed nibh non, vestibulum suscipit dui. Vestibulum vitae sodales velit. Nam cursus, velit id semper malesuada, sem mauris iaculis diam, sit amet auctor ligula lectus in eros. Aliquam tincidunt semper odio, sit amet ornare neque tristique ut. Suspendisse placerat consequat lectus ut varius. Aliquam in ligula non massa auctor porta. Proin auctor mattis elit sit amet tincidunt. Cras auctor mauris augue, et volutpat diam iaculis vitae. - 273 page

문자 선택자 > 전후 문자 선택자

The screenshot shows a browser window with developer tools open. The left panel displays the DOM tree for a file named "HTMLPage.html". The right panel shows the source code of the same file.

```
<!DOCTYPE html>
<html>
<head>
<title>jQuery Mobile</title>
<meta name="viewport" content="width=device-width, initial-scale=1" />
<link rel="stylesheet"
      href="http://code.jquery.com/mobile/1.4.4/jquery.mobile-1.4.4.min.css" />
<script src="http://code.jquery.com/jquery-1.11.1.min.js"></script>
<script src="http://code.jquery.com/mobile/1.4.4/jquery.mobile-1.4.4.min.js">
</script>
</head>
<body>
<div data-role="page">
    <div data-role="header" data-theme="b">
        <h1>HTML5</h1>
    </div>
    <div data-role="content">
        <ul data-role="listview">
            <li data-role="list-divider">HTML5</li>
            <li>Multimedia</li>
            <li>Connectivity</li>
            <li>Device Access</li>
            <li data-role="list-divider">CSS3</li>
            <li>Animation</li>
            <li>3D Transform</li>
        </ul>
    </div>
</div>
</body>
</html>
```

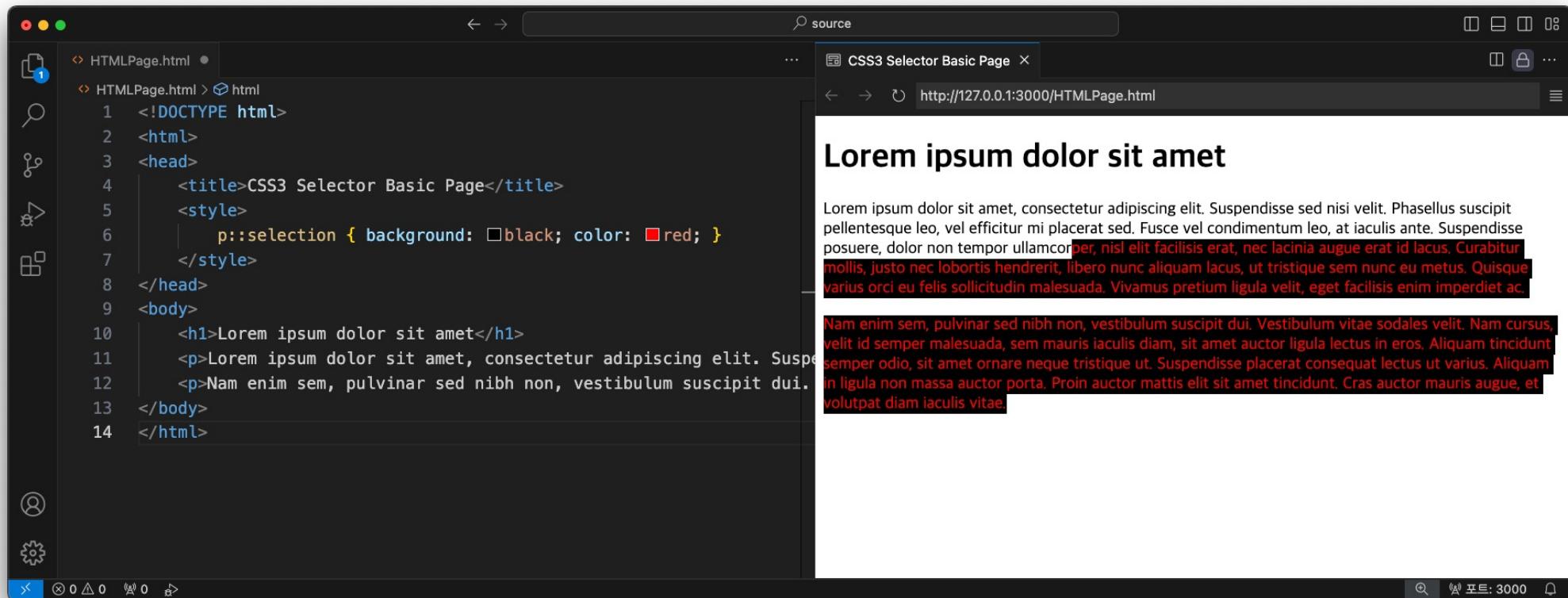
The source code is color-coded, with "HTML5" appearing in blue and "Multimedia", "Connectivity", "Device Access", "CSS3", "Animation", and "3D Transform" appearing in orange. The browser title bar shows "jQuery Mobile" and the URL "http://127.0.0.1:3002/HTMLPage.html". The status bar at the bottom indicates the date and time as "Jul 25, 17:38" and the port number as "포트: 3002".

선택자 형태

:selection

설명

사용자가 드래그한 글자를 선택



```
<!DOCTYPE html>
<html>
<head>
    <title>CSS3 Selector Basic Page</title>
    <style>
        p::selection { background: black; color: red; }
    </style>
</head>
<body>
    <h1>Lorem ipsum dolor sit amet</h1>
    <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit. Suspendisse posuere, dolor non tempor ullamcorper, nisl elit facilisis erat, nec lacinia augue erat id lacus. Curabitur mollis, justo nec lobortis hendrerit, libero nunc aliquam lacus, ut tristique sem nunc eu metus. Quisque varius orci eu felis sollicitudin malesuada. Vivamus pretium ligula velit, eget facilisis enim imperdiet ac, Nam enim sem, pulvinar sed nibh non, vestibulum suscipit dui. In ligula non massa auctor porta. Proin auctor mattis elit sit amet tincidunt. Cras auctor mauris augue, et volutpat diam iaculis vitae.</p>
</body>
</html>
```

선택자 형태	설명
:link	href 속성을 가지고 있는 a 태그를 선택
:visited	방문했던 링크를 가지고 있는 a 태그를 선택

The screenshot shows a browser window with developer tools open. The left pane is the 'source' editor containing the following HTML and CSS code:

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS3 Selector Basic</title>
    <style>
        a { text-decoration: none; }
        a:visited { color: red; }
        /* href 속성을 가지고 있는 a 태그 뒤의 공간에
           "- (href 속성)"을 추가합니다. */
        a:link::after { content: ' - ' attr(href); }
    </style>
</head>
<body>
    <h1><a>Nothing</a></h1>
    <h1><a href="http://hanbit.co.kr">Hanbit Media</a></h1>
    <h1><a href="https://github.com/">Github</a></h1>
</body>
</html>
```

The right pane shows the rendered HTML output:

Nothing

[Hanbit Media - http://hanbit.co.kr](http://hanbit.co.kr)

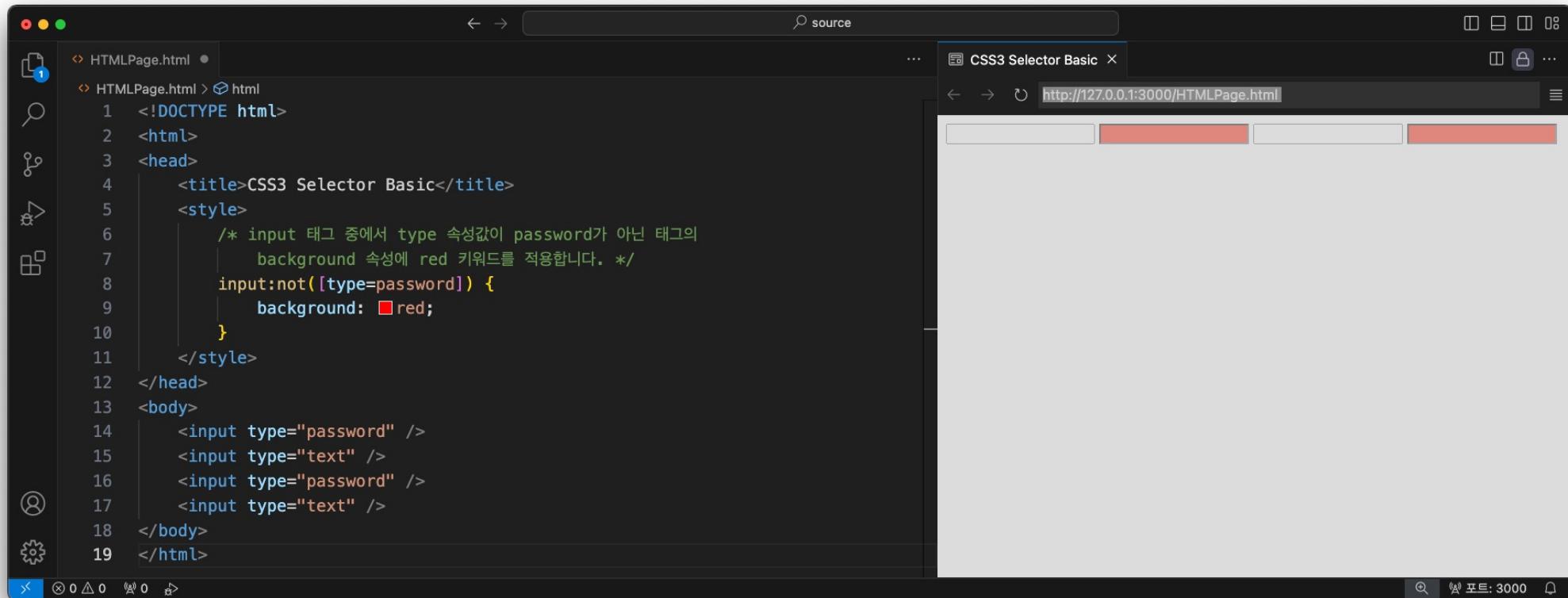
[Github - https://github.com/](https://github.com/)

선택자 형태

:not(선택자)

설명

선택자를 반대로 적용

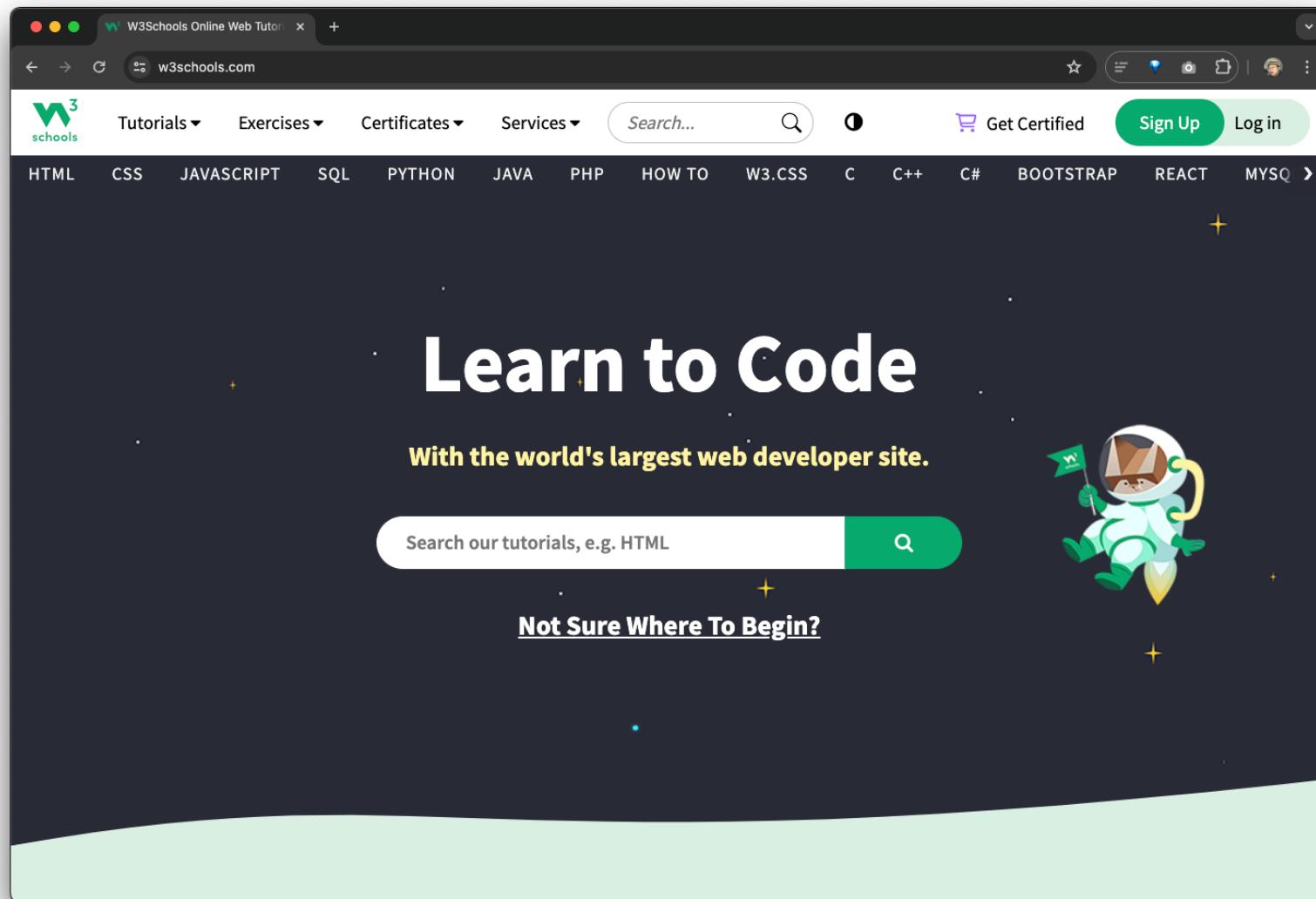


```
1 <!DOCTYPE html>
2 <html>
3 <head>
4   <title>CSS3 Selector Basic</title>
5   <style>
6     /* input 태그 중에서 type 속성값이 password가 아닌 태그의
      |   background 속성에 red 키워드를 적용합니다. */
7     input:not([type=password]) {
8       background: red;
9     }
10   </style>
11 </head>
12 <body>
13   <input type="password" />
14   <input type="text" />
15   <input type="password" />
16   <input type="text" />
17 </body>
18 </html>
```

A close-up photograph of a person's hands holding a white smartphone. The person is wearing a white button-down shirt. The background is blurred.

스타일 속성

스타일 속성을 공부할 때는



- 크기 단위

단위	설명
%	백분율 단위
em	배수 단위
px	픽셀

```
<style>
  h1 {
    margin: 10px;
    font-size: 200%;
    line-height: 2em;
  }
</style>
```

Part 1

CSS3 단위 > 크기 단위 > 퍼센트 단위

The screenshot shows a browser window with developer tools open. On the left, the HTML code is displayed:

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS3 Style Property Basic</title>
    <style>
        p:nth-child(1) { }
        p:nth-child(2) { font-size: 100%; }
        p:nth-child(3) { font-size: 150%; }
        p:nth-child(4) { font-size: 200%; }
    </style>
</head>
<body>
    <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit.</p>
    <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit.</p>
    <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit.</p>
    <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit.</p>
</body>
</html>
```

On the right, the browser window shows the rendered content with four paragraphs of text. The first paragraph has a font size of 100%, the second has 150%, and the third has 200%.

The screenshot shows a browser window with developer tools open. On the left, the HTML code is displayed:

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS3 Style Property Basic</title>
    <style>
        p:nth-child(1) { }
        p:nth-child(2) { font-size: 1.0em; }
        p:nth-child(3) { font-size: 1.5em; }
        p:nth-child(4) { font-size: 2.0em; }
    </style>
</head>
<body>
    <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit.</p>
    <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit.</p>
    <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit.</p>
    <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit.</p>
</body>
</html>
```

The right pane shows the browser output with four paragraphs of placeholder text. The first paragraph is the baseline. The second paragraph has a font size of 1.0em. The third paragraph has a font size of 1.5em. The fourth paragraph has a font size of 2.0em.

Part 1

CSS3 단위 > 크기 단위 > 픽셀 단위

The screenshot shows a browser window with developer tools open. On the left, the HTML code is displayed:

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS3 Style Property Basic</title>
    <style>
        p:nth-child(1) { }
        p:nth-child(2) { font-size: 16px; }
        p:nth-child(3) { font-size: 24px; }
        p:nth-child(4) { font-size: 32px; }
    </style>
</head>
<body>
    <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit.</p>
    <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit.</p>
    <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit.</p>
    <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit.</p>
</body>
</html>
```

The right pane shows the browser output with four paragraphs of placeholder text. The first paragraph has a font size of 16px, the second of 24px, the third of 32px, and the fourth of 16px again.

The screenshot shows a browser window with developer tools open. The left panel displays the HTML code for 'HTMLPage.html'. The right panel shows the rendered content of the page.

HTML Code:

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS3 Property Basic</title>
    <style>
        * { font-size: 12px; }
        h1 { font-size: 3.0em; }
        h2 { font-size: 1.5em; }
    </style>
</head>
<body>
    <h1>Lorem ipsum dolor sit amet</h1>
    <h2>consectetur adipiscing elit. Sed nec purus elit, nec cursus dolo</h2>
    <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit. Suspendi</p>
</body>
</html>
```

Rendered Content:

Page Title: CSS3 Property Basic

Page URL: http://127.0.0.1:3000/HTMLPage.html

Content:

H1: **Lorem ipsum dolor sit amet**

H2: **consectetur adipiscing elit. Sed nec purus elit, nec cursus dolor.**

P: Lorem ipsum dolor sit amet, consectetur adipiscing elit. Suspendi

Page Footer: × ⌂ 0 △ 0 ⌂ 0 🔍 ⌂ 포트: 3000 🔍

- 색상 단위

단위 형태	설명
#000000	HEX 코드 단위
rgb(red, green, blue)	RGB 색상 단위
rgba(red, green, blue, alpha)	RGBA 색상 단위
hsl(hue, saturation, lightness)	HSL 색상 단위
hsla(hue, saturation, lightness, alpha)	HSLA 색상 단위

```
<style>
|   h1 { background-color: ■#0094FF}
</style>
```

```
<style>
|   h1 { background-color: ■rgb(255, 255, 255)}
</style>
```

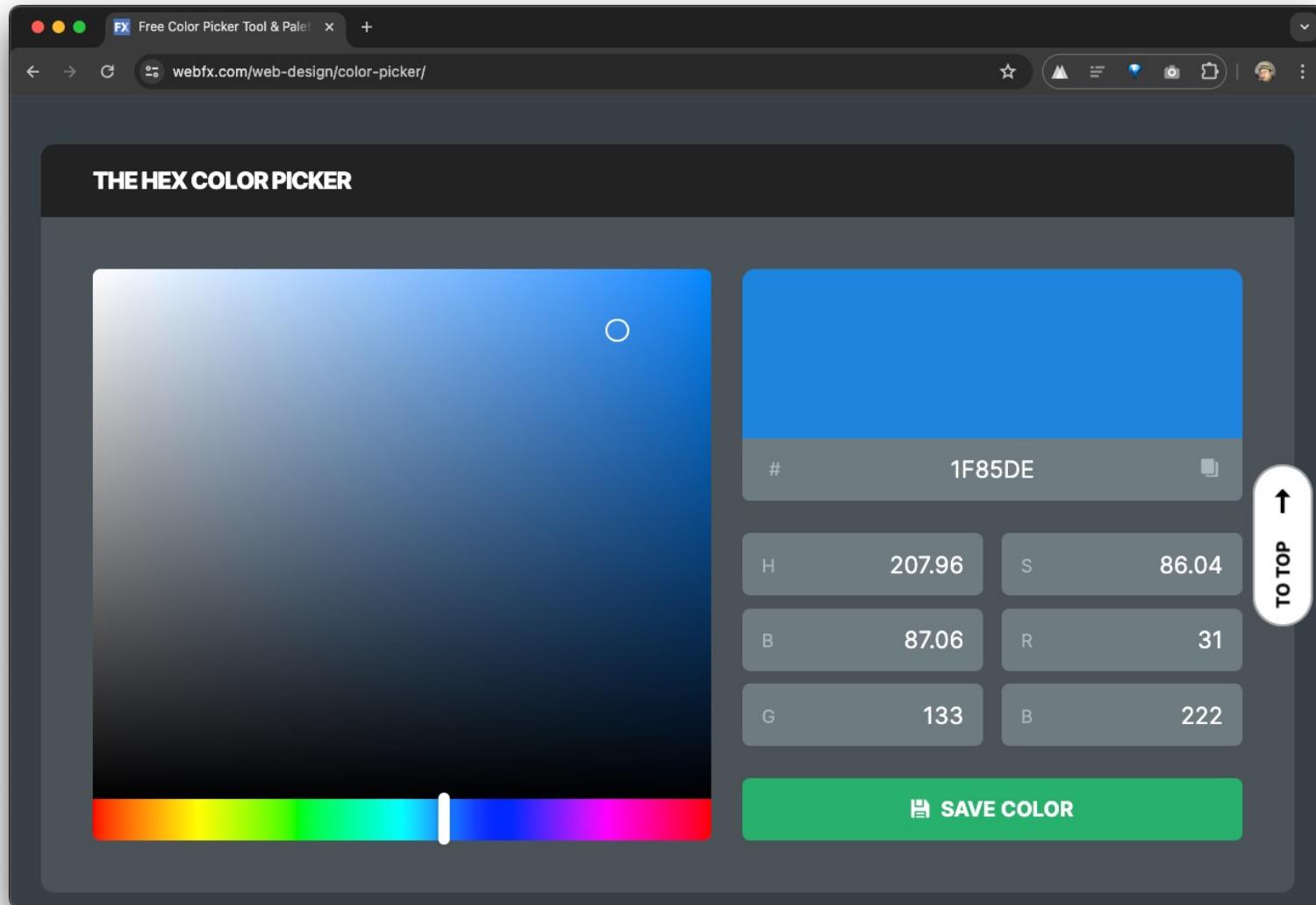
```
<style>
|   h1 { background-color: ■hsl(33, 100%, 50%)}
</style>
```

```
<style>
|   body {
|       background-image: url('Desert.jpg');
|   }
</style>
```

```
<style>
|   h1 { background-color: ■red; }
|   h2 { background-color: ■orange; }
|   h3 { background-color: ■blue; }
|   h4 { background-color: ■green; }
|   h5 { background-color: ■brown; }
|   h6 { background-color: ■purple; }
</style>
```

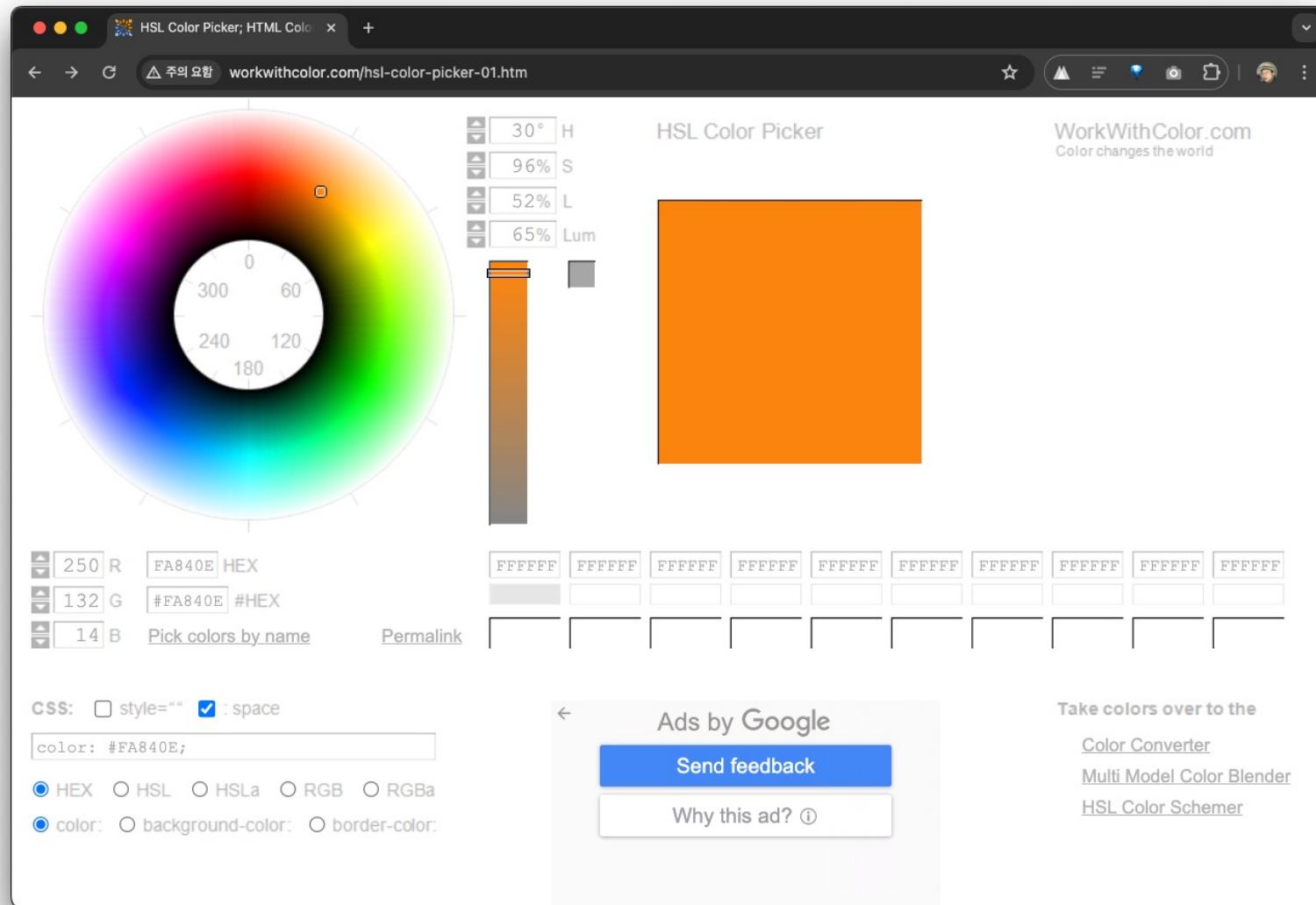
Part 1

CSS3 단위 > 색상 단위 > 16진수 색상 표현 (Color Picker)



Part 1

CSS3 단위 > 색상 단위 > HSL 색상 표현 (HSL Color Picker)



The screenshot shows a browser window with developer tools open. On the left, the 'source' tab displays the HTML code for 'HTMLPage.html'. The code includes a title, a CSS style block defining a background image for the body, and two paragraphs of placeholder text ('Lorem ipsum dolor amet.' and 'Lorem ipsum dolor sit amet, consectetur adipiscing elit.'). On the right, the 'CSS3 Property Basic' tab shows the rendered output. The page has a blue header bar with the title 'CSS3 Property Basic' and the URL 'http://127.0.0.1:3000/HTMLPage.html'. The main content area features a large, scenic image of a desert landscape with red rock formations under a clear blue sky. The text from the HTML is overlaid on this image.

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS3 Property Basic</title>
    <style>
        body {
            background-image: url('Desert.jpg');
        }
    </style>
</head>
<body>
    <h1>Lorem ipsum dolor amet.</h1>
    <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit.</p>
</body>
</html>
```

Part 1

가시 속성 > display 속성

- display 속성에 사용 가능한 키워드

키워드 이름	설명
none	태그를 화면에서 보이지 않게 만듭니다.
block	태그를 block 형식으로 지정합니다.
inline	태그를 inline 형식으로 지정합니다.
inline-block	태그를 inline-block 형식으로 지정합니다.

Part 1

가시 속성 > display 속성 > none 키워드

The screenshot shows a browser developer tools interface with two main panels: the CSS3 Style Property Basic panel and the source code editor.

Source Code:

```
1 <html>
2   <head>
3     <title>CSS3 Style Property Basic</title>
4     <style>
5       #box {
6         display: none;
7       }
8     </style>
9   </head>
10  <body>
11    <span>Dummy</span>
12    <div id="box">
13      <span>Lorem ipsum dolor sit amet, consectetur adipiscing elit.</span>
14    </div>
15    <span>Dummy</span>
16  </body>
17 </html>
```

CSS3 Style Property Basic Panel:

The panel displays the CSS properties for the element with ID "box". The "display" property is set to "none". A tooltip for "block" indicates: "The element generates a block-level box".

Properties shown in the panel:

- display: block (highlighted)
- contents
- flex
- flexbox
- flow-root
- grid
- inline
- inline-block
- inline-flex
- inline-flexbox
- inline-table
- list-item

Part 1

가시 속성 > display 속성 > block 키워드

The screenshot shows a browser window with developer tools open. The left pane displays the HTML code:

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS3 Style Property Basic</title>
    <style>
        #box {
            display: block;
        }
    </style>
</head>
<body>
    <span>Dummy</span>
    <div id="box">
        <span>Lorem ipsum dolor sit amet, consectetur adipiscing elit.</span>
    </div>
    <span>Dummy</span>
</body>
</html>
```

The right pane shows the CSS3 Style Property Basic panel with the following content:

Dummy
Lorem ipsum dolor sit amet, consectetur adipiscing elit.
Dummy

A tooltip is displayed over the "div#box" element, showing its dimensions: 398.4 x 19.2.

Part 1

가시 속성 > display 속성 > inline 키워드

The screenshot shows a browser developer tools window with two tabs: "HTMLPage.html" and "CSS3 Style Property Basic".

HTMLPage.html Tab:

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS3 Style Property Basic</title>
    <style>
        #box {
            display: inline;
        }
    </style>
</head>
<body>
    <span>Dummy</span>
    <div id="box">
        <span>Lorem ipsum dolor sit amet, consectetur adipiscing elit.</span>
    </div>
    <span>Dummy</span>
</body>
</html>
```

CSS3 Style Property Basic Tab:

The browser window displays the rendered HTML. A tooltip is shown over the "div#box" element, which contains the text "Lorem ipsum dolor sit amet, consectetur adipiscing elit.". The tooltip information is as follows:

Dummy Lorem ipsum dolor sit amet, consectetur adipiscing elit. Dummy
div#box 376.19x19.2

Part 1

가시 속성 > display 속성 > inline-block 키워드

The screenshot shows a browser developer tools window with two panels: the left panel displays the HTML code and the right panel shows the rendered CSS3 Style Property Basic page.

HTML Code:

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS3 Style Property Basic</title>
    <style>
        #box {
            display: inline-block;
        }
    </style>
</head>
<body>
    <span>Dummy</span>
    <div id="box">
        <span>Lorem ipsum dolor sit amet, consectetur adipiscing elit.</span>
    </div>
    <span>Dummy</span>
</body>
</html>
```

Rendered Page:

The page content is "Dummy Lorem ipsum dolor sit amet, consectetur adipiscing elit. Dummy". A callout box highlights the "div#box" element, which contains the text "Lorem ipsum dolor sit amet, consectetur adipiscing elit.". The callout box also includes the text "div#box 371.98x19.2".

Part 1

가시 속성 > display 속성 > inline 키워드

The screenshot shows a browser developer tools window with two panes. The left pane displays the HTML code for 'HTMLPage.html' and the right pane shows the rendered HTML with developer tool overlays.

HTML Code:

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS3 Style Property Basic</title>
    <style>
        #box {
            display: inline;
            background-color: red;
            width: 300px; height: 50px;
            margin: 10px;
        }
    </style>
</head>
<body>
    <span>Dummy</span>
    <div id="box">
        <span>Lorem ipsum dolor sit amet, consectetur adipiscing elit.</span>
    </div>
    <span>Dummy</span>
</body>
</html>
```

Rendered Output:

The browser window shows the following layout:

- A red rectangular box with the ID "box". It contains the text "Lorem ipsum dolor sit amet, consectetur adipiscing elit.". The box has a width of 300px and a height of 50px, with 10px margins on all sides.
- Two "Dummy" placeholder spans are positioned on either side of the red box.

A developer tool overlay provides detailed information about the red box:

- Top bar: Dummy, Lorem ipsum dolor sit amet, consectetur adipiscing elit., Dummy
- Bottom bar: div#box 376.19 × 19.2

At the bottom of the developer tools, there are status indicators: 줄 21, 열 8, 공백: 4, UTF-8, CRLF, HTML, 포트: 3000.

Part 1

가시 속성 > display 속성 > inline-block 키워드

The screenshot shows a browser developer tools window with two main panes. The left pane displays the HTML code for 'HTMLPage.html':

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS3 Style Property Basic</title>
    <style>
        #box {
            display: inline-block;
            background-color: red;
            width: 300px; height: 50px;
            margin: 10px;
        }
    </style>
</head>
<body>
    <span>Dummy</span>
    <div id="box">
        <span>Lorem ipsum dolor sit amet, consectetur adipiscing elit.</span>
    </div>
    <span>Dummy</span>
</body>
</html>
```

The right pane shows the rendered HTML with developer tool overlays. A red box highlights the 'div#box' element, which contains a purple inner box with the text 'Lorem ipsum dolor sit amet, consectetur adipiscing elit.'. The developer tools also show a tooltip for the 'div#box' element stating 'div#box 300x50'. The word 'Dummy' appears twice in the developer tools interface.

Part 1

가시 속성 > visibility 속성

- visibility 속성에 사용 가능한 키워드

키워드 이름	설명
visible	태그를 보이게 만듭니다.
hidden	태그를 보이지 않게 만듭니다.
collapse	table 태그를 보이지 않게 만듭니다.

Part 1

가시 속성 > visibility 속성 > hidden 키워드

The screenshot shows a browser developer tools interface with the following details:

- HTML Page:** HTMLPage.html
- CSS3 Style Property Basic:** CSS3 Style Property Basic
- Preview:** http://127.0.0.1:3000/HTMLPage.html
- Code View (HTML):**

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS3 Style Property Basic</title>
    <style>
        #box {
            visibility: hidden;
        }
    </style>
</head>
<body>
    <span>Dummy</span>
    <div id="box">
        <span>Lorem ipsum dolor sit amet, consectetur adipiscing elit.</span>
    </div>
    <span>Dummy</span>
</body>
</html>
```
- Code View (CSS):**

```
#box {
    visibility: hidden;
}
```
- Tooltips:** A tooltip for the `visibility` property is displayed, listing the following values:
 - collapse
 - hidden
 - visible
 - calc()
 - inherit
 - initial
 - unset
 - var()

A note in the tooltip states: "Table-specific. If used on elements other than rows, row groups, columns, or column groups, 'collapse' has the same meaning as 'hidden'."

Part 1

가시 속성 > visibility 속성 > collapse 키워드

The screenshot shows a browser developer tools window with two panes. The left pane displays the source code of an HTML file named 'HTMLPage.html'. The right pane shows the rendered view of the page at the URL <http://127.0.0.1:3000/HTMLPage.html>.

Source Code (HTMLPage.html):

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS3 Selector Basic Page</title>
    <style>
        table {
            visibility: collapse;
        }
    </style>
</head>
<body>
    <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit.</p>
    <table>
        <tr><td>Test</td><td>Test</td></tr>
        <tr><td>Test</td><td>Test</td></tr>
        <tr><td>Test</td><td>Test</td></tr>
    </table>
    <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit.</p>
</body>
</html>
```

Renders:

The rendered view shows two paragraphs of placeholder text: "Lorem ipsum dolor sit amet, consectetur adipiscing elit." and "Lorem ipsum dolor sit amet, consectetur adipiscing elit.". Between these paragraphs is a table with three rows and two columns, each containing the word "Test". The table's border is visible, but the individual cells are not, demonstrating the effect of the CSS rule `visibility: collapse;` applied to the table element.

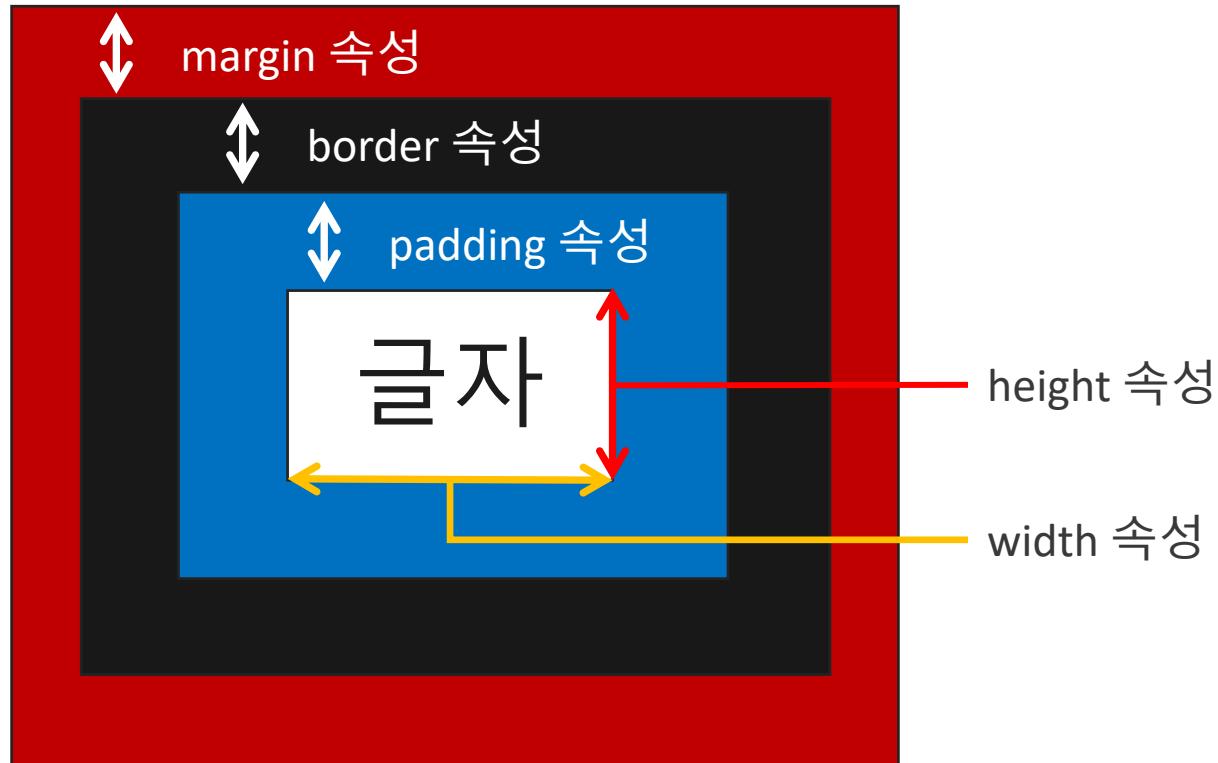
Part 1

가시 속성 > opacity 속성

The screenshot shows a browser developer tools window with two panes. The left pane displays the HTML code for 'HTMLPage.html' with line numbers 1 through 20. The right pane shows the rendered web page at 'http://127.0.0.1:3000/HTMLPage.html'. The page contains a title 'CSS3 Selector Basic Page', a style block defining a box with black background, white text, and 20% opacity, and several spans with the text 'Dummy' and 'Lorem ipsum dolor sit amet, consectetur adipiscing elit.'

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS3 Selector Basic Page</title>
    <style>
        #box {
            background-color: black;
            color: white;
            opacity: 0.2;
        }
    </style>
</head>
<body>
    <span>Dummy</span>
    <div id="box">
        <span>Lorem ipsum dolor sit amet, consectetur adipiscing elit.</span>
    </div>
    <span>Dummy</span>
</body>
</html>
```

Dummy
Lorem ipsum dolor sit amet, consectetur adipiscing elit.
Dummy



Part 1

박스 속성 > width 속성과 height 속성

The screenshot shows a code editor interface with two main panes. The left pane displays the source code of an HTML file named 'HTMLPage.html'. The code includes a title, a style block defining a red square with width and height of 100px, and a body containing a single red square div. The right pane shows the rendered output of the HTML page at the URL <http://127.0.0.1:3000/HTMLPage.html>, which is a solid red square.

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS Property Basic</title>
    <style>
        div {
            width: 100px; height: 100px;
            background-color: red;
        }
    </style>
</head>
<body>
    <div></div>
</body>
</html>
```

Part 1

박스 속성 > margin 속성과 padding 속성

The screenshot shows a code editor interface with two main panes. The left pane displays the HTML and CSS code for a single red square element. The right pane shows the rendered output of this code.

HTML and CSS Code:

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS Property Basic</title>
    <style>
        div {
            width: 100px; height: 100px;
            background-color: red;

            border: 20px solid black;
            margin: 10px; padding: 30px;
        }
    </style>
</head>
<body>
    <div></div>
</body>
</html>
```

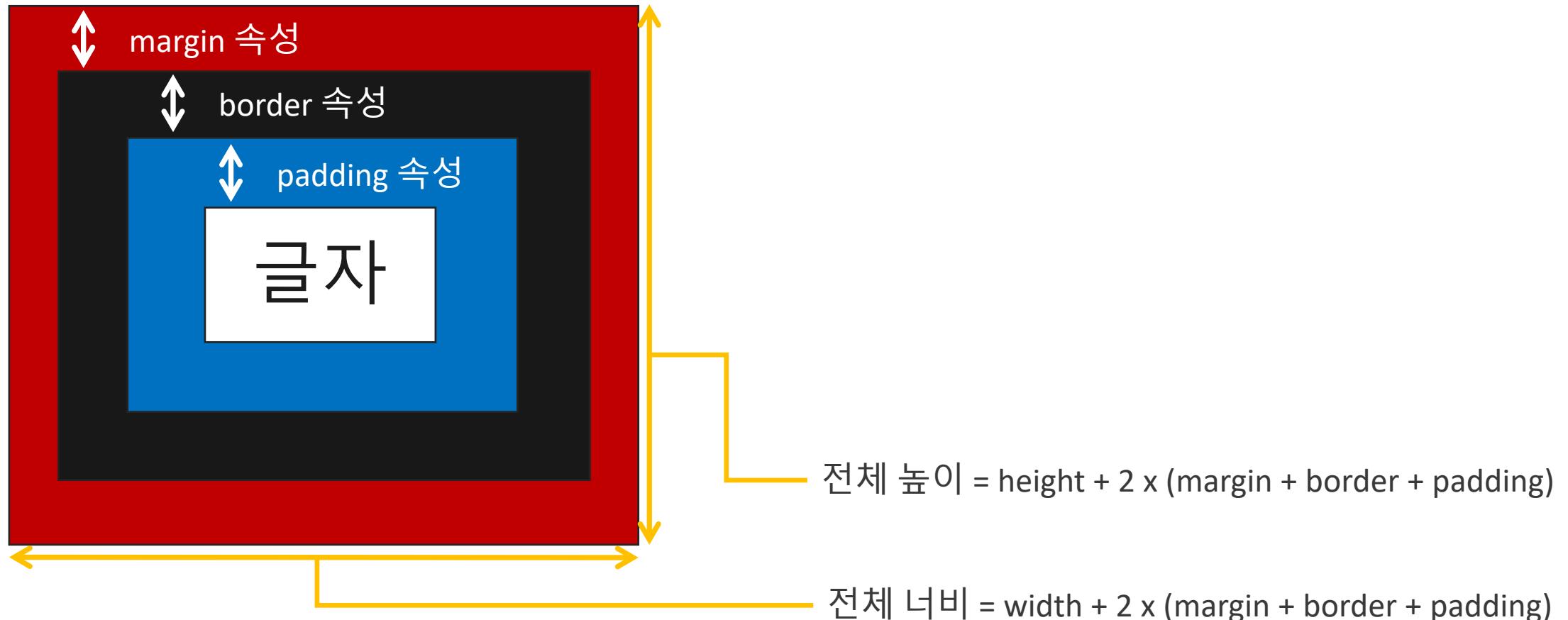
Rendered Preview:

The preview shows a red square with a black border. The square has a total width and height of 100px. It is surrounded by a white margin of 10px and a black padding of 30px. The overall width of the element including its border, margin, and padding is 140px.

Code Editor Status Bar:

Bottom status bar: × ☰ 0 △ 0 ⌂ 0 출 18, 열 8 공백: 4 UTF-8 CRLF HTML ⌂ 포트: 3000

박스 속성 > width 속성과 height 속성의 사용 범위



Part 1

박스 속성 > margin 속성과 padding 속성에 2개 적용

The screenshot shows a browser developer tools window with two main panes. The left pane displays the HTML code for a file named 'HTMLPage.html':

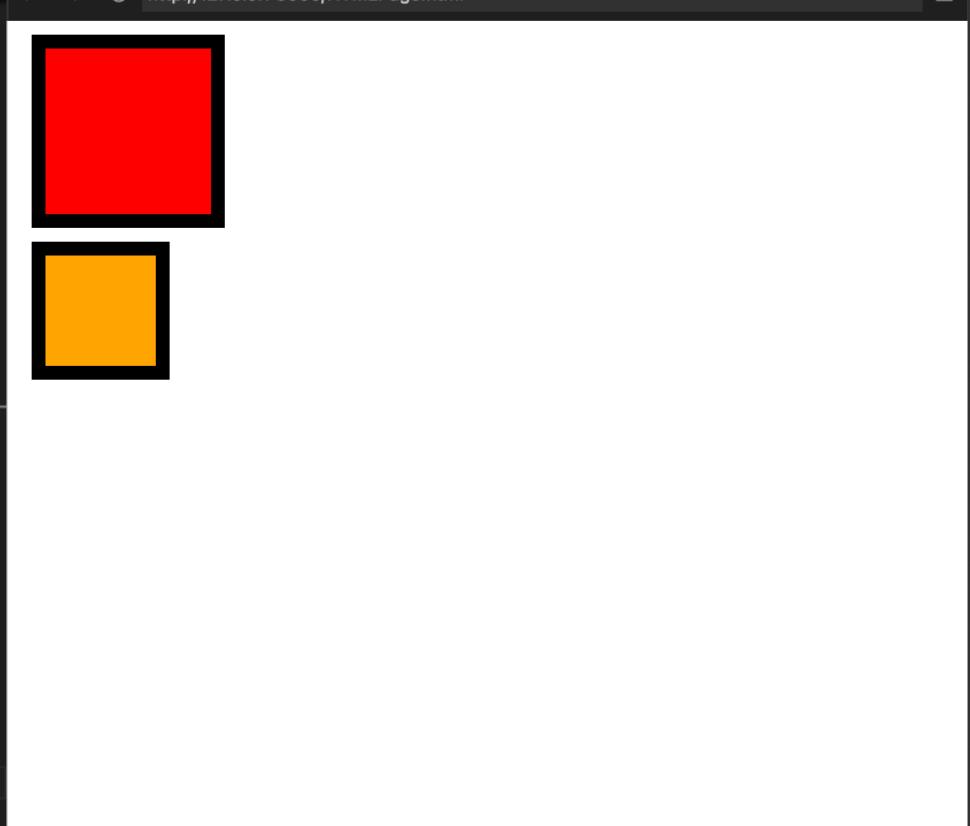
```
<!DOCTYPE html>
<html>
<head>
    <title>CSS Property Basic</title>
    <style>
        div {
            width: 100px; height: 100px;
            background-color: red;
            /* margin: 위아래 왼쪽오른쪽 */
            /* padding: 위아래 왼쪽오른쪽 */
            margin: 0 30px; padding: 0 30px;
        }
    </style>
</head>
<body>
    <div></div>
</body>
</html>
```

The right pane shows the rendered HTML page at the URL <http://127.0.0.1:3000/HTMLPage.html>. A red square is displayed. Below it, a larger rectangular area is divided into four equal quadrants: top-left (orange), top-right (brown), bottom-left (brown), and bottom-right (orange). This visual representation illustrates the effect of applying a margin of 30px to both the top and bottom edges of the red box, resulting in a total height of 160px (100px box + 30px top margin + 30px bottom margin) and a total width of 160px (100px box + 30px left padding + 30px right padding).

div 160 × 100

Part 1

박스 속성 > box-sizing 속성

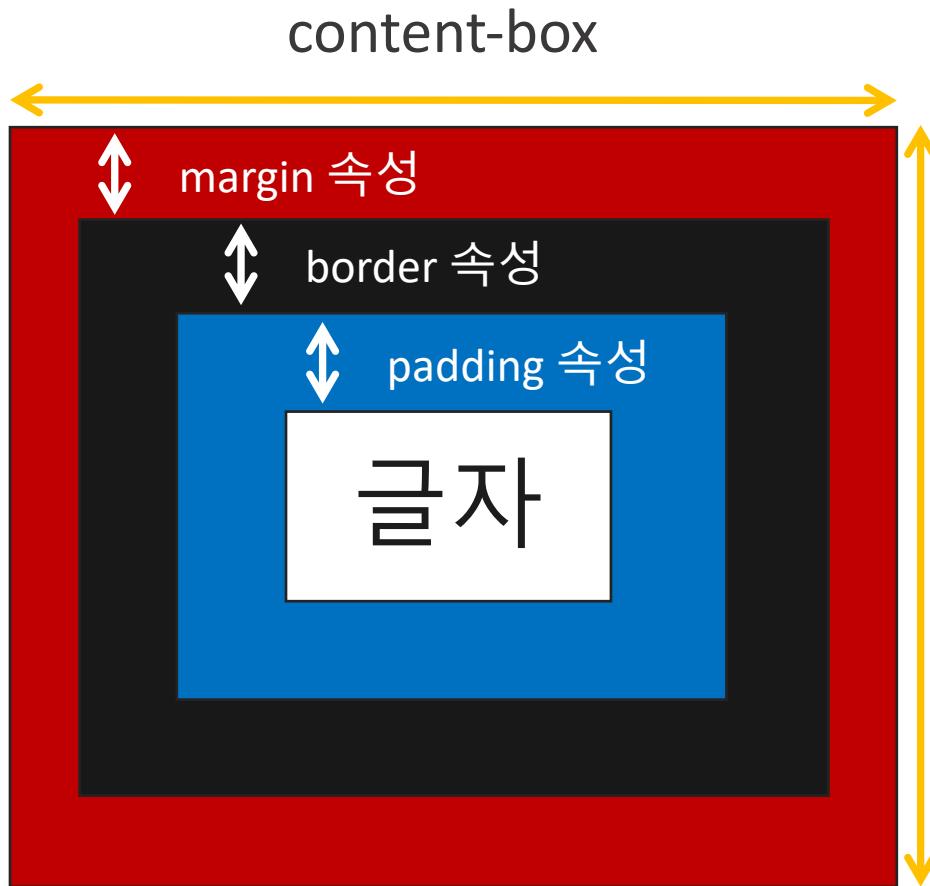


The screenshot shows a browser window with developer tools open. On the left, the HTML and CSS code for a page titled "CSS3 Property Basic" is displayed. The CSS includes styles for a main div and its children, demonstrating the effects of different box-sizing values.

```
2  <html>
3  <head>
4      <title>CSS3 Property Basic</title>
5      <style>
6          div {
7              margin: 10px; padding: 10px;
8              width: 100px; height: 100px;
9              border: 10px solid black;
10         }
11         div:first-child {
12             background: red;
13             box-sizing: content-box;
14         }
15         div:last-child {
16             background: orange;
17             box-sizing: border-box;
18         }
19     </style>
20 </head>
21 <body>
22     <div></div>
23     <div></div>
24 </body>
25 </html>
```

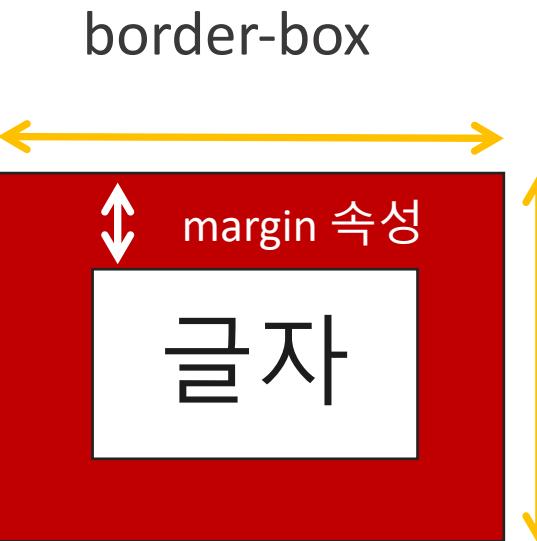
The browser's address bar shows the URL `http://127.0.0.1:3000/HTMLPage.html`. The right pane displays the rendered HTML with two square boxes. The top square is red and has a black border, while the bottom square is orange and also has a black border. This visual comparison illustrates how the "border" property is positioned relative to the content area based on the "box-sizing" value.

박스 속성 > box-sizing 속성 > content-box 와 border-box 키워드



박스 높이 = height + 2 x (margin + border + padding)

박스 너비 = width + 2 x (margin + border + padding)



박스 높이 = height + 2 x margin

박스 너비 = width + 2 x margin

Part 1

테두리 속성 > border-width 속성과 border-style 속성

The screenshot shows a browser window with developer tools open. On the left, the HTML code for 'HTMLPage.html' is displayed:

```
<html>
  <head>
    <title>CSS3 Property Basic</title>
    <style>
      .box {
        border-width: thick;
        border-style: dashed;
        border-color: black;
      }
    </style>
  </head>
  <body>
    <div class="box">
      <h1>Lorem ipsum dolor amet</h1>
    </div>
  </body>
</html>
```

The right side shows the browser preview and the CSS property dropdown menus for the 'border-width' and 'border-style' properties.

border-width:

- 0cap
- 0ch
- 0cm
- 0cq
- 0cqh
- 0cqi
- 0cqmax
- 0cqmin
- 0cqw
- 0dvh
- 0dvh
- 0dvi

border-style:

- calc()
- dashed
- dotted
- double
- groove
- hidden
- inherit
- initial
- inset
- none
- outset
- ridge

Part 1

테두리 속성 > border-width 속성과 border-style 속성

The screenshot shows a browser window with developer tools open. The left pane displays the HTML code:

```
<html>
  <head>
    <title>CSS3 Property Basic</title>
    <style>
      .box {
        border: thick dashed black;
      }
    </style>
  </head>
  <body>
    <div class="box">
      <h1>Lorem ipsum dolor amet</h1>
    </div>
  </body>
</html>
```

The right pane shows the rendered page with a dashed border around the `.box` div containing the text "Lorem ipsum dolor amet". A tooltip for the `border` property is visible, providing information about the shorthand property for setting border width, style, and color.

`border`

- `border`
- `border-radius`
- `border-bottom`
- `border-color`
- `border-top`
- `border-width`
- `border-left`
- `border-right`
- `border-style`
- `border-top-left-radius`
- `border-top-right-radius`
- `border-bottom-left-radius`

Shorthand property for setting border width, style, and color.
(Edge 12, Firefox 1, Safari 1, Chrome 1, IE 4, Opera 3)
Syntax: <line-width> || <line-style> || <color>
MDN Reference

Part 1

테두리 속성 > border-radius 속성

The screenshot shows a browser window with developer tools open. On the left, the HTML code is displayed:

```
1 <!DOCTYPE html>
2 <html>
3   <head>
4     <title>CSS3 Property Basic</title>
5     <style>
6       .box {
7         border: thick dashed black;
8         border-radius: 20px;
9       }
10    </style>
11  </head>
12  <body>
13    <div class="box">
14      <h1>Lorem ipsum dolor amet</h1>
15    </div>
16  </body>
17 </html>
```

The right side shows the rendered HTML page with a large, rounded rectangular box containing the text "Lorem ipsum dolor amet". The box has a thick dashed black border and rounded corners.

Part 1

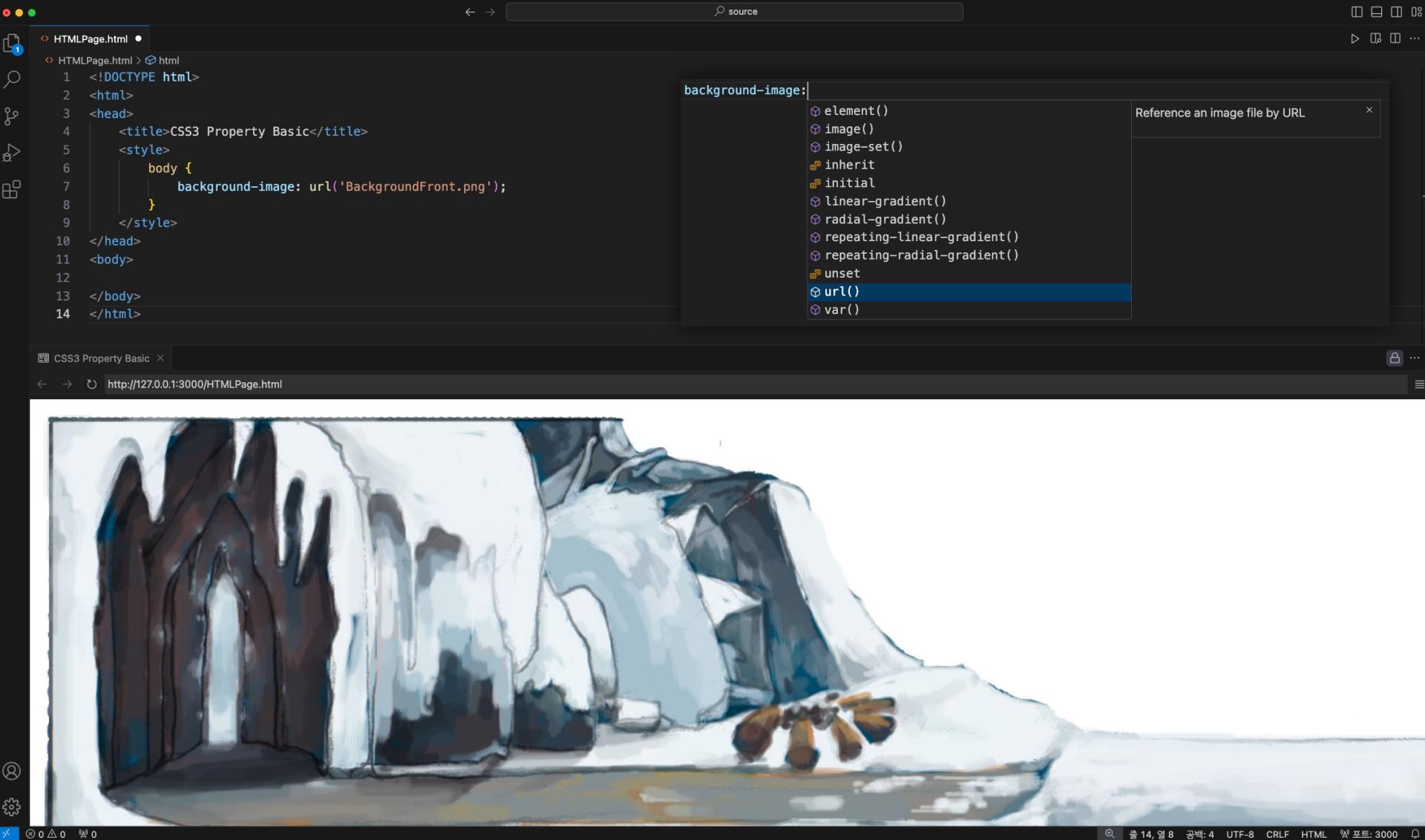
테두리 속성 > border-radius 속성

The screenshot shows a browser developer tools window divided into two panes. The left pane displays the HTML and CSS code for a page titled "CSS3 Property Basic". The CSS includes a class ".box" with a thick dashed border and specific border-radius values: top-left (50px), top-right (40px), bottom-right (20px), and bottom-left (10px). The right pane shows the rendered HTML page with a large, dashed black border around a white content area, and the text "Lorem ipsum dolor amet" centered inside.

```
2 <html>
3 <head>
4     <title>CSS3 Property Basic</title>
5     <style>
6         .box {
7             border: thick dashed black;
8             /* border-radius: 左上(50px) 右上(40px) 右下(20px) 左下(10px); */
9             border-radius: 50px 40px 20px 10px;
10        }
11    </style>
12 </head>
13 <body>
14     <div class="box">
15         <h1>Lorem ipsum dolor amet</h1>
16     </div>
17 </body>
18 </html>
```

Part 1

배경 속성 > background-image 속성



The screenshot shows a code editor interface with a dark theme. On the left, the file structure and code are displayed:

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS3 Property Basic</title>
    <style>
        body {
            background-image: url('BackgroundFront.png');
        }
    </style>
</head>
<body>
</body>
</html>
```

In the center, a tooltip for the `background-image` property is open, listing various values:

- element()
- image()
- image-set()
- inherit
- initial
- linear-gradient()
- radial-gradient()
- repeating-linear-gradient()
- repeating-radial-gradient()
- unset
- url()
- var()

The `url()` value is highlighted with a blue selection bar. Below the editor, a browser preview window shows a painting of a landscape with mountains and a small boat.

Part 1

배경 속성 > background-size 속성

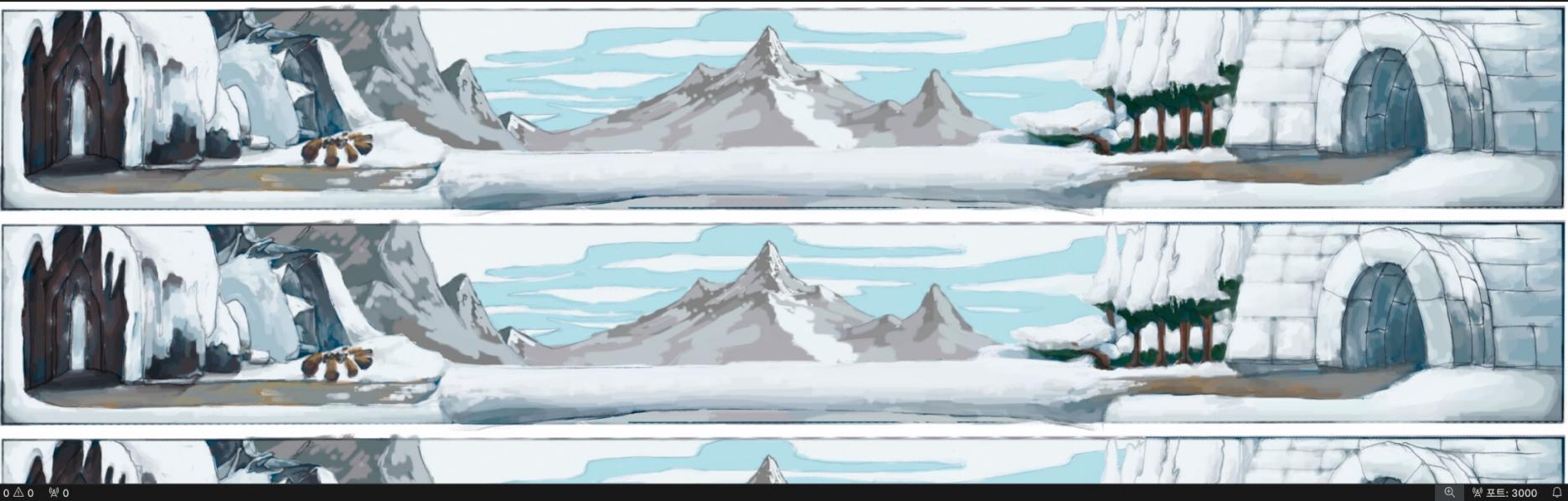
The screenshot shows a browser developer tools interface with the following details:

- Code Editor:** Displays the HTML and CSS code for "HTMLPage.html". The CSS includes:

```
1  <!DOCTYPE html>
2  <html>
3  <head>
4      <title>CSS3 Property Basic</title>
5      <style>
6          body {
7              background-image: url('BackgroundFront.png'), url('BackgroundBack.png');
8              background-size: 100%;
9          }
10     </style>
11 </head>
12 <body>
13
14 </body>
15 </html>
```
- Properties Panel:** Shows the "background-size:" property expanded, displaying a list of possible values: 0svi, 0svw, 0vb, 0vh, 0vi, 0vmax, 0vmin, 0vw, calc(), inherit, initial, and unset. The "unset" value is currently selected.
- Preview:** Three stacked images show the visual effect of different background sizes:
 - Top Image:** Shows a wide, horizontal background image covering the entire width of the body.
 - Middle Image:** Shows a narrower background image, likely 100% width, centered horizontally.
 - Bottom Image:** Shows a very narrow background image, appearing as a small strip at the top of the page.
- Status Bar:** At the bottom, it shows the URL "http://127.0.0.1:3000/HTMLPage.html" and a port number "포트: 3000".

Part 1

배경 속성 > background-size 속성



The screenshot shows a browser window displaying a repeating background image of a snowy landscape with mountains and ice structures. The browser interface includes a sidebar with file navigation, a code editor with the following CSS code, and a bottom status bar.

```
1  <!DOCTYPE html>
2  <html>
3  <head>
4      <title>CSS3 Property Basic</title>
5      <style>
6          body {
7              background-image: url('BackgroundFront.png'), url('BackgroundBack.png');
8              background-size: 100% 250px;
9          }
10     </style>
11 </head>
12 <body>
13
14 </body>
15 </html>
```

The browser title bar says "CSS3 Property Basic". The address bar shows the URL "http://127.0.0.1:3000/HTMLPage.html". The status bar at the bottom right shows "포트: 3000".

Part 1

배경 속성 > background-size 속성

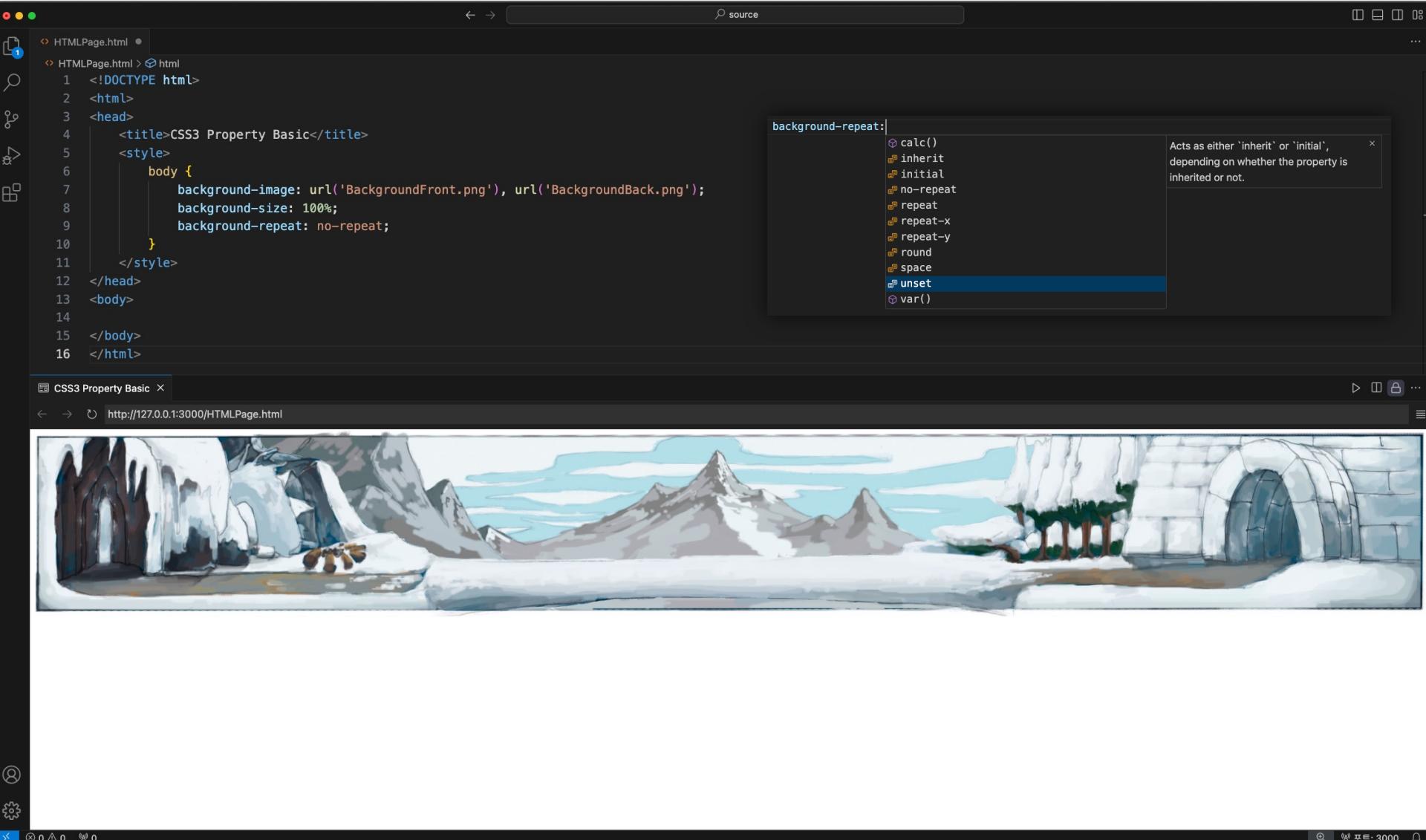
The screenshot shows a browser developer tools interface. On the left, the code editor displays an HTML file named 'HTMLPage.html' with the following content:

```
<!DOCTYPE html>
<html>
<head>
<title>CSS3 Property Basic</title>
<style>
body {
    background-image: url('BackgroundFront.png'), url('BackgroundBack.png');
    background-size: 100%, 200%;
}
</style>
</head>
<body>
</body>
</html>
```

The browser tab is titled 'CSS3 Property Basic' and shows the URL 'http://127.0.0.1:3000/HTMLPage.html'. The rendered page displays a landscape scene with a large rock formation, a path, and a stone archway. The background consists of two images: 'BackgroundFront.png' (the foreground) and 'BackgroundBack.png' (the background). The 'background-size' property is applied to both images, with the front image having a size of 100% and the back image having a size of 200%. This results in the back image being twice as large as the front one.

Part 1

배경 속성 > background-repeat 속성



The screenshot shows a code editor interface with the following details:

- File Structure:** The left sidebar shows a file named "HTMLPage.html" containing an "html" folder with "HTMLPage.html".
- Code Editor:** The main area displays the following CSS code:

```
<!DOCTYPE html>
<html>
<head>
<title>CSS3 Property Basic</title>
<style>
body {
    background-image: url('BackgroundFront.png'), url('BackgroundBack.png');
    background-size: 100%;
    background-repeat: no-repeat;
}
</style>
</head>
<body>
</body>
</html>
```
- Autocomplete Pop-up:** A tooltip for the "background-repeat:" property is open, listing the following values:
 - calc()
 - inherit
 - initial
 - no-repeat
 - repeat
 - repeat-x
 - repeat-y
 - round
 - space
 - unset
 - var()A tooltip message states: "Acts as either 'inherit' or 'initial', depending on whether the property is inherited or not."
- Browser Preview:** Below the code editor, a browser window titled "CSS3 Property Basic" shows the rendered result at the URL <http://127.0.0.1:3000/HTMLPage.html>. The preview image is a landscape scene featuring snow-covered ground, rocky mountains, and a large stone archway.

배경 속성 > background-attachment 속성

The screenshot shows a browser window with the developer tools open. The left sidebar displays the file structure and code editor for 'HTMLPage.html'. The main content area shows a page with a header, body text, and a background image of a snowy landscape. A tooltip for the 'background-attachment' property is shown, listing the following values:

- fixed (selected)
- local
- scroll
- calc()
- inherit
- initial
- unset
- var()

The tooltip provides a detailed explanation: "The background is fixed with regard to the viewport. In paged media where there is no viewport, a 'fixed' background is fixed with respect to the page box and therefore replicated on every page."

The browser's address bar shows the URL `http://127.0.0.1:3000/HTMLPage.html`. The bottom status bar indicates the page is at 0% zoom.

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS3 Property Basic</title>
    <style>
        body {
            background-color: #E7E7E8;
            background-image: url('BackgroundFront.png'), url('BackgroundBack.png');
            background-size: 100%;
            background-repeat: no-repeat;
        }
    </style>
</head>
<body>
    <h1>Lorem ipsum dolor sit amet</h1>
    <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit. Suspendisse sed nisi velit. Phasellus suscipit pellentesque leo, vel efficitur mi placerat sed. Fusce vel condimentum l...</p>
    <p>Nam enim sem, pulvinar sed nibh non, vestibulum suscipit dui. Vestibulum vitae sodales velit. Nam cursus, velit id semper malesuada, sem mauris iaculis diam, sit amet auctor li...</p>
    <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit. Suspendisse sed nisi velit. Phasellus suscipit pellentesque leo, vel efficitur mi placerat sed. Fusce vel condimentum l...</p>
    <p>Nam enim sem, pulvinar sed nibh non, vestibulum suscipit dui. Vestibulum vitae sodales velit. Nam cursus, velit id semper malesuada, sem mauris iaculis diam, sit amet auctor li...</p>
</body>
</html>
```

Part 1

배경 속성 > background-attachment 속성

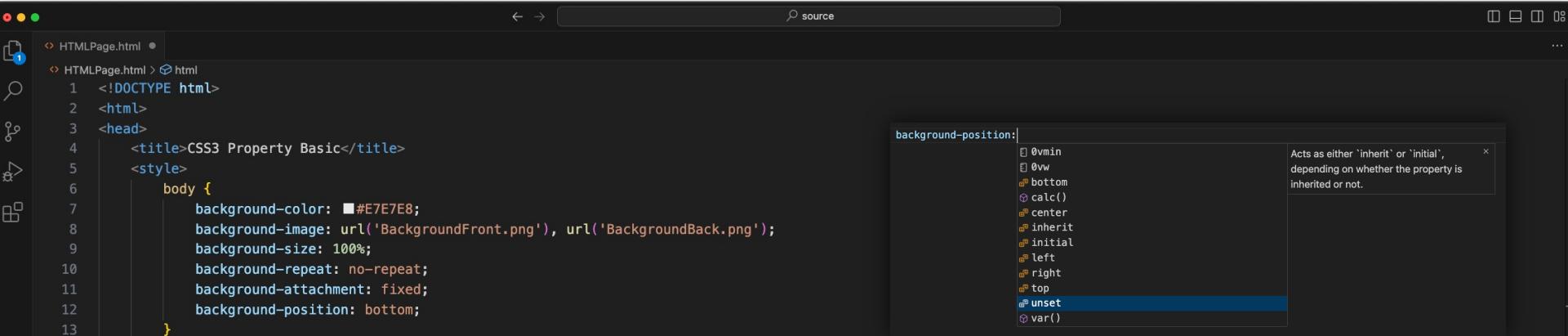
The screenshot shows a browser developer tools window with the following details:

- Code View:** Displays the HTML and CSS code for "HTMLPage.html". The CSS includes:

```
body {    background-color: #E7E7E8;    background-image: url('BackgroundFront.png'), url('BackgroundBack.png');    background-size: 100%;    background-repeat: no-repeat;    background-attachment: fixed;}
```
- Preview:** Shows the rendered page with a background image of a snowy mountain landscape. The text "Lorem ipsum dolor sit amet" is displayed multiple times in the body.
- Status Bar:** Shows the URL "http://127.0.0.1:3000/HTMLPage.html" and the port "포트: 3000".

Part 1

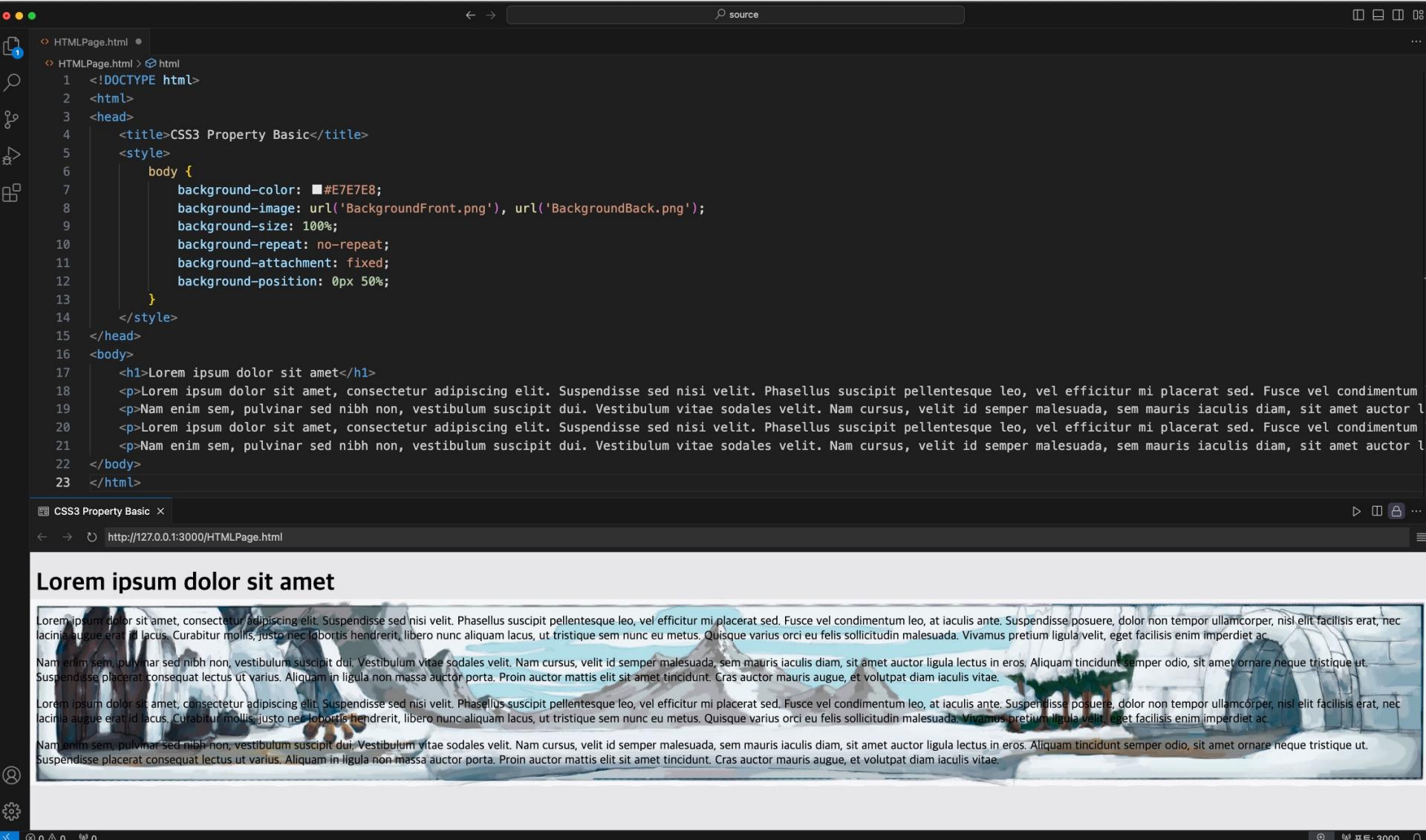
배경 속성 > background-position 속성



The screenshot shows a browser window with the address bar at `http://127.0.0.1:3000/HTMLPage.html`. The page content includes an

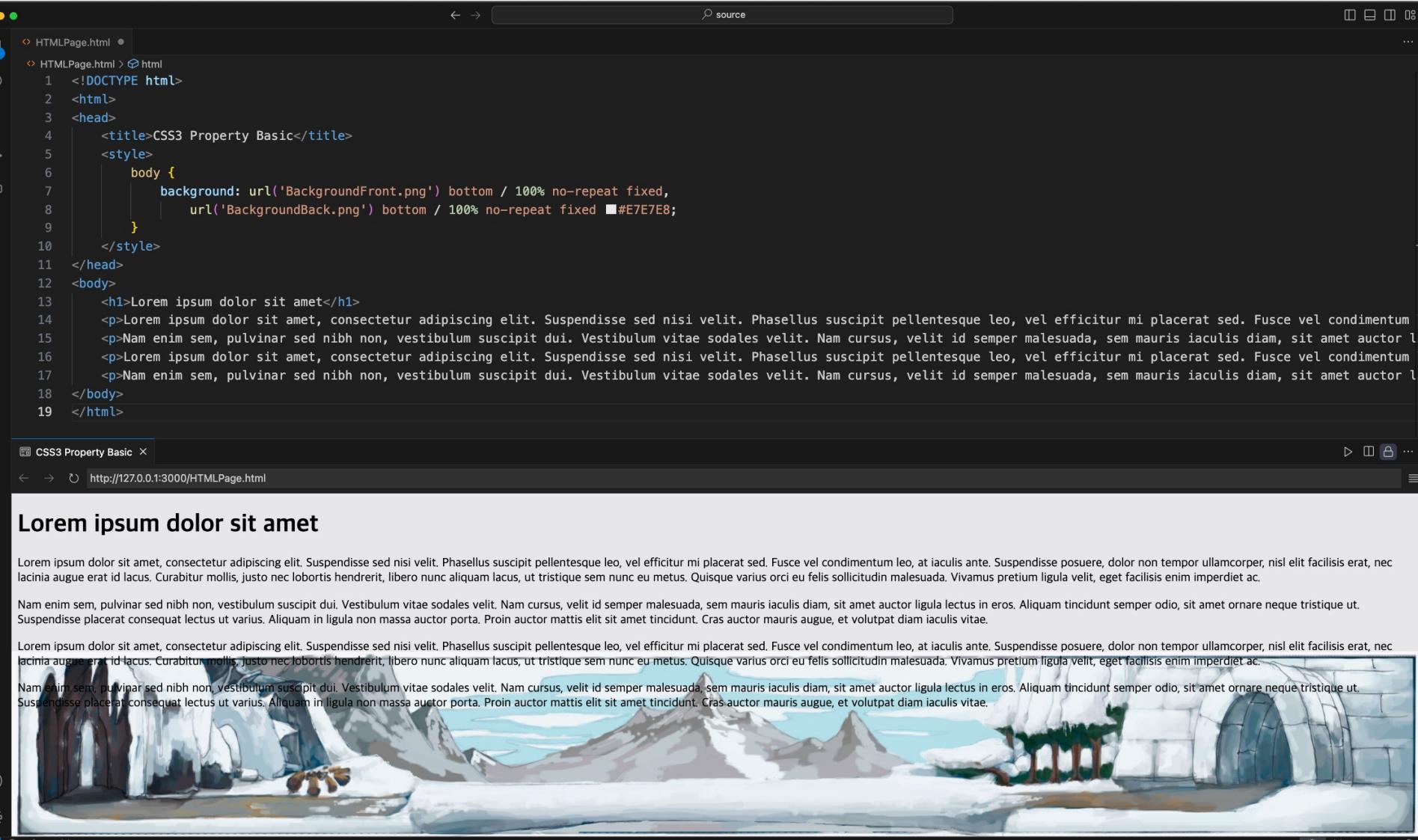
element and several elements with placeholder text. On the left, the browser's file tree shows an open file named `HTMLPage.html`. In the center, the code editor displays the following CSS: ``` <!DOCTYPE html> <html> <head> <title>CSS3 Property Basic</title> <style> body { background-color: #E7E7E8; background-image: url('BackgroundFront.png'), url('BackgroundBack.png'); background-size: 100%; background-repeat: no-repeat; background-attachment: fixed; background-position: bottom; } </style> </head> <body> <h1>Lorem ipsum dolor sit amet</h1> <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit. Suspendisse sed nisi velit. Phasellus suscipit pellentesque leo, vel efficitur mi placerat sed. Fusce vel condimentum leo, at iaculis ante. Suspendisse posuere, dolor non tempor ullamcorper, nisl elit facilisis erat, nec lacinia augue erat id lacus. Curabitur mollis, justo nec lobortis hendrerit, libero nunc aliquam lacus, ut tristique sem nunc eu metus. Quisque varius orci eu felis sollicitudin malesuada. Vivamus pretium ligula velit, eget facilisis enim imperdiet ac. <p>Nam enim sem, pulvinar sed nibh non, vestibulum suscipit dui. Vestibulum vitae sodales velit. Nam cursus, velit id semper malesuada, sem mauris iaculis diam, sit amet auctor ligula lectus in eros. Aliquam tincidunt semper odio, sit amet ornare neque tristique ut. Suspendisse placerat consequat lectus ut varius. Aliquam in ligula non massa auctor porta. Proin auctor mattis elit sit amet tincidunt. Cras auctor mauris augue, et volutpat diam iaculis vitae. <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit. Suspendisse sed nisi velit. Phasellus suscipit pellentesque leo, vel efficitur mi placerat sed. Fusce vel condimentum leo, at iaculis ante. Suspendisse posuere, dolor non tempor ullamcorper, nisl elit facilisis erat, nec lacinia augue erat id lacus. Curabitur mollis, justo nec lobortis hendrerit, libero nunc aliquam lacus, ut tristique sem nunc eu metus. Quisque varius orci eu felis sollicitudin malesuada. Vivamus pretium ligula velit, eget facilisis enim imperdiet ac. <p>Nam enim sem, pulvinar sed nibh non, vestibulum suscipit dui. Vestibulum vitae sodales velit. Nam cursus, velit id semper malesuada, sem mauris iaculis diam, sit amet auctor ligula lectus in eros. Aliquam tincidunt semper odio, sit amet ornare neque tristique ut. Suspendisse placerat consequat lectus ut varius. Aliquam in ligula non massa auctor porta. Proin auctor mattis elit sit amet tincidunt. Cras auctor mauris augue, et volutpat diam iaculis vitae. </body> </html> ``` A CSS property dropdown menu is open over the `background-position` declaration. The menu lists various values: `0vmin`, `0vw`, `bottom`, `calc()`, `center`, `inherit`, `initial`, `left`, `right`, `top`, `unset`, and `var()`. The value `bottom` is highlighted with a blue selection bar.

배경 속성 > background-position 속성



The screenshot shows a browser window displaying a web page. The page has a dark gray background color (#E7E7E8). Overlaid on this are two background images: 'BackgroundFront.png' (a blue and white abstract pattern) and 'BackgroundBack.png' (a green and blue abstract pattern). The background images are repeated across the entire page. In the center, there is a white rectangular area containing the text 'Lorem ipsum dolor sit amet'. Below this text, there is a large amount of placeholder text ('Lorem ipsum...') that is partially cut off at the bottom.

```
<!DOCTYPE html>
<html>
<head>
<title>CSS3 Property Basic</title>
<style>
body {
    background-color: #E7E7E8;
    background-image: url('BackgroundFront.png'), url('BackgroundBack.png');
    background-size: 100px 100px;
    background-repeat: no-repeat;
    background-attachment: fixed;
    background-position: 0px 50%;
}
</style>
</head>
<body>
<h1>Lorem ipsum dolor sit amet</h1>
<p>Lorem ipsum dolor sit amet, consectetur adipiscing elit. Suspendisse sed nisi velit. Phasellus suscipit pellentesque leo, vel efficitur mi placerat sed. Fusce vel condimentum leo, at iaculis ante. Suspendisse posuere, dolor non tempor ullamcorper, nisl elit facilisis erat, nec lacinia augue erat id lacus. Curabitur mollis, justo nec lobortis hendrerit, libero nunc aliquam lacus, ut tristique sem nunc eu metus. Quisque varius orci eu felis sollicitudin malesuada. Vivamus pretium ligula velit, eget facilisis enim imperdiet ac. Nam enim sem, pulvinar sed nibh non, vestibulum suscipit dui. Vestibulum vitae sodales velit. Nam cursus, velit id semper malesuada, sem mauris iaculis diam, sit amet auctor ligula lectus in eros. Aliquam tincidunt semper odio, sit amet ornare neque tristique ut. Suspendisse placerat consequat lectus ut varius. Aliquam in ligula non massa auctor porta. Proin auctor mattis elit sit amet tincidunt. Cras auctor mauris augue, et volutpat diam iaculis vitae. Lorem ipsum dolor sit amet, consectetur adipiscing elit. Suspendisse sed nisi velit. Phasellus suscipit pellentesque leo, vel efficitur mi placerat sed. Fusce vel condimentum leo, at iaculis ante. Suspendisse posuere, dolor non tempor ullamcorper, nisl elit facilisis erat, nec lacinia augue erat id lacus. Curabitur mollis, justo nec lobortis hendrerit, libero nunc aliquam lacus, ut tristique sem nunc eu metus. Quisque varius orci eu felis sollicitudin malesuada. Vivamus pretium ligula velit, eget facilisis enim imperdiet ac. Nam enim sem, pulvinar sed nibh non, vestibulum suscipit dui. Vestibulum vitae sodales velit. Nam cursus, velit id semper malesuada, sem mauris iaculis diam, sit amet auctor ligula lectus in eros. Aliquam tincidunt semper odio, sit amet ornare neque tristique ut. Suspendisse placerat consequat lectus ut varius. Aliquam in ligula non massa auctor porta. Proin auctor mattis elit sit amet tincidunt. Cras auctor mauris augue, et volutpat diam iaculis vitae.</p>
</body>
</html>
```



The screenshot shows a browser window displaying a web page titled "CSS3 Property Basic". The page content includes a title "Lorem ipsum dolor sit amet" and several paragraphs of placeholder text. The browser's developer tools are open, showing the HTML structure and the CSS code responsible for the styling. The CSS code uses the `background` property to set two images: "BackgroundFront.png" for the top half and "BackgroundBack.png" for the bottom half, both repeated no-repeat and positioned at the bottom of the body.

```
<!DOCTYPE html>
<html>
<head>
<title>CSS3 Property Basic</title>
<style>
body {
    background: url('BackgroundFront.png') bottom / 100% no-repeat fixed,
                url('BackgroundBack.png') bottom / 100% no-repeat fixed #E7E7E8;
}
</style>
</head>
<body>
<h1>Lorem ipsum dolor sit amet</h1>
<p>Lorem ipsum dolor sit amet, consectetur adipiscing elit. Suspendisse sed nisi velit. Phasellus suscipit pellentesque leo, vel efficitur mi placerat sed. Fusce vel condimentum leo, at iaculis ante. Suspendisse posuere, dolor non tempor ullamcorper, nisl elit facilisis erat, nec lacinia augue erat id lacus. Curabitur mollis, justo nec lobortis hendrerit, libero nunc aliquam lacus, ut tristique sem nunc eu metus. Quisque varius orci eu felis sollicitudin malesuada. Vivamus pretium ligula velit, eget facilisis enim imperdiet ac.</p>
<p>Nam enim sem, pulvinar sed nibh non, vestibulum suscipit dui. Vestibulum vitae sodales velit. Nam cursus, velit id semper malesuada, sem mauris iaculis diam, sit amet auctor ligula lectus in eros. Aliquam tincidunt semper odio, sit amet ornare neque tristique ut. Suspendisse placerat consequat lectus ut varius. Aliquam in ligula non massa auctor porta. Proin auctor mattis elit sit amet tincidunt. Cras auctor mauris augue, et volutpat diam iaculis vitae.</p>
<p>Lorem ipsum dolor sit amet, consectetur adipiscing elit. Suspendisse sed nisi velit. Phasellus suscipit pellentesque leo, vel efficitur mi placerat sed. Fusce vel condimentum leo, at iaculis ante. Suspendisse posuere, dolor non tempor ullamcorper, nisl elit facilisis erat, nec lacinia augue erat id lacus. Curabitur mollis, justo nec lobortis hendrerit, libero nunc aliquam lacus, ut tristique sem nunc eu metus. Quisque varius orci eu felis sollicitudin malesuada. Vivamus pretium ligula velit, eget facilisis enim imperdiet ac.</p>
<p>Nam enim sem, pulvinar sed nibh non, vestibulum suscipit dui. Vestibulum vitae sodales velit. Nam cursus, velit id semper malesuada, sem mauris iaculis diam, sit amet auctor ligula lectus in eros. Aliquam tincidunt semper odio, sit amet ornare neque tristique ut. Suspendisse placerat consequat lectus ut varius. Aliquam in ligula non massa auctor porta. Proin auctor mattis elit sit amet tincidunt. Cras auctor mauris augue, et volutpat diam iaculis vitae.</p>
</body>
</html>
```

Part 1

폰트 속성 > font-size 속성

The screenshot shows a browser window with developer tools open. The left pane displays the HTML code for 'HTMLPage.html':

```
1 <html>
2   <head>
3     <title>CSS3 Font Property</title>
4     <style>
5       .a { font-size: 32px; }
6       .b { font-size: 2em; }
7       .c { font-size: large; }
8       .d { font-size: small; }
9     </style>
10    </head>
11    <body>
12      <h1>Lorem ipsum</h1>
13      <p class="a">Lorem ipsum</p>
14      <p class="b">Lorem ipsum</p>
15      <p class="c">Lorem ipsum</p>
16      <p class="d">Lorem ipsum</p>
17    </body>
18  </html>
```

The right pane shows the rendered page with four 'Lorem ipsum' text blocks. The first block (class 'a') is 32px, the second (class 'b') is 2em, the third (class 'c') is large, and the fourth (class 'd') is small. A CSS property dropdown for 'font-size' is open, listing various values: 'large', 'larger', 'medium', 'small', 'smaller', 'x-large', 'x-small', 'xx-large', 'xx-small', '0%', '0cap', and '0ch'. The 'xx-small' option is currently selected.

Part 1

폰트 속성 > font-family 속성

The screenshot shows a browser window with developer tools open. The left pane displays the HTML code for 'HTMLPage.html' with CSS styles applied:

```
1 <html>
2   <head>
3     <title>CSS3 Font Property</title>
4     <style>
5       .font_arial { font-family: Arial; }
6       .font_roman { font-family: 'Times New Roman'; }
7     </style>
8   </head>
9   <body>
10    <h1 class="font_arial">Lorem ipsum</h1>
11    <p class="font_roman">Lorem ipsum</p>
12  </body>
13</html>
```

The right pane shows the rendered page with the title 'Lorem ipsum' in Arial and the paragraph 'Lorem ipsum' in Times New Roman. A CSS property dropdown for 'font-family:' is open, displaying a list of available font families:

- 'Courier New', Courier, monospace
- 'Franklin Gothic Medium', 'Arial Narrow...', Gill Sans, 'Gill Sans MT', Calibri, ...
- 'Lucida Sans', 'Lucida Sans Regular', ...
- 'Segoe UI', Tahoma, Geneva, Verdana, sans-serif
- 'Times New Roman', Times, serif
- 'Trebuchet MS', 'Lucida Sans Unicode', ...
- Arial, Helvetica, sans-serif
- Cambria, Cochin, Georgia, Times, 'Times New Roman', Times, serif
- Georgia, 'Times New Roman', Times, serif
- Impact, Haettenschweiler, 'Arial Narrow...', Verdana, Geneva, Tahoma, sans-serif

Part 1

폰트 속성 > font-family 속성

The screenshot shows a browser window with developer tools open. On the left, the HTML code is displayed:

```
1 <html>
2   <head>
3     <title>CSS3 Font Property</title>
4     <style>
5       .font_arial { font-family: '없는 폰트', Arial; }
6       .font_roman { font-family: 'Times New Roman', Arial; }
7     </style>
8   </head>
9   <body>
10    <h1 class="font_arial">Lorem ipsum</h1>
11    <p class="font_roman">Lorem ipsum</p>
12  </body>
13</html>
```

The right side shows the rendered page with the title "CSS3 Font Property" and the URL "http://127.0.0.1:3000/HTMLPage.html". The page content includes the text "Lorem ipsum" in two different fonts: Arial for the h1 element and Times New Roman for the p element.

Part 1

폰트 속성 > font-family 속성

The screenshot shows a browser window with developer tools open. On the left, the HTML code is displayed:

```
1 <html>
2   <head>
3     <title>CSS3 Font Property</title>
4     <style>
5       .font_arial { font-family: '없는 폰트', sans-serif; }
6       .font_roman { font-family: '없는 폰트', serif; }
7     </style>
8   </head>
9   <body>
10    <h1 class="font_arial">Lorem ipsum</h1>
11    <p class="font_roman">Lorem ipsum</p>
12  </body>
13</html>
```

The right panel shows the rendered output of the page. The title "CSS3 Font Property" is displayed in a sans-serif font. The main heading "Lorem ipsum" is also in a sans-serif font. Below it, a paragraph "Lorem ipsum" is displayed in a serif font.

Part 1

폰트 속성 > font-style 속성과 font-weight 속성

The screenshot shows a code editor interface with a dark theme. On the left, the file structure and code are visible:

```
1 <html>
2   <head>
3     <title>CSS3 Font Property</title>
4     <style>
5       .font_big { font-size: 2em; }
6       .font_italic { font-style: italic; }
7       .font_bold { font-weight: bold; }
8     </style>
9   </head>
10  <body>
11    <p class="font_big font_italic font_bold">Lorem ipsum dolor amet</p>
12  </body>
13 </html>
```

The right side displays the rendered HTML page with the text "Lorem ipsum dolor amet" styled in bold, italicized, and large font size. Below the page, two dropdown menus are open, showing the available values for the CSS properties:

- font-style:** italic, normal, oblique, calc(), inherit, initial, unset, var()
- font-weight:** 100, 200, 300, 400, 500, 600, 700, 800, 900, bold, bolder, lighter

Part 1

폰트 속성 > line-height 속성

The screenshot shows a browser window with developer tools open. The left pane displays the HTML and CSS code for a page titled "CSS3 Font Property". The CSS includes rules for font sizes, styles, and shadows, and defines a button with specific dimensions and colors. The right pane shows the rendered result: a blue button with the word "Click" in white, centered text.

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS3 Font Property</title>
    <style>
        .font_big { font-size: 2em; }
        .font_italic { font-style: italic; }
        .font_bold { font-weight: bold; }
        .font_center { text-align: center; }

        .button {
            width: 150px;
            height: 70px;
            background-color: #FF6A00;
            border: 10px solid #FFFFFF;
            border-radius: 30px;
            box-shadow: 5px 5px 5px #A9A9A9;
        }

        .button > a {
            display: block;
        }
    </style>
</head>
<body>
    <div class="button">
        <a href="#" class="font_big font_italic font_bold font_center">Click</a>
    </div>
</body>
</html>
```

Part 1

폰트 속성 > line-height 속성

The screenshot shows a browser window with developer tools open. The left pane displays the HTML code for 'HTMLPage.html' with some CSS styles applied. The right pane shows the rendered output of the code.

HTML Code:

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS3 Font Property</title>
    <style>
        .font_big { font-size: 2em; }
        .font_italic { font-style: italic; }
        .font_bold { font-weight: bold; }
        .font_center { text-align: center; }

        .button {
            width: 150px;
            height: 70px;
            background-color: #FF6A00;
            border: 10px solid #FFFFFF;
            border-radius: 30px;
            box-shadow: 5px 5px 5px #A9A9A9;
        }

        .button > a {
            display: block;
            line-height: 70px;
        }
    </style>
</head>
<body>
    <div class="button">
        <a href="#" class="font_big font_italic font_bold font_center">Click</a>
    </div>
</body>
</html>
```

Rendered Output:

A central orange button with a white border and rounded corners. Inside the button, the word "Click" is displayed in a large, bold, italicized black font. The button has a box shadow at the bottom.

CSS3 Font Property Panel:

The right side of the developer tools shows the 'CSS3 Font Property' panel. A tooltip for the 'font' property is open, providing information about its syntax and supported properties. The tooltip includes:

- font**: Shorthand property for setting 'font-style', 'font-variant', 'font-weight', 'font-size', 'line-height', and 'font-family' at the same place in the style sheet. The syntax of this property is based on a traditional typographical shorthand notation to set multiple properties related to fonts.
- Syntax:** [<font-style> || <font-variant-cs2> || <font-weight>]? <font-stretch>? <font-size> [/ <line-height>]? <font-family>] | caption | icon | menu | message-box | small-caption | status-bar
- MDN Reference**

Part 1

폰트 속성 > text-align 속성

The screenshot shows a code editor interface with two tabs: "HTMLPage.html" and "CSS3 Font Property".

HTMLPage.html:

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS3 Font Property</title>
    <style>
        .font_big { font-size: 2em; }
        .font_italic { font-style: italic; }
        .font_bold { font-weight: bold; }
        .font_center { text-align: center; }
        .font_right { text-align: right; }
    </style>
</head>
<body>
    <p class="font_big font_italic font_bold font_center">Lorem ipsum dolor amet</p>
    <p class="font_bold font_right">2019.02.14</p>
    <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit. Suspendisse sed n...
</body>
</html>
```

CSS3 Font Property:

The browser window displays the rendered HTML content. The first paragraph is centered, italicized, bold, and large. The second paragraph is bold and aligned to the right. The date "2019.02.14" is also visible.

A tooltip for the "text-align" property is shown in the bottom right corner, listing the following values:

- center
- end
- justify
- left
- right
- start
- calc()
- inherit
- initial
- unset
- var()

The tooltip text states: "The inline contents are centered within the line box."

Part 1

폰트 속성 > text-align 속성

The screenshot shows a browser window with developer tools open. On the left, the HTML code is displayed:

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS3 Font Property</title>
    <style>
        .font_center { text-align: center; }
    </style>
</head>
<body>
    <span class="font_center">Lorem ipsum dolor amet</span>
    <p class="font_center">Lorem ipsum dolor amet</p>
</body>
</html>
```

In the main pane, the page content is shown with two centered blocks of text: "Lorem ipsum dolor amet". In the bottom right corner of the browser window, there is a status bar with the text "포트: 3000".

Part 1

폰트 속성 > text-decoration 속성

The screenshot shows a browser window with developer tools open. On the left, the HTML code for 'HTMLPage.html' is displayed:

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS3 Font Property</title>
    <style>
        a { text-decoration: none; }
    </style>
</head>
<body>
    <h1>
        <a href="#">Lorem ipsum dolor amet</a>
    </h1>
</body>
</html>
```

In the center, the browser preview shows the word "Lorem ipsum dolor amet" in blue, indicating it is a link. On the right, the 'CSS3 Font Property' panel shows the applied CSS rule:

```
a { text-decoration: none; }
```

The browser address bar shows the URL: `http://127.0.0.1:3000/HTMLPage.html`.

Part 1

위치 속성 > position 속성

- position 속성에 사용 가능한 키워드

키워드	설명
static	태그가 위에서 아래로 순서대로 배치
relative	초기 위치 상태에서 상하좌우로 위치를 이동
absolute	절대 위치 좌표를 설정
fixed	화면을 기준으로 절대 위치 좌표를 설정

Part 1

위치 속성 > position 속성

The screenshot shows a browser developer tools window with the following details:

- HTMLPage.html** file open in the left sidebar.
- CSS3 Property Basic** panel is active, displaying the `position` property.
- Preview**: Shows three overlapping boxes: a blue box at the top, a green box in the middle, and a red box at the bottom.
- Positioning API** panel is visible on the right, showing the definition of the `position` property.
- Code Editor**: The `HTMLPage.html` file contains the following code:

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS3 Property Basic</title>
    <style>
        .box {
            width: 100px; height: 100px;
            position: absolute;
        }
        .red { background-color: red; }
        .green { background-color: green; }
        .blue { background-color: blue; }
    </style>
</head>
<body>
    <div class="box red"></div>
    <div class="box green"></div>
    <div class="box blue"></div>
</body>
</html>
```

Positioning API panel content for `position`:

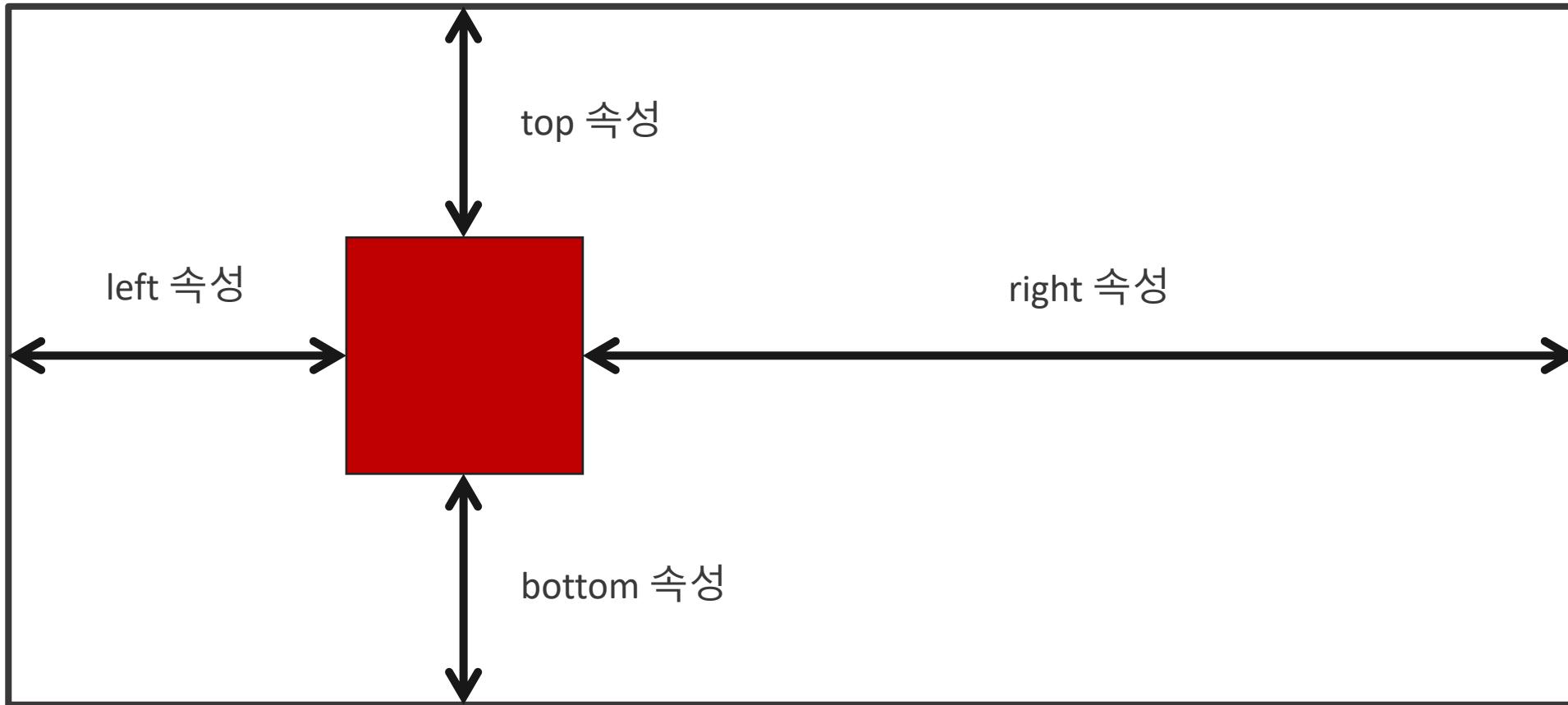
- `absolute` (selected)
- `fixed`
- `relative`
- `static`
- `sticky`
- `-ms-page`
- `-webkit-sticky`
- `calc()`
- `inherit`
- `initial`
- `unset`
- `var()`

The panel also includes a detailed description of the `position` property:

The box's position (and possibly size) is specified with the 'top', 'right', 'bottom', and 'left' properties. These properties specify offsets with respect to the box's 'containing block'.

Part 1

위치 속성 > position 속성



Part 1

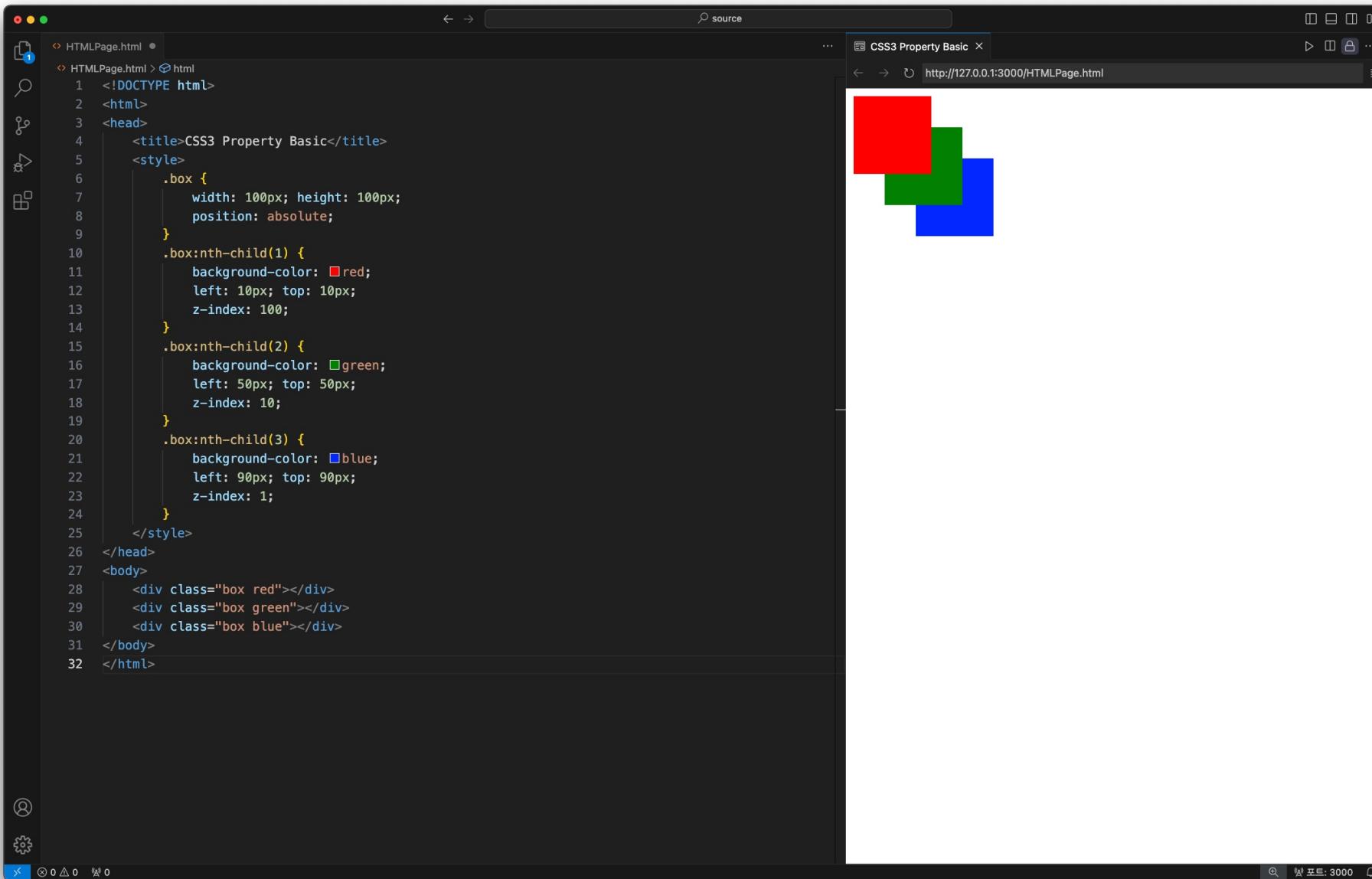
위치 속성 > z-index 속성

The screenshot shows a browser window with developer tools open. The left pane displays the HTML and CSS code for a file named 'HTMLPage.html'. The CSS defines a class '.box' with absolute positioning and dimensions of 100px by 100px. Three specific classes ('red', 'green', 'blue') inherit from '.box' and set their background colors. The right pane shows the rendered output where the boxes overlap: the red box is at the top, the green box is in the middle, and the blue box is at the bottom.

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS3 Property Basic</title>
    <style>
        .box {
            width: 100px; height: 100px;
            position: absolute;
        }
        .red {
            background-color: red;
            left: 10px; top: 10px;
        }
        .green {
            background-color: green;
            left: 50px; top: 50px;
        }
        .blue {
            background-color: blue;
            left: 90px; top: 90px;
        }
    </style>
</head>
<body>
    <div class="box red"></div>
    <div class="box green"></div>
    <div class="box blue"></div>
</body>
</html>
```

Part 1

위치 속성 > z-index 속성



The screenshot shows a browser developer tools window with two panes. The left pane displays the HTML and CSS code for a file named 'HTMLPage.html'. The right pane shows the resulting visual output of the CSS properties.

HTML Code:

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS3 Property Basic</title>
    <style>
        .box {
            width: 100px; height: 100px;
            position: absolute;
        }
        .box:nth-child(1) {
            background-color: red;
            left: 10px; top: 10px;
            z-index: 100;
        }
        .box:nth-child(2) {
            background-color: green;
            left: 50px; top: 50px;
            z-index: 10;
        }
        .box:nth-child(3) {
            background-color: blue;
            left: 90px; top: 90px;
            z-index: 1;
        }
    </style>
</head>
<body>
    <div class="box red"></div>
    <div class="box green"></div>
    <div class="box blue"></div>
</body>
</html>
```

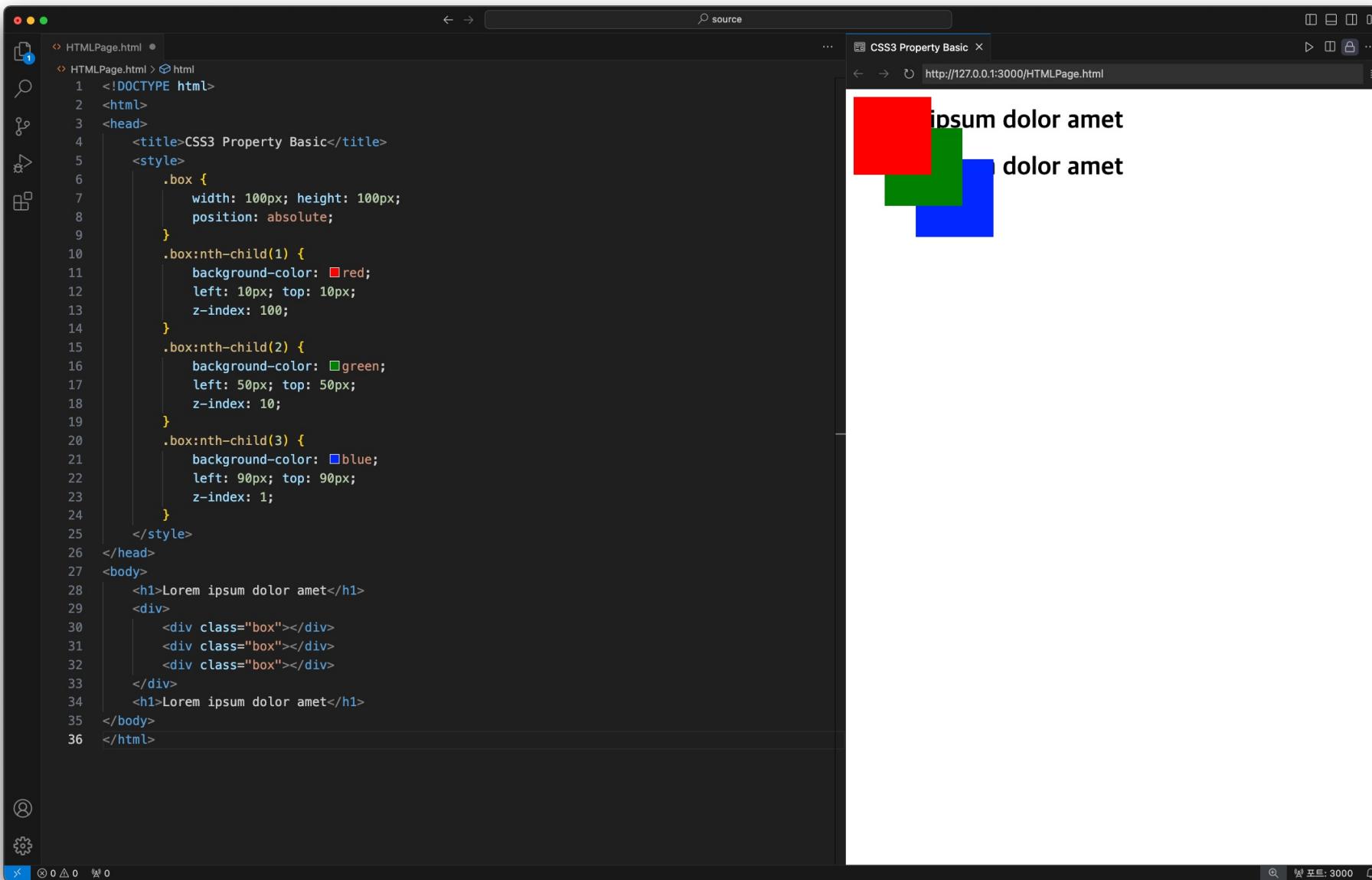
CSS Properties (from right pane):

- .box:nth-child(1) { background-color: red; left: 10px; top: 10px; z-index: 100; }
- .box:nth-child(2) { background-color: green; left: 50px; top: 50px; z-index: 10; }
- .box:nth-child(3) { background-color: blue; left: 90px; top: 90px; z-index: 1; }

The visual output shows three square boxes: a red box at the top-left (z-index 100), a green box in the middle (z-index 10), and a blue box at the bottom-right (z-index 1).

Part 1

위치 속성 > 위치 속성과 관련된 공식



The screenshot shows a browser developer tools window with two panes. The left pane displays the HTML and CSS code for a page named 'HTMLPage.html'. The CSS defines a class '.box' with absolute positioning and three child boxes (nth-child(1), nth-child(2), nth-child(3)) with different colors and positions. The right pane shows the resulting visual output: three overlapping boxes (red, green, blue) containing the text 'ipsum dolor amet' at different coordinates.

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS3 Property Basic</title>
    <style>
        .box {
            width: 100px; height: 100px;
            position: absolute;
        }
        .box:nth-child(1) {
            background-color: red;
            left: 10px; top: 10px;
            z-index: 100;
        }
        .box:nth-child(2) {
            background-color: green;
            left: 50px; top: 50px;
            z-index: 10;
        }
        .box:nth-child(3) {
            background-color: blue;
            left: 90px; top: 90px;
            z-index: 1;
        }
    </style>
</head>
<body>
    <h1>Lorem ipsum dolor amet</h1>
    <div>
        <div class="box"></div>
        <div class="box"></div>
        <div class="box"></div>
    </div>
    <h1>Lorem ipsum dolor amet</h1>
</body>
</html>
```

Part 1

위치 속성 > 위치 속성과 관련된 공식



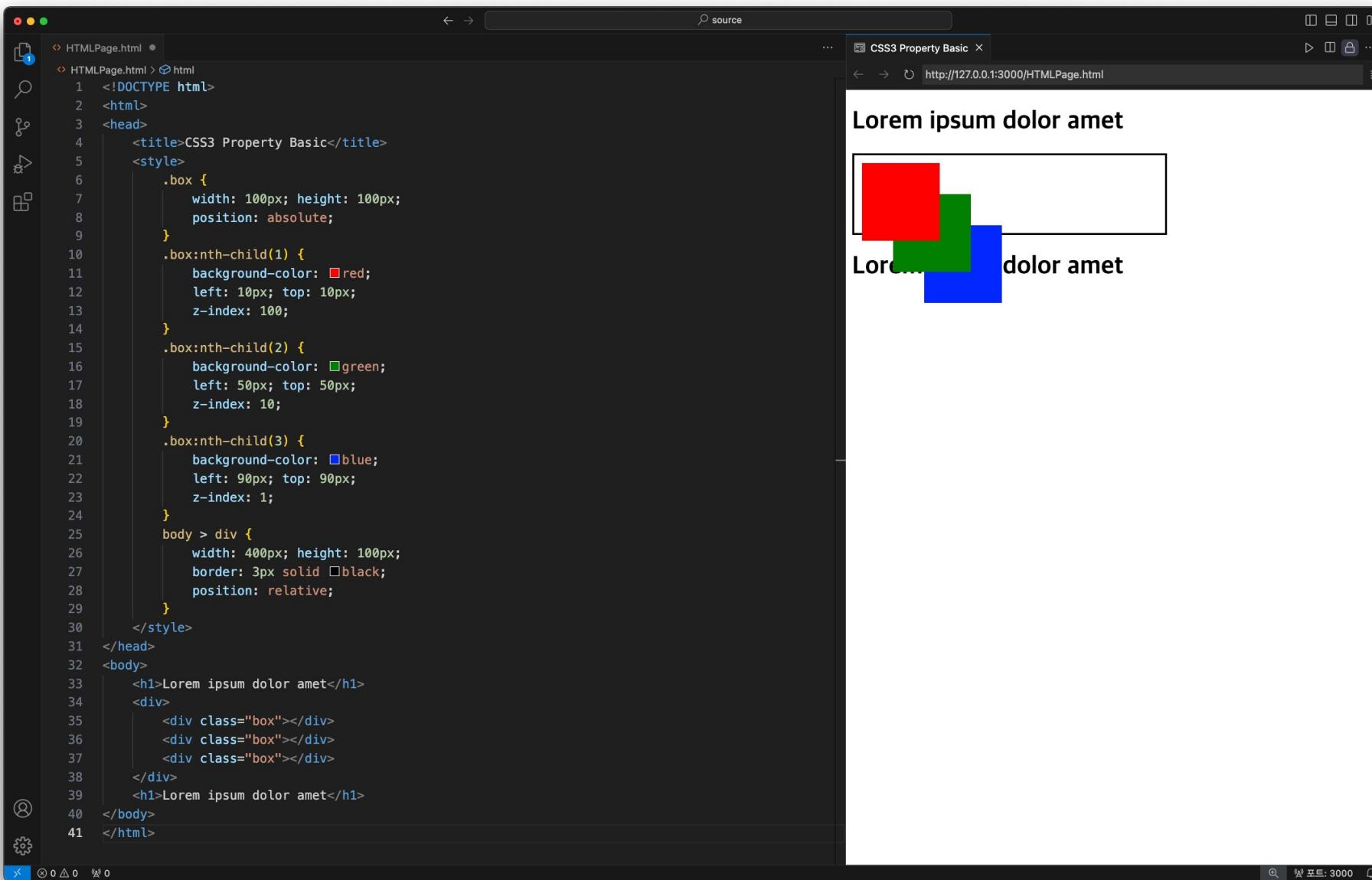
The screenshot shows a browser window displaying a page titled "CSS3 Property Basic". The page contains the following HTML and CSS code:

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS3 Property Basic</title>
    <style>
        .box {
            width: 100px; height: 100px;
            position: absolute;
        }
        .box:nth-child(1) {
            background-color: red;
            left: 10px; top: 10px;
            z-index: 100;
        }
        .box:nth-child(2) {
            background-color: green;
            left: 50px; top: 50px;
            z-index: 10;
        }
        .box:nth-child(3) {
            background-color: blue;
            left: 90px; top: 90px;
            z-index: 1;
        }
        body > div {
            width: 400px; height: 100px;
            border: 3px solid black;
        }
    </style>
</head>
<body>
    <h1>Lorem ipsum dolor amet</h1>
    <div>
        <div class="box"></div>
        <div class="box"></div>
        <div class="box"></div>
    </div>
    <h1>Lorem ipsum dolor amet</h1>
</body>
</html>
```

The browser's developer tools are open, showing the DOM tree and the CSS styles applied to the elements. The page displays three overlapping boxes: a red box at the top-left, a green box in the center, and a blue box at the bottom-right. Below the boxes, the text "Lorem ipsum dolor amet" is displayed twice.

Part 1

위치 속성 > 위치 속성과 관련된 공식



The screenshot shows a browser window displaying a page titled "CSS3 Property Basic". The page content includes the text "Lorem ipsum dolor amet" and three overlapping boxes (red, green, blue) positioned absolute within a container. The left side of the screen shows the code editor with the HTML and CSS for this example.

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS3 Property Basic</title>
    <style>
        .box {
            width: 100px; height: 100px;
            position: absolute;
        }
        .box:nth-child(1) {
            background-color: red;
            left: 10px; top: 10px;
            z-index: 100;
        }
        .box:nth-child(2) {
            background-color: green;
            left: 50px; top: 50px;
            z-index: 10;
        }
        .box:nth-child(3) {
            background-color: blue;
            left: 90px; top: 90px;
            z-index: 1;
        }
        body > div {
            width: 400px; height: 100px;
            border: 3px solid black;
            position: relative;
        }
    </style>
</head>
<body>
    <h1>Lorem ipsum dolor amet</h1>
    <div>
        <div class="box"></div>
        <div class="box"></div>
        <div class="box"></div>
    </div>
    <h1>Lorem ipsum dolor amet</h1>
</body>
</html>
```

Part 1

위치 속성 > overflow 속성

- overflow 속성에 사용 가능한 키워드

키워드 이름	설명
hidden	영역을 벗어나는 부분을 보이지 않게 만듭니다.
scroll	영역을 벗어나는 부분을 스크롤로 만듭니다.

Part 1

위치 속성 > overflow 속성

The screenshot shows a browser developer tools interface with two panes. The left pane displays the HTML and CSS code for a file named 'HTMLPage.html'. The right pane shows the resulting visual output.

HTML and CSS Code:

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS3 Property Basic</title>
    <style>
        .box {
            width: 100px; height: 100px;
            position: absolute;
        }
        .box:nth-child(1) {
            background-color: red;
            left: 10px; top: 10px;
            z-index: 100;
        }
        .box:nth-child(2) {
            background-color: green;
            left: 50px; top: 50px;
            z-index: 10;
        }
        .box:nth-child(3) {
            background-color: blue;
            left: 90px; top: 90px;
            z-index: 1;
        }
        body > div {
            width: 400px; height: 100px;
            border: 3px solid black;
            position: relative;
            overflow: hidden;
        }
    </style>
</head>
<body>
    <h1>Lorem ipsum dolor amet</h1>
    <div>
        <div class="box"></div>
        <div class="box"></div>
        <div class="box"></div>
    </div>
    <h1>Lorem ipsum dolor amet</h1>
</body>
</html>
```

Visual Output:

The browser window title is 'CSS3 Property Basic' and the URL is 'http://127.0.0.1:3000/HTMLPage.html'. The page content includes the title 'Lorem ipsum dolor amet' and three nested div elements. The first div has a red background and is positioned at the top-left. The second div has a green background and is positioned in the center. The third div has a blue background and is positioned at the bottom-right. All three boxes are partially visible within the parent div's boundaries, demonstrating the 'overflow: hidden' property.

Part 1

위치 속성 > overflow 속성

The screenshot shows a browser developer tools window with two main panes. The left pane displays the source code of a file named 'HTMLPage.html'. The right pane shows the rendered HTML page at the URL <http://127.0.0.1:3000/HTMLPage.html>.

Source Code (HTMLPage.html):

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS3 Property Basic</title>
    <style>
        .box {
            width: 100px; height: 100px;
            position: absolute;
        }
        .box:nth-child(1) {
            background-color: red;
            left: 10px; top: 10px;
            z-index: 100;
        }
        .box:nth-child(2) {
            background-color: green;
            left: 50px; top: 50px;
            z-index: 10;
        }
        .box:nth-child(3) {
            background-color: blue;
            left: 90px; top: 90px;
            z-index: 1;
        }
        body > div {
            width: 400px; height: 100px;
            border: 3px solid black;
            position: relative;
            overflow: scroll;
        }
    </style>
</head>
<body>
    <h1>Lorem ipsum dolor amet</h1>
    <div>
        <div class="box"></div>
        <div class="box"></div>
        <div class="box"></div>
    </div>
    <h1>Lorem ipsum dolor amet</h1>
</body>
</html>
```

Rendered Page:

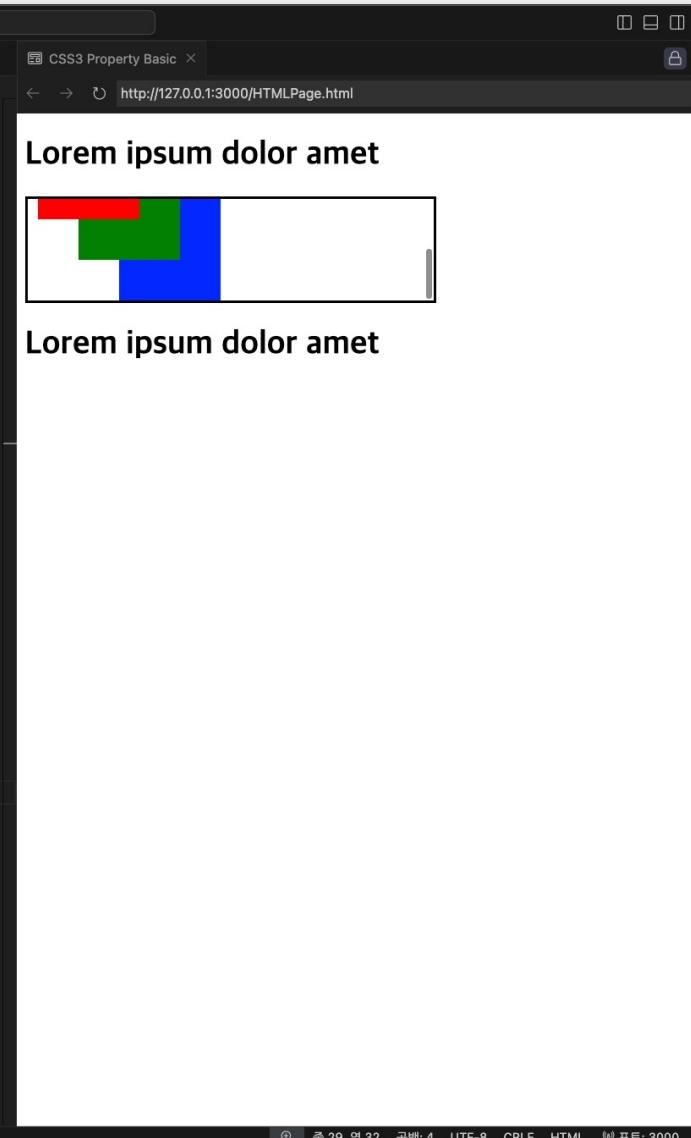
The rendered page contains the following elements:

- A large white **h1** element with the text "Lorem ipsum dolor amet".
- A **div** element with a black border and a white background, containing three smaller colored boxes (red, green, blue) arranged in a triangle.
- A second **h1** element with the same text "Lorem ipsum dolor amet".

The three colored boxes (red, green, blue) are positioned at (10px, 10px), (50px, 50px), and (90px, 90px) respectively, all with a **z-index** of 100. The **div** element has a **z-index** of 1, which is lower than the boxes, causing them to overlap it.

Part 1

위치 속성 > overflow 속성



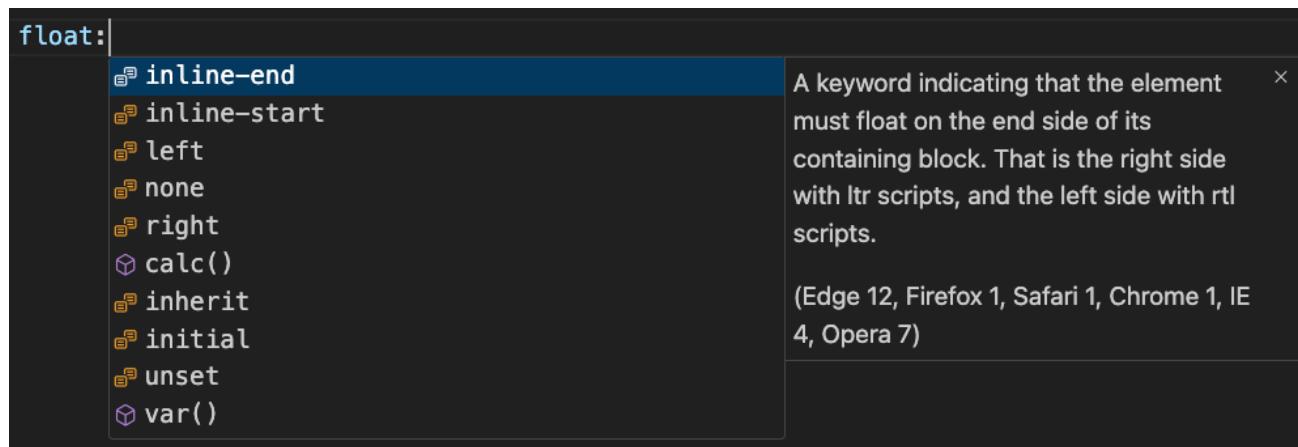
The screenshot shows a browser window displaying a page titled "CSS3 Property Basic". The page contains the following HTML and CSS code:

```
<!DOCTYPE html>
<html>
<head>
<title>CSS3 Property Basic</title>
<style>
.box {
    width: 100px; height: 100px;
    position: absolute;
}
.box:nth-child(1) {
    background-color: red;
    left: 10px; top: 10px;
    z-index: 100;
}
.box:nth-child(2) {
    background-color: green;
    left: 50px; top: 50px;
    z-index: 10;
}
.box:nth-child(3) {
    background-color: blue;
    left: 90px; top: 90px;
    z-index: 1;
}
body > div {
    width: 400px; height: 100px;
    border: 3px solid black;
    position: relative;
    overflow-y: scroll;
}
</style>
</head>
<body>
<h1>Lorem ipsum dolor amet</h1>
<div>
<div class="box"></div>
<div class="box"></div>
<div class="box"></div>
</div>
<h1>Lorem ipsum dolor amet</h1>
</body>
</html>
```

The browser's status bar at the bottom indicates the following information: 줄 29, 열 32, 공백: 4, UTF-8, CRLF, HTML, 포트: 3000.

- float 속성에 사용 가능한 키워드

키워드	설명
left	태그를 왼쪽에 붙입니다.
right	태그를 오른쪽에 붙입니다.



Part 1

float 속성 > float 속성 개요

The screenshot shows a browser window with developer tools open. On the left, the HTML code for 'HTMLPage.html' is displayed:

```
<!DOCTYPE html>
<html>
<head>
    <title>Float Style Property</title>
    <style>
        ...
    </style>
</head>
<body>
    
    <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit. Suspendisse sed nisi suscipit pellentesque leo, vel efficitur mi placerat sed. Fusce vel condimentum leo, at iaculis ante. Suspendisse posuere, dolor non tempor ullamcorper, nisl elit facilisis erat, nec lacinia augue erat id lacus. Curabitur mollis, justo nec lobortis hendrerit, libero nunc aliquam lacus, ut tristique sem nunc eu metus. Quisque varius orci eu felis sollicitudin malesuada. Vivamus pretium ligula velit, eget facilisis enim imperdiet ac.
    Nam enim sem, pulvinar sed nibh non, vestibulum suscipit dui. Vestibulum vitae sodales velit. Nam cursus, velit id semper malesuada, sem mauris iaculis diam, sit amet auctor ligula lectus in eros. Aliquam tincidunt semper odio, sit amet ornare neque tristique ut. Suspendisse placerat consequat lectus ut varius. Aliquam in ligula non massa auctor porta. Proin auctor mattis elit sit amet tincidunt. Cras auctor mauris augue, et volutpat diam iaculis vitae.
    ...
    ...
</body>
</html>
```

The right pane shows the rendered HTML page with the Hanbit Media logo and some placeholder text. The developer tools also show the 'Float Style Property' panel with the URL <http://127.0.0.1:3000/HTMLPage.html>.

Part 1

float 속성 > float 속성 개요

The screenshot shows a browser window with developer tools open. On the left, the HTML code for 'HTMLPage.html' is displayed:

```
<!DOCTYPE html>
<html>
<head>
    <title>Float Style Property</title>
    <style>
        img {
            float: left;
        }
    </style>
</head>
<body>
    
    <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit. Suspendisse sed nisi velit. Phasellus suscipit pellentesque leo, vel efficitur mi placerat sed. Fusce vel condimentum leo, at iaculis ante. Suspendisse posuere, dolor non tempor ullamcorper, nisl elit facilisis erat, nec lacinia augue erat id lacus. Curabitur mollis, justo nec lobortis hendrerit, libero nunc aliquam lacus, ut tristique sem nunc eu metus. Quisque varius orci eu felis sollicitudin malesuada. Vivamus pretium ligula velit, eget facilisis enim imperdiet ac.</p>
    <p>Nam enim sem, pulvinar sed nibh non, vestibulum suscipit dui. Vestibulum malesuada, sem mauris iaculis diam, sit amet auctor ligula lectus in eros. Aliquam tincidunt semper odio, sit amet ornare neque tristique ut. Suspendisse placerat consequat lectus ut varius. Aliquam in ligula non massa auctor porta. Proin auctor mattis elit sit amet tincidunt. Cras auctor mauris augue, et volutpat diam iaculis vitae.</p>
</body>
</html>
```

The right pane shows the rendered output. It features the Hanbit Media logo (a stylized 'HB' in green and orange) followed by the text '한빛미디어' and 'Hanbit Media, Inc.'. Below the logo is a large amount of placeholder text (Lorem ipsum).

At the bottom of the browser window, there are various developer tools controls like zoom levels, orientation, and a port number indicator.

Part 1

float 속성 > float 속성을 사용한 수평 정렬

The screenshot shows a browser window with developer tools open. On the left, the DOM tree displays the structure of the HTML file. The main pane shows the source code:

```
<!DOCTYPE html>
<html>
<head>
    <title>Float Style Property</title>
    <style>
        .box {
            width: 100px;
            height: 100px;
            background-color: #ccc;
            margin: 10px;
            float: left;
        }
    </style>
</head>
<body>
    <div class="box">1</div>
    <div class="box">2</div>
</body>
</html>
```

A floating panel titled "Float Style Property" is visible on the right side of the screen, containing the numbers "1" and "2". The browser's address bar shows the URL `http://127.0.0.1:3000/HTMLPage.html`. The bottom status bar indicates the page is at 0% zoom.

Part 1

float 속성 > float 속성을 사용한 수평 정렬

The screenshot shows a browser window with developer tools open. On the left, the HTML code for "HTMLPage.html" is displayed:

```
<!DOCTYPE html>
<html>
<head>
    <title>Float Style Property</title>
    <style>
        .box {
            width: 100px; height: 100px;
            background-color: red;
            margin: 10px; padding: 10px;
            /* 태그를 왼쪽으로 붙입니다. */
            float: left;
        }
    </style>
</head>
<body>
    <div class="box">1</div>
    <div class="box">2</div>
</body>
</html>
```

The browser window on the right shows two red squares labeled "1" and "2". Square "1" has a light purple background and is surrounded by a thin orange border. A callout box at the bottom indicates its size is 120x120. The URL in the address bar is <http://127.0.0.1:3000/HTMLPage.html>.

Part 1

float 속성 > float 속성을 사용한 수평 정렬

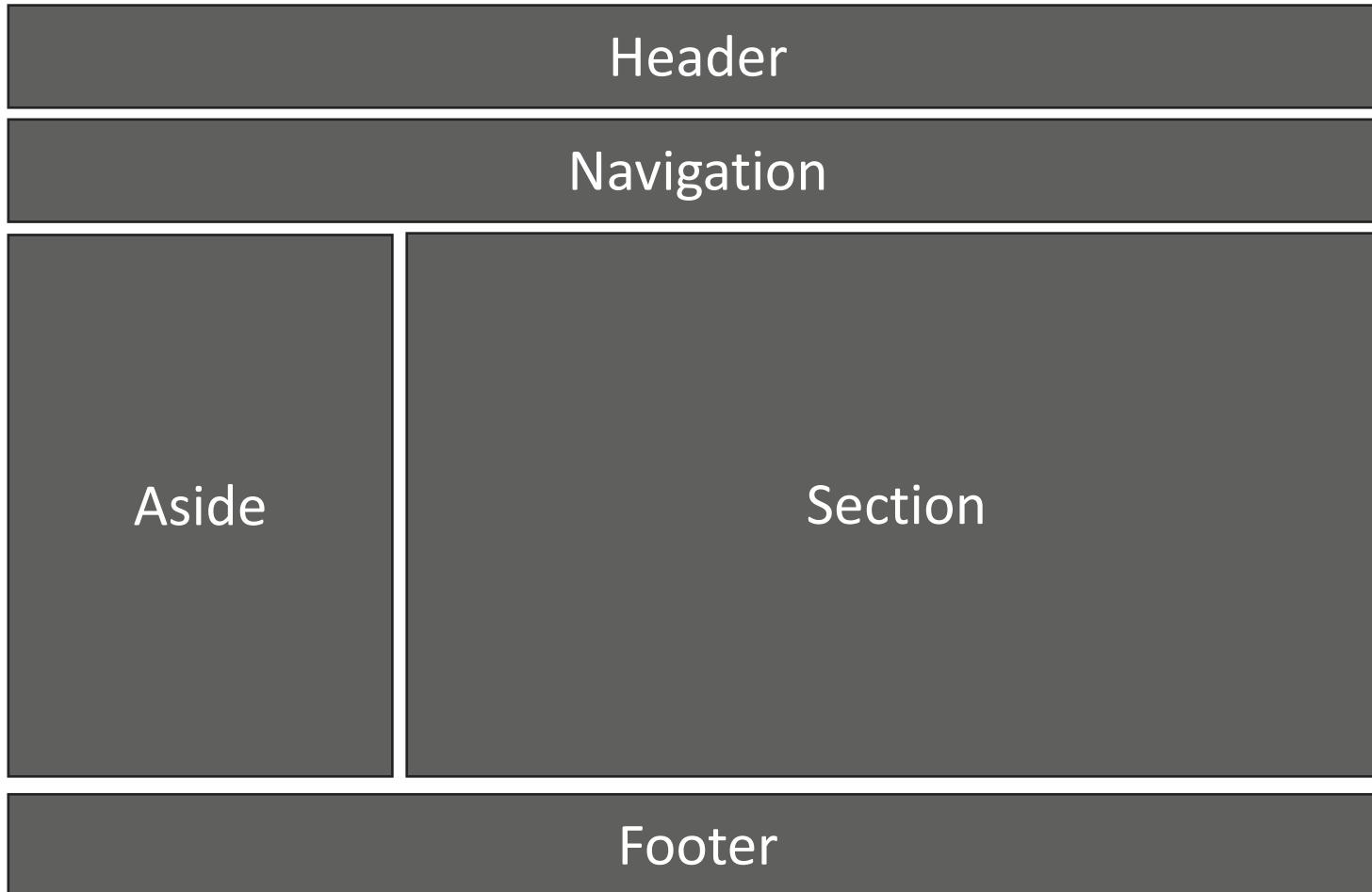
The screenshot shows a browser window with developer tools open. On the left, the HTML code for "HTMLPage.html" is displayed:

```
<!DOCTYPE html>
<html>
<head>
    <title>Float Style Property</title>
    <style>
        .box {
            width: 100px; height: 100px;
            background-color: red;
            margin: 10px; padding: 10px;
            /* 태그를 오른쪽으로 붙입니다. */
            float: right;
        }
    </style>
</head>
<body>
    <div class="box">1</div>
    <div class="box">2</div>
</body>
</html>
```

The browser's address bar shows the URL `http://127.0.0.1:3000/HTMLPage.html`. The page content consists of two red square boxes labeled "1" and "2". Box "1" has a purple inner box and a brown outer border. A callout box highlights this element with the text "div.box 120 x 120".

Part 1

float 속성 > float 속성을 사용한 레이아웃 구성



Part 1

float 속성 > float 속성을 사용한 레이아웃 구성

The screenshot shows a browser window with developer tools open. On the left, the HTML code for 'HTMLPage.html' is displayed:

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS3 Property Basic</title>
    <style>
        ...
    </style>
</head>
<body>
    <div id="header"></div>
    <div id="navigation"></div>
    <div id="wrap">
        <div id="aside"></div>
        <div id="section"></div>
    </div>
    <div id="footer"></div>
</body>
</html>
```

The right side of the interface shows the rendered HTML page in a browser window titled 'CSS3 Property Basic'. The URL in the address bar is 'http://127.0.0.1:3000/HTMLPage.html'. The page content includes a header, navigation, a main wrap area containing aside and section containers, and a footer.

The screenshot shows a browser window with developer tools open. On the left, the HTML code is displayed:

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS3 Property Basic</title>
    <style>
        /* CSS3 Properties */
    </style>
</head>
<body>
    <div id="header"><h1>Header</h1></div>
    <div id="navigation"><h1>Navigation</h1></div>
    <div id="wrap">
        <div id="aside">
            <h1>Aside</h1>
            <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit. Suspendisse posuere, dolor non tempor ullamcorper, nisl elit facilisis erat, nec lacinia augue erat id lacus. Curabitur mollis, justo nec lobortis hendrerit, libero nunc aliquam lacus, ut tristique sem nunc eu metus. Quisque varius orci eu felis sollicitudin malesuada. Vivamus pretium ligula velit, eget facilisis enim imperdiet ac.</p>
        </div>
        <div id="section">
            <h1>Section</h1>
            <p>Nam enim sem, pulvinar sed nibh non, vestibulum suscipit dui. Vestibulum vitae sodales velit. Nam cursus, velit id semper malesuada, sem mauris iaculis diam, sit amet auctor ligula lectus in eros. Aliquam tincidunt semper odio, sit amet ornare neque tristique ut. Suspendisse placerat consequat lectus ut varius. Aliquam in ligula non massa auctor porta. Proin auctor mattis elit sit amet tincidunt. Cras auctor mauris augue, et volutpat diam iaculis vitae.</p>
        </div>
    </div>
    <div id="footer"><h1>Footer</h1></div>
</body>
</html>
```

The right side shows the rendered HTML with floating elements:

- Header**
- Navigation**
- Aside**

Lore ipsum dolor sit amet, consectetur adipiscing elit. Suspendisse posuere, dolor non tempor ullamcorper, nisl elit facilisis erat, nec lacinia augue erat id lacus. Curabitur mollis, justo nec lobortis hendrerit, libero nunc aliquam lacus, ut tristique sem nunc eu metus. Quisque varius orci eu felis sollicitudin malesuada. Vivamus pretium ligula velit, eget facilisis enim imperdiet ac.
- Section**

Nam enim sem, pulvinar sed nibh non, vestibulum suscipit dui. Vestibulum vitae sodales velit. Nam cursus, velit id semper malesuada, sem mauris iaculis diam, sit amet auctor ligula lectus in eros. Aliquam tincidunt semper odio, sit amet ornare neque tristique ut. Suspendisse placerat consequat lectus ut varius. Aliquam in ligula non massa auctor porta. Proin auctor mattis elit sit amet tincidunt. Cras auctor mauris augue, et volutpat diam iaculis vitae.
- Footer**

The screenshot shows a code editor interface with two main panes. The left pane displays the source code of an HTML file named 'HTMLPage.html'. The right pane shows the rendered output of the same code.

HTML Source Code:

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS3 Property Basic</title>
    <style>
        /* body 태그를 중앙 정렬합니다. */
        body {
            width: 960px;
            margin: 0 auto;
        }
    </style>
</head>
<body>
    <div id="header"><h1>Header</h1></div>
    <div id="navigation"><h1>Navigation</h1></div>
    <div id="wrap">
        <div id="aside">
            <h1>Aside</h1>
            <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit. Suspendisse sed nisi velit. Phasellus suscipit pellentesque leo, vel efficitur mi placerat sed. Fusce vel condimentum leo, at iaculis ante. Suspendisse posuere, dolor non tempor ullamcorper, nisl elit facilisis erat, nec lacinia augue erat id lacus. Curabitur mollis, justo nec lobortis hendrerit, libero nunc aliquam lacus, ut tristique sem nunc eu metus. Quisque varius orci eu felis sollicitudin malesuada. Vivamus pretium ligula velit, eget facilisis enim imperdiet ac.</p>
        </div>
        <div id="section">
            <h1>Section</h1>
            <p>Nam enim sem, pulvinar sed nibh non, vestibulum suscipit dui. Vestibulum vitae sodales velit. Nam cursus, velit id semper malesuada, sem mauris iaculis diam, sit amet auctor ligula lectus in eros. Aliquam tincidunt semper odio, sit amet ornare neque tristique ut. Suspendisse placerat consequat lectus ut varius. Aliquam in ligula non massa auctor porta. Proin auctor mattis elit sit amet tincidunt. Cras auctor mauris augue, et volutpat diam iaculis vitae.</p>
        </div>
    </div>
    <div id="footer"><h1>Footer</h1></div>
</body>
</html>
```

Rendered Output:

The rendered output consists of five sections: Header, Navigation, Aside, Section, and Footer. The Aside section contains a paragraph of placeholder text. The Section section also contains a paragraph of placeholder text.

Header
Navigation
Aside
Section
Footer

Header
Navigation
Aside
Section
Footer

Part 1

float 속성 > float 속성을 사용한 레이아웃 구성

The screenshot shows a browser window displaying a web page titled "CSS3 Property Basic". The page content is as follows:

```
<!DOCTYPE html>
<html>
<head>
<title>CSS3 Property Basic</title>
<style>
/* body 태그를 중앙 정렬합니다. */
body {
    width: 960px;
    margin: 0 auto;
}
#aside {
    width: 200px;
    float: left;
}
#section {
    width: 760px;
    float: left;
}
</style>
</head>
<body>
<div id="header"><h1>Header</h1></div>
<div id="navigation"><h1>Navigation</h1></div>
<div id="wrap">
    <div id="aside">
        <h1>Aside</h1>
        <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit. Suspendisse sed nisi velit, id semper malesuada, sem mauris iaculis diam, sit amet auctor ligula lectus in eros. Aliquam tincidunt semper odio, sit amet ornare neque tristique ut. Suspendisse placerat consequat lectus ut varius. Aliquam in ligula non Phasellus suscipit massa auctor porta. Proin auctor mattis elit sit amet tincidunt. Cras auctor mauris augue, et volutpat diam iaculis pellentesque leo, vel efficitur vitae. mi placerat sed. Fusce vel condimentum leo, at iaculis ante. Suspendisse posuere, dolor non tempor ullamcorper, nisl elit facilisis erat, nec lacinia augue erat id lacus. Curabitur mollis, justo nec lobortis hendrerit, libero nunc aliquam lacus, ut tristique sem nunc eu metus. Quisque varius orci eu felis sollicitudin malesuada. Vivamus pretium ligula velit, eget facilisis enim imperdiet ac.</p>
    <div id="section">
        <h1>Section</h1>
        <p>Nam enim sem, pulvinar sed nibh non, vestibulum suscipit dui. Vesti</p>
    </div>
</div>
<div id="footer"><h1>Footer</h1></div>
</body>
</html>
```

The browser interface includes a sidebar with icons for file operations, a status bar at the bottom, and a top navigation bar with tabs for "source" and "CSS3 Property Basic". The page itself features a header, navigation, aside content, section content, and a footer.

Part 1

float 속성 > float 속성을 사용한 레이아웃 구성

The screenshot shows a browser window displaying a web page titled "CSS3 Property Basic". The page has a header, navigation, aside, section, and footer. The aside and section are floated to the left, while the footer is at the bottom. The browser's developer tools are open, showing the HTML and CSS code.

HTML:

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS3 Property Basic</title>
    <style>
        /* body 태그를 중앙 정렬합니다. */
        body {
            width: 960px;
            margin: 0 auto;
        }
        #aside {
            width: 200px;
            float: left;
        }
        #section {
            width: 760px;
            float: left;
        }
        #wrap { overflow: hidden; }
    </style>
</head>
<body>
    <div id="header"><h1>Header</h1></div>
    <div id="navigation"><h1>Navigation</h1></div>
    <div id="wrap">
        <div id="aside">
            <h1>Aside</h1>
            <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit. Suspendisse sed nisi velit, odio, sit amet ornare neque tristique ut. Suspendisse placerat consequat lectus ut varius. Aliquam in ligula non Phasellus suscipit massa auctor porta. Proin auctor mattis elit sit amet tincidunt. Cras auctor mauris augue, et volutpat diam iaculis pellentesque leo, vel efficitur vitae. mi placerat sed. Fusce vel condimentum leo, at iaculis ante. Suspendisse posuere, dolor non tempor ullamcorper, nisl elit facilisis erat, nec lacinia augue erat id lacus. Curabitur mollis, justo nec lobortis hendrerit, libero nunc aliquam lacus, ut tristique sem nunc eu metus. Quisque varius orci eu felis sollicitudin malesuada. Vivamus pretium ligula velit, eget facilisis enim imperdiet ac.
        </div>
        <div id="section">
            <h1>Section</h1>
            <p>Nam enim sem, pulvinar sed nibh non, vestibulum suscipit dui. Vesti
        </div>
    <div id="footer"><h1>Footer</h1></div>
</body>
</html>
```

CSS:

```
/* body 태그를 중앙 정렬합니다. */
body {
    width: 960px;
    margin: 0 auto;
}
#aside {
    width: 200px;
    float: left;
}
#section {
    width: 760px;
    float: left;
}
#wrap { overflow: hidden; }
```

Page Content:

Header

Navigation

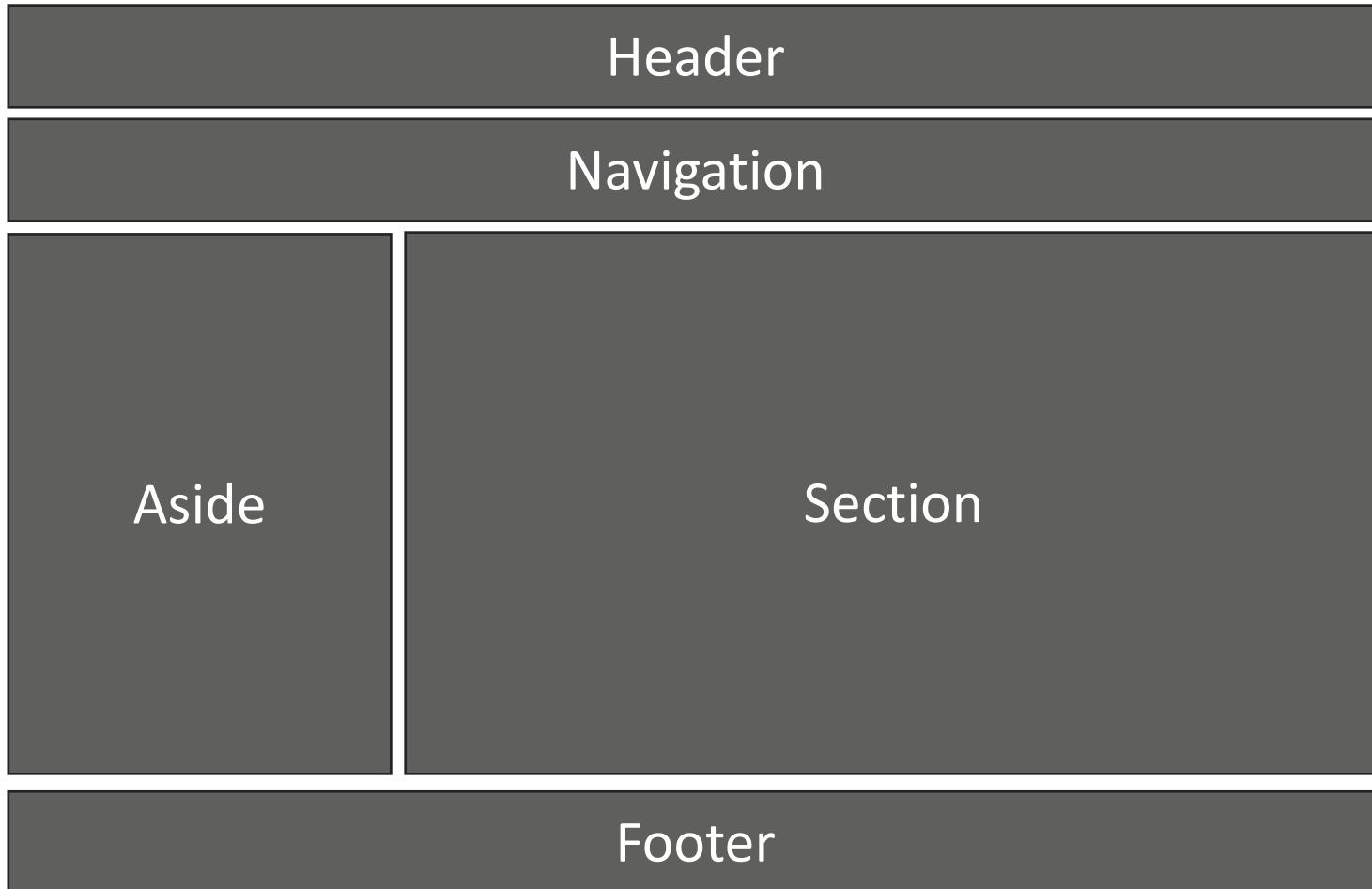
Aside

Section

Footer

Part 1

clear: both를 사용한 레이아웃



Part 1

clear: both를 사용한 레이아웃

The screenshot shows a browser developer tools window with two main panes. The left pane displays the source code of an HTML file named 'HTMLPage.html'. The code structure is as follows:

```
<!DOCTYPE html>
<html>
  <head>
    <title>CSS3 Property Basic</title>
    <style>
      /* CSS styles go here */
    </style>
  </head>
  <body>
    <div id="header"></div>
    <div id="navigation"></div>
    <div id="aside"></div>
    <div id="section"></div>
    <div id="footer"></div>
  </body>
</html>
```

The right pane shows the rendered preview of the page at the URL <http://127.0.0.1:3000/HTMLPage.html>. The page consists of five stacked div elements: header, navigation, aside, section, and footer. The 'aside' and 'section' divs overlap each other in the rendered view.

Part 1

clear: both를 사용한 레이아웃

The screenshot shows a browser developer tools window with two main panes. The left pane displays the source code of an HTML file named 'HTMLPage.html'. The right pane shows the rendered HTML page at the URL <http://127.0.0.1:3000/HTMLPage.html>.

Source Code (HTMLPage.html):

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS3 Property Basic</title>
    <style>
        </style>
</head>
<body>
    <div id="header"></div>
    <div id="navigation"></div>
    <div class="clear"></div>

    <div id="aside"></div>
    <div id="section"></div>
    <div class="clear"></div>

    <div id="footer"></div>
    <div class="clear"></div>
</body>
</html>
```

Renders:

The rendered page consists of several stacked div elements. The first three divs (header, navigation, and a clear class) are positioned above the aside and section divs. The aside and section divs are positioned above the footer and another clear class div. All these divs appear to be stacked vertically without any horizontal space between them, demonstrating the effect of the CSS 'clear: both' property.

The screenshot shows a browser window with developer tools open. On the left, the DOM tree for 'HTMLPage.html' is visible, showing the structure of the page with various sections like Header, Navigation, Aside, Section, and Footer. In the main content area, the rendered HTML is displayed with the following structure:

```
<div id="header"><h1>Header</h1></div>
<div id="navigation"><h1>Navigation</h1></div>
<div class="clear"></div>
<div id="aside">
    <h1>Aside</h1>
    <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit. Suspendisse sed nisl velit. Phasellus suscipit pellentesque leo, vel efficitur mi placerat sed. Fusce vel condimentum leo, at iaculis ante. Suspendisse posuere, dolor non tempor ullamcorper, nisl elit facilisis erat, nec lacinia augue erat id lacus. Curabitur mollis, justo nec lobortis hendrerit, libero nunc aliquam lacus, ut tristique sem nunc eu metus. Quisque varius orci eu felis sollicitudin malesuada. Vivamus pretium ligula velit, eget facilisis enim imperdiet ac.</p>
</div>
<div id="section">
    <h1>Section</h1>
    <p>Nam enim sem, pulvinar sed nibh non, vestibulum suscipit dui. Vestibulum vitae sodales velit. Nam cursus, velit id semper malesuada, sem mauris iaculis diam, sit amet auctor ligula lectus in eros. Aliquam tincidunt semper odio, sit amet ornare neque tristique ut. Suspendisse placerat consequat lectus ut varius. Aliquam in ligula non massa auctor porta. Proin auctor mattis elit sit amet tincidunt. Cras auctor mauris augue, et volutpat diam iaculis vitae.</p>
</div>
<div class="clear"></div>
<div id="footer"><h1>Footer</h1></div>
<div class="clear"></div>
```

The rendered output shows the following sections:

- Header**
- Navigation**
- Aside**

Aside content: Lorem ipsum dolor sit amet, consectetur adipiscing elit. Suspendisse sed nisl velit. Phasellus suscipit pellentesque leo, vel efficitur mi placerat sed. Fusce vel condimentum leo, at iaculis ante. Suspendisse posuere, dolor non tempor ullamcorper, nisl elit facilisis erat, nec lacinia augue erat id lacus. Curabitur mollis, justo nec lobortis hendrerit, libero nunc aliquam lacus, ut tristique sem nunc eu metus. Quisque varius orci eu felis sollicitudin malesuada. Vivamus pretium ligula velit, eget facilisis enim imperdiet ac.
- Section**

Section content: Nam enim sem, pulvinar sed nibh non, vestibulum suscipit dui. Vestibulum vitae sodales velit. Nam cursus, velit id semper malesuada, sem mauris iaculis diam, sit amet auctor ligula lectus in eros. Aliquam tincidunt semper odio, sit amet ornare neque tristique ut. Suspendisse placerat consequat lectus ut varius. Aliquam in ligula non massa auctor porta. Proin auctor mattis elit sit amet tincidunt. Cras auctor mauris augue, et volutpat diam iaculis vitae.
- Footer**

The screenshot shows a browser developer tools window with two panes. The left pane displays the HTML and CSS code for a page titled "CSS3 Property Basic". The right pane shows the rendered HTML structure with four main sections: Header, Navigation, Aside, and Section, each containing placeholder text.

```
<!DOCTYPE html>
<html>
<head>
<title>CSS3 Property Basic</title>
<style>
body {
    width: 960px;
    margin: 0 auto;
}
.clear {
    clear: both;
}
#aside {
    float: left;
    width: 260px;
}
#section {
    float: right;
    width: 700px;
}
</style>
</head>
<body>
<div id="header"><h1>Header</h1></div>
<div id="navigation"><h1>Navigation</h1></div>
<div class="clear"></div>
<div id="aside">
    <h1>Aside</h1>
    <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit. Suspendisse posuere, dolor non tempor ullamcorper, nisl elit facilisis erat, nec lacinia augue erat id lacus. Curabitur mollis, justo nec lobortis hendrerit, libero nunc aliquam lacus, ut tristique sem nunc eu metus. Quisque varius orci eu felis sollicitudin malesuada. Vivamus pretium ligula velit, eget facilisis enim imperdiet ac.</p>
</div>
<div id="section">
    <h1>Section</h1>
    <p>Nam enim sem, pulvinar sed nibh non, vestibulum suscipit du</p>
</div>
<div class="clear"></div>
<div id="footer"><h1>Footer</h1></div>
<div class="clear"></div>
</body>
</html>
```

Header

Navigation

Aside

Section

Nam enim sem, pulvinar sed nibh non, vestibulum suscipit du...
Nam enim sem, pulvinar sed nibh non, vestibulum suscipit du...

Footer

Part 1

그림자 속성 > text-shadow 속성

The screenshot shows a browser window with developer tools open. On the left, the HTML code for 'HTMLPage.html' is displayed:

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS3 Property Basic</title>
    <style>
        h1 {
            text-shadow: 5px 5px 5px black;
        }
    </style>
</head>
<body>
    <h1>Lorem ipsum dolor amet</h1>
</body>
</html>
```

The right side of the window shows the rendered HTML page with the text "Lorem ipsum dolor amet" in a large h1 element. The text has a visible black text shadow effect.

Part 1

그림자 속성 > box-shadow 속성

The screenshot shows a browser window with developer tools open. On the left, the HTML code for 'HTMLPage.html' is displayed:

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS3 Property Basic</title>
    <style>
        div {
            border: 3px solid black;
            box-shadow: 10px 10px 30px black;
            text-shadow: 5px 5px 5px black;
        }
    </style>
</head>
<body>
    <div>
        <h1>Lorem ipsum dolor amet</h1>
    </div>
</body>
</html>
```

The right panel shows the rendered HTML page at <http://127.0.0.1:3000/HTMLPage.html>. It features a large, dark gray box shadow around a central

element containing the text "Lorem ipsum dolor amet".

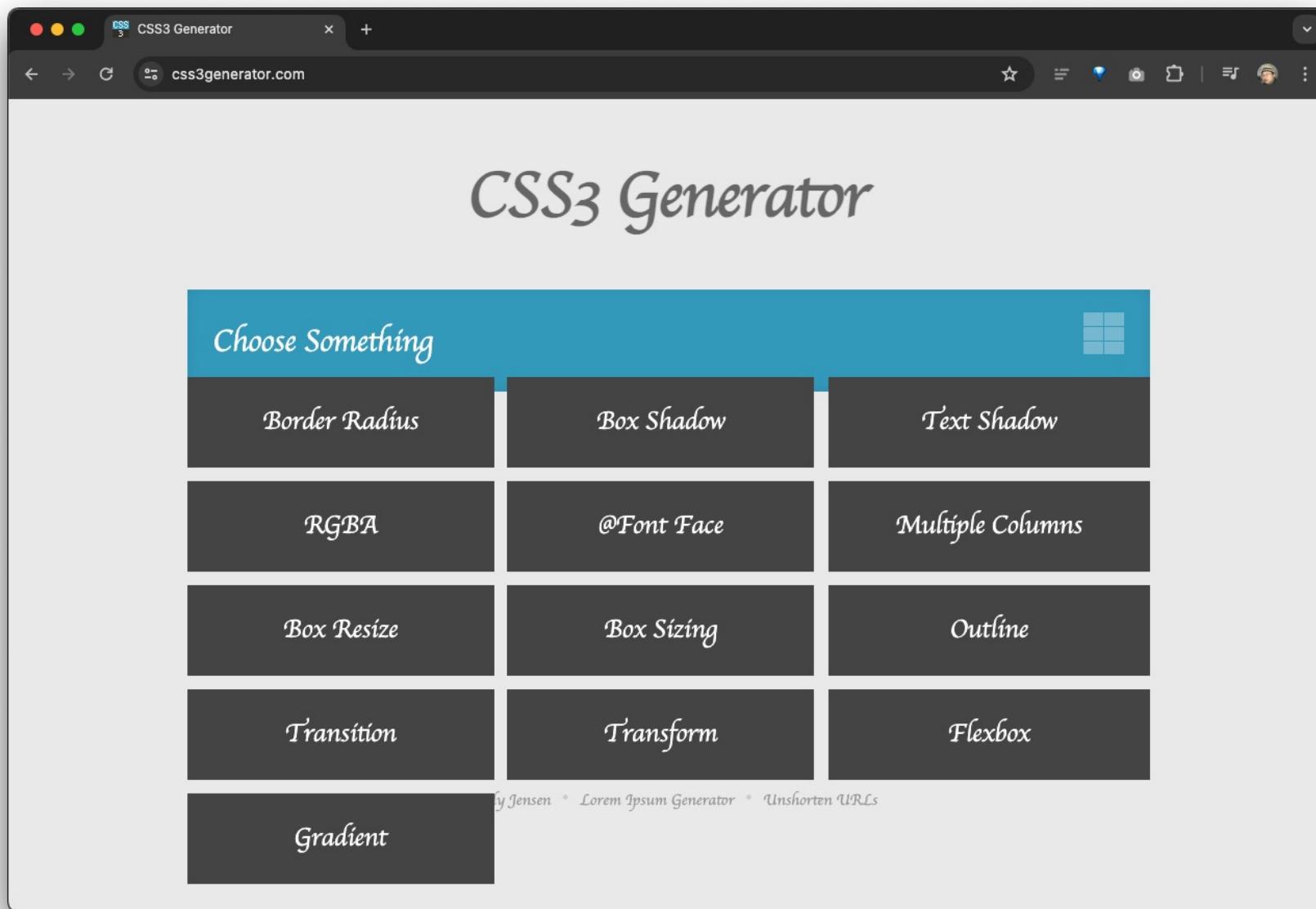
The screenshot shows a browser developer tools window with two main panes. The left pane displays the source code of an HTML file named 'HTMLPage.html'. The right pane shows the rendered output of the page.

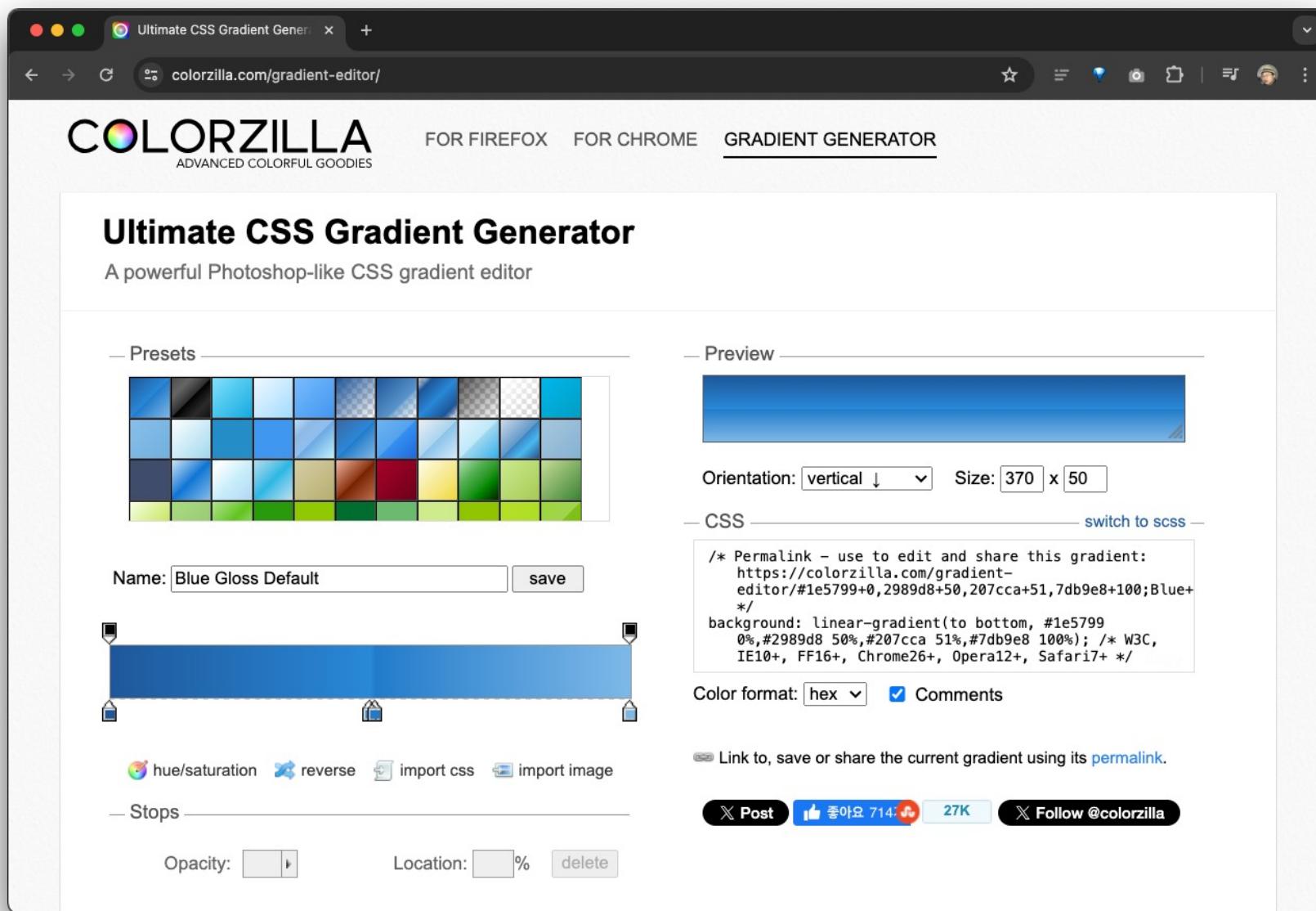
Source Code (HTMLPage.html):

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS3 Property Basic</title>
    <style>
        .box {
            border: 3px solid black;
            box-shadow: 10px 10px 10px black, 10px 10px 20px orange, 10px 10px 30px red;
            text-shadow: 10px 10px 10px black, 10px 10px 20px orange, 10px 10px 30px red;
        }
    </style>
</head>
<body>
    <div class="box">
        <h1>Lorem ipsum dolor amet</h1>
    </div>
</body>
</html>
```

Renders Preview:

The rendered preview shows a large black **h1** element with the text "Lorem ipsum dolor amet". The element has a black border and three nested shadows: a black shadow at 10px offset with a spread of 10px, an orange shadow at 10px offset with a spread of 20px, and a red shadow at 10px offset with a spread of 30px. The background of the page is blurred with a similar color gradient.





The image shows a browser window and a code editor side-by-side. The browser window displays a red gradient header with the text "CSS3 Gradient". The code editor shows the corresponding CSS3 gradient code in an HTML file named "HTMLPage.html".

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS3 Style Property Basic</title>
    <style>
        div {
            font-family: 'Times New Roman';
            height: 60px;
            line-height: 60px;
            text-align: center;
            /* 복사해서 붙여 넣으세요. */
            /* Old browsers */
            background: #f85032;
            /* FF3.6+ */
            background: -moz-linear-gradient(top, #f85032 1%, #f16f5c 50%,
                #f6290c 51%, #e73827 100%);
            /* Chrome, Safari4+ */
            background: -webkit-gradient(linear, left top, left bottom,
                color-stop(1%, #f85032), color-stop(50%, #f16f5c),
                color-stop(51%, #f6290c), color-stop(100%, #e73827));
            /* Opera 11.10+ */
            background: -o-linear-gradient(top, #f85032 1%, #f16f5c 50%,
                #f6290c 51%, #e73827 100%);
            /* IE10+ */
            background: -ms-linear-gradient(top, #f85032 1%, #f16f5c 50%,
                #f6290c 51%, #e73827 100%);
            /* W3C */
            background: linear-gradient(top bottom, #f85032 1%, #f16f5c 50%,
                #f6290c 1%, #e73827 100%);
            /* IE6-9 */
            filter: progid:DXImageTransform.Microsoft.gradient(
                startColorstr='#f85032', endColorstr='#e73827', GradientType=0
            );
        }
    </style>
</head>
<body>
    <div>
        <h1>CSS3 Gradient</h1>
    </div>
</body>
</html>
```

The screenshot shows a code editor window and a browser preview window side-by-side.

Code Editor (HTMLPage.html):

```
1 <!DOCTYPE html>
2 <html>
3 <head>
4   <title>CSS3 Selector Basic</title>
5   <style>
6     /* input 태그의 type 속성값이 checkbox인 태그가 체크되었을 때
      바로 뒤에 위치하는 div 태그의 height 속성에 0픽셀을 적용합니다. */
7     input[type=checkbox]:checked + div {
8       height: 0px;
9     }
10    div {
11      overflow: hidden;
12      width: 650px; height: 300px;
13      /* 변화 효과를 적용합니다. */
14      -ms-transition-duration: 1s;
15      -webkit-transition-duration: 1s;
16      -moz-transition-duration: 1s;
17      transition-duration: 1s;
18    }
19  </style>
20 </head>
21 <body>
22   <input type="checkbox" />
23   <div>
24     <h1>Lorem ipsum</h1>
25     <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit. Suspendisse s
26   </div>
27 </body>
28 </html>
```

Browser Preview:

The browser preview shows the following content:

Lore ipsum

Lore ipsum dolor sit amet, consectetur adipiscing elit. Suspendisse sed nisi velit. Phasellus suscipit pellentesque leo, vel efficitur mi placerat sed. Fusce vel condimentum leo, at iaculis. Suspendisse posuere, dolor non tempor ullamcorper, nisl elit facilisis erat, nec lacinia augue id lacus. Curabitur mollis, justo nec lobortis hendrerit, libero nunc aliquam lacus, ut tristique nunc eu metus. Quisque varius orci eu felis sollicitudin malesuada. Vivamus pretium ligula vel et facilisis enim imperdiet ac.

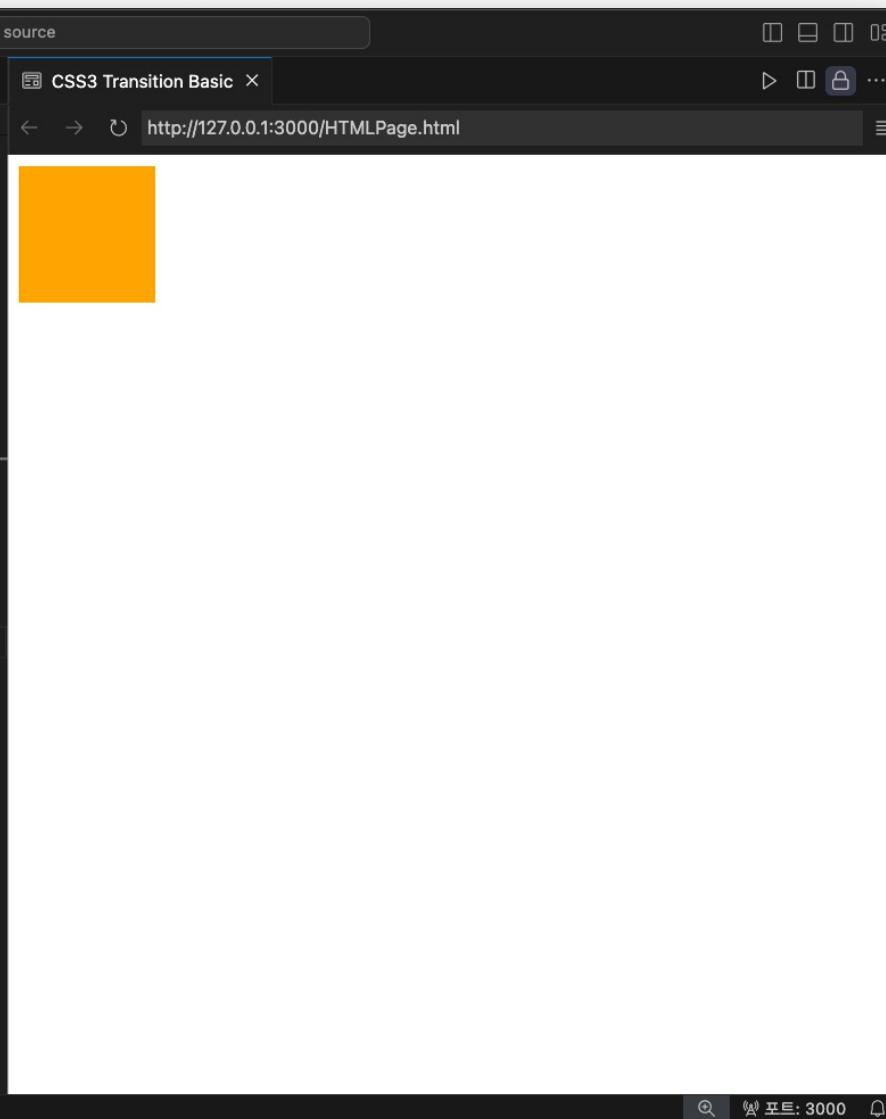
I orem ipsum

Below the preview, there are icons for various web browsers: Internet Explorer, Google Chrome, Mozilla Firefox, Safari, and Opera. Below each icon is a vendor prefix: -ms-, -webkit-, -moz-, -webkit-, and -webkit- respectively.

- 1 CSS3 기본
- 2 CSS3 심화

A close-up photograph of a person's hands holding a white smartphone. The person is wearing a white button-down shirt. The background is blurred.

변형과 애니메이션



The screenshot shows a browser developer tools window with the following details:

- Title Bar:** source
- Address Bar:** CSS3 Transition Basic ×
http://127.0.0.1:3000/HTMLPage.html
- Left Panel:** A code editor showing the HTML and CSS for a basic page. The CSS defines a class ".box" with a width of 100px, height of 100px, and a background color of orange.

```
1  <!DOCTYPE html>
2  <html>
3  <head>
4      <title>CSS3 Transition Basic</title>
5      <style>
6          .box {
7              width: 100px; height: 100px;
8              background-color: orange;
9          }
10     </style>
11 </head>
12 <body>
13     <div class="box"></div>
14 </body>
15 </html>
16 
```

- Right Panel:** A preview area showing a single orange square (the box element) centered on the page.

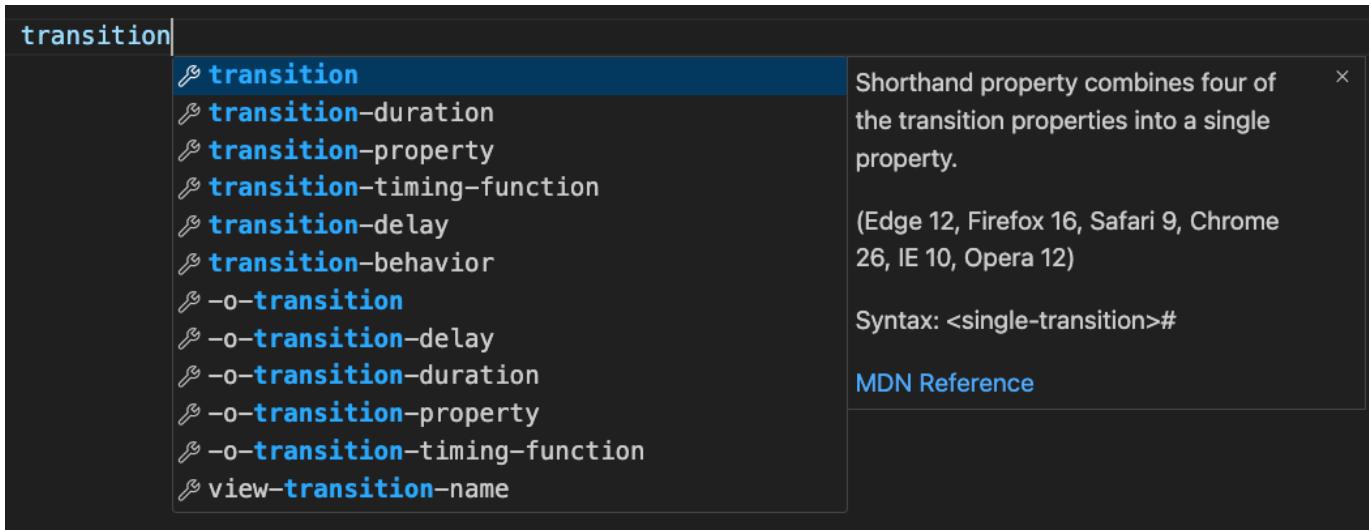
The screenshot shows a browser window with developer tools open. The left pane displays the HTML and CSS code for a basic CSS transition example. The right pane shows the resulting visual output with three colored boxes.

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS3 Transition Basic</title>
    <style>
        .box {
            width: 100px; height: 100px;
            background-color: orange;
        }

        .box:hover {
            width: 200px;
            height: 300px;
        }

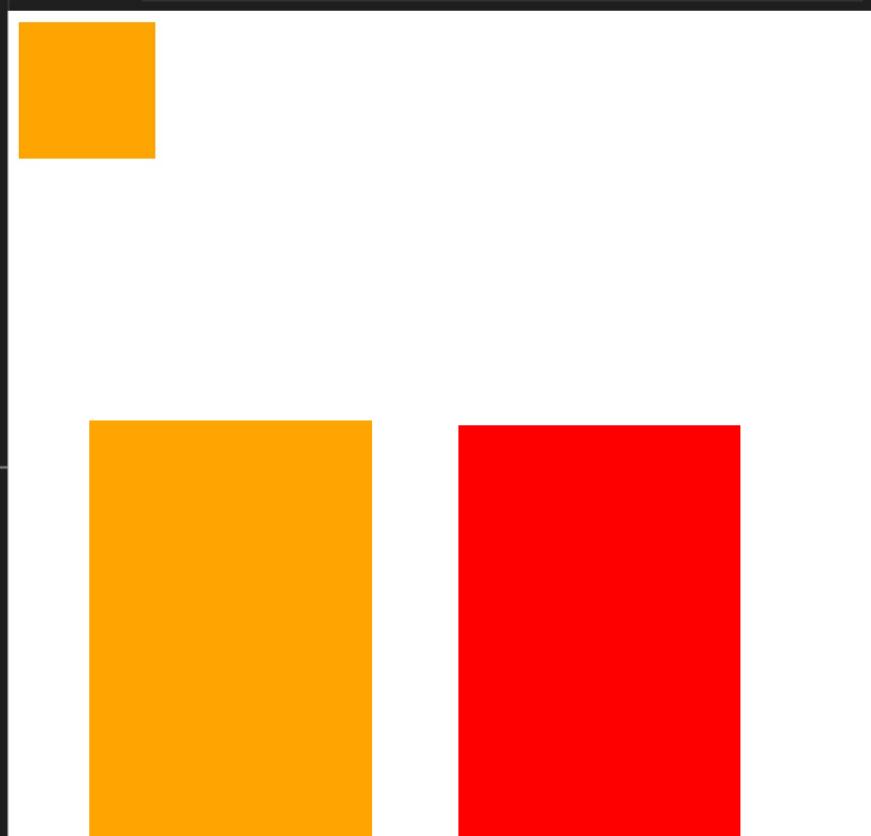
        .box:active {
            background-color: red;
        }
    </style>
</head>
<body>
    <div class="box"></div>
</body>
</html>
```

The browser title bar reads "CSS3 Transition Basic" and the address bar shows "http://127.0.0.1:3000/HTMLPage.html". The visual output consists of three adjacent square boxes: an orange box on the left, a larger yellow box in the middle, and a red box on the right. The orange box is labeled "active", the yellow box is labeled "hover", and the red box is labeled "initial".



Part 2

변형 속성 기본 > transition-duration 속성



The screenshot shows a browser window with developer tools open. On the left, the HTML and CSS code for a basic CSS3 transition example is displayed. The CSS defines a class .box with a width of 100px and height of 100px, a background color of orange, and a transition duration of 2 seconds for width and height changes across multiple vendor prefixes (-ms-, -moz-, -webkit-) and the standard transition-duration property. It also includes styles for the :hover and :active pseudo-classes, which change the width and height to 200px and 300px respectively, and change the background color to red. On the right, the browser's preview pane shows three identical-looking square boxes side-by-side. The first box is orange, the second is yellow, and the third is red, demonstrating the effect of the transition duration on the size changes.

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS3 Transition Basic</title>
    <style>
        .box {
            width: 100px; height: 100px;
            background-color: orange;

            -ms-transition-duration: 2s;
            -moz-transition-duration: 2s;
            -webkit-transition-duration: 2s;
            transition-duration: 2s;
        }

        .box:hover {
            width: 200px;
            height: 300px;
        }

        .box:active {
            background-color: red;
        }
    </style>
</head>
<body>
    <div class="box"></div>
</body>
</html>
```

- 변형 속성과 함께 사용할 수 있는 스타일 속성

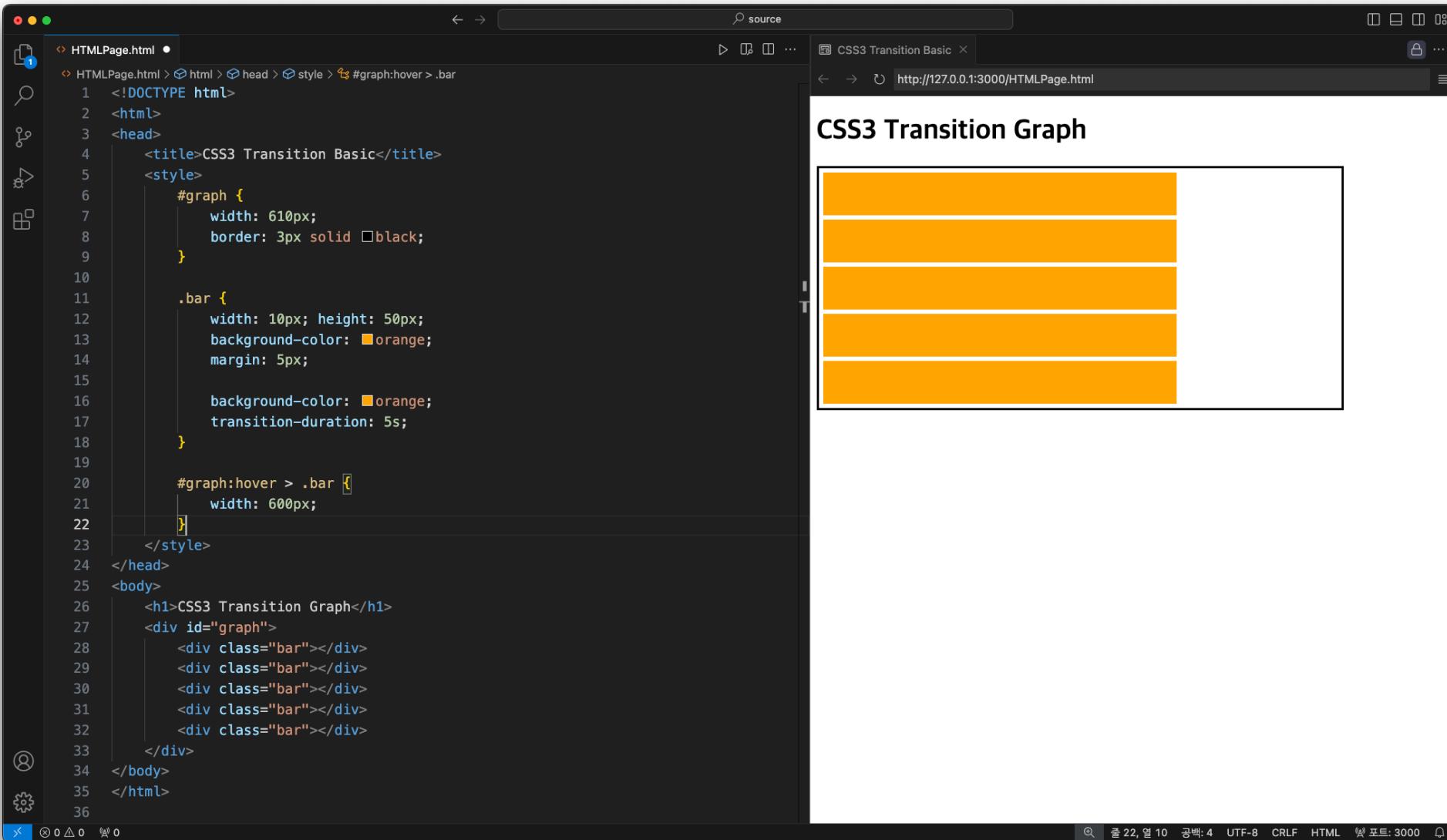
속성 종류	속성 이름
위치 속성	top, left, bottom, right
크기 속성	width, height
박스 속성	margin, padding
테두리 속성	border-width, border-radius, border-color
색상 속성	color, background-color
투명도 속성	opacity
변환 속성	transition

- transition 속성

속성 이름	설명
transition	모든 transition 속성을 한 번에 사용
transition-delay	이벤트 발생 후 몇 초 후에 재생할지 지정
transition-duration	몇 초 동안 재생할지 지정
transition-property	어떤 속성을 변형할지 지정
transition-timing-function	수치 변형 함수를 지정

Part 2

변형 속성



The screenshot shows a browser developer tools window with two panes. The left pane displays the source code of a file named "HTMLPage.html". The right pane shows the resulting "CSS3 Transition Graph" as it appears in the browser.

Source Code (HTMLPage.html):

```
<!DOCTYPE html>
<html>
<head>
<title>CSS3 Transition Basic</title>
<style>
#graph {
    width: 610px;
    border: 3px solid black;
}

.bar {
    width: 10px; height: 50px;
    background-color: orange;
    margin: 5px;

    background-color: orange;
    transition-duration: 5s;
}

#graph:hover > .bar {
    width: 600px;
}
</style>
</head>
<body>
<h1>CSS3 Transition Graph</h1>
<div id="graph">
    <div class="bar"></div>
    <div class="bar"></div>
    <div class="bar"></div>
    <div class="bar"></div>
    <div class="bar"></div>
</div>
</body>
</html>
```

Browser Preview:

The browser preview shows a header with the title "CSS3 Transition Basic" and a main content area titled "CSS3 Transition Graph". Inside the content area, there is a large rectangular container holding five horizontal orange bars. Each bar has a width of 10px and a height of 50px, separated by 5px margins. The bars are styled with a solid orange background and a black border. A transition effect is applied to the width property of the bars, which changes to 600px when the mouse hovers over the container. The entire container has a width of 610px and a 3px solid black border.

Part 2

변형 속성 > transition-delay 속성

The screenshot shows a browser window with developer tools open. On the left, the source code of `HTMLPage.html` is displayed, containing CSS rules for a `#graph` element and several `.bar` elements. The CSS includes `transition-delay` values of 0s, 1s, 2s, 3s, and 4s for different `.bar` children. On the right, the browser displays the resulting "CSS3 Transition Graph" where five orange bars of increasing width are shown, illustrating the effect of the `transition-delay` property.

CSS3 Transition Graph

ease

source

```
<html>
<head>
<style>
#graph:hover > .bar {
    width: 600px;
}

.bar:nth-child(1) {
    transition-delay: 0s;
}
.bar:nth-child(2) {
    transition-delay: 1s;
}
.bar:nth-child(3) {
    transition-delay: 2s;
}
.bar:nth-child(4) {
    transition-delay: 3s;
}
.bar:nth-child(5) {
    transition-delay: 4s;
}
</style>
</head>
<body>
<h1>CSS3 Transition Graph</h1>
<div id="graph">
<div class="bar"></div>
<div class="bar"></div>
<div class="bar"></div>
<div class="bar"></div>
<div class="bar"></div>
</div>
</body>
</html>
```

출 13, 열 38 공백: 4 UTF-8 CRLF HTML 포트: 3000

Part 2

변형 속성 > transition-timing-function 속성

The screenshot shows a browser window with two tabs. The left tab is titled "HTMLPage.html" and displays the source code of an HTML file. The right tab is titled "CSS3 Transition Basic" and shows a visual representation of the CSS transitions defined in the source code.

HTMLPage.html (Source Code):

```
<html>
<head>
<style>
#graph:hover > .bar {
    width: 600px;
}

.bar:nth-child(1) {
    transition-timing-function: linear;
}
.bar:nth-child(2) {
    transition-timing-function: ease;
}
.bar:nth-child(3) {
    transition-timing-function: ease-in;
}
.bar:nth-child(4) {
    transition-timing-function: ease-in-out;
}
.bar:nth-child(5) {
    transition-timing-function: ease-out;
}
</style>
</head>
<body>
<h1>CSS3 Transition Graph</h1>
<div id="graph">
    <div class="bar"></div>
    <div class="bar"></div>
    <div class="bar"></div>
    <div class="bar"></div>
    <div class="bar"></div>
</div>
</body>
</html>
```

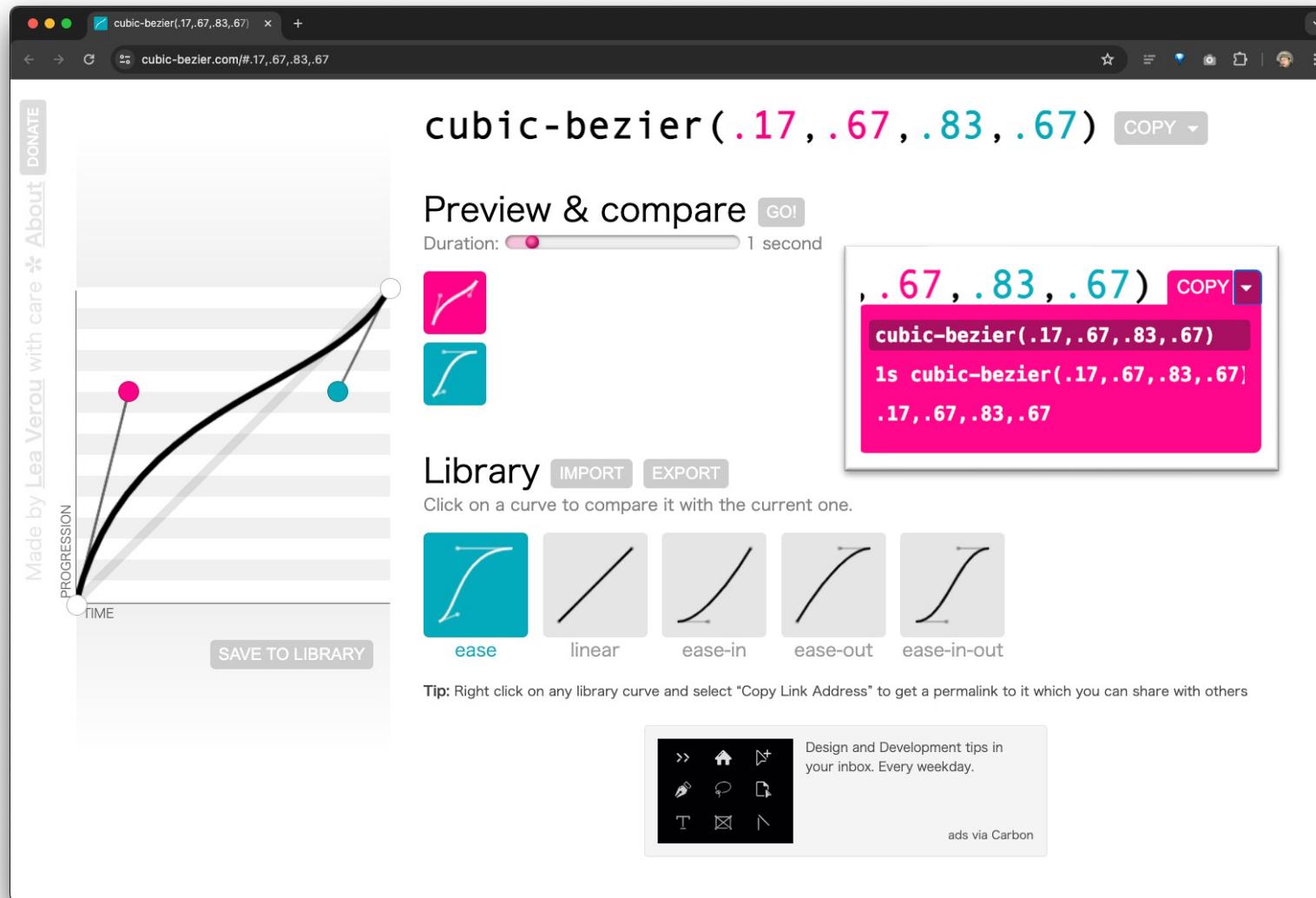
CSS3 Transition Graph (Visual):

The visual representation consists of five horizontal orange bars of varying widths, arranged vertically. Each bar corresponds to one of the five .bar elements defined in the CSS. The widths of the bars are as follows:

- Bar 1 (linear): ~450px
- Bar 2 (ease): ~750px
- Bar 3 (ease-in): ~350px
- Bar 4 (ease-in-out): ~550px
- Bar 5 (ease-out): ~650px

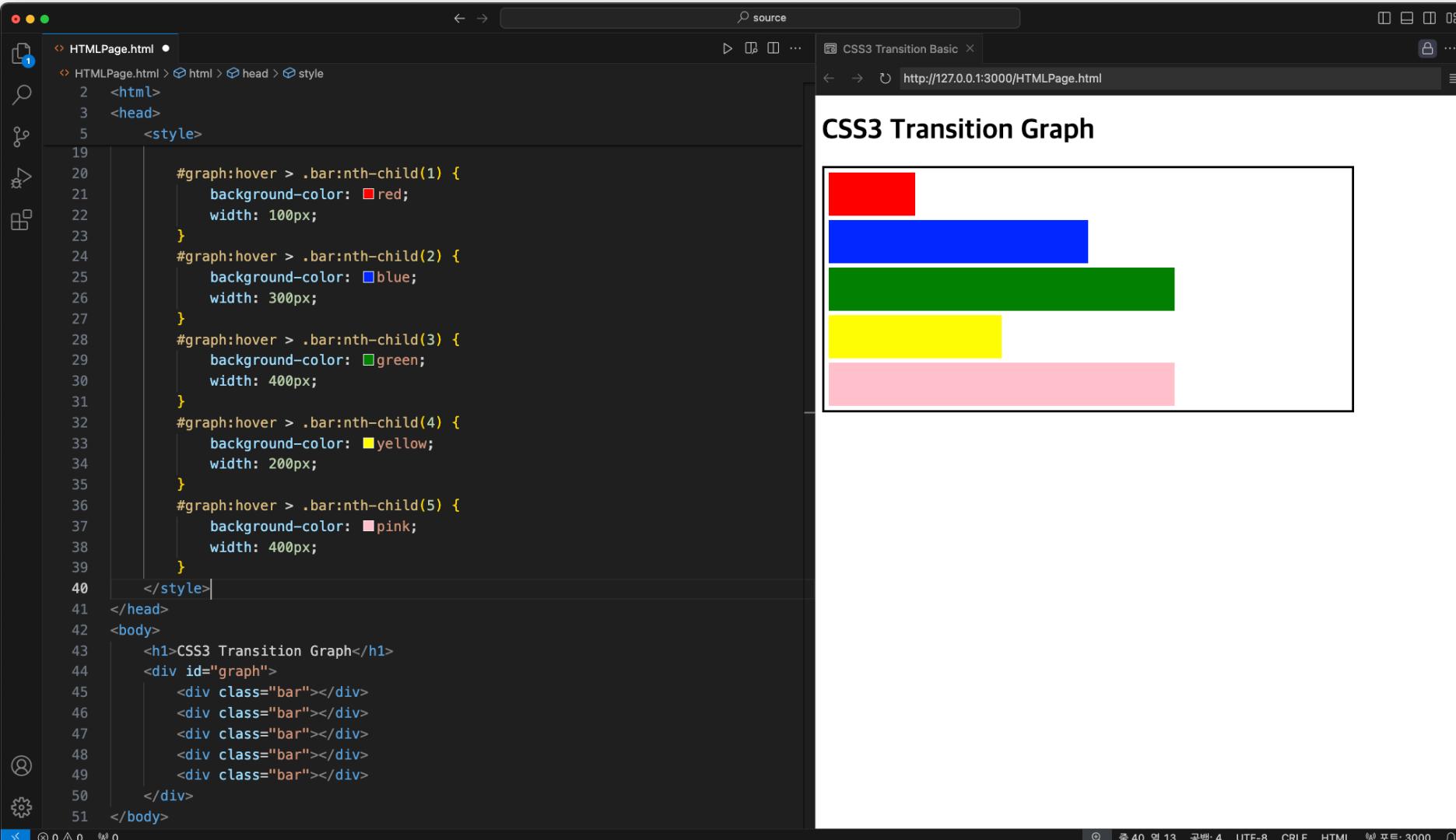
Part 2

변형 속성 > transition-timing-function 속성



Part 2

변형 속성 > transition-property 속성

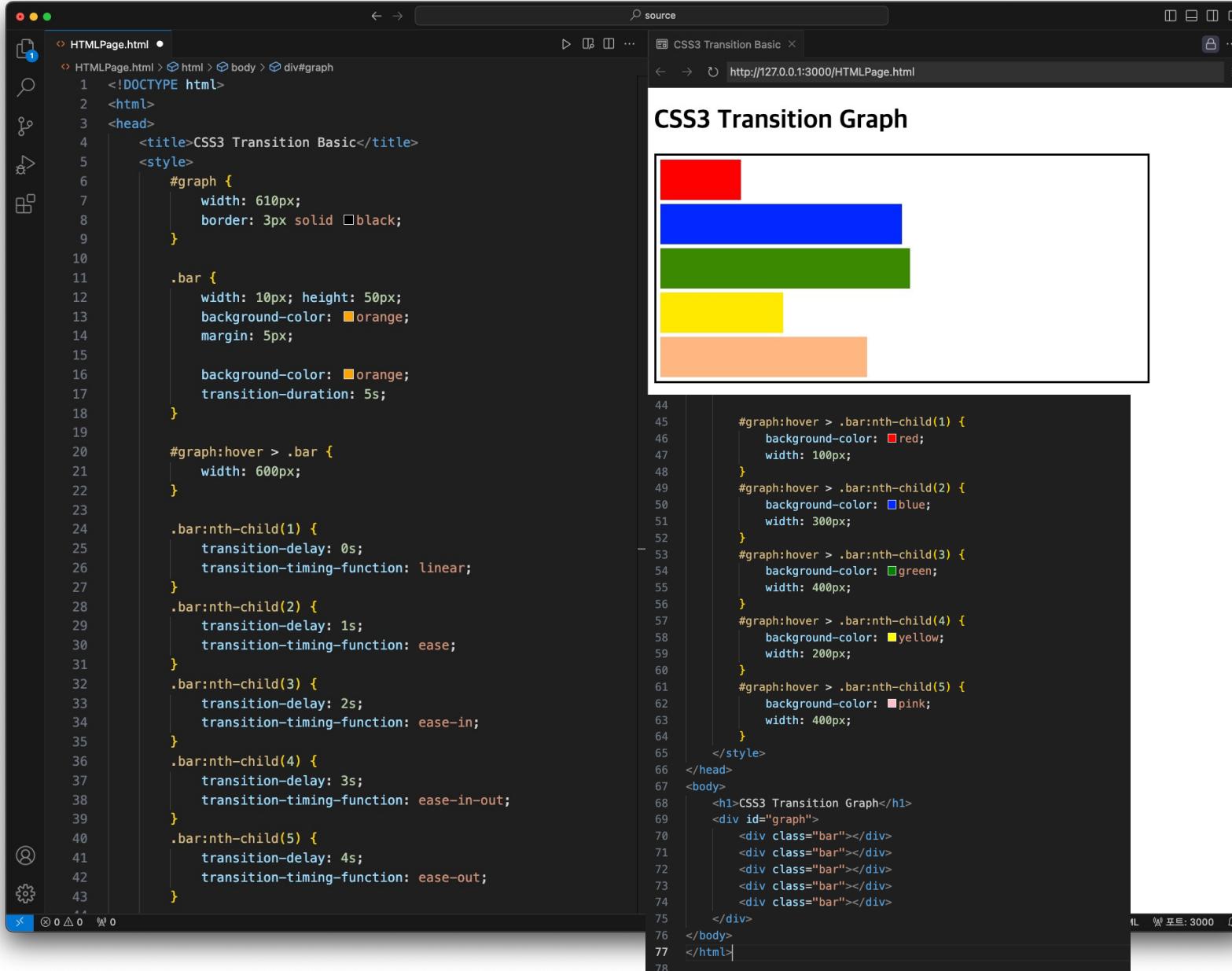


The screenshot shows a browser developer tools window with two panes. The left pane displays the HTML and CSS code for a page titled "CSS3 Transition Graph". The CSS defines a series of five horizontal bars with different widths and colors (red, blue, green, yellow, pink) under the selector "#graph:hover > .bar:nth-child(n)". The right pane shows the visual representation of these bars as a horizontal stack.

```
<html>
<head>
<style>
2   #graph:hover > .bar:nth-child(1) {
3     background-color: red;
4     width: 100px;
5   }
6   #graph:hover > .bar:nth-child(2) {
7     background-color: blue;
8     width: 300px;
9   }
10  #graph:hover > .bar:nth-child(3) {
11    background-color: green;
12    width: 400px;
13  }
14  #graph:hover > .bar:nth-child(4) {
15    background-color: yellow;
16    width: 200px;
17  }
18  #graph:hover > .bar:nth-child(5) {
19    background-color: pink;
20    width: 400px;
21  }
22  </style>
23 </head>
24 <body>
25   <h1>CSS3 Transition Graph</h1>
26   <div id="graph">
27     <div class="bar"></div>
28     <div class="bar"></div>
29     <div class="bar"></div>
30     <div class="bar"></div>
31     <div class="bar"></div>
32   </div>
33 </body>
34 </html>
```

Part 2

변형 속성



The screenshot shows a browser developer tools interface with two panels. The left panel displays the HTML and CSS code for a page titled "CSS3 Transition Basic". The right panel shows the resulting "CSS3 Transition Graph" with five horizontal bars of increasing width.

HTMLPage.html

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS3 Transition Basic</title>
    <style>
        #graph {
            width: 610px;
            border: 3px solid black;
        }

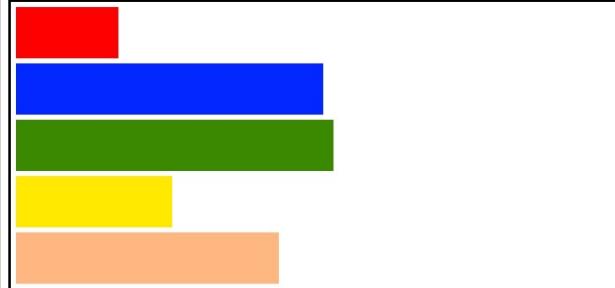
        .bar {
            width: 10px; height: 50px;
            background-color: orange;
            margin: 5px;

            background-color: orange;
            transition-duration: 5s;
        }

        #graph:hover > .bar {
            width: 600px;
        }

        .bar:nth-child(1) {
            transition-delay: 0s;
            transition-timing-function: linear;
        }
        .bar:nth-child(2) {
            transition-delay: 1s;
            transition-timing-function: ease;
        }
        .bar:nth-child(3) {
            transition-delay: 2s;
            transition-timing-function: ease-in;
        }
        .bar:nth-child(4) {
            transition-delay: 3s;
            transition-timing-function: ease-in-out;
        }
        .bar:nth-child(5) {
            transition-delay: 4s;
            transition-timing-function: ease-out;
        }
    </style>
</head>
<body>
    <h1>CSS3 Transition Graph</h1>
    <div id="graph">
        <div class="bar"></div>
        <div class="bar"></div>
        <div class="bar"></div>
        <div class="bar"></div>
        <div class="bar"></div>
    </div>
</body>
</html>
```

CSS3 Transition Graph

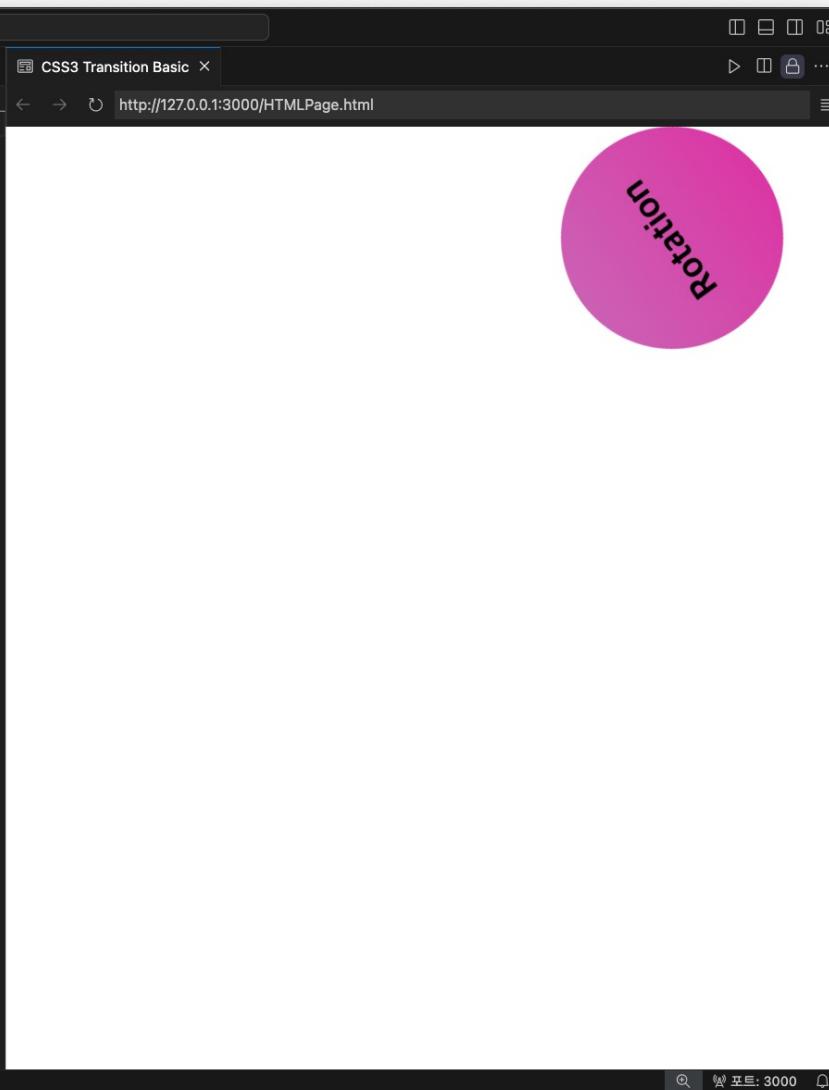


- animation 속성

속성 이름	설명
animation	모든 animation 속성을 한 번에 적용
animation-delay	이벤트 발생 후 몇 초 후에 재생할지 지정
animation-direction	애니메이션 진행 방향을 설정
animation-duration	애니메이션을 몇 초 동안 재생할지 지정
animation-iteration-count	애니메이션 반복 횟수를 지정
animation-name	애니메이션 이름을 지정
animation-play-state	애니메이션 재생 상태를 지정
animation-timing-function	수치 변형 함수를 지정

Part 2

키 프레임과 애니메이션 속성 > animation-name 속성



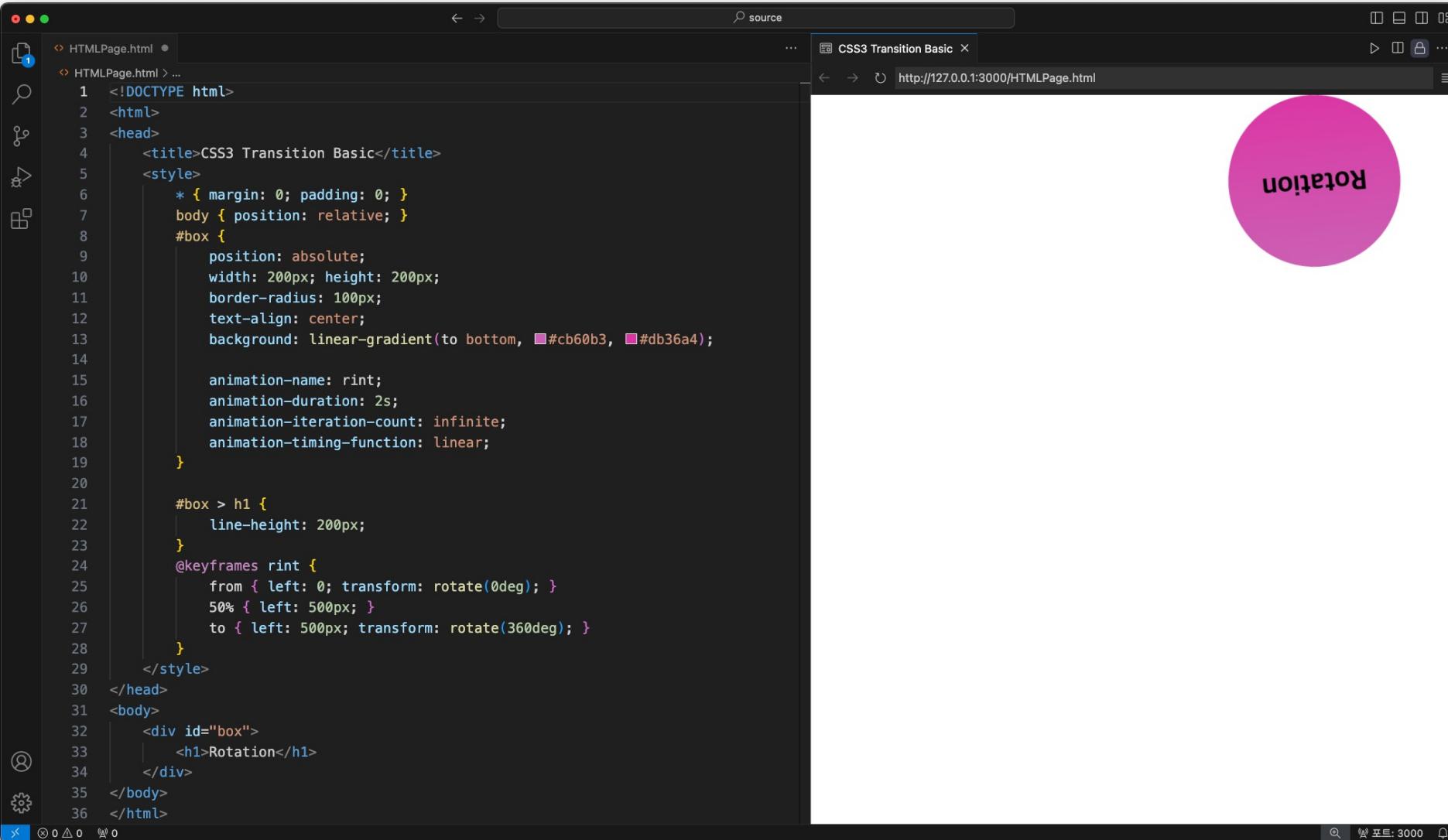
```
<!DOCTYPE html>
<html>
<head>
    <title>CSS3 Transition Basic</title>
    <style>
        * { margin: 0; padding: 0; }
        body { position: relative; }
        #box {
            position: absolute;
            width: 200px; height: 200px;
            border-radius: 100px;
            text-align: center;
            background: linear-gradient(to bottom, #cb60b3, #db36a4);

            animation-name: rint;
            animation-duration: 2s;
            animation-timing-function: linear;
        }

        #box > h1 {
            line-height: 200px;
        }
        @keyframes rint {
            from { left: 0; transform: rotate(0deg); }
            50% { left: 500px; }
            to { left: 500px; transform: rotate(360deg); }
        }
    </style>
</head>
<body>
    <div id="box">
        <h1>Rotation</h1>
    </div>
</body>
</html>
```

Part 2

키 프레임과 애니메이션 속성 > animation-iteration-count 속성



The screenshot shows a browser developer tools window with two panes. The left pane displays the HTML and CSS code for a page titled "CSS3 Transition Basic". The right pane shows the resulting web page with a large pink circle containing the word "Rotation".

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS3 Transition Basic</title>
    <style>
        * { margin: 0; padding: 0; }
        body { position: relative; }
        #box {
            position: absolute;
            width: 200px; height: 200px;
            border-radius: 100px;
            text-align: center;
            background: linear-gradient(to bottom, #cb60b3, #db36a4);

            animation-name: rint;
            animation-duration: 2s;
            animation-iteration-count: infinite;
            animation-timing-function: linear;
        }
        #box > h1 {
            line-height: 200px;
        }
        @keyframes rint {
            from { left: 0; transform: rotate(0deg); }
            50% { left: 500px; }
            to { left: 500px; transform: rotate(360deg); }
        }
    </style>
</head>
<body>
    <div id="box">
        <h1>Rotation</h1>
    </div>
</body>
</html>
```

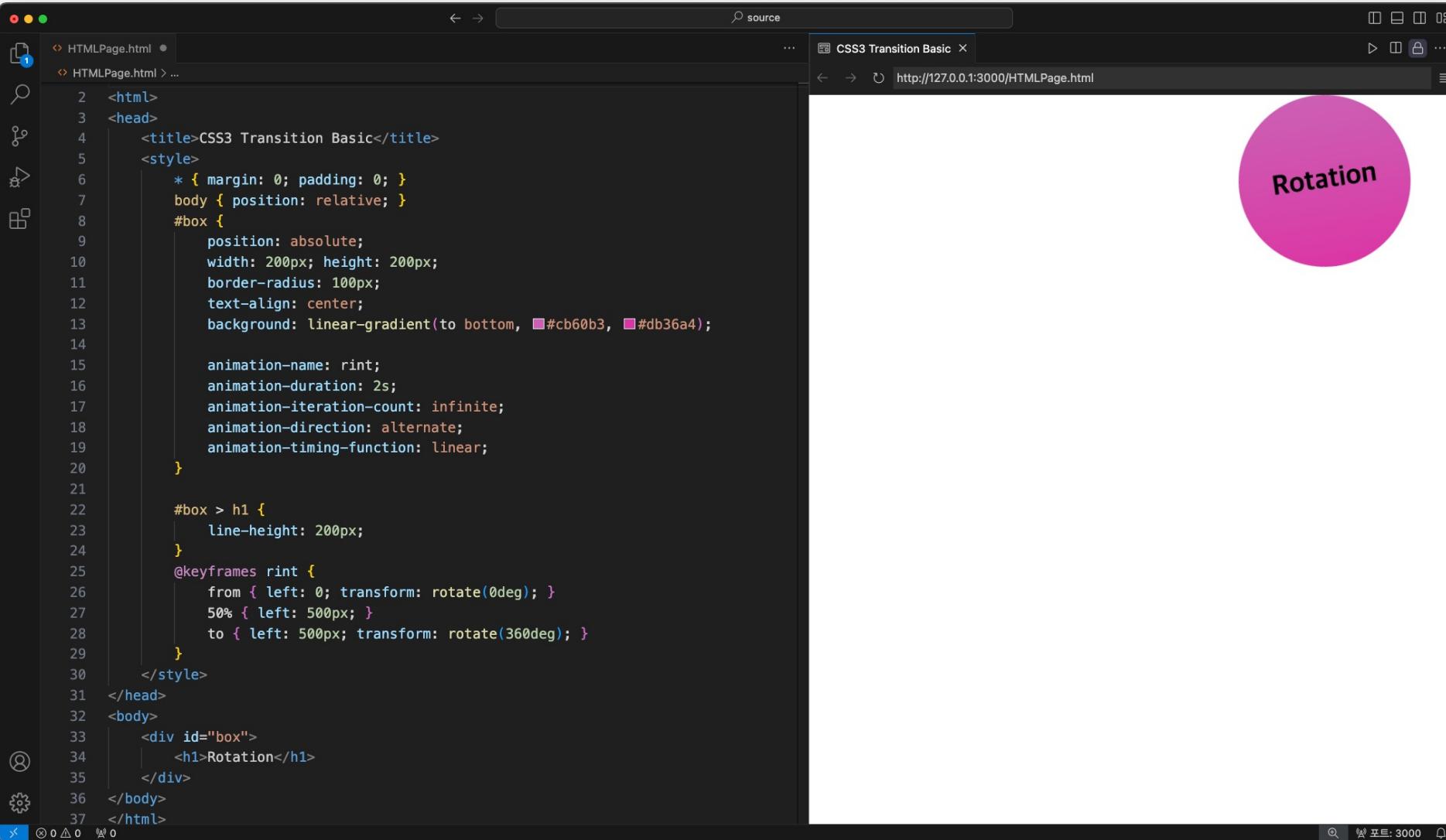
The browser address bar shows the URL `http://127.0.0.1:3000/HTMLPage.html`. The browser status bar at the bottom indicates "포트: 3000".

- animation-direction 속성에 사용 가능한 키워드

animation-direction 속성	설명
alternate	from에서 to로 이동 후 to에서 from으로 이동을 반복
normal	계속 from에서 to로 이동

Part 2

키 프레임과 애니메이션 속성 > animation-direction 속성



The screenshot shows a browser developer tools interface with two panes. The left pane displays the HTML and CSS code for a basic CSS3 transition. The right pane shows the resulting web page with a pink circle containing the text "Rotation".

```
2  <html>
3  <head>
4      <title>CSS3 Transition Basic</title>
5      <style>
6          * { margin: 0; padding: 0; }
7          body { position: relative; }
8          #box {
9              position: absolute;
10             width: 200px; height: 200px;
11             border-radius: 100px;
12             text-align: center;
13             background: linear-gradient(to bottom, #cb60b3, #db36a4);
14
15             animation-name: rint;
16             animation-duration: 2s;
17             animation-iteration-count: infinite;
18             animation-direction: alternate;
19             animation-timing-function: linear;
20         }
21
22         #box > h1 {
23             line-height: 200px;
24         }
25         @keyframes rint {
26             from { left: 0; transform: rotate(0deg); }
27             50% { left: 500px; }
28             to { left: 500px; transform: rotate(360deg); }
29         }
30     </style>
31 </head>
32 <body>
33     <div id="box">
34         <h1>Rotation</h1>
35     </div>
36 </body>
37 </html>
```

Part 2

키 프레임과 애니메이션 속성 > animation-play-state 속성

The screenshot shows a browser developer tools interface with two panes. The left pane displays the CSS code for a file named `HTMLPage.html`. The right pane shows the resulting visual effect.

CSS Code:

```
<html>
<head>
<style>
#box {
    position: absolute;
    width: 200px; height: 200px;
    border-radius: 100px;
    text-align: center;
    background: linear-gradient(to bottom, #cb60b3, #db36a4);

    animation-name: rint;
    animation-duration: 2s;
    animation-iteration-count: infinite;
    animation-direction: alternate;
    animation-timing-function: linear;
}

#box:hover {
    animation-play-state: paused;
}

#box > h1 {
    line-height: 200px;
}
@keyframes rint {
    from { left: 0; transform: rotate(0deg); }
    50% { left: 500px; }
    to { left: 500px; transform: rotate(360deg); }
}
</style>
</head>
<body>
    <div id="box">
        <h1>Rotation</h1>
    </div>
</body>

```

Visual Effect: A large pink circle with the word "Rotation" inside it is centered on the page. The circle rotates continuously.

JavaScript Documentation Overlay: A tooltip is displayed over the `animation-play-state` property in the CSS editor, showing the `paused` value. The tooltip text reads: "A running animation will be paused."

Toolbars and Status Bar: The top bar includes standard browser icons like back, forward, and search. The status bar at the bottom shows file information: 줄 3, 열 7, 공백: 4, UTF-8, CRLF, HTML, 포트: 3000.

A close-up photograph of a person's hands holding a white smartphone. The person is wearing a white button-down shirt. A large, semi-transparent white rectangular box is overlaid on the center-left portion of the image. Inside this box, the Korean word "변환" (Byehwan, meaning transformation or change) is written in a bold, black, sans-serif font.

변환



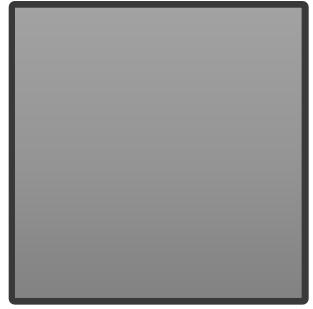
Part 2

2차원 변환

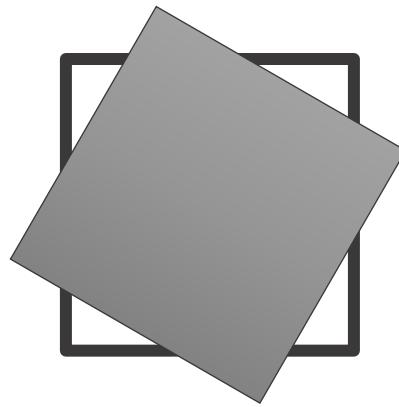


Part 2

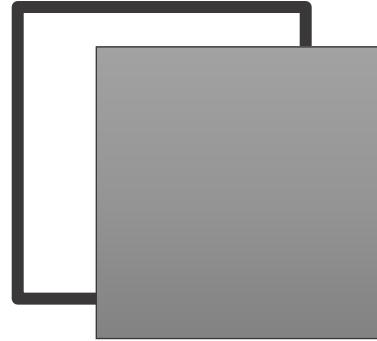
2차원 변환 > transform 속성



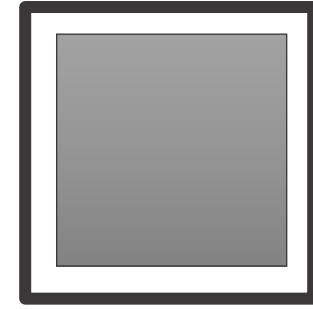
Normal



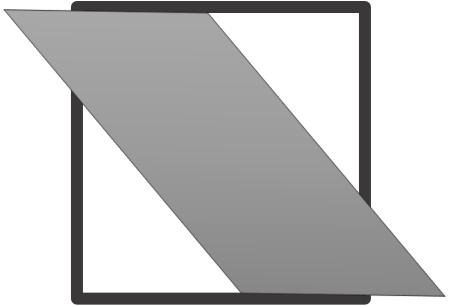
Rotate



Translate



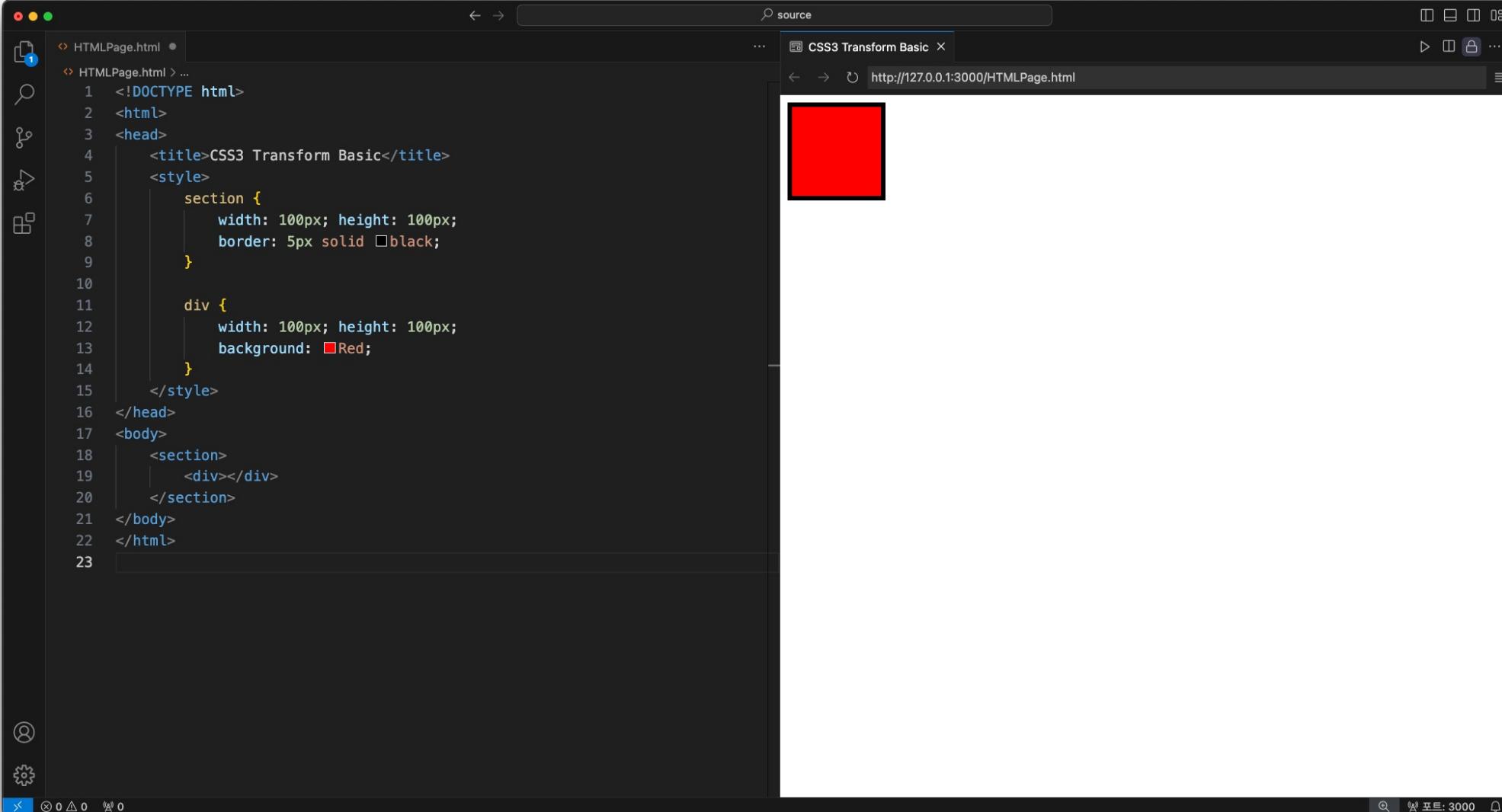
Scale



Skew

Part 2

2차원 변환 > transform 속성



The screenshot shows a browser developer tools window with the following details:

- Source Tab:** Displays the HTML code for "HTMLPage.html". The code includes a title, a style block defining a red square with a black border, and a body section containing a single red square element.
- Elements Tab:** Shows a single element with the ID "red-square". This element is a red square with a black border, matching the one in the browser preview.
- Network Tab:** Shows a request to "CSS3 Transform Basic" at the URL "http://127.0.0.1:3000/HTMLPage.html".
- Status Bar:** At the bottom, it shows "포트: 3000" (Port: 3000).

Part 2

2차원 변환 > transform 속성

The screenshot shows a browser window with developer tools open. On the left, the 'source' tab displays the HTML and CSS code for a page titled 'CSS3 Transform Basic'. The CSS includes styles for a section and a div, with specific transforms applied to the div. On the right, the 'CSS3 Transform Basic' tab shows the rendered result: a red square rotated 60 degrees counter-clockwise, positioned within a larger black square frame.

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS3 Transform Basic</title>
    <style>
        section {
            width: 100px; height: 100px;
            border: 5px solid black;
        }

        div {
            width: 100px;
            height: 100px;
            background: red;

            -ms-transform: rotate(60deg);
            -moz-transform: rotate(60deg);
            -webkit-transform: rotate(60deg);
            transform: rotate(60deg);
        }
    </style>
</head>
<body>
    <section>
        <div></div>
    </section>
</body>
</html>
```

Part 2

2차원 변환 > 2차원 변환 함수

• 2차원 변환 함수

변환 함수	설명
translate(translateX, translateY)	특정 크기만큼 이동
translateX(translateX)	x축으로 특정 크기만큼 이동
translateY(translateY)	y축으로 특정 크기만큼 이동
scale(scaleX, scaleY)	특정 크기만큼 확대 및 축소
scaleX(scaleX)	x축으로 특정 크기만큼 확대 및 축소
scaleY(scaleY)	y축으로 특정 크기만큼 확대 및 축소
skew(angleX, angleY)	특정 각도만큼 기울임
skew(angleX)	x축으로 특정 각도만큼 기울임
skew(angleY)	y축으로 특정 각도만큼 기울임
rotate(angleZ)	특정 각도만큼 회전

Part 2

2차원 변환 > 2차원 변환 함수

The screenshot shows a browser window with developer tools open. On the left, the 'source' tab displays the HTML and CSS code for a page titled 'CSS3 Transform Basic'. The CSS includes styles for a section and a red-div, applying transformations like rotation, scaling, and skewing. On the right, the 'CSS3 Transform Basic' tab shows the rendered result: a red diamond-shaped element with a black border, rotated 60 degrees counter-clockwise and skewed vertically by 10 degrees.

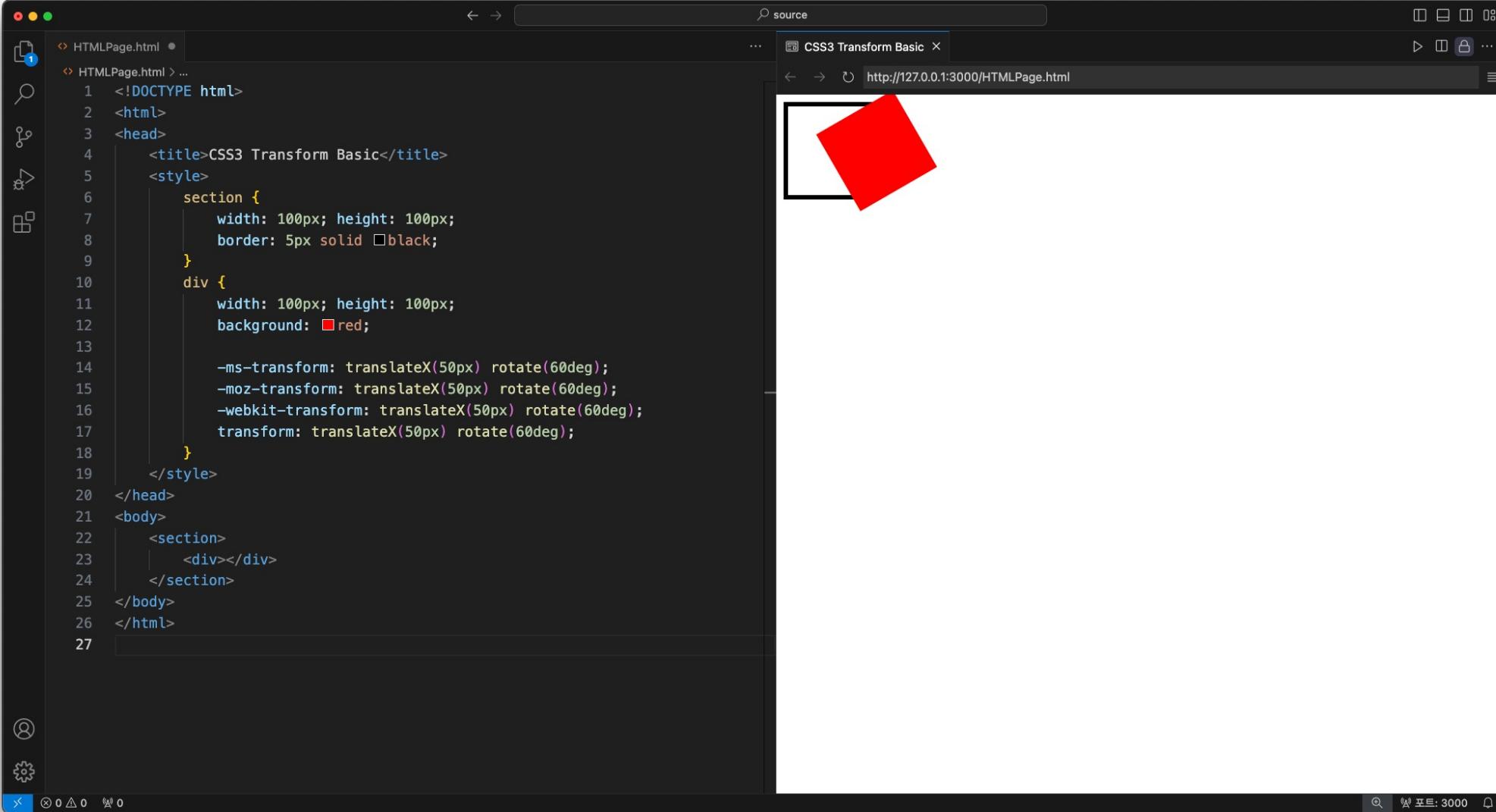
```
<!DOCTYPE html>
<html>
<head>
    <title>CSS3 Transform Basic</title>
    <style>
        section {
            width: 100px; height: 100px;
            border: 5px solid black;
        }

        div {
            width: 100px; height: 100px;
            background: red;

            -ms-transform: rotate(60deg) scale(1.2) skewY(10deg);
            -moz-transform: rotate(60deg) scale(1.2) skewY(10deg);
            -webkit-transform: rotate(60deg) scale(1.2) skewY(10deg);
            transform: rotate(60deg) scale(1.2) skewY(10deg);
        }
    </style>
</head>
<body>
    <section>
        <div></div>
    </section>
</body>
</html>
```

Part 2

2차원 변환 > 변환 함수의 순서



The screenshot shows a browser developer tools window with the following details:

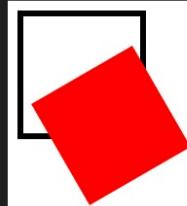
- Source Tab:** Displays the HTML and CSS code for "HTMLPage.html". The CSS includes styles for a section and a div, and uses multiple vendor prefixes for transform functions.
- Elements Tab:** Shows a single element with a red background and a black border, which has been rotated 60 degrees counter-clockwise.
- Address Bar:** Shows the URL `http://127.0.0.1:3000/HTMLPage.html`.
- Bottom Status Bar:** Shows various developer tools controls and the port number `포트: 3000`.

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS3 Transform Basic</title>
    <style>
        section {
            width: 100px; height: 100px;
            border: 5px solid black;
        }
        div {
            width: 100px; height: 100px;
            background: red;

            -ms-transform: translateX(50px) rotate(60deg);
            -moz-transform: translateX(50px) rotate(60deg);
            -webkit-transform: translateX(50px) rotate(60deg);
            transform: translateX(50px) rotate(60deg);
        }
    </style>
</head>
<body>
    <section>
        <div></div>
    </section>
</body>
</html>
```

Part 2

2차원 변환 > 변환 함수의 순서



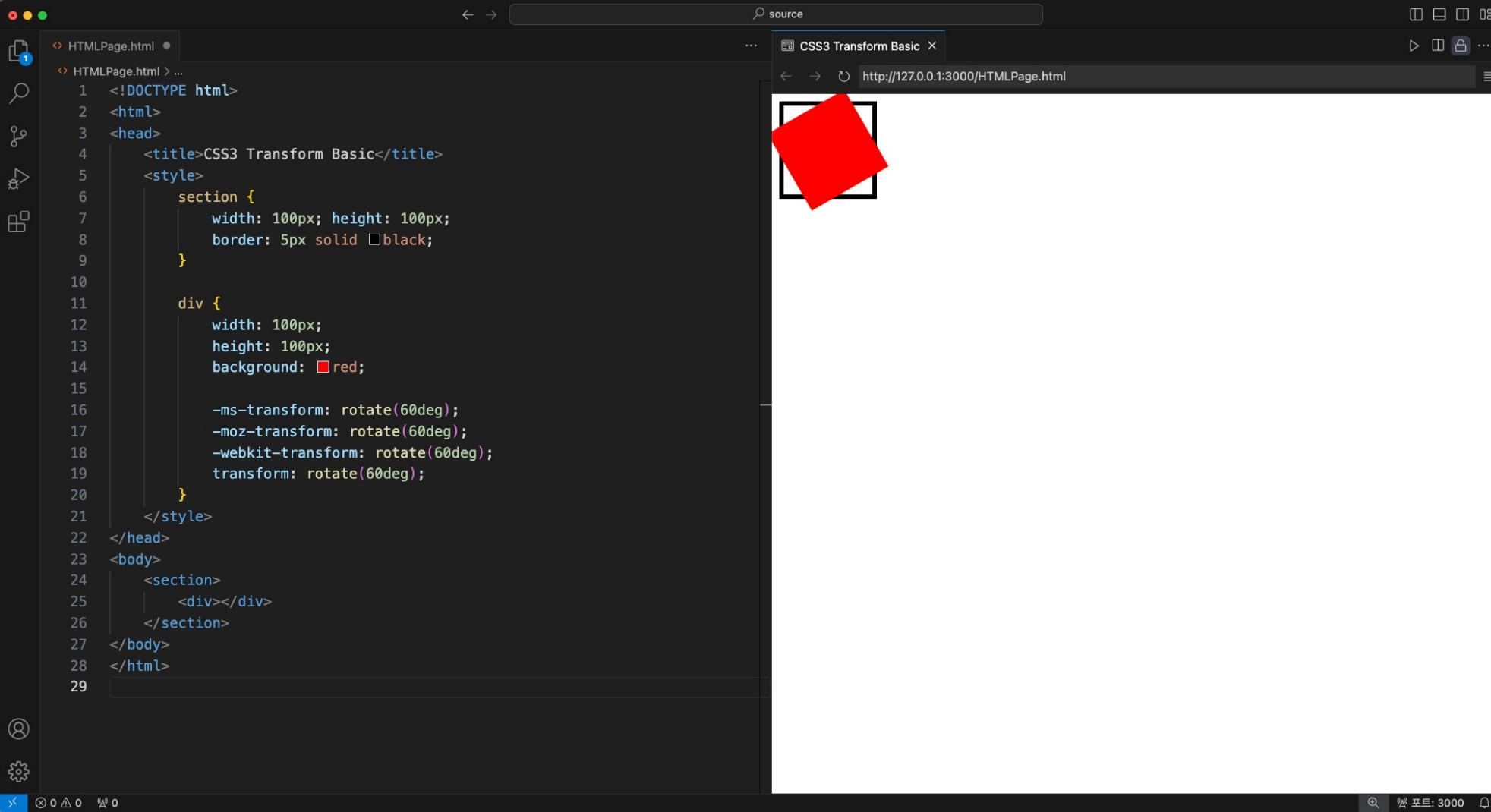
The screenshot shows a browser window with developer tools open. The left panel displays the HTML code for "HTMLPage.html". The right panel shows the browser's preview area with a red square rotated 60 degrees counter-clockwise and translated 50px to the right. The browser address bar indicates the page is at <http://127.0.0.1:3000/HTMLPage.html>.

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS3 Transform Basic</title>
    <style>
        section {
            width: 100px; height: 100px;
            border: 5px solid black;
        }
        div {
            width: 100px; height: 100px;
            background: red;

            -ms-transform: rotate(60deg) translateX(50px);
            -moz-transform: rotate(60deg) translateX(50px);
            -webkit-transform: rotate(60deg) translateX(50px);
            transform: rotate(60deg) translateX(50px);
        }
    </style>
</head>
<body>
    <section>
        <div></div>
    </section>
</body>
</html>
```

Part 2

2차원 변환 > transform-origin 속성



The screenshot shows a browser window with developer tools open. The left pane displays the HTML and CSS code for a test page. The right pane shows the rendered output of the CSS transformations.

HTML and CSS Code:

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS3 Transform Basic</title>
    <style>
        section {
            width: 100px; height: 100px;
            border: 5px solid black;
        }

        div {
            width: 100px;
            height: 100px;
            background: red;

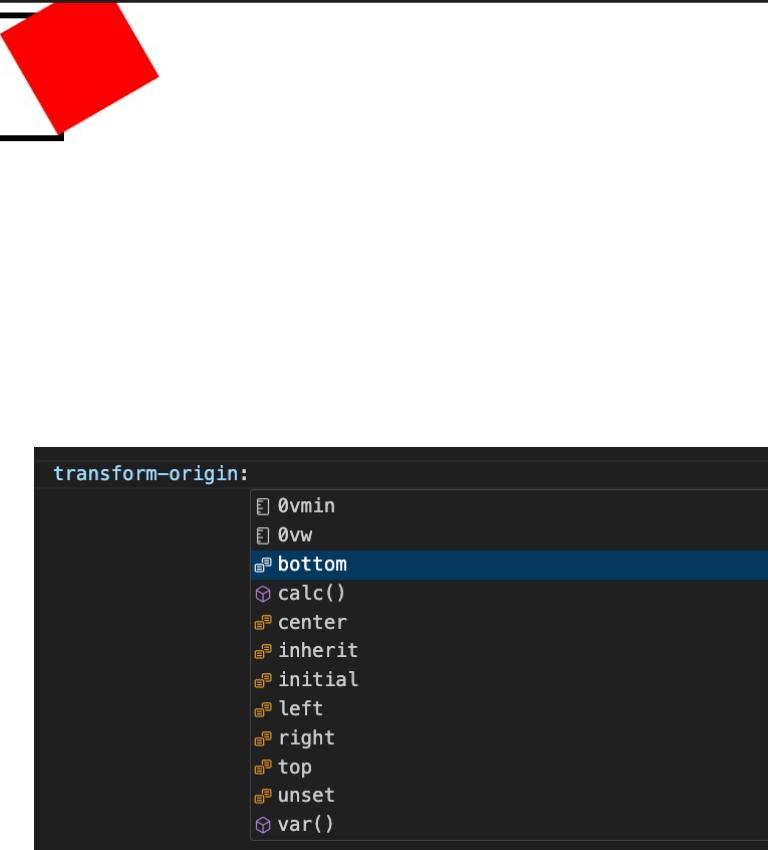
            -ms-transform: rotate(60deg);
            -moz-transform: rotate(60deg);
            -webkit-transform: rotate(60deg);
            transform: rotate(60deg);
        }
    </style>
</head>
<body>
    <section>
        <div></div>
    </section>
</body>
</html>
```

Rendered Output:

The rendered output shows a red square rotated 60 degrees counter-clockwise. The square is positioned at the top-left corner of its parent section element. The browser's address bar shows the URL `http://127.0.0.1:3000/HTMLPage.html`.

Part 2

2차원 변환 > transform-origin 속성



The screenshot shows a browser window with developer tools open. On the left, the HTML and CSS code for a page titled "CSS3 Transform Basic" is displayed. The CSS includes styles for a section and a red-div, and uses multiple vendor prefixes for rotation and transform-origin. On the right, the browser preview shows a red square rotated 60 degrees counter-clockwise, positioned relative to its top-left corner. Below the preview, a dropdown menu for the "transform-origin" property is open, listing various values: 0vmin, 0vw, bottom (which is highlighted), calc(), center, inherit, initial, left, right, top, unset, and var().

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS3 Transform Basic</title>
    <style>
        section {
            width: 100px; height: 100px;
            border: 5px solid black;
        }

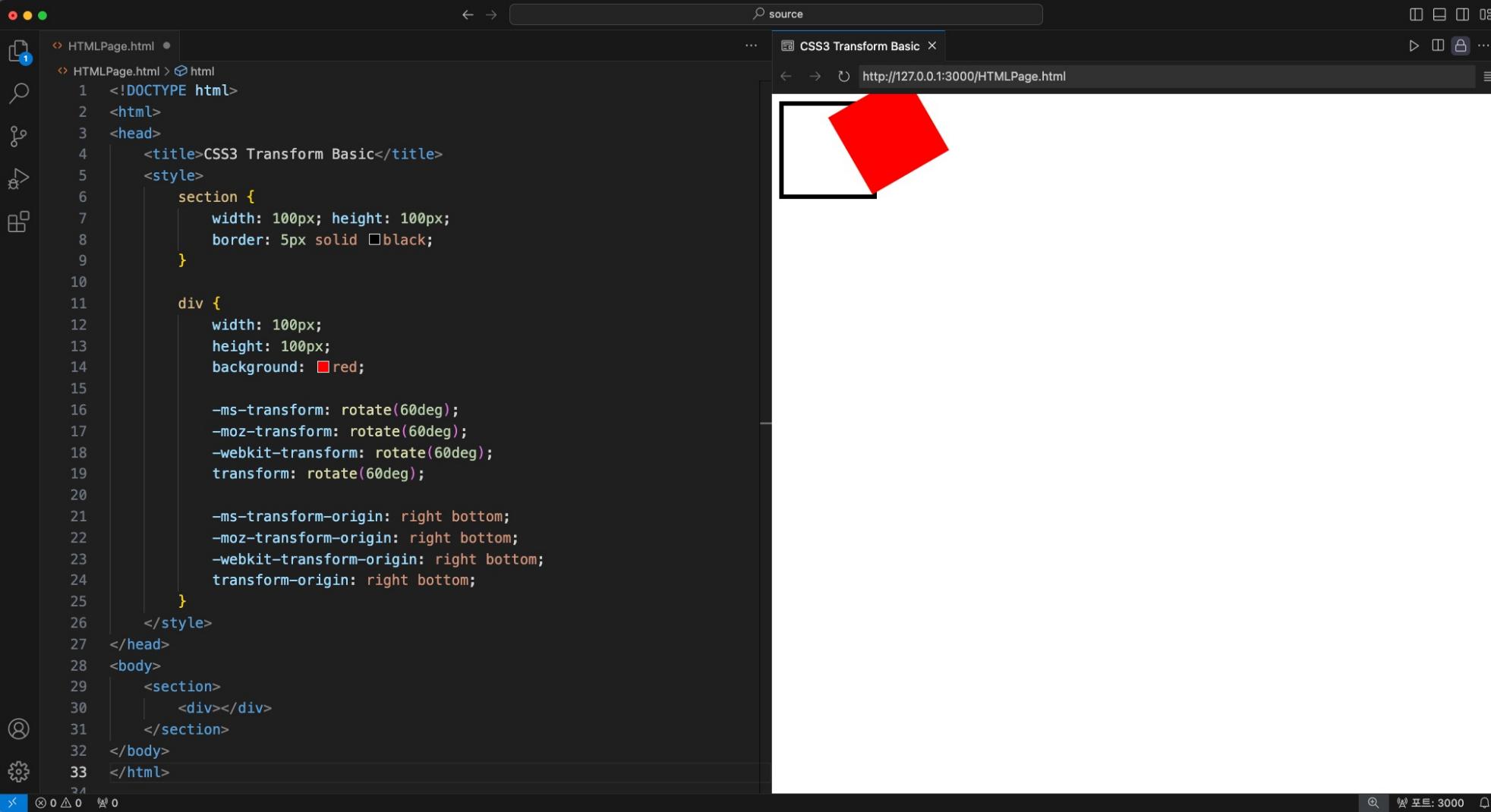
        div {
            width: 100px;
            height: 100px;
            background: red;

            -ms-transform: rotate(60deg);
            -moz-transform: rotate(60deg);
            -webkit-transform: rotate(60deg);
            transform: rotate(60deg);

            -ms-transform-origin: 100% 100%;
            -moz-transform-origin: 100% 100%;
            -webkit-transform-origin: 100% 100%;
            transform-origin: 100% 100%;
        }
    </style>
</head>
<body>
    <section>
        <div></div>
    </section>
</body>
</html>
```

Part 2

2차원 변환 > transform-origin 속성



The screenshot shows a browser developer tools window with the following details:

- Source Tab:** Displays the HTML and CSS code for "HTMLPage.html". The CSS includes a section with a red background and a 60deg rotation, and a div with a 60deg rotation and a right bottom transform origin.
- Elements Tab:** Shows the rendered HTML structure with the red rotated div.
- Network Tab:** Shows the URL `http://127.0.0.1:3000/HTMLPage.html`.
- Status Bar:** Shows zoom levels (0, 0, 0) and a port number (포트: 3000).

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS3 Transform Basic</title>
    <style>
        section {
            width: 100px; height: 100px;
            border: 5px solid black;
        }

        div {
            width: 100px;
            height: 100px;
            background: red;

            -ms-transform: rotate(60deg);
            -moz-transform: rotate(60deg);
            -webkit-transform: rotate(60deg);
            transform: rotate(60deg);

            -ms-transform-origin: right bottom;
            -moz-transform-origin: right bottom;
            -webkit-transform-origin: right bottom;
            transform-origin: right bottom;
        }
    </style>
</head>
<body>
    <section>
        <div></div>
    </section>
</body>
</html>
```

Part 2

3차원 변환



- 3차원 변환 함수

변환 함수	설명
translate3d(translateX, translateY, translateZ)	특정 크기만큼 이동
translateX(translateX)	x축으로 특정 크기만큼 이동
translateY(translateY)	y축으로 특정 크기만큼 이동
translateZ(translateZ)	z축으로 특정 크기만큼 이동
scale3d(scaleX, scaleY, scaleZ)	특정 크기만큼 확대 및 축소
scaleX(scaleX)	x축으로 특정 크기만큼 확대 및 축소
scaleY(scaleY)	y축으로 특정 크기만큼 확대 및 축소
scaleZ(scaleZ)	z축으로 특정 크기만큼 확대 및 축소
rotate3d(angleX, angleY, angleZ)	특정 각도만큼 회전
rotate(angleX)	x축으로 특정 각도만큼 회전
rotate(angleY)	y축으로 특정 각도만큼 회전
rotate(angleZ)	z축으로 특정 각도만큼 회전

Part 2

3차원 변환 > 3차원 변환 함수

The screenshot shows a code editor with two tabs: "HTMLPage.html" and "CSS3 Transform Basic".

HTMLPage.html:

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS3 Transform Basic</title>
    <style>
        body {
            width: 200px;
            margin: 200px auto;
        }
        section {
            width: 200px; height: 200px;
            position: relative;
        }
        div {
            width: 200px; height: 200px;
            position: absolute; left: 0; top: 0;
            opacity: 0.3;
        }
        div:nth-child(1) {
            transform: rotateY( 0deg) translate3d(0px, 0px, 100px);
            background: ■red;
        }
        div:nth-child(2) {
            transform: rotateY( 90deg) translate3d(0px, 0px, 100px);
            background: ■green;
        }
        div:nth-child(3) {
            transform: rotateY(180deg) translate3d(0px, 0px, 100px);
            background: ■blue;
        }
        div:nth-child(4) {
            transform: rotateY(270deg) translate3d(0px, 0px, 100px);
            background: ■yellow;
        }
        div:nth-child(5) {
            transform: rotateX( 90deg) translate3d(0px, 0px, 100px);
            background: ■brown;
        }
    </style>
</head>
<body>
    <section>
        <div></div>
        <div></div>
        <div></div>
        <div></div>
        <div></div>
    </section>
</body>
</html>
```

CSS3 Transform Basic:

```
div:nth-child(6) {
    transform: rotateX(270deg) translate3d(0px, 0px, 100px);
    background: ■pink;
}
```

The browser preview shows a purple square at the bottom right of the page.

Part 2

3차원 변환 > transform-style 속성

The screenshot shows a code editor window with two panes. The left pane displays the CSS code for "HTMLPage.html", and the right pane shows the browser preview of the result.

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS3 Transform Basic</title>
    <style>
        body {
            width: 200px;
            margin: 200px auto;
        }

        section {
            width: 200px; height: 200px;
            position: relative;
            animation: rint 3s linear 0s infinite;
        }

        @keyframes rint {
            from {
                transform: rotateX( 0deg) rotateY( 0deg) rotateZ( 0deg);
            }

            to {
                transform: rotateX(360deg) rotateY(360deg) rotateZ(360deg);
            }
        }

        div {
            width: 200px; height: 200px;
            position: absolute; left: 0; top: 0;
            opacity: 0.3;
        }

        div:nth-child(1) {
            transform: rotateY( 0deg) translate3d(0px, 0px, 100px);
            background: ■red;
        }
        div:nth-child(2) {
            transform: rotateY( 90deg) translate3d(0px, 0px, 100px);
            background: ■green;
        }
        div:nth-child(3) {
    
```

The browser preview on the right shows a purple square rotated 90 degrees around the Y-axis, demonstrating the effect of the transform-style property.

Part 2

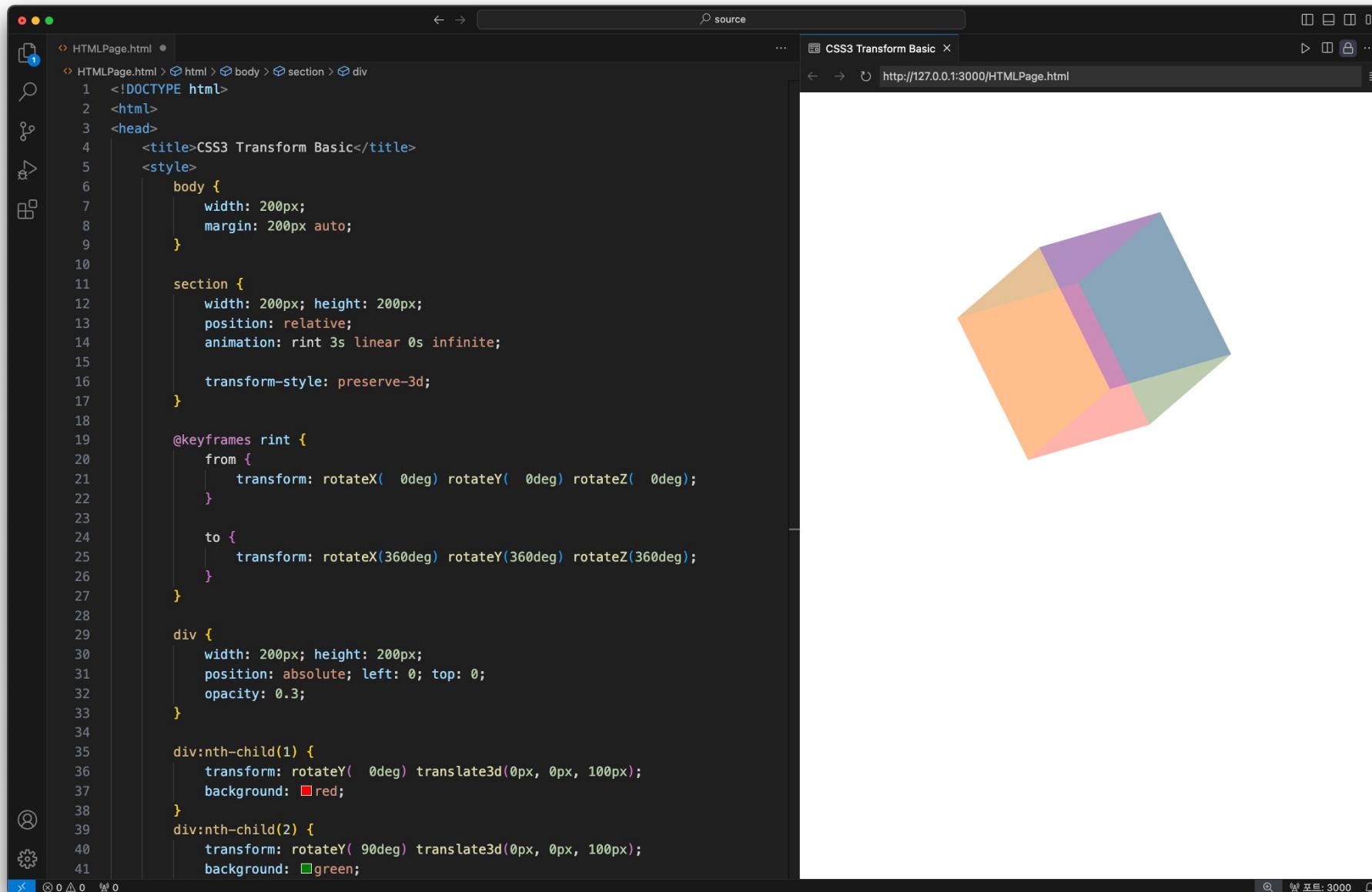
3차원 변환 > transform-style 속성

- transform-style 속성에 사용 가능한 키워드

키워드	설명
flat	후손의 3차원 속성을 무시
preserve-3d	후손의 3차원 속성을 유지

Part 2

3차원 변환 > transform-style 속성



The screenshot shows a browser developer tools window with two panes. The left pane displays the source code of a file named "HTMLPage.html". The right pane shows the resulting 3D transformation effect.

Source Code (HTMLPage.html):

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS3 Transform Basic</title>
    <style>
        body {
            width: 200px;
            margin: 200px auto;
        }

        section {
            width: 200px; height: 200px;
            position: relative;
            animation: rint 3s linear 0s infinite;

            transform-style: preserve-3d;
        }

        @keyframes rint {
            from {
                transform: rotateX( 0deg) rotateY( 0deg) rotateZ( 0deg);
            }

            to {
                transform: rotateX(360deg) rotateY(360deg) rotateZ(360deg);
            }
        }

        div {
            width: 200px; height: 200px;
            position: absolute; left: 0; top: 0;
            opacity: 0.3;
        }

        div:nth-child(1) {
            transform: rotateY( 0deg) translate3d(0px, 0px, 100px);
            background: ■red;
        }

        div:nth-child(2) {
            transform: rotateY( 90deg) translate3d(0px, 0px, 100px);
            background: ■green;
        }
    </style>
</head>
<body>
    <section>
        <div></div>
        <div></div>
    </section>
</body>

```

Result: A 3D cube composed of four colored faces (top, bottom, front, back). The top face is orange, the bottom face is pink, the front face is blue, and the back face is purple. The cube is rotated 90 degrees around the Y-axis.

Part 2

3차원 변환 > backface-visibility 속성

- backface-visibility 속성에 사용 가능한 키워드

키워드	설명
visible	후면을 보이게 만듭니다.
hidden	후면을 보이지 않게 만듭니다.

Part 2

3차원 변환 > backface-visibility 속성

The screenshot shows a code editor interface with two main panes. The left pane displays the CSS code for a 3D cube, and the right pane shows a 3D perspective view of the cube in a browser.

```
<html>
<head>
<style>
@keyframes rint {
    from {
        transform: rotateX( 0deg) rotateY( 0deg) rotateZ( 0deg);
    }
    to {
        transform: rotateX(360deg) rotateY(360deg) rotateZ(360deg);
    }
}

div {
    width: 200px; height: 200px;
    position: absolute; left: 0; top: 0;

    backface-visibility: hidden;
    opacity: 0.3;
}

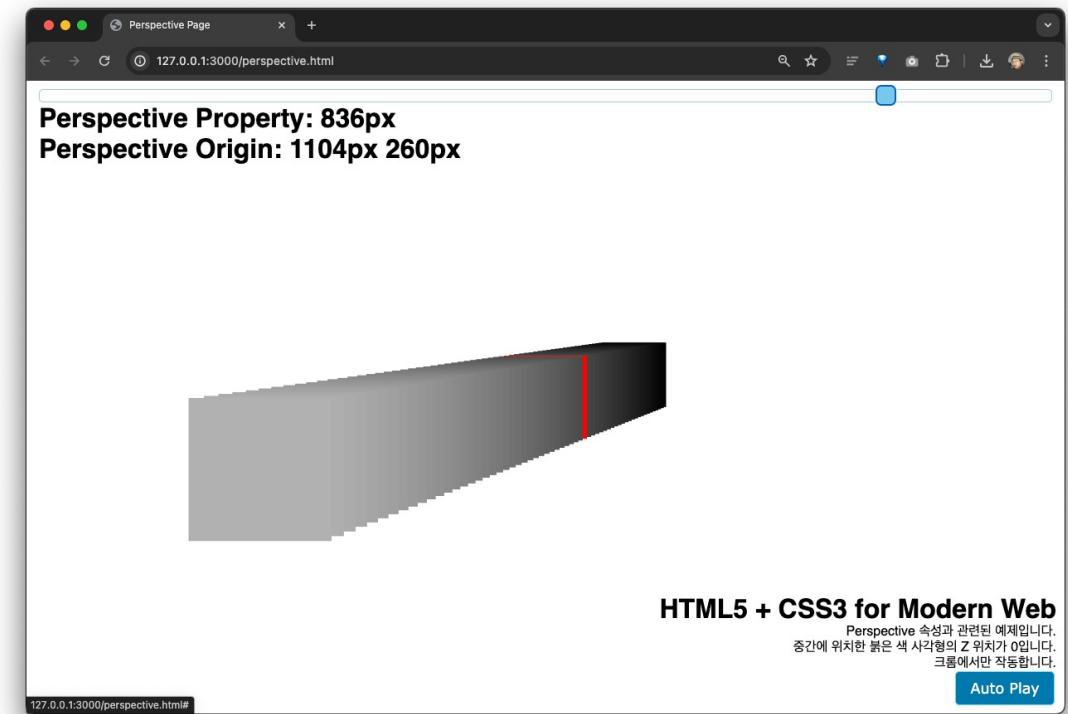
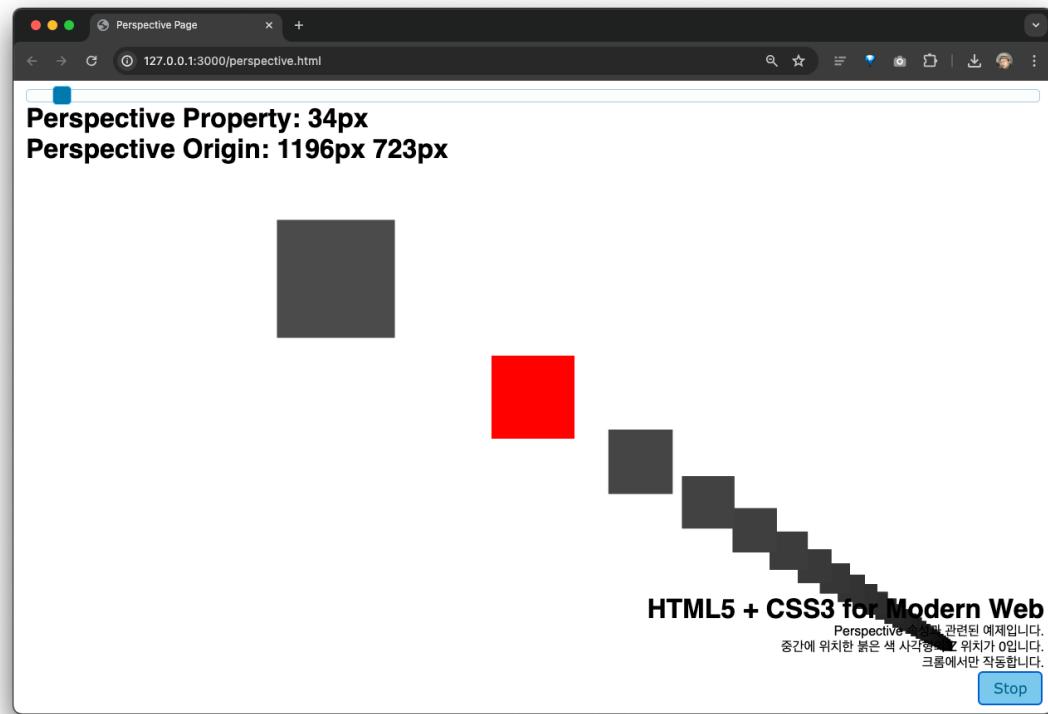
div:nth-child(1) {
    transform: rotateY( 0deg) translate3d(0px, 0px, 100px);
    background: red;
}
div:nth-child(2) {
    transform: rotateY( 90deg) translate3d(0px, 0px, 100px);
    background: green;
}
div:nth-child(3) {
    transform: rotateY(180deg) translate3d(0px, 0px, 100px);
    background: blue;
}
div:nth-child(4) {
    transform: rotateY(270deg) translate3d(0px, 0px, 100px);
    background: yellow;
}
div:nth-child(5) {
    transform: rotateX( 90deg) translate3d(0px, 0px, 100px);
    background: brown;
}
</style>

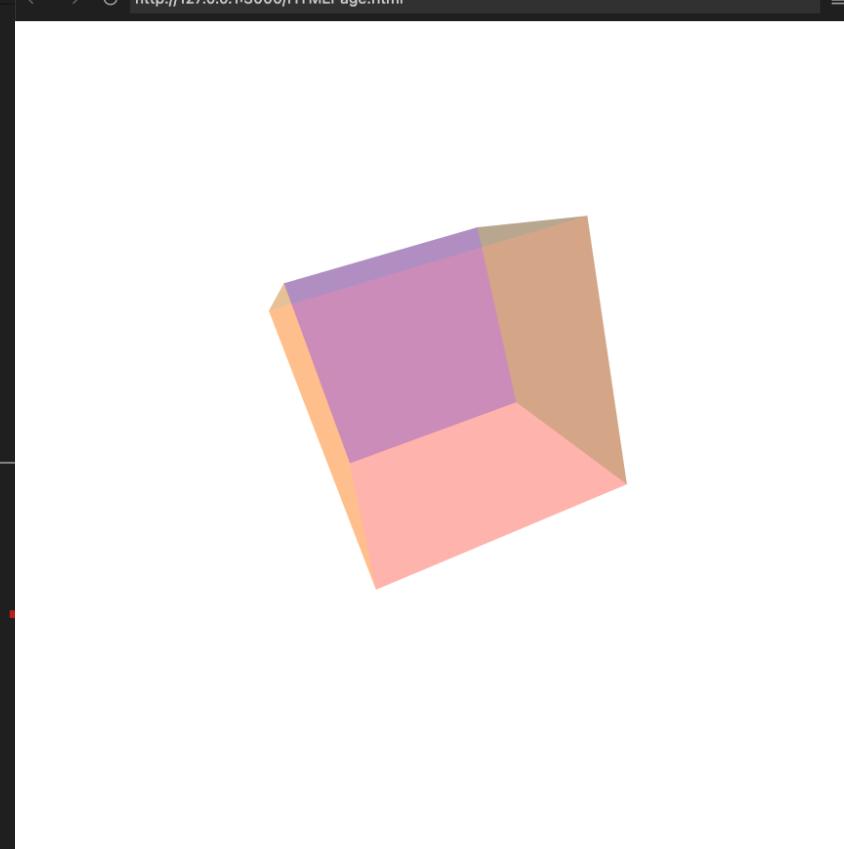
```

The browser preview on the right shows a 3D cube. The front face is red, the back face is yellow, and the other four faces are partially visible or hidden. The cube is rotated 45 degrees, and its depth is increased by 100px using the translate3d() function.

Part 2

원근법





The screenshot shows a browser window with two panes. The left pane displays the source code of an HTML file named 'HTMLPage.html'. The right pane shows the rendered output of the CSS3 transform basic example.

```
<!DOCTYPE html>
<html>
<head>
<title>CSS3 Transform Basic</title>
<style>
body {
    width: 200px;
    margin: 200px auto;
    -webkit-perspective: 400;
    perspective: 400;
}

section {
    width: 200px; height: 200px;
    position: relative;
    animation: rint 3s linear 0s infinite;

    transform-style: preserve-3d;
}

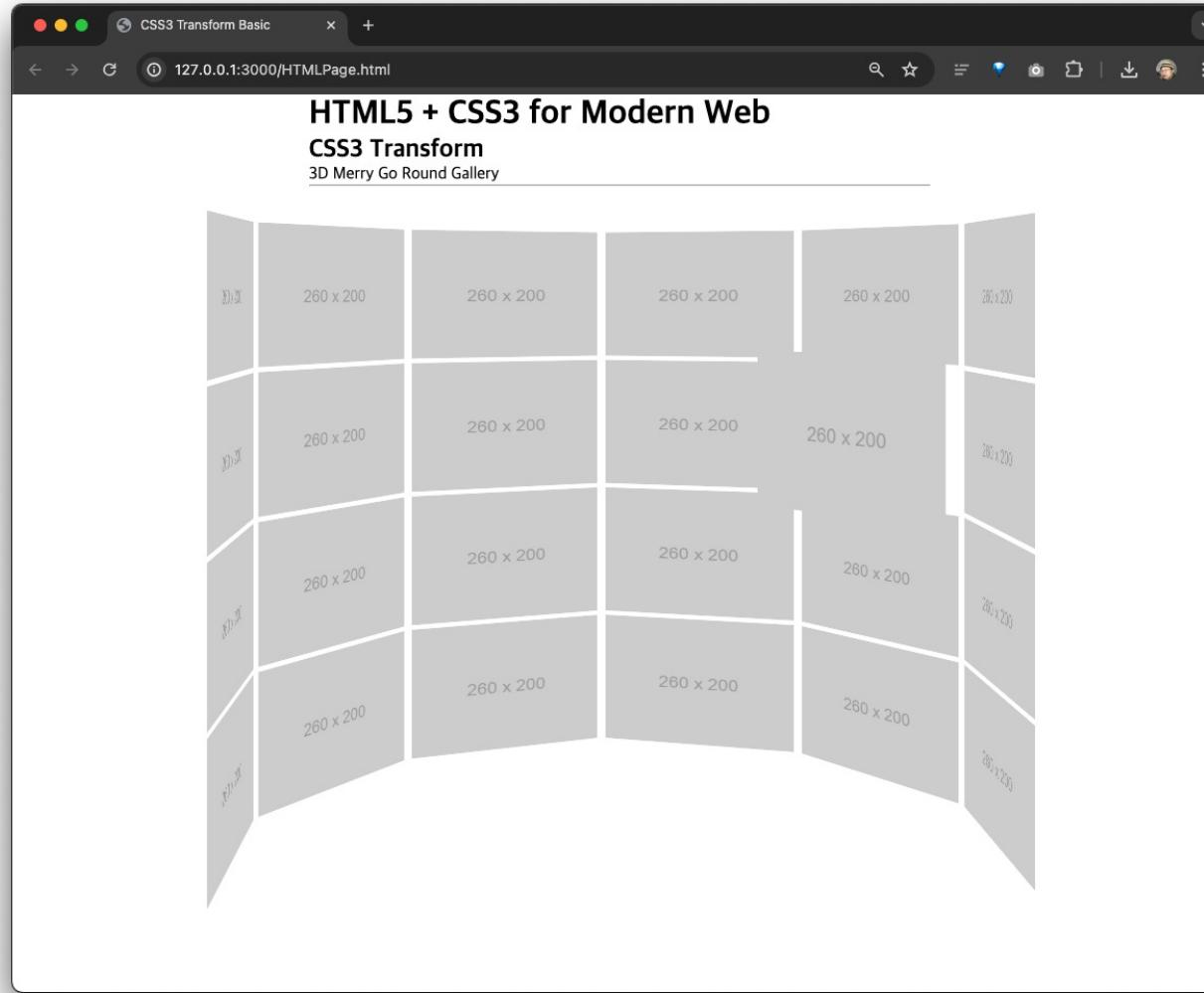
@keyframes rint {
    from {
        transform: rotateX( 0deg) rotateY( 0deg) rotateZ( 0deg);
    }

    to {
        transform: rotateX(360deg) rotateY(360deg) rotateZ(360deg);
    }
}

```

Part 2

회전 목마



Part 2

회전 목마 > body 태그 구성

The screenshot shows a browser window with developer tools open. On the left, the HTML source code is displayed:

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS3 Transform Basic</title>
    <style>
        ...
    </style>
</head>
<body>
    <h1>HTML5 + CSS3 for Modern Web</h1>
    <h2>CSS3 Transform</h2>
    <p>3D Merry Go Round Gallery</p>
    <hr />
    <div id="canvas">
        <div id="merry">
            <div class="face">
                <div class="cell"></div>
                <div class="cell"></div>
                <div class="cell"></div>
                <div class="cell"></div>
            </div>
            <div class="face">
                <div class="cell"></div>
                <div class="cell"></div>
                <div class="cell"></div>
                <div class="cell"></div>
            </div>
            <div class="face">
                <div class="cell"></div>
                <div class="cell"></div>
                <div class="cell"></div>
                <div class="cell"></div>
            </div>
            <div class="face">
                <div class="cell"></div>
                <div class="cell"></div>
                <div class="cell"></div>
                <div class="cell"></div>
            </div>
        </div>
    </div>
</body>
```

The right pane shows the rendered HTML5 + CSS3 page titled "HTML5 + CSS3 for Modern Web" with the heading "CSS3 Transform" and the subtext "3D Merry Go Round Gallery".

Part 2

회전 목마 > 스타일 사용

The screenshot shows a browser window with developer tools open. On the left, the CSS panel displays the CSS code for 'HTMLPage.html'. On the right, the rendered page shows a 3D Merry Go Round Gallery.

```
<!DOCTYPE html>
<html>
<head>
<title>CSS3 Transform Basic</title>
<style>
* { margin: 0; padding: 0 }
html, body { height:100%; }

body {
    width: 600px;
    margin: 0 auto;
}

#canvas {
    position: relative;
    width: 100%; height: 200px;
    -webkit-perspective: 1500;
    perspective: 1500;
}

#merry {
    position: absolute;
    left: 50%; top: 30px;
    transform-style: preserve-3d;
}
</style>
</head>
<body>
<h1>HTML5 + CSS3 for Modern Web</h1>
<h2>CSS3 Transform</h2>
<p>3D Merry Go Round Gallery</p>
<hr />
<div id="canvas">
    <div id="merry">
        <div class="face">
            <div class="cell"></div>
            <div class="cell"></div>
            <div class="cell"></div>
            <div class="cell"></div>
    </div>
</div>
</body>

```

HTML5 + CSS3 for Modern Web
CSS3 Transform
3D Merry Go Round Gallery

Part 2

회전 목마 > 스타일 사용

The screenshot shows a browser window displaying a 3D gallery grid titled "HTML5 + CSS3 for Modern Web" and "CSS3 Transform". The grid consists of 20 gray squares arranged in a 4x5 pattern, each labeled "260 x 200". The browser's developer tools are open, showing the CSS code for the "HTMLPage.html" file. The code defines styles for ".face", ".cell", and ".cell:hover" elements, utilizing CSS3 transforms like rotateY and translateZ to create a 3D effect.

```
<!DOCTYPE html>
<html>
<head>
<style>
    .face {
        position: absolute;
        left: 0; top: 0;
        margin-left: -115px;

        backface-visibility: hidden;
        transform-style: preserve-3d;
    }

    .cell {
        width: 230px; height: 150px;
        margin-bottom: 5px;
        background: url('http://placehold.it/260x200');
        background-size: 100% 100%;

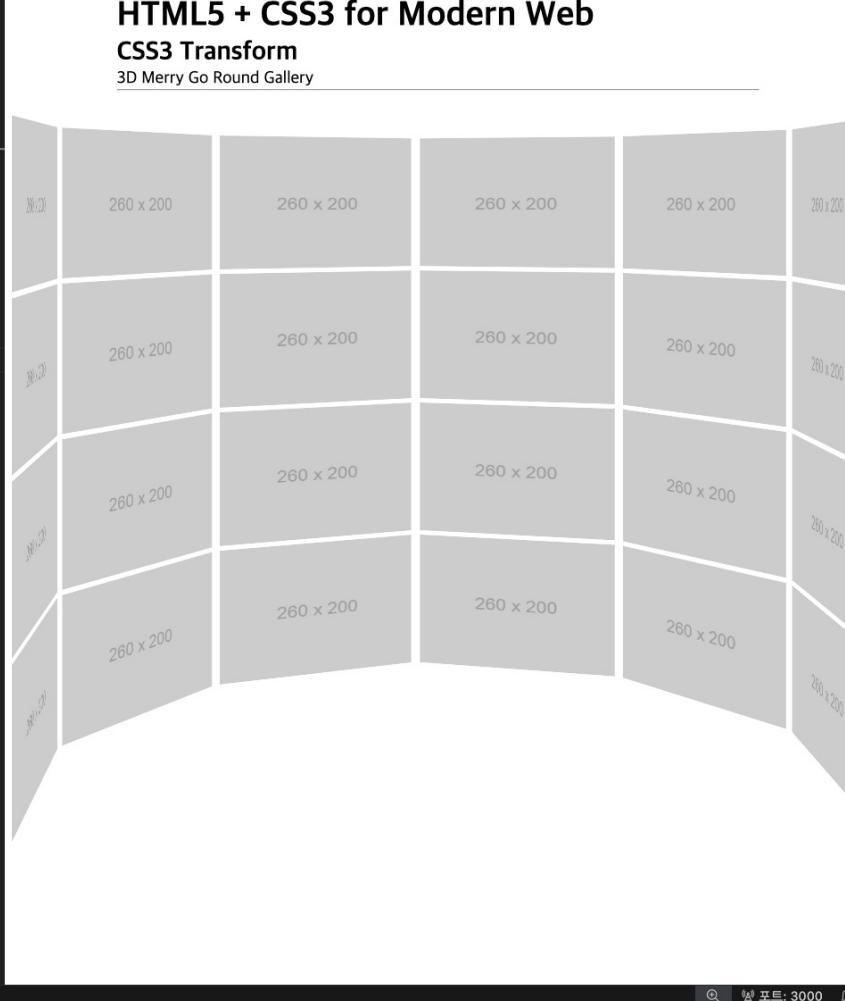
        transition-duration: 0.5s;
    }

    .face:nth-child(1) { transform: rotateY( 0deg) translateZ(-370px); }
    .face:nth-child(2) { transform: rotateY( 36deg) translateZ(-370px); }
    .face:nth-child(3) { transform: rotateY( 72deg) translateZ(-370px); }
    .face:nth-child(4) { transform: rotateY(108deg) translateZ(-370px); }
    .face:nth-child(5) { transform: rotateY(144deg) translateZ(-370px); }
    .face:nth-child(6) { transform: rotateY(180deg) translateZ(-370px); }
    .face:nth-child(7) { transform: rotateY(216deg) translateZ(-370px); }
    .face:nth-child(8) { transform: rotateY(252deg) translateZ(-370px); }
    .face:nth-child(9) { transform: rotateY(288deg) translateZ(-370px); }
    .face:nth-child(10){ transform: rotateY(324deg) translateZ(-370px); }

    .cell:hover {
        transform: scale(1.2) translateZ(50px);
    }
</style>
</head>
<body>
```

Part 2

회전 목마 > 애니메이션 적용



The screenshot shows a browser window displaying a 3D Merry Go Round gallery. The title bar reads "HTML5 + CSS3 for Modern Web" and "CSS3 Transform". The main content area shows a circular arrangement of 12 rectangular cells, each labeled "260 x 200". The cells are rotated and transformed to create a 3D effect. On the left side of the image, a code editor is visible, showing the corresponding CSS3 code for creating this effect.

```
<!DOCTYPE html>
<html>
<head>
<style>
    .merry {
        position: absolute;
        left: 50%; top: 30px;
        transform-style: preserve-3d;
        animation: rint 15s infinite linear;
    }

    @keyframes rint
    {
        from { transform: rotateY(0deg); }
        to { transform: rotateY(360deg); }
    }

    .face {
        position: absolute;
        left: 0; top: 0;
        margin-left: -115px;

        backface-visibility: hidden;
        transform-style: preserve-3d;
    }

    .cell {
        width: 230px; height: 150px;
        margin-bottom: 5px;
        background: url('http://placehold.it/260x200');
        background-size: 100% 100%;

        transition-duration: 0.5s;
    }

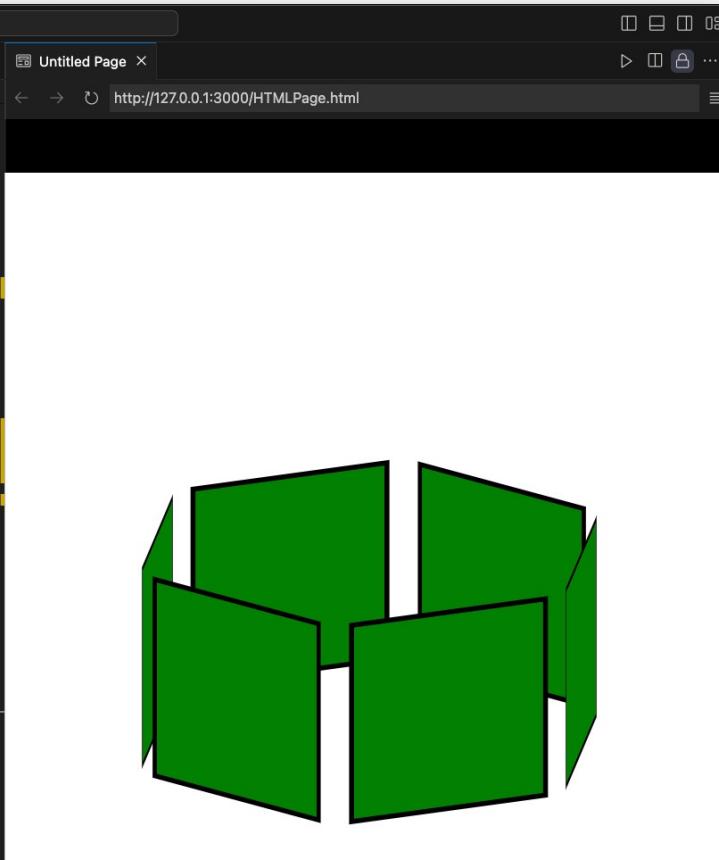
    .face:nth-child(1) { transform: rotateY( 0deg) translateZ(-370px); }
    .face:nth-child(2) { transform: rotateY( 36deg) translateZ(-370px); }
    .face:nth-child(3) { transform: rotateY( 72deg) translateZ(-370px); }
    .face:nth-child(4) { transform: rotateY(108deg) translateZ(-370px); }
    .face:nth-child(5) { transform: rotateY(144deg) translateZ(-370px); }
    .face:nth-child(6) { transform: rotateY(180deg) translateZ(-370px); }
    .face:nth-child(7) { transform: rotateY(216deg) translateZ(-370px); }
    .face:nth-child(8) { transform: rotateY(252deg) translateZ(-370px); }
    .face:nth-child(9) { transform: rotateY(288deg) translateZ(-370px); }
    .face:nth-child(10) { transform: rotateY(324deg) translateZ(-370px); }
    .face:nth-child(11) { transform: rotateY(360deg) translateZ(-370px); }
    .face:nth-child(12) { transform: rotateY(0deg) translateZ(-370px); }


<body>
</body>

```

Part 2

회전 목마



The screenshot shows a code editor and a browser window side-by-side. The code editor on the left displays an HTML file named 'HTMLPage.html' with CSS styles. The browser window on the right shows the resulting 3D effect.

```
<!DOCTYPE html>
<html>
<head>
    <title>Untitled Page</title>
    <style>
        header {
            position: absolute;
            left: 0; top: 0; right: 0;
            height: 50px;
            background: black;
        }

        #wheel {
            position: absolute;
            left: 50%; top: 50%;

            -webkit-transform-style: preserve-3d;
            -webkit-animation: rint 10s infinite linear;
        }

        .item {
            position: absolute;

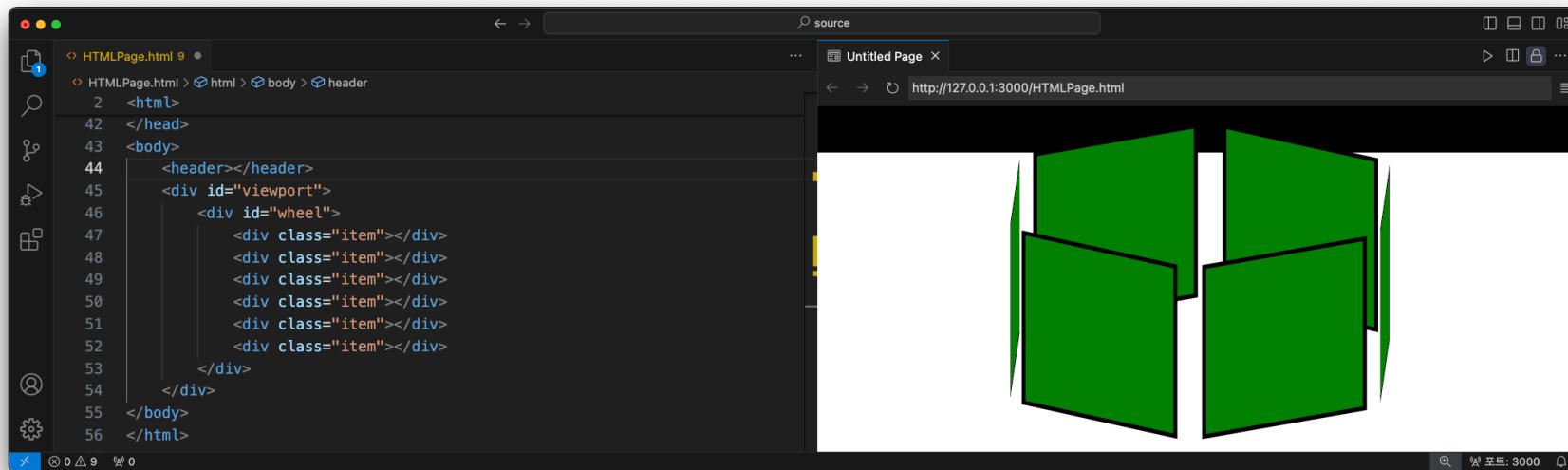
            margin-left: -100px; margin-top: -100px;
            width: 190px; height: 190px;
            border: 5px solid black;
            background: green;
        }

        .item:nth-child(1) { -webkit-transform: rotateY( 0deg) translateZ(-200px); }
        .item:nth-child(2) { -webkit-transform: rotateY( 60deg) translateZ(-200px); }
        .item:nth-child(3) { -webkit-transform: rotateY(120deg) translateZ(-200px); }
        .item:nth-child(4) { -webkit-transform: rotateY(180deg) translateZ(-200px); }
        .item:nth-child(5) { -webkit-transform: rotateY(240deg) translateZ(-200px); }
        .item:nth-child(6) { -webkit-transform: rotateY(300deg) translateZ(-200px); }

        @-webkit-keyframes rint {
            from { -webkit-transform: rotateX(-20deg) rotateY(0deg); }
            to { -webkit-transform: rotateX(-20deg) rotateY(360deg); }
        }
    </style>
</head>
<body>
    <div id="viewport">
        <div id="wheel">
            <div class="item"></div>
            <div class="item"></div>
            <div class="item"></div>
            <div class="item"></div>
            <div class="item"></div>
            <div class="item"></div>
        </div>
    </div>
</body>
</html>
```

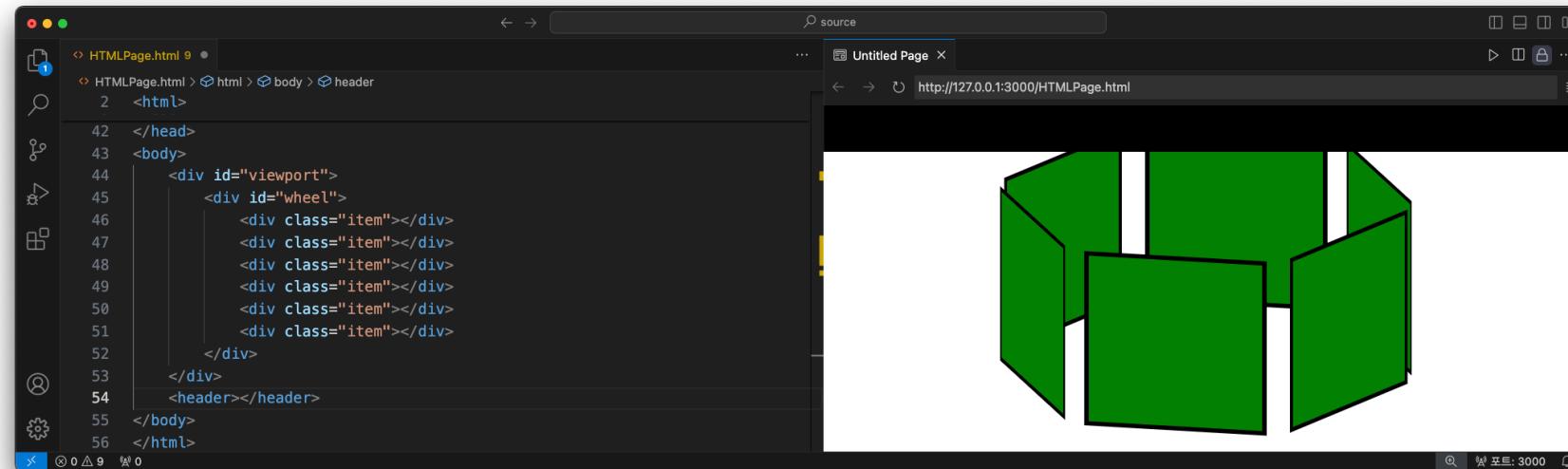
Part 2

회전 목마



The screenshot shows a browser developer tools window with two panes. The left pane displays the source code of `HTMLPage.html`, which contains HTML and CSS code for a 3D cube. The right pane shows a 3D cube visualization with green faces and black edges.

```
<html>
</head>
<body>
<header></header>
<div id="viewport">
<div id="wheel">
<div class="item"></div>
<div class="item"></div>
<div class="item"></div>
<div class="item"></div>
<div class="item"></div>
<div class="item"></div>
</div>
</div>
</body>
</html>
```



The screenshot shows a browser developer tools window with two panes. The left pane displays the source code of `HTMLPage.html`, which contains HTML and CSS code for a 3D cube. The right pane shows a 3D cube visualization with green faces and black edges, rotated differently than in the previous screenshot.

```
<html>
</head>
<body>
<div id="viewport">
<div id="wheel">
<div class="item"></div>
<div class="item"></div>
<div class="item"></div>
<div class="item"></div>
<div class="item"></div>
<div class="item"></div>
</div>
</div>
</body>
</html>
```

A close-up photograph of a person's hands and torso. The person is wearing a white lab coat over a light-colored shirt. Their right hand is holding a white smartphone, which is oriented horizontally. The background is blurred.

추가 규칙과 반응형 웹

규칙(@-rule)이란?

```
@font-face {  
    font-family: 'AAA';  
    src: local('NanumGothic'),  
         url('NanumGothic.eot'),  
         url('NanumGothic.ttf'),  
         url('NanumGothic.woff');  
}
```

Part 2

@import 규칙

```
# StyleSheetA.css ×  
ch_11 > @import > # StyleSheetA.css > ...  
1 body {  
2   color: red;  
3 }
```

```
# StyleSheetB.css ×  
ch_11 > @import > # StyleSheetB.css > ...  
1 html {  
2   background: black;  
3 }
```

The screenshot shows a browser window with the URL `http://127.0.0.1:3000/ch_11/@import/HTMLPage.html`. The page content is:

Lorem ipsum

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Duis sollicitudin, nulla a posuere convallis, magna ipsum semper leo, quis bibendum velit massa ut tellus. Vestibulum laoreet dapibus quam non adipiscing. Donec vehicula urna quis nisi suscipit a ultrices lacus malesuada. Quisque mattis turpis a libero volutpat euismod a in massa. Vestibulum sem lacus, volutpat et gravida a, placerat ac lacus. Nulla facilisi. Cras placerat felis at risus iaculis eget sodales ipsum consectetur. Donec at leo quam, non egestas quam. Donec magna libero, pellentesque a ultricies ac, consectetur eu diam. Maecenas sit amet justo nisl, sit amet fermentum felis. In laoreet, quam ac mollis consequat, nisl ante mollis dui, id tempus felis libero nec dolor. Proin lobortis rhoncus sem, vitae luctus neque scelerisque quis. Morbi quis quam diam, quis condimentum libero. Quisque vel enim vel metus sagittis mollis quis et arcu. Aliquam erat nulla, congue non imperdiet sit amet, consectetur quis urna.

Aenean luctus congue scelerisque. Maecenas aliquet ante, elementum mauris porta vel tristique nisl euismod. Integer vel tincidunt lectus. Cras id nisi tortor. Maecenas nec molestie dui. Fusce in sapien elit, mattis convallis nisi. Mauris vel varius lacus. Praesent sit amet mi velit. Sed eu erat lorem, vel varius lacus. Proin pharetra augue eu ligula tempor eu sagittis ante condimentum. Phasellus sed risus sem. Vestibulum sodales diam non massa iaculis eu volutpat velit pellentesque. Pellentesque pharetra tincidunt metus sed porta.

The left side of the interface shows the HTML code for `HTMLPage.html`:

```
HTMLPage.html ×  
ch_11 > @import > HTMLPage.html > html  
1 <!DOCTYPE html>  
2 <html>  
3 <head>  
4   <title>Import Query Basic</title>  
5   <style>  
6     @import url(StyleSheetA.css);  
7     @import url(StyleSheetB.css);  
8  
9     h1 {  
10       color: white;  
11     }  
12   </style>  
13 </head>  
14 <body>  
15   <h1>Lorem ipsum</h1>  
16   <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit.  
17   <p>Aenean luctus congue scelerisque. Maecenas aliquet ante.  
18 </body>  
19 </html>
```

- @font-face 규칙의 속성

속성 이름	설명
font-family	폰트 이름을 지정
src	폰트 파일을 지정
font-weight	폰트 두께를 지정
font-style	폰트 스타일을 지정

The screenshot shows a browser window with developer tools open. The left pane displays the HTML and CSS code for a page titled "FontFace Basic". The CSS contains an @font-face rule for the font "AAA" with sources for eot, ttf, and woff files. The body of the page contains a large h1 heading "나눔 고딕" and four paragraphs of Korean text. The right pane shows the rendered page with the text displayed in the "Nanum Gothic" font.

```
1  <!DOCTYPE html>
2  <html>
3  <head>
4      <title>FontFace Basic</title>
5      <style>
6          @font-face {
7              font-family: 'AAA';
8              src: local('NanumGothic'),
9                  url('NanumGothic.eot'),
10                 url('NanumGothic.ttf'),
11                 url('NanumGothic.woff');
12         }
13
14         * {
15             font-family: 'AAA';
16         }
17     </style>
18 </head>
19 <body>
20     <h1>나눔 고딕</h1>
21     <p>동해물과 백두산이 마르고 닳도록 하느님이 보우하사 우리나라 만세</p>
22     <p>남산 위에 저 소나무 철갑을 두른듯 바람서리 불변함은 우리 기상일세</p>
23     <p>가을하늘 공활한데 높고 구름 없이 밝은 달은 우리 가슴 일편 단심일세</p>
24     <p>이기상과 이 맘으로 충성을 다하여 괴로우나 즐거우나 나라 사랑하세</p>
25 </body>
26 </html>
```

- 웹 브라우저가 지원하는 폰트 형식

					
ttf/otf	O	O	O	O	O
woff	O	O	O	O	O
woff2	X	X	O	X	O
svg	X	X	X	O	O
eot	X	O	X	X	X

```
# desktop.css ×  
ch_11 > @media > # desktop.css > ...  
1   html {  
2     height: 100%;  
3     background: □black;  
4   }  
5   body {  
6     color: ■white; font-family: serif;  
7   }
```

```
# print.css ×  
ch_11 > @media > # print.css > ...  
1   h1 {  
2     text-align: center;  
3     color: ■red; font-family: sans-serif;  
4   }
```

The screenshot shows a browser window with developer tools open. The left pane displays the HTML code for a file named 'HTMLPage.html'. The right pane shows the rendered content of the page at the URL http://127.0.0.1:3000/ch_11/@media/HTMLPage.html.

HTML Source:

```
1 <!DOCTYPE html>
2 <html>
3 <head>
4   <title>Media Query Basic</title>
5   <link rel="stylesheet" href="desktop.css" media="screen" />
6   <link rel="stylesheet" href="print.css" media="print" />
7 </head>
8 <body>
9   <h1>Lorem ipsum</h1>
10  <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit. Duis sollicitudin, nulla a posuere convallis, magna ipsum semper leo, quis bibendum velit massa ut tellus. Vestibulum laoreet dapibus quam non adipiscing. Donec vehicula urna quis nisi suscipit a ultrices lacus malesuada. Quisque mattis turpis a libero volutpat euismod a in massa. Vestibulum sem lacus, volutpat et gravida a, placerat ac lacus. Nulla facilisi. Cras placerat felis at risus iaculis eget sodales ipsum consectetur. Donec at leo quam, non egestas quam. Donec magna libero, pellentesque a ultricies ac, consectetur eu diam. Maecenas sit amet justo nisl, sit amet fermentum felis. In laoreet, quam ac mollis consequat, nisl ante mollis dui, id tempus felis libero nec dolor. Proin lobortis rhoncus sem, vitae luctus neque scelerisque quis. Morbi quis quam diam, quis condimentum libero. Quisque vel enim vel metus sagittis mollis quis et arcu. Aliquam erat nulla, congue non imperdiet sit amet, consectetur quis urna.
```

Rendered Content:

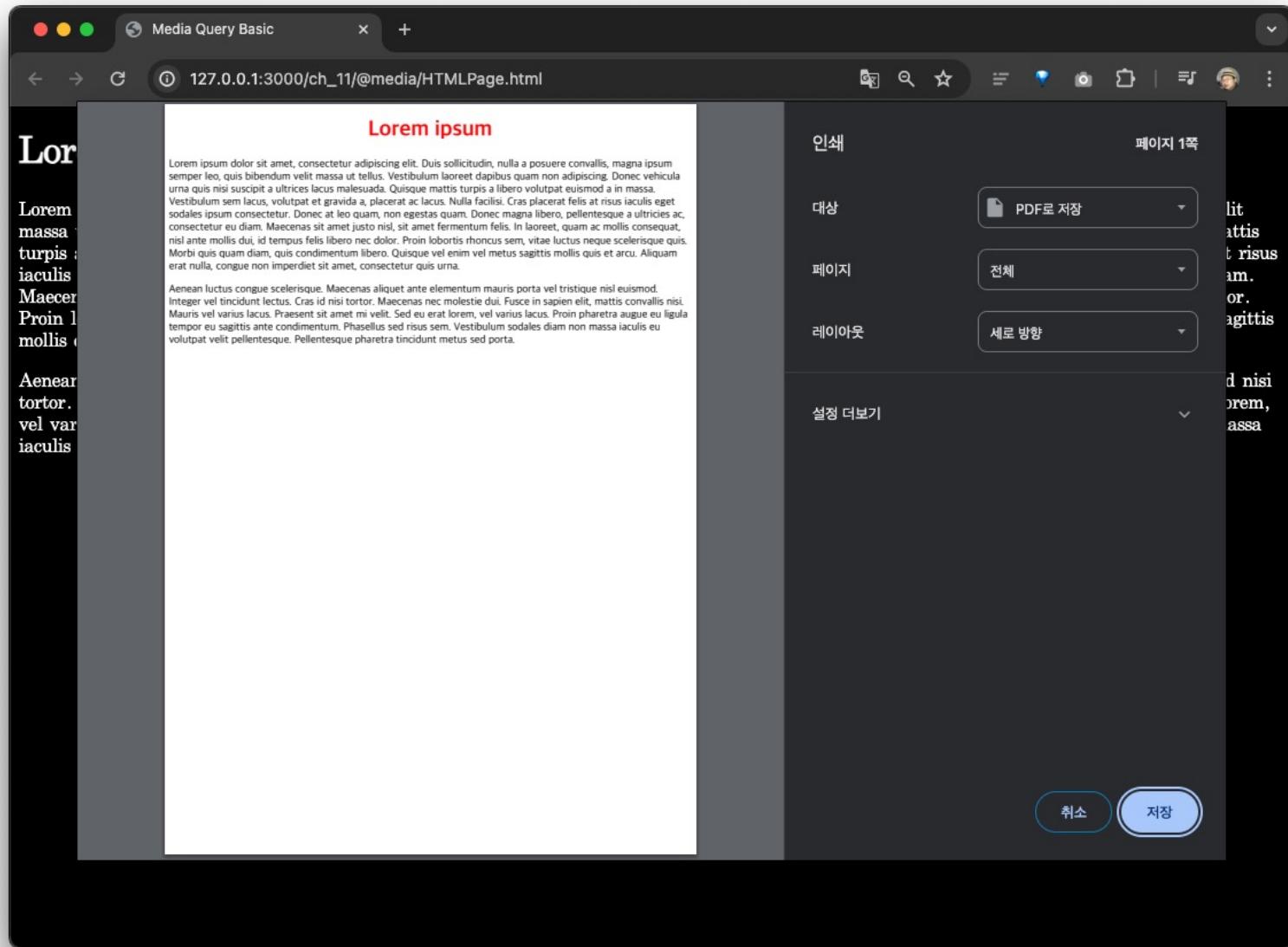
Lorem ipsum

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Duis sollicitudin, nulla a posuere convallis, magna ipsum semper leo, quis bibendum velit massa ut tellus. Vestibulum laoreet dapibus quam non adipiscing. Donec vehicula urna quis nisi suscipit a ultrices lacus malesuada. Quisque mattis turpis a libero volutpat euismod a in massa. Vestibulum sem lacus, volutpat et gravida a, placerat ac lacus. Nulla facilisi. Cras placerat felis at risus iaculis eget sodales ipsum consectetur. Donec at leo quam, non egestas quam. Donec magna libero, pellentesque a ultricies ac, consectetur eu diam. Maecenas sit amet justo nisl, sit amet fermentum felis. In laoreet, quam ac mollis consequat, nisl ante mollis dui, id tempus felis libero nec dolor. Proin lobortis rhoncus sem, vitae luctus neque scelerisque quis. Morbi quis quam diam, quis condimentum libero. Quisque vel enim vel metus sagittis mollis quis et arcu. Aliquam erat nulla, congue non imperdiet sit amet, consectetur quis urna.

Aenean luctus congue scelerisque. Maecenas aliquet ante elementum mauris porta vel tristique nisl euismod. Integer vel tincidunt lectus. Cras id nisi tortor. Maecenas nec molestie dui. Fusce in sapien elit, mattis convallis nisi. Mauris vel varius lacus. Praesent sit amet mi velit. Sed eu erat lorem, vel varius lacus. Proin pharetra augue eu ligula tempor eu sagittis ante condimentum. Phasellus sed risus sem. Vestibulum sodales diam non massa iaculis eu volutpat velit pellentesque. Pellentesque pharetra tincidunt metus sed porta.

Part 2

@media규칙



The screenshot shows a code editor on the left and a browser window on the right. The code editor displays an HTML file named 'HTMLPage.html' with the following content:

```
1 <!DOCTYPE html>
2 <html>
3 <head>
4     <title>Media Query Basic</title>
5     <style>
6         @media screen {
7             html {
8                 height: 100%;
9                 background: black;
10            }
11            body {
12                color: white; font-family: serif;
13            }
14        }
15
16        @media print {
17            h1 {
18                text-align: center;
19                color: red; font-family: sans-serif;
20            }
21        }
22    </style>
23 </head>
24 <body>
25     <h1>Lorem ipsum</h1>
26     <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit.
27     <p>Aenean luctus congue scelerisque. Maecenas aliquet ante e
```

The browser window shows the rendered output of the HTML page. The title is 'Media Query Basic'. The main content area contains the text 'Lorem ipsum' in large black font. Below it, two paragraphs are displayed in a smaller black font. The browser's address bar shows the URL <http://127.0.0.1:3000/HTMLPage.html>.

The screenshot shows a browser developer tools window with the following details:

- Source Tab:** Displays the HTML code for "Media Query Basic". The code includes imports for desktop.css and print.css.
- Preview Tab:** Shows the rendered content "Lorem ipsum" followed by two paragraphs of placeholder text.
- Console Tab:** Shows the status "0 0 △ 0 ⌂ 0".
- Network Tab:** Shows a request for "HTMLPage.html" with a status of 200.

```
1  <!DOCTYPE html>
2  <html>
3  <head>
4      <title>Media Query Basic</title>
5      <style>
6          @import url(desktop.css) screen;
7          @import url(print.css) print;
8      </style>
9  </head>
10 <body>
11     <h1>Lorem ipsum</h1>
12     <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit.
13     <p>Aenean luctus congue scelerisque. Maecenas aliquet ante e
14 </body>
15 </html>
16
17
```

Media Query Basic

source

HTTP://127.0.0.1:3000/HTMLPage.html

Lorem ipsum

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Duis sollicitudin, nulla a posuere convallis, magna ipsum semper leo, quis bibendum velit massa ut tellus. Vestibulum laoreet dapibus quam non adipiscing. Donec vehicula urna quis nisi suscipit a ultrices lacus malesuada. Quisque mattis turpis a libero volutpat euismod a in massa. Vestibulum sem lacus, volutpat et gravida a, placerat ac lacus. Nulla facilisi. Cras placerat felis at risus iaculis eget sodales ipsum consectetur. Donec at leo quam, non egestas quam. Donec magna libero, pellentesque a ultricies ac, consectetur eu diam. Maecenas sit amet justo nisl, sit amet fermentum felis. In laoreet, quam ac mollis consequat, nisl ante mollis dui, id tempus felis libero nec dolor. Proin lobortis rhoncus sem, vitae luctus neque scelerisque quis. Morbi quis quam diam, quis condimentum libero. Quisque vel enim vel metus sagittis mollis quis et arcu. Aliquam erat nulla, congue non imperdiet sit amet, consectetur quis urna.

Aenean luctus congue scelerisque. Maecenas aliquet ante elementum mauris porta vel tristique nisl euismod. Integer vel tincidunt lectus. Cras id nisi tortor. Maecenas nec molestie dui. Fusce in sapien elit, mattis convallis nisi. Mauris vel varius lacus. Praesent sit amet mi velit. Sed eu erat lorem, vel varius lacus. Proin pharetra augue eu ligula tempor eu sagittis ante condimentum. Phasellus sed risus sem. Vestibulum sodales diam non massa iaculis eu volutpat velit pellentesque. Pellentesque pharetra tincidunt metus sed porta.

- 미디어 쿼리

속성	설명
width	화면의 너비
height	화면의 높이
device-width	장치의 너비
device-height	장치의 높이
orientation	장치의 방향
device-aspect-ratio	화면의 비율
color	장치의 색상 비트
color-index	장치에서 표현 가능한 최대 색상 개수
monochrome	흑백 장치의 픽셀당 비트 수
resolution	장치의 해상도

Part 2

반응형 웹

The screenshot shows a code editor on the left and a browser preview on the right. The code editor displays an HTML file named 'HTMLPage.html' with the following content:

```
<!DOCTYPE html>
<html>
<head>
    <title>Media Query Basic</title>
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <style>
        @media screen and (max-width: 767px) {
            html {
                background: red;
                color: white; font-weight: bold;
            }
        }

        @media screen and (min-width: 768px) and (max-width: 959px) {
            html {
                background: green;
                color: white; font-weight: bold;
            }
        }

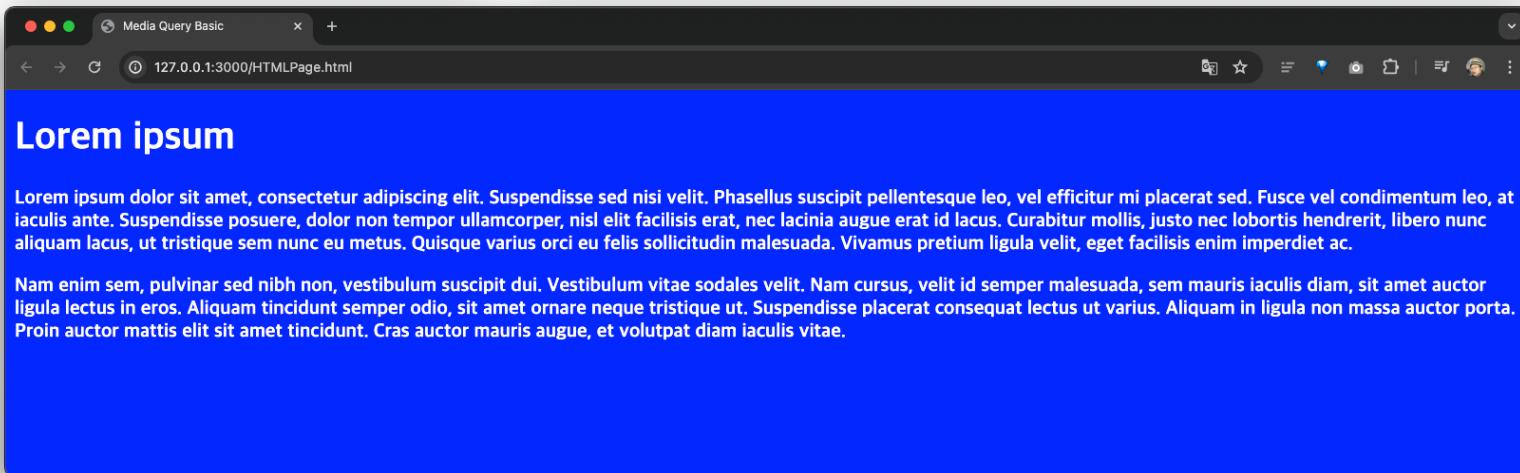
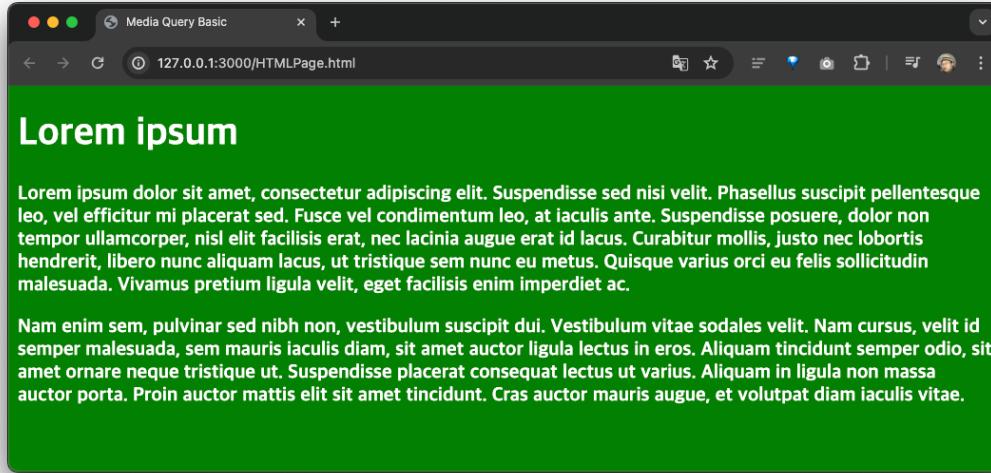
        @media screen and (min-width: 960px) {
            html {
                background: blue;
                color: white; font-weight: bold;
            }
        }
    </style>
</head>
<body>
    <h1>Lorem ipsum</h1>
    <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit. Suspendisse sed nisi velit. Phasellus suscipit pellentesque leo, vel efficitur mi placerat sed. Fusce vel condimentum leo, at iaculis ante. Suspendisse posuere, dolor non tempor ullamcorper, nisl elit facilisis erat, nec lacinia augue erat id lacus. Curabitur mollis, justo nec lobortis hendrerit, libero nunc aliquam lacus, ut tristique sem nunc eu metus. Quisque varius orci eu felis sollicitudin malesuada. Vivamus pretium ligula velit, eget facilisis enim imperdiet ac.

Nam enim sem, pulvinar sed nibh non, vestibulum suscipit dui. Vestibulum vitae sodales velit. Nam cursus, velit id semper malesuada, sem mauris iaculis diam, sit amet auctor ligula lectus in eros. Aliquam tincidunt semper odio, sit amet ornare neque tristique ut. Suspendisse placerat consequat lectus ut varius. Aliquam in ligula non massa auctor porta. Proin auctor mattis elit sit amet tincidunt. Cras auctor mauris augue, et volutpat diam iaculis vitae.



The browser preview on the right shows the page with a red background and white text, matching the styles defined in the media query for screens up to 767px wide.


```



Part 2

화면 방향 전환

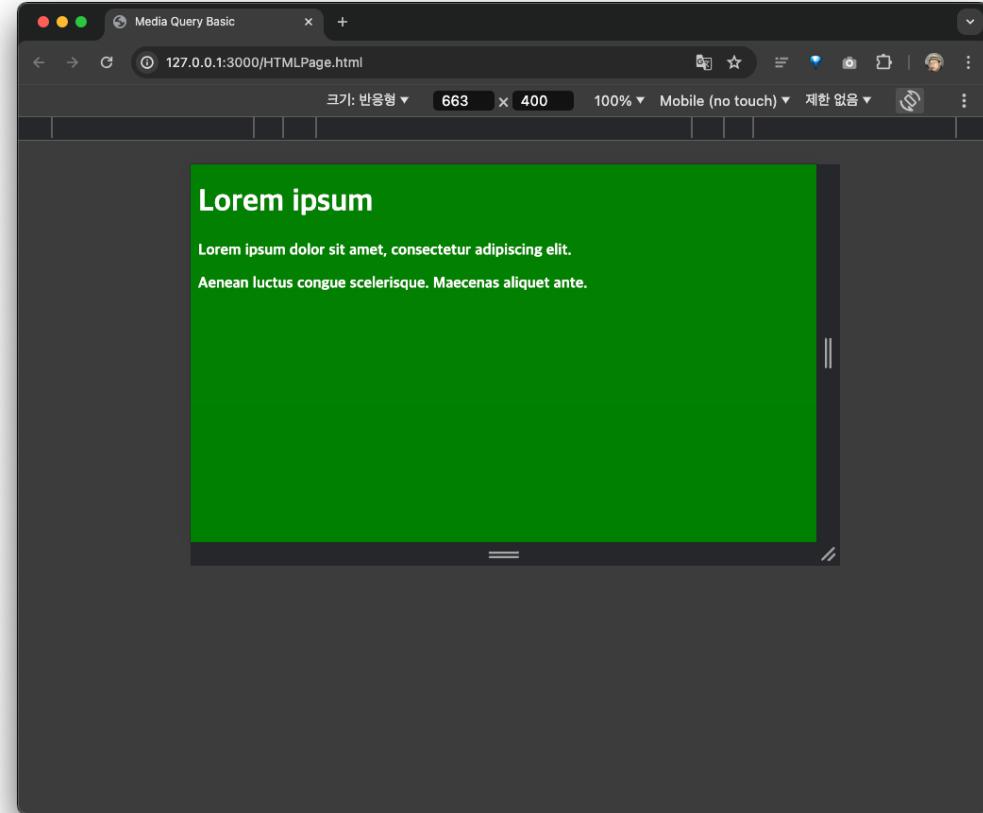
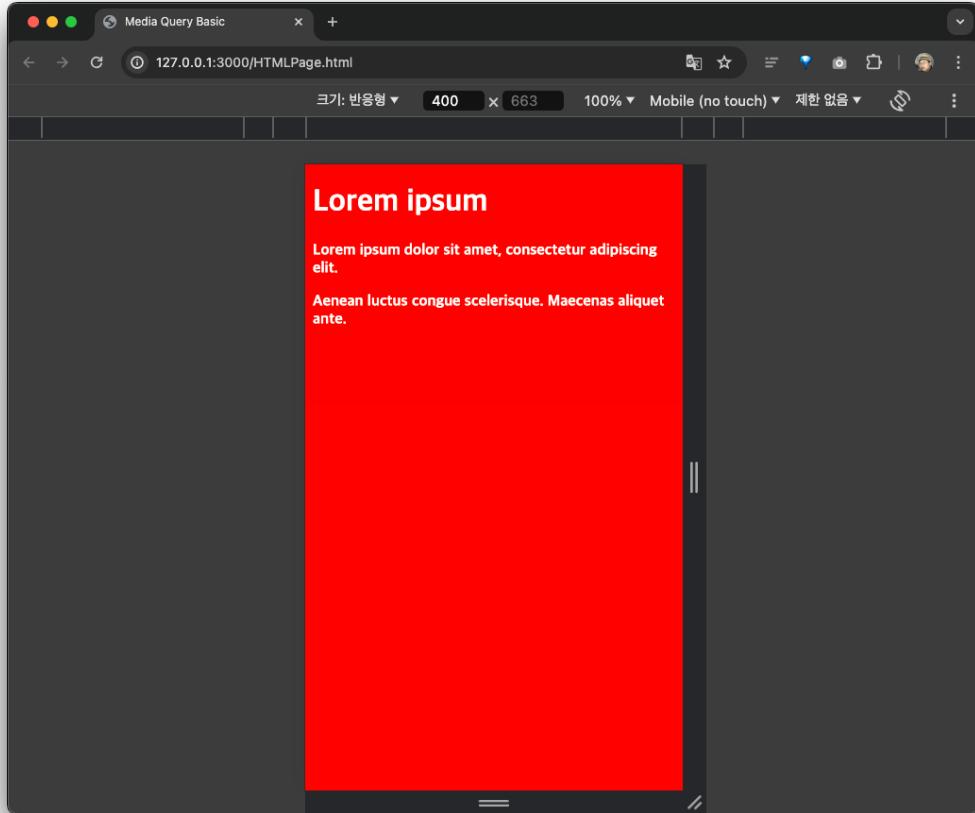
The screenshot shows a browser developer tools window divided into two main sections. On the left, the code editor displays the HTML file `HTMLPage.html`. The code includes a `<head>` section with a `<title>Media Query Basic</title>` tag and a `<meta name="viewport" content="width=device-width, initial-scale=1.0" />` tag. It also contains a `<style>` block with media queries for portrait and landscape orientations. The right side shows the rendered preview of the page at `http://127.0.0.1:3000/HTMLPage.html`. The preview has a red background and white bold text, with the title "Lorem ipsum" and two paragraphs of placeholder text.

```
<!DOCTYPE html>
<html>
<head>
    <title>Media Query Basic</title>
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <style>
        @media screen and (orientation: portrait) {
            html {
                background: red;
                color: white; font-weight: bold;
            }
        }

        @media screen and (orientation: landscape) {
            html {
                background: green;
                color: white; font-weight: bold;
            }
        }
    </style>
</head>
<body>
    <h1>Lorem ipsum</h1>
    <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit.</p>
    <p>Aenean luctus congue scelerisque. Maecenas aliquet ante.</p>
</body>
</html>
```

Part 2

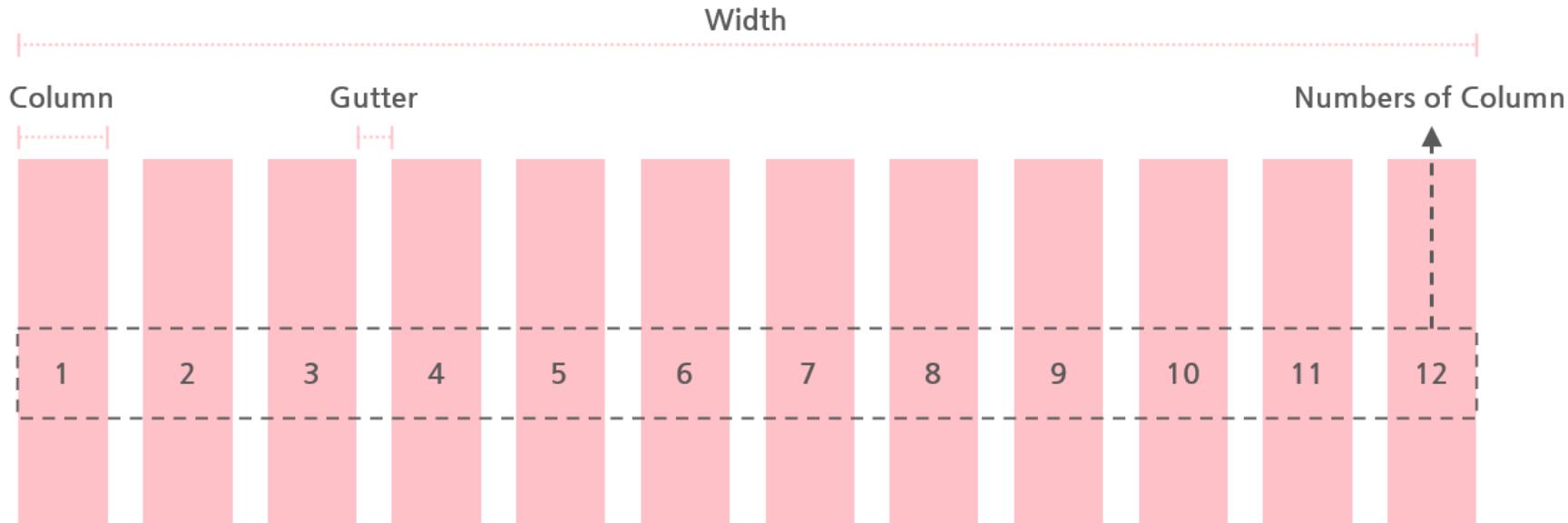
화면 방향 전환



A close-up photograph of a person's hands holding a white smartphone. The person is wearing a white button-down shirt. The background is blurred.

그리드 시스템

정직 그리드 시스템



$$\text{ContainerWidth} = (\text{ColumnWidth} + \text{GutterWidth}) \times 12$$

예제의 Column 너비를 60 픽셀, Gutter 너비를 20 픽셀로 지정

$$960 \text{ 픽셀} = (60\text{픽셀} + 20\text{픽셀}) \times 12$$

Part 2

정적 그리드 시스템

The screenshot shows a code editor on the left and a browser window on the right. The code editor displays an HTML file named 'HTMLPage.html' with the following content:

```
<!DOCTYPE html>
<html>
<head>
<title></title>
<style>
.container {
    width: 960px;
    margin: 0 auto;
}
.row {
    overflow: hidden;
    margin-left: 10px;
    margin-right: 10px;
}

.span_1, .span_2, .span_3, .span_4, .span_5,
.span_6, .span_7, .span_8, .span_9, .span_10,
.span_11, .span_12{
    float: left;
}

.span_1 { width: 60px; }
.span_2 { width: 140px; }
.span_3 { width: 220px; }
.span_4 { width: 300px; }
.span_5 { width: 380px; }
.span_6 { width: 460px; }
.span_7 { width: 540px; }
.span_8 { width: 620px; }
.span_9 { width: 700px; }
.span_10 { width: 780px; }
.span_11 { width: 860px; }
.span_12 { width: 940px; }
</style>
</head>
<body>
<div class="container">
    <div class="row">
        <div class="span_12">
            <h1>Lorem ipsum dolor sit amet</h1>
            <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit. Curabitur non ultricies odio. Nulla scelerisque pulvinar purus a varius. Morbi auctor facilisis eros vitae egestas. Proin in dui vel nunc laoreet ultricies vitae ut nunc. Praesent leo nulla, dignissim et scelerisque lobortis, eleifend quis mauris. Nam sed massa purus, vitae mollis sapien. Suspendisse cursus est sed orci tincidunt ultricies. Pellentesque non lectus suscipit urna dignissim imperdiet eget id quam. Pellentesque nec enim enim. Aliquam volutpat velit mi, a ultricies augue. Nam nec metus purus.
        </div>
        <div class="row">
            <div class="span_6">
                <h1>Lorem ipsum dolor sit amet</h1>
                <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit. Curabitur non ultricies odio. Nulla scelerisque pulvinar purus a varius. Morbi auctor facilisis eros vitae egestas. Proin in dui vel nunc laoreet ultricies vitae ut nunc. Praesent leo nulla, dignissim et scelerisque lobortis, eleifend quis mauris. Nam sed massa purus, vitae mollis sapien. Suspendisse cursus est sed orci tincidunt ultricies. Pellentesque non lectus suscipit urna dignissim imperdiet eget id quam. Pellentesque nec enim enim. Aliquam volutpat velit mi, a ultricies augue. Nam nec metus purus.
            </div>
            <div class="span_6">
                <h1>Lorem ipsum dolor sit amet</h1>
                <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit. Curabitur non ultricies odio. Nulla scelerisque pulvinar purus a varius. Morbi auctor facilisis eros vitae egestas. Proin in dui vel nunc laoreet ultricies vitae ut nunc. Praesent leo nulla, dignissim et scelerisque lobortis, eleifend quis mauris. Nam sed massa purus, vitae mollis sapien. Suspendisse cursus est sed orci tincidunt ultricies. Pellentesque non lectus suscipit urna dignissim imperdiet eget id quam. Pellentesque nec enim enim. Aliquam volutpat velit mi, a ultricies augue. Nam nec metus purus.
            </div>
        </div>
    </div>
</div>
</body>

```

The browser window shows the rendered HTML with three columns of text. Each column contains a heading and a paragraph of placeholder text ('Lorem ipsum dolor sit amet'). The browser's status bar at the bottom right indicates '포트: 3000'.

The screenshot shows a code editor interface with two files open:

- HTMLPage.html**: An HTML file containing a basic structure with a container, a row, and a span_12 element containing an h1 tag.
- StaticGridSystem.less**: A LESS file defining a grid system with a fixed width of 960px and a gutter width of 20px. It includes a mixin for spans and applies styles to the container and row elements.

```
<!DOCTYPE html>
<html>
<head>
    <title></title>
    <style>
        .container {
            width: 960px;
            margin: 0 auto;
        }
        .row {
            overflow: hidden;
            margin-left: 10px;
            margin-right: 10px;
        }
        .span_1, .span_2, .span_3, .span_4, .span_5,
        .span_6, .span_7, .span_8, .span_9, .span_10,
        .span_11,.span_12{
            float: left;
        }
        .span_1 { width: 60px; }
        .span_2 { width:140px; }
        .span_3 { width:220px; }
        .span_4 { width:300px; }
        .span_5 { width:380px; }
        .span_6 { width:460px; }
        .span_7 { width:540px; }
        .span_8 { width:620px; }
        .span_9 { width:700px; }
        .span_10{ width:780px; }
        .span_11{ width:860px; }
        .span_12{ width:940px; }
    </style>
</head>
<body>
    <div class="container">
        <div class="row">
            <div class="span_12">
                <h1>Lorem ipsum dolor sit amet</h1>
            </div>
        </div>
    </div>
</body>
</html>
```

```
// 변수
@ColumnWidth: 60px;
@GutterWidth: 20px;

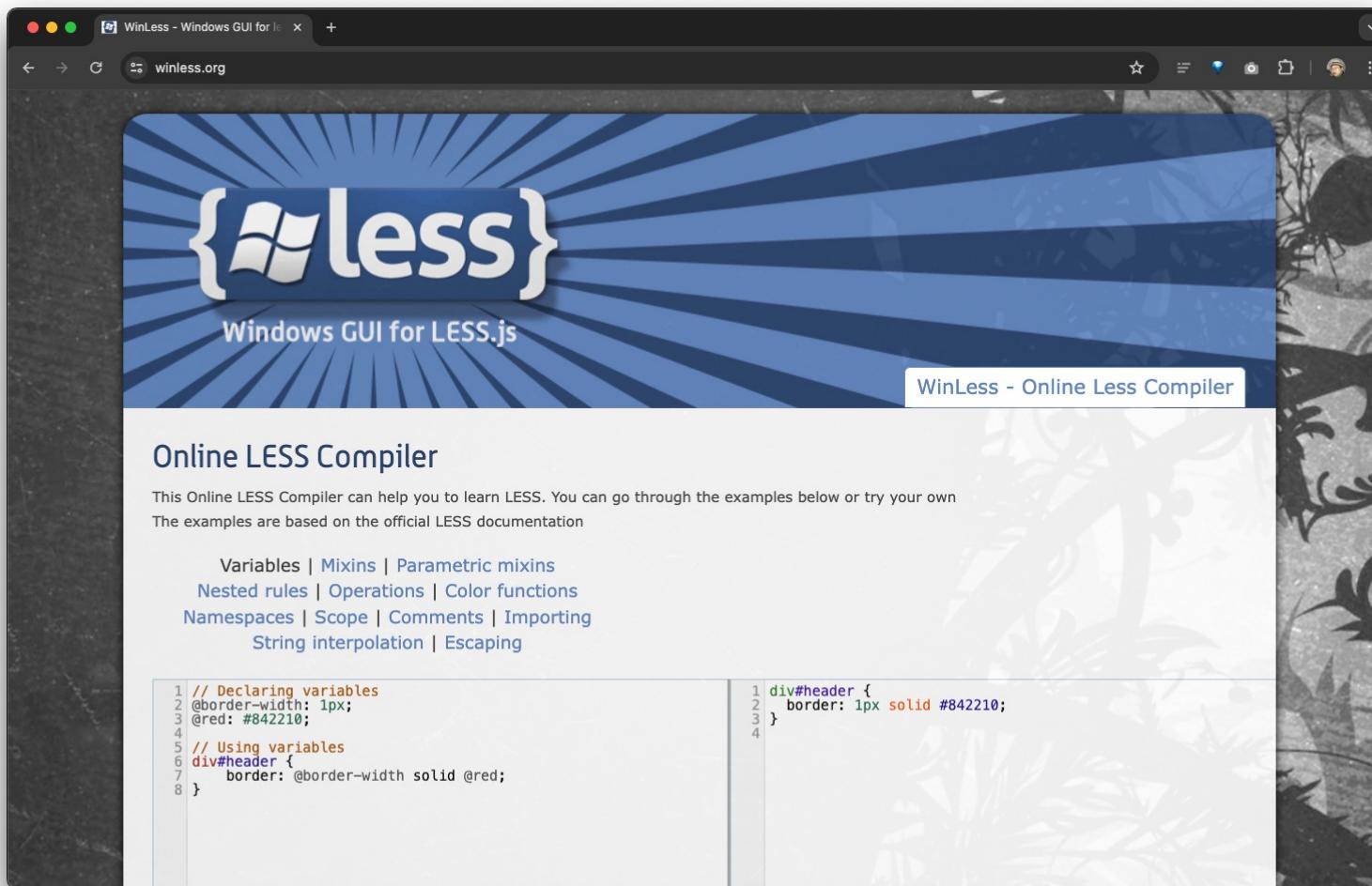
// 믹스인
.span(@column) {
    width: (@ColumnWidth * @column) + (@GutterWidth * (@column - 1));
}

// 스타일 적용
.container {
    width: 960px;
    margin: 0 auto;
}

.row {
    overflow: hidden;
    margin-left: 10px;
    margin-right: 10px;
}

.span_1 { .span(1); }
.span_2 { .span(2); }
.span_3 { .span(3); }
.span_4 { .span(4); }
.span_5 { .span(5); }
.span_6 { .span(6); }
.span_7 { .span(7); }
.span_8 { .span(8); }
.span_9 { .span(9); }
.span_10{ .span(10);}
.span_11{ .span(11);}
.span_12{ .span(12);}
```

동적 그리드 시스템



온라인 Less 컴파일러(<https://winless.org/>)

동적 그리드 시스템

동적 그리드 시스템을 만들 때는 다음 공식을 사용합니다.

공식 2는 공식 1을 사용해 유도한 공식입니다.

- 공식 1 **(Column Width + GutterWidth) x ColumnCount - GutterWidth = 100**
- 공식 2 **Column Width = (100 - (ColumnCount - 1) × GutterWidth) / ColumnCount**

예제) @GutterWidth를 2%로 적용하면 $\text{ColumnWidth} = (100 - 11 \times 2) / 12 = 6.5$

Part 2

동적 그리드 시스템

The screenshot shows a code editor interface with two files open:

- HTMLPage.html**: An HTML file containing a single row of spans with widths defined by CSS classes like .span_1 through .span_12.
- StaticGridSystem.less**: A LESS file defining a static grid system with 12 columns, each 6.5% wide, and a total grid row width of 100%.

HTMLPage.html Content:

```
<!DOCTYPE html>
<html>
<head>
<title></title>
<style>
.container {
  margin: 0;
  padding: 0;
}
.row {
  overflow: hidden;
  width: 100%;
}
.row [class*=span] {
  float: left;
  margin-left: 2%;
}
.row [class*=span]:first-child {
  margin-left: 0;
}
.span_1 {
  width: 6.5%;
  *width: 6%;
}
.span_2 {
  width: 15%;
  *width: 14.5%;
}
.span_3 {
  width: 23.5%;
  *width: 23%;
}
.span_4 {
  width: 32%;
  *width: 31.5%;
}
.span_5 {
  width: 40.5%;
  *width: 40%;
}
.span_6 {
  width: 49%;
  *width: 48.5%;
}
.span_7 {
  width: 57.5%;
  *width: 57%;
}
.span_8 {
  width: 66%;
  *width: 65.5%;
}
.span_9 {
  width: 74.5%;
```

StaticGridSystem.less Content:

```
// 변수
@ColumnCount: 12;
@ColumnWidth: 6.5%;
@GutterWidth: 2%;
@gridRowWidth: @ColumnCount * @ColumnWidth + @GutterWidth * (@ColumnCount - 1);

// 미스인
.span(@column) {
  @width: (@ColumnWidth * @column) + (@GutterWidth * (@column - 1));
  width: @width;
  *width: @width - percentage(0.5 / @gridRowWidth * 100);
}

// 스타일 적용
.container {
  margin: 0;
  padding: 0;
}

.row {
  overflow: hidden;
  width: 100%;
}

[class*=span] {
  float: left;
  margin-left: @GutterWidth;
  &:first-child {
    margin-left: 0;
  }
}

.span_1 { .span(1); }
.span_2 { .span(2); }
.span_3 { .span(3); }
.span_4 { .span(4); }
.span_5 { .span(5); }
.span_6 { .span(6); }
.span_7 { .span(7); }
.span_8 { .span(8); }
.span_9 { .span(9); }
.span_10{ .span(10);}
.span_11{ .span(11);}
.span_12{ .span(12);}
```

The LESS file uses variables for column count, width, and gutter width, and defines a span macro to calculate the width for each column based on its index. It also applies styles to the container and rows, and uses the span macro to generate individual styles for each span element from .span_1 to .span_12.

Part 2

동적 그리드 시스템

The screenshot shows a code editor on the left and a browser window on the right. The code editor displays an HTML file named 'HTMLPage.html' with CSS styles for a responsive grid. The browser window shows the rendered page at 'http://127.0.0.1:3000/HTMLPage.html'. The page contains a title 'Lorem ipsum dolor sit amet' and nine identical text blocks labeled 'Lorem ipsum dolor sit amet' arranged in three columns of three. Each text block is preceded by a short paragraph of placeholder text.

```
<!DOCTYPE html>
<html>
<head>
    <title></title>
    <style>
        .container {
            margin: 0;
            padding: 0;
        }
        .row {
            overflow: hidden;
            width: 100%;
        }
        .row [class*=span] {
            float: left;
            margin-left: 2%;
        }
        .row [class*=span]:first-child {
            margin-left: 0;
        }
        .span_1 {
            width: 6.5%;
            *width: 6%;
        }
        .span_2 {
            width: 15%;
            *width: 14.5%;
        }
        .span_3 {
            width: 23.5%;
            *width: 23%;
        }
        .span_4 {
            width: 32%;
            *width: 31.5%;
        }
        .span_5 {
            width: 40.5%;
            *width: 40%;
        }
        .span_6 {
            width: 49%;
            *width: 48.5%;
        }
        .span_7 {
            width: 57.5%;
            *width: 57%;
        }
        .span_8 {
            width: 66%;
            *width: 65.5%;
        }
        .span_9 {
            width: 74.5%;
        }
    </style>
</head>
<body>
    <div>
        <h1>Lorem ipsum dolor sit amet</h1>
        <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit. Curabitur non ultricies odio. Nulla scelerisque pulvinar purus a varius. Morbi auctor facilisis eros vitae egestas. Proin in dui vel nunc laoreet ultricies vitae ut nunc. Praesent leo nulla, dignissim et scelerisque lobortis, eleifend quis mauris. Nam sed massa purus, vitae mollis sapien. Suspendisse cursus est sed orci tincidunt ultricies. Pellentesque non lectus suscipit urna dignissim imperdiet eget id quam. Pellentesque nec enim enim. Aliquam volutpat velit mi, a ultricies augue. Nam nec metus purus.</p>
        <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit. Curabitur non ultricies odio. Nulla scelerisque pulvinar purus a varius. Morbi auctor facilisis eros vitae egestas. Proin in dui vel nunc laoreet ultricies vitae ut nunc. Praesent leo nulla, dignissim et scelerisque lobortis, eleifend quis mauris. Nam sed massa purus, vitae mollis sapien. Suspendisse cursus est sed orci tincidunt ultricies. Pellentesque non lectus suscipit urna dignissim imperdiet eget id quam. Pellentesque nec enim enim. Aliquam volutpat velit mi, a ultricies augue. Nam nec metus purus.</p>
        <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit. Curabitur non ultricies odio. Nulla scelerisque pulvinar purus a varius. Morbi auctor facilisis eros vitae egestas. Proin in dui vel nunc laoreet ultricies vitae ut nunc. Praesent leo nulla, dignissim et scelerisque lobortis, eleifend quis mauris. Nam sed massa purus, vitae mollis sapien. Suspendisse cursus est sed orci tincidunt ultricies. Pellentesque non lectus suscipit urna dignissim imperdiet eget id quam. Pellentesque nec enim enim. Aliquam volutpat velit mi, a ultricies augue. Nam nec metus purus.</p>
        <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit. Curabitur non ultricies odio. Nulla scelerisque pulvinar purus a varius. Morbi auctor facilisis eros vitae egestas. Proin in dui vel nunc laoreet ultricies vitae ut nunc. Praesent leo nulla, dignissim et scelerisque lobortis, eleifend quis mauris. Nam sed massa purus, vitae mollis sapien. Suspendisse cursus est sed orci tincidunt ultricies. Pellentesque non lectus suscipit urna dignissim imperdiet eget id quam. Pellentesque nec enim enim. Aliquam volutpat velit mi, a ultricies augue. Nam nec metus purus.</p>
        <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit. Curabitur non ultricies odio. Nulla scelerisque pulvinar purus a varius. Morbi auctor facilisis eros vitae egestas. Proin in dui vel nunc laoreet ultricies vitae ut nunc. Praesent leo nulla, dignissim et scelerisque lobortis, eleifend quis mauris. Nam sed massa purus, vitae mollis sapien. Suspendisse cursus est sed orci tincidunt ultricies. Pellentesque non lectus suscipit urna dignissim imperdiet eget id quam. Pellentesque nec enim enim. Aliquam volutpat velit mi, a ultricies augue. Nam nec metus purus.</p>
        <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit. Curabitur non ultricies odio. Nulla scelerisque pulvinar purus a varius. Morbi auctor facilisis eros vitae egestas. Proin in dui vel nunc laoreet ultricies vitae ut nunc. Praesent leo nulla, dignissim et scelerisque lobortis, eleifend quis mauris. Nam sed massa purus, vitae mollis sapien. Suspendisse cursus est sed orci tincidunt ultricies. Pellentesque non lectus suscipit urna dignissim imperdiet eget id quam. Pellentesque nec enim enim. Aliquam volutpat velit mi, a ultricies augue. Nam nec metus purus.</p>
        <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit. Curabitur non ultricies odio. Nulla scelerisque pulvinar purus a varius. Morbi auctor facilisis eros vitae egestas. Proin in dui vel nunc laoreet ultricies vitae ut nunc. Praesent leo nulla, dignissim et scelerisque lobortis, eleifend quis mauris. Nam sed massa purus, vitae mollis sapien. Suspendisse cursus est sed orci tincidunt ultricies. Pellentesque non lectus suscipit urna dignissim imperdiet eget id quam. Pellentesque nec enim enim. Aliquam volutpat velit mi, a ultricies augue. Nam nec metus purus.</p>
    </div>
</body>
</html>
```

Part 2

반응형 그리드 시스템

The screenshot shows a code editor with two tabs: 'HTMLPage.html' and 'source'. The 'HTMLPage.html' tab contains the following HTML code:

```
<!DOCTYPE html>
<html>
<head>
<title></title>
<style>
    /* 화면 너비 0픽셀 ~ 767픽셀: 그리드를 해제합니다. */
    @media screen and (max-width: 767px) {
    }

    /* 화면 너비 768픽셀 ~ 959픽셀: 동적 그리드 시스템 */
    @media screen and (min-width: 768px) and (max-width: 959px) {
        .container {
            margin: 0;
            padding: 0;
        }
        .row {
            overflow: hidden;
            width: 100%;
        }
        .row [class*=span] {
            float: left;
            margin-left: 2%;
        }
        .row [class*=span]:first-child {
            margin-left: 0;
        }
        .span_1 {
            width: 6.5%;
            *width: 6%;
        }
        .span_2 {
            width: 15%;
            *width: 14.5%;
        }
        .span_3 {
            width: 23.5%;
            *width: 23%;
        }
        .span_4 {
            width: 32%;
            *width: 31.5%;
        }
        .span_5 {
            width: 40.5%;
            *width: 40%;
        }
        .span_6 {
            width: 49%;
            *width: 48.5%;
        }
        .span_7 {
            width: 57.5%;
            *width: 57%;
        }
    }
}
```

The 'source' tab shows the rendered output of the CSS at <http://127.0.0.1:3000/HTMLPage.html>. The page displays a grid of seven columns with the heading 'Lorem ipsum dolor sit amet' repeated seven times. Each column contains placeholder text ('Lorem ipsum dolor sit amet, consectetur adipiscing elit...'). The grid layout is visible on the desktop version of the page.

Part 2

반응형 그리드 시스템

The screenshot shows a code editor with two tabs: 'HTMLPage.html' and 'HTMLPage.html'. The left pane displays the source code for 'HTMLPage.html', which includes HTML structure and CSS for a responsive grid system. The right pane shows the rendered output of the page at <http://127.0.0.1:3000/HTMLPage.html>, featuring a grid of seven columns with placeholder text ('Lorem ipsum dolor sit amet') repeated across the rows.

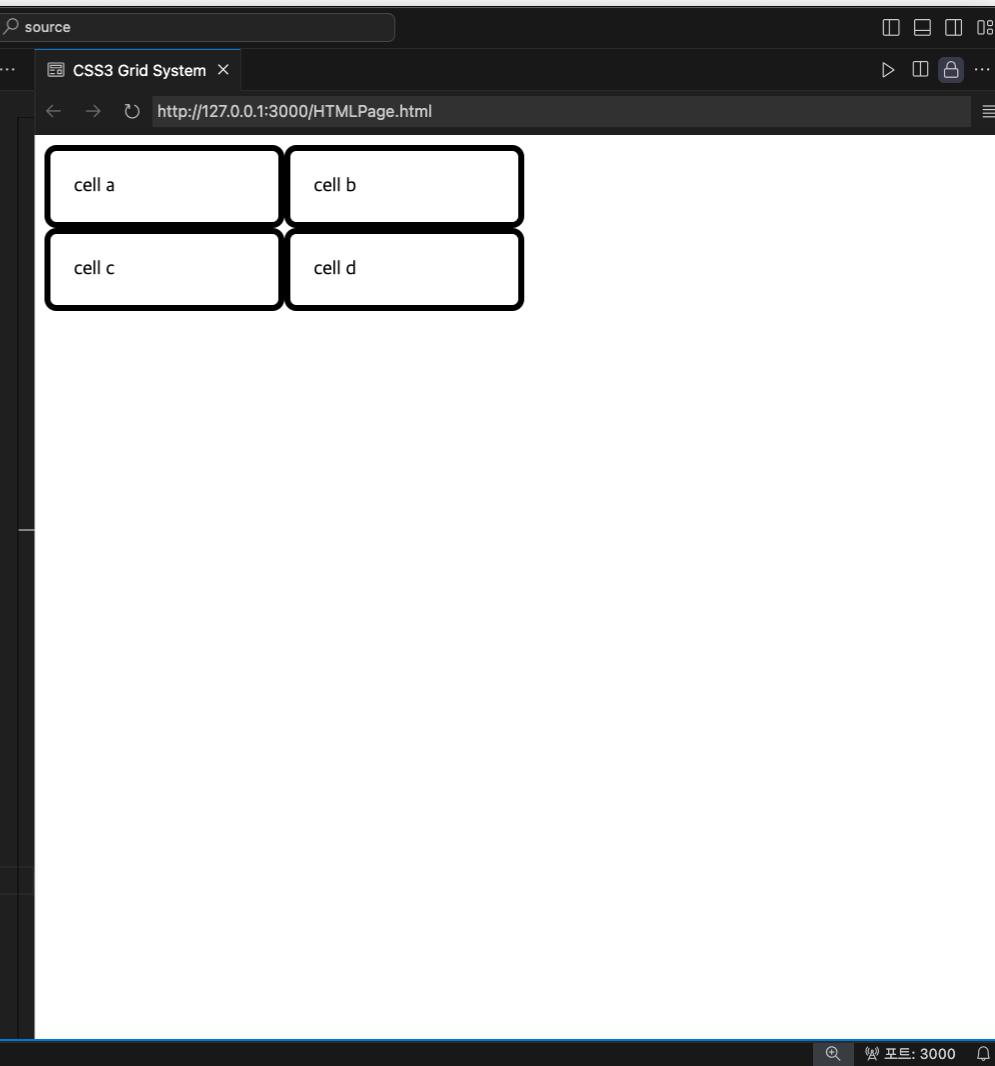
```
<!DOCTYPE html>
<html>
<head>
    <title></title>
    <style>
        /* 화면 너비 0픽셀 ~ 767픽셀: 그리드를 해제합니다. */
        @media screen and (max-width: 767px) {
            .container {
                margin: 0;
                padding: 0;
            }
            .row {
                overflow: hidden;
                width: 100%;
            }
            .row [class*=span] {
                float: left;
                margin-left: 2%;
            }
            .row [class*=span]:first-child {
                margin-left: 0;
            }
            .span_1 {
                width: 6.5%;
                *width: 6%;
            }
            .span_2 {
                width: 15%;
                *width: 14.5%;
            }
            .span_3 {
                width: 23.5%;
                *width: 23%;
            }
            .span_4 {
                width: 32%;
                *width: 31.5%;
            }
            .span_5 {
                width: 40.5%;
                *width: 40%;
            }
            .span_6 {
                width: 49%;
                *width: 48.5%;
            }
            .span_7 {
                width: 57.5%;
                *width: 57%;
            }
        }
        /* 화면 너비 768픽셀 ~ 959픽셀: 동적 그리드 시스템 */
        @media screen and (min-width: 768px) and (max-width: 959px) {
            .container {
                margin: 0;
                padding: 0;
            }
            .row {
                margin-left: -10px;
                margin-right: -10px;
            }
            .row [class*=span] {
                float: none;
                padding-left: 10px;
                padding-right: 10px;
            }
            .span_1 {
                width: 6.563px;
                *width: 6px;
            }
            .span_2 {
                width: 15.125px;
                *width: 14.5px;
            }
            .span_3 {
                width: 23.5px;
                *width: 23px;
            }
            .span_4 {
                width: 32.125px;
                *width: 31.5px;
            }
            .span_5 {
                width: 40.5px;
                *width: 40px;
            }
            .span_6 {
                width: 49.125px;
                *width: 48.5px;
            }
            .span_7 {
                width: 57.5px;
                *width: 57px;
            }
        }
    </style>
</head>
<body>
    <div class="container">
        <div class="row">
            <div class="span_1">Lorem ipsum dolor sit amet</div>
            <div class="span_1">Lorem ipsum dolor sit amet</div>
        </div>
    </div>
</body>
</html>
```

The rendered output shows a grid of seven columns with the text 'Lorem ipsum dolor sit amet' repeated in each column. The browser window title is 'HTMLPage.html'.

The screenshot shows a browser window with developer tools open. The left panel displays the HTML code for 'HTMLPage.html' with line numbers. The right panel shows the rendered output of the CSS3 Grid System.

```
1  <!DOCTYPE html>
2  <html>
3  <head>
4      <title>CSS3 Grid System</title>
5      <style>
6          .container {
7              /* 그리드 구성하기 */
8              display: grid;
9          }
10     </style>
11 </head>
12 <body>
13     <div class="container">
14         <div class="cell-a">cell a</div>
15         <div class="cell-b">cell b</div>
16         <div class="cell-c">cell c</div>
17         <div class="cell-d">cell d</div>
18     </div>
19 </body>
20 </html>
```

The rendered output on the right shows four cells labeled 'cell a', 'cell b', 'cell c', and 'cell d' arranged in a single row.



The screenshot shows a browser window displaying a CSS Grid layout. The left side of the screen is a code editor with the file `HTMLPage.html` open, showing the following HTML and CSS code:

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS3 Grid System</title>
    <style>
        .container {
            display: grid;
            grid-template-columns: 200px 200px;
        }
        [class*=cell] {
            box-sizing: border-box;
            border: 5px solid black;
            border-radius: 10px;
            padding: 20px;
        }
    </style>
</head>
<body>
    <div class="container">
        <div class="cell-a">cell a</div>
        <div class="cell-b">cell b</div>
        <div class="cell-c">cell c</div>
        <div class="cell-d">cell d</div>
    </div>
</body>
</html>
```

The right side of the screen shows the browser's developer tools with the tab `CSS3 Grid System` selected. It displays a 2x2 grid layout with four cells, each containing a label: "cell a" in the top-left, "cell b" in the top-right, "cell c" in the bottom-left, and "cell d" in the bottom-right. The grid has a total width of 400px, divided into two equal columns of 200px each.

The screenshot displays a browser window with developer tools open, illustrating the CSS3 Grid System.

HTML:

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS3 Grid System</title>
    <style>
        .container {
            display: grid;
            grid-template-columns: 2fr 1fr;
        }
        [class*=cell] {
            box-sizing: border-box;
            border: 5px solid black;
            border-radius: 10px;
            padding: 20px;
        }
    </style>
</head>
<body>
    <div class="container">
        <div class="cell-a">cell a</div>
        <div class="cell-b">cell b</div>
        <div class="cell-c">cell c</div>
        <div class="cell-d">cell d</div>
    </div>
</body>
</html>
```

CSS:

```
.container {
    display: grid;
    grid-template-columns: 2fr 1fr;
}

[cell*=cell] {
    box-sizing: border-box;
    border: 5px solid black;
    border-radius: 10px;
    padding: 20px;
}
```

Rendered Output:

The browser window shows a grid layout with four cells:

- Top-left cell: "cell a"
- Top-right cell: "cell b"
- Bottom-left cell: "cell c"
- Bottom-right cell: "cell d"

The cells have a black border, rounded corners, and padding of 20px. The container has a grid-template-columns property of 2fr 1fr, creating two columns where the first column is twice the size of the second.

The screenshot displays a browser window with developer tools open, illustrating the CSS3 Grid System.

HTML:

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS3 Grid System</title>
    <style>
        .container {
            display: grid;
            grid-template-columns: 300px 1fr;
        }
        [class*=cell] {
            box-sizing: border-box;
            border: 5px solid black;
            border-radius: 10px;
            padding: 20px;
        }
    </style>
</head>
<body>
    <div class="container">
        <div class="cell-a">cell a</div>
        <div class="cell-b">cell b</div>
        <div class="cell-c">cell c</div>
        <div class="cell-d">cell d</div>
    </div>
</body>
</html>
```

CSS:

```
.container {
    display: grid;
    grid-template-columns: 300px 1fr;
}

[cell*=cell] {
    box-sizing: border-box;
    border: 5px solid black;
    border-radius: 10px;
    padding: 20px;
}
```

Rendered Output:

The browser shows a grid layout with four cells:

- Top-left cell: "cell a"
- Top-right cell: "cell b"
- Bottom-left cell: "cell c"
- Bottom-right cell: "cell d"

Each cell is a white rectangle with a black border, rounded corners, and 20px padding. The cells are arranged in a 2x2 grid.

The screenshot displays a browser window with developer tools open, illustrating the CSS3 Grid System.

HTML:

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS3 Grid System</title>
    <style>
        .container {
            display: grid;
            grid-template-columns: 300px 300px;
            grid-template-rows: 1fr 2fr;
        }
        [class*=cell] {
            box-sizing: border-box;
            border: 5px solid black;
            border-radius: 10px;
            padding: 20px;
        }
    </style>
</head>
<body>
    <div class="container">
        <div class="cell-a">cell a</div>
        <div class="cell-b">cell b</div>
        <div class="cell-c">cell c</div>
        <div class="cell-d">cell d</div>
    </div>
</body>
</html>
```

CSS:

```
.container {
    display: grid;
    grid-template-columns: 300px 300px;
    grid-template-rows: 1fr 2fr;
}

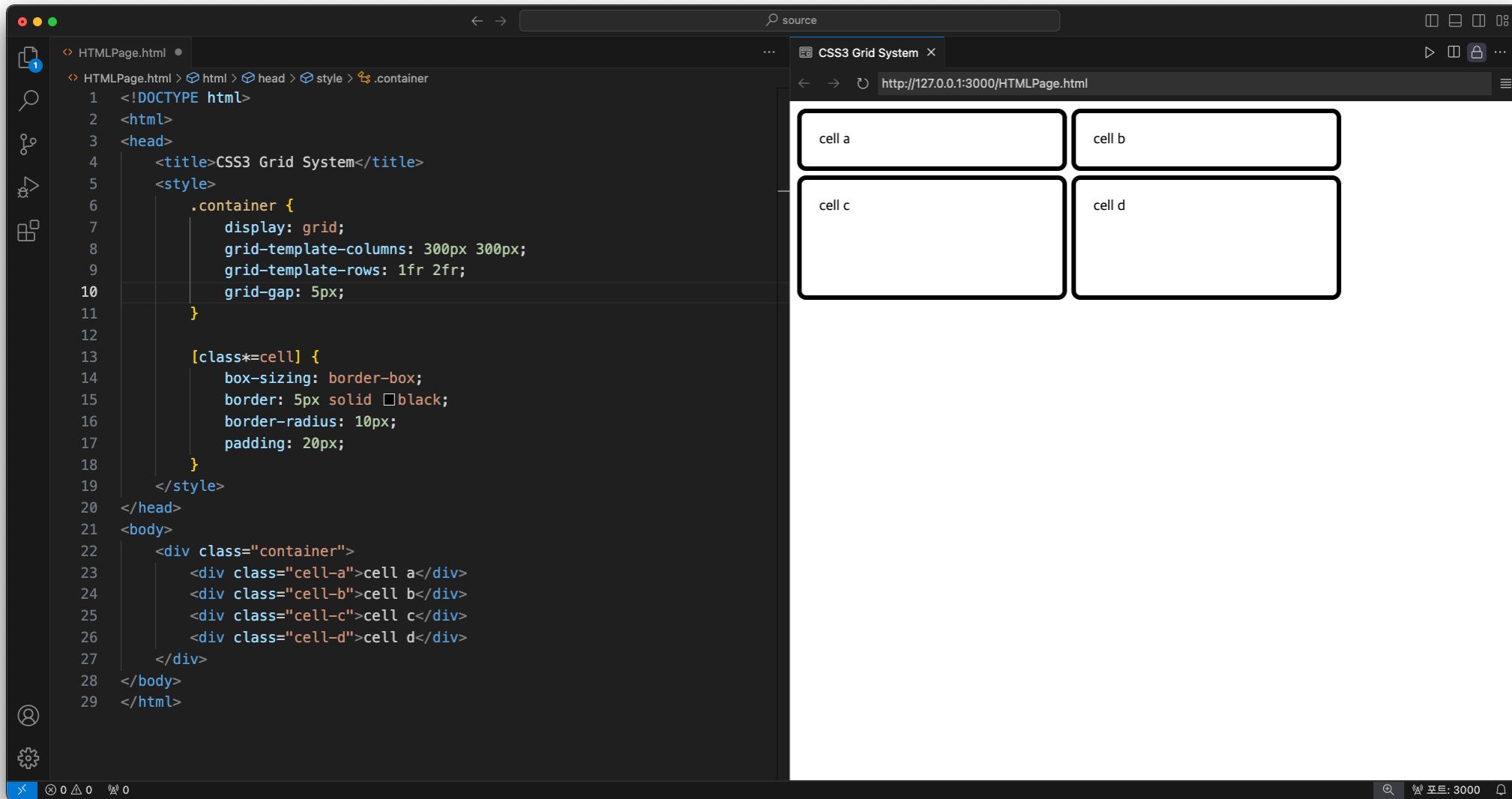
[cell*="cell"] {
    box-sizing: border-box;
    border: 5px solid black;
    border-radius: 10px;
    padding: 20px;
}
```

Rendered Output:

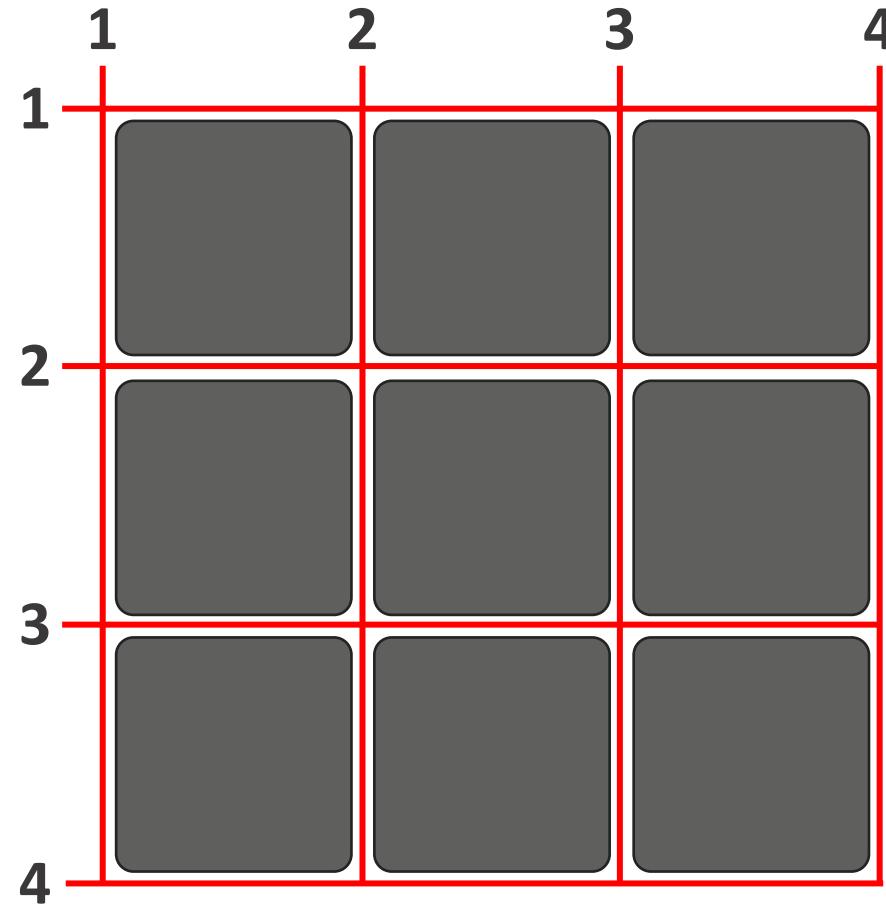
The browser shows a 2x2 grid of four cells:

- Top Left: cell a
- Top Right: cell b
- Bottom Left: cell c
- Bottom Right: cell d

Each cell is a white rectangle with a black border, rounded corners, and 20px padding. The grid has two columns and two rows, with the first column being 300px wide and the second being 300px wide, and the first row being 1fr high and the second being 2fr high.



```
1  <!DOCTYPE html>
2  <html>
3  <head>
4      <title>CSS3 Grid System</title>
5      <style>
6          .container {
7              display: grid;
8              grid-template-columns: 300px 300px;
9              grid-template-rows: 1fr 2fr;
10             grid-gap: 5px;
11         }
12
13         [class*=cell] {
14             box-sizing: border-box;
15             border: 5px solid black;
16             border-radius: 10px;
17             padding: 20px;
18         }
19     </style>
20 </head>
21 <body>
22     <div class="container">
23         <div class="cell-a">cell a</div>
24         <div class="cell-b">cell b</div>
25         <div class="cell-c">cell c</div>
26         <div class="cell-d">cell d</div>
27     </div>
28 </body>
29 </html>
```



Part 2

CSS3 그리드 레이아웃 > 셀 배치하기

The screenshot displays a browser developer tools window with two main panes. The left pane shows the source code for `HTMLPage.html`, which includes a CSS3 grid system. The right pane shows the rendered output of this code.

Source Code (HTMLPage.html):

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS3 Grid System</title>
    <style>
        .container {
            display: grid;
            grid-template: 200px 200px 200px / 200px 200px 200px;
            grid-gap: 10px;
        }

        [class*=cell] {
            box-sizing: border-box;
            border: 5px solid black;
            border-radius: 10px;
            padding: 10px;
        }

        .cell-a {
            grid-row-start: 1;
            grid-row-end: 4;
            grid-column-start: 1;
            grid-column-end: 3;
        }
    </style>
</head>
<body>
    <div class="container">
        <div class="cell-a">cell a</div>
        <div class="cell-b">cell b</div>
        <div class="cell-c">cell c</div>
        <div class="cell-d">cell d</div>
    </div>
</body>
</html>
```

Renders:

The rendered output shows a grid with four cells:

- Cell a (top-left): A large box spanning the first three columns and all four rows.
- Cell b (top-right): A box in the top row, second column.
- Cell c (bottom-left): A box in the bottom row, first column.
- Cell d (bottom-right): A box in the bottom row, second column.

The screenshot shows a browser developer tools window with two panes. The left pane displays the HTML and CSS code for a grid system, and the right pane shows the rendered output.

HTML and CSS Code:

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS3 Grid System</title>
    <style>
        * {
            /* 기본 초기화 */
            margin: 0;
            padding: 0;
        }
        .container {
            /* 너비 고정 and 중앙 정렬*/
            width: 960px;
            margin: 0 auto;
            padding-top: 10px;

            /* 그리드 구성하기 */
            display: grid;
            grid-template: 70px 1fr 70px / 200px 1fr;
            grid-gap: 5px;
        }
        [class*=cell] {
            box-sizing: border-box;
            border: 5px solid black;
            padding: 10px;
            border-radius: 10px
        }
        .cell-header { grid-column: 1 / 3; }
        .cell-footer { grid-column: 1 / 3; }
    </style>
</head>
<body>
    <div class="container">
        <div class="cell-header">
            <h1>Lorem ipsum dolor sit amet</h1>
        </div>
        <div class="cell-aide">
            <p>Lorem ipsum</p>
            <p>dolor sit amet</p>
            <p>Lorem ipsum</p>
            <p>dolor sit amet</p>
        </div>
        <div class="cell-content">
            <h1>Lorem ipsum dolor sit amet</h1>
            <p>Lorem ipsum dolor sit amet</p>
            <p>Lorem ipsum dolor sit amet</p>
        </div>
        <div class="cell-footer">Lorem ipsum dolor sit amet</div>
    </div>
</body>
</html>
```

Rendered Output:

The rendered output shows a grid layout with three columns. The first column contains a header section with an

element and a footer section with a single-line paragraph. The second column contains a sidebar section with four elements and a content section with three and elements. The third column contains a footer section with a single-line paragraph.

The screenshot shows a browser developer tools interface with two panes. The left pane displays the HTML and CSS code for a grid system, while the right pane shows the resulting layout.

HTML and CSS Code:

```
<html>
<head>
    <title>CSS3 Grid System</title>
    <style>
        * {
            /* 기본 초기화 */
            margin: 0;
            padding: 0;
        }

        .container {
            /* 너비 고정 and 중앙 정렬*/
            width: 960px;
            margin: 0 auto;
            padding-top: 10px;

            /* 그리드 구성하기 */
            display: grid;
            grid-template: 70px 1fr 70px / 200px 1fr;
            grid-gap: 5px;
            grid-template-areas:
                'header header'
                'aside content'
                'footer footer';
        }

        [class*=cell] {
            box-sizing: border-box;
            border: 5px solid black;
            padding: 10px;
            border-radius: 10px
        }

        .cell-header { grid-area: header; }
        .cell-aside { grid-area: aside; }
        .cell-content { grid-area: content; }
        .cell-footer { grid-area: footer; }
    </style>

```

Rendered Layout:

The layout consists of a header row, a content row, and a footer row.

- Header Row:** Contains one column labeled "header". It features a large **h1** heading "Lorem ipsum dolor sit amet".
- Content Row:** Contains two columns labeled "aside" and "content".
 - Aside Column:** Contains three **p** tags: "Lorem ipsum", "dolor sit amet", and "Lorem ipsum".
 - Content Column:** Contains three **p** tags: "Lorem ipsum dolor sit amet", "Lorem ipsum dolor sit amet", and "Lorem ipsum dolor sit amet".
- Footer Row:** Contains one column labeled "footer". It contains the text "Lorem ipsum dolor sit amet".



감사합니다